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Anything else you'd like to talk about!

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NOTE: When posting Forth source code, to preserve indentation, format it using the `\pre{` tag like this:

```
\pre{
: hello
  \ A simple message:
  ." Hello World!"
  10 0 do
    i .
  loop cr
;
}
```

If you wish to include a } character, enter it as: `\}`

General

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Wrist Watch Zire

[Quartus Handheld Software: Discussion Forum: General: Wrist Watch Zire](#)



By [Mike Will](#) on Friday, April 4, 2003 - 10:52 am: [Edit](#)

Have a look:

<http://www.fossil.com/tech/default.asp?Tier1=Tech>

Mike

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Top 25 Threads?

[Quartus Handheld Software: Discussion Forum: General: Top 25 Threads?](#)



By [Tod Wulff \(Todwulff\)](#) on Monday, March 31, 2003 - 09:29 pm: [Edit](#)

Neal,

Have you thought about having a 'Top 25' for each of the forms to allow us to glean some of the knowledge here more easily? Seems as though that a thread which is large (at least here) will contain a wealth of knowledge from the contributors. Maybe size is not the most appropriate criteria, but it is a thought.

Thanks.

-Tod



By [Neal Bridges \(Nbridges\)](#) on Thursday, April 3, 2003 - 12:09 pm: [Edit](#)

Tod, I get stuck wondering what the appropriate criteria might be. But it's a good idea.

Neal



By [Tod Wulff \(Todwulff\)](#) on Friday, April 4, 2003 - 01:31 pm: [Edit](#)

I know, me too. Maybe you could implement a polling system to give the viewer a tool to 'rate' it, and give specific users more weight than the general public (i.e. yourself, Kris, Jim, and the other contributors/experts...).

Probably too much of a pain...

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Float stack division by zero error

[Quartus Handheld Software: Discussion Forum: General](#): Float stack division by zero error



By [gwiese](#) on Sunday, February 23, 2003 - 12:31 am: [Edit](#)

What is the best way around a float stack division by zero error?

needs fasin

1e fasin

fasin? float divide by zero

Should'nt it be 1.5708

Gary



By [Neal Bridges \(Nbridges\)](#) on Friday, February 28, 2003 - 04:38 pm:

[Edit](#)

Gary, what fasin implementation is that?

Neal



By [gwiese](#) on Friday, February 28, 2003 - 09:26 pm: [Edit](#)

I am doing a trig calculation. When the result is 1 and take the fasin of it I get a fatal error. I looked it up on the wiki and it said that Quartus's floats are the problem. Doesn't matter anyway, I test for 1 and use 1.5708 as a constant.

Gary

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Float to double

[Quartus Handheld Software: Discussion Forum: General](#): Float to double



By [gwiese](#) on Monday, February 17, 2003 - 10:13 pm: [Edit](#)

When I take a float and turn it into a double where is the integer part and fraction parts stored. I did this with a number like this,

6.5e ok

f>d

3 0 is left on the stack, it looks like the fractional part was truncated. Is it?

Gary



By [Kris Johnson \(Kdj\)](#) on Tuesday, February 18, 2003 - 10:37 am: [Edit](#)

"6.5e f>d" should leave "6 0" on the stack, not "3 0".

Yes, the fractional part is truncated.

See

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/BasicFloatingPointTutorial> for some techniques that will let you do something useful with the fractional part.

-- Kris



By [gwiese](#) on Tuesday, February 18, 2003 - 06:37 pm: [Edit](#)

Thanks Kris,

Your right I wrote one thing here and another on the PDA.

Gary



By [gwiese](#) on Tuesday, February 18, 2003 - 07:29 pm: [Edit](#)

Kris, I am working on a project that uses fractions and these fractions are converted to doubles. I'm writing a program to find the arc length and radius of an arc. I am using an equation that squares some of these numbers. For example, with this as the equation I am using

$$R = [C^2 + 4(H^2)]/8H$$

I take the users info like this.

999 1/64 = 63937/64 when I square this I run into overflow problems.

4,087,939,969/4096 see what I mean.

The end result will not be close to that high of a number, but getting to the end result is the problem.

Dave Bennett showed me something you have on the wiki about converting Quartus doubles to 32 bit from 16 bit. Does this mean the range is higher or does it make doubles faster?

Here is the place I am talking about.

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/X32Module>

Do you think this will help?

Gary

 By [Kris Johnson \(Kdj\)](#) on Wednesday, February 19, 2003 - 01:32 am:
[Edit](#)

The x32 stuff will make some 32-bit operations faster than using straight double-cell integers, but Quartus double-cells are already 32-bit, so this doesn't increase the range.

You might want to look into Chapman Flack's MathLib package. IEEE double-precision numbers have 53 bits of precision, and there are features that will take care of rounding things reasonably whenever you overflow those 53 bits.

You also might want to think about whether you really need this precision. I don't know exactly what your application is being used for. Is 999 1/64 a reasonable input value, and do you really need the answer in 64ths? Is 999,999,999 1/64 a reasonable input value? If so, then even the IEEE double-precision numbers may not work accurately enough. (You don't need to tell me the answers--I'm just suggesting questions you should ask yourself before you starting making your program more complicated.)

-- Kris

 By [gwiese](#) on Wednesday, February 19, 2003 - 11:44 pm: [Edit](#)

You are right it doesn't need to be so precise. 1/16ths are fine, but I did not want to limit the input from the user. If I have to I will, I was just looking for a way to do this with out a limit. I will probably limit the user to 300 inches and nothing smaller than 16ths for the fractional part.

Thanks
Gary

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Suggestions for How-To-Make-This-Happen?

[Quartus Handheld Software: Discussion Forum: General:](#)

Suggestions for How-To-Make-This-Happen?



By [m a richard](#) on Monday, February 10, 2003 - 05:30 pm: [Edit](#)

Hi!

I've lurked here for years--I can't seem to get started properly with Forth, so I've never felt it appropriate to intrude. However, knowing how lively this forum is, (and loving the elegance and simplicity of Forth) I was hoping for some suggestions on the following:

I have an REB1100, which, if you aren't familiar with it, is an ebook reader. It has a fantastic design, with tremendous hardware--but the OS (RocketEngine) is weak, weak, weak. Gemstar, the corporation that bought NuvoMedia (who designed the hardware) have abandoned the 1100 platform (and thus the OS) for a different format. I really think that a Forth system, "right on the silicon" so to speak, would have tremendous possibilities. The hardware has onboard audio, 56k modem, infrared port (built into the power switch!), USB, 16-bit grey touch-sensitive screen and a memory card slot. All in the size of a paperback! It uses an ARM processor.

I am no programmer, but I think that this device would be a tremendous portable platform if people could program for it. Forth seems to me to be the obvious choice. What would it take to entice someone to build/program such a Forth as a basic OS? Where should one search for such a person?

Once Forth is there, I'm sure different methods of using it would grow (including windowing routines, etc.) As a dedicated device, it would take but a single program on this Forth (an ebook/html reader of some sort) to match its current functionality.

It would take me years to learn how to make such a thing happen on my own--but it would be satisfying to simply help it come into being in some way.

Well, I hope this instigates some commentary--I really think this could be of great benefit to a lot of folks frustrated by the way the REB1100 was mismanaged by Gemstar.

Thanks for your time.

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Changes to the forum

[Quartus Handheld Software: Discussion Forum: General](#): Changes to the forum



By [gwiese](#) on Thursday, January 30, 2003 - 09:00 pm: [Edit](#)

Neal, have you made changes to the forum? It doesn't display tree view anymore.

Gary Wiese



By [Neal Bridges \(Nbridges\)](#) on Friday, January 31, 2003 - 06:59 pm:

[Edit](#)

Gary, no I haven't. It displays it here; what are you seeing instead?

Neal



By [gwiese](#) on Friday, January 31, 2003 - 07:59 pm: [Edit](#)

Sorry Neal, I had my firewall set wrong. Everything looking good again.

Gary

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Password:

E-mail:

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RsrcEdit forget positon 😞

[Quartus Handheld Software: Discussion Forum: General: RsrcEdit forget positon](#) 😞



By [BogD](#) on Friday, January 24, 2003 - 06:44 am: [Edit](#)

I have RsrcEdit v.1.017b 06/24/01
If i twice open RsrcEdit, position (choosed PRC) is lost.

Step by step:

1. Run RsrcEdit
2. Choose PRC and resourse, edit
3. Run PRC, look changes
4. Run RsrcEdit, PRC is opening and place is OK.
5. Run PRC, look changes
6. Run RsrcEdit, but place is lost out to root directory.

ANYBODY HELP ME, please!!!

Sorry, my English so bad...
Thank You Very Much from Russia.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 28, 2003 - 04:15 pm:

[Edit](#)

BoqD, I will investigate and attempt to replicate the problem here.

Thanks for the report.

Neal



By [BogD](#) on Saturday, March 1, 2003 - 04:55 pm: [Edit](#)

Neal, please, don't forget this report.

Thank You Very Much from Russia.

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H.jackson -- unable to send email

[Quartus Handheld Software: Discussion Forum: General](#): H.jackson
-- unable to send email



By [Neal Bridges \(Nbridges\)](#) on Wednesday, January 22, 2003 - 09:47
am: [Edit](#)

To the customer with the email address beginning 'h.jackson' -- I am unable to send you email. Consistently, I'm receiving an 'Unknown local user' error from your mail server.

I will try again this evening, in the hopes that whatever email issue exists on your side has been resolved. Sorry for the delay.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Removing Benchmark 2.0 fr Tungsten

[Quartus Handheld Software: Discussion Forum: General](#): Removing Benchmark 2.0 fr Tungsten



By [danny](#) on Monday, December 30, 2002 - 07:42 am: [Edit](#)

Out of curiosity I beamed Benchmark 2.0 fr a M515 on display in a store in Taipei to my Tungsten T. It shows 255%, great. But now I can't delete the program and its driving me crazy as I keep getting an Error Box "Unable to delete Benchmark-CHT"

Pls assist and pls also email the solution to qdanny@bigfoot.com

Rgds.



By [danny](#) on Monday, December 30, 2002 - 08:49 am: [Edit](#)

nvm, just found out it was somehow installed into ROM. Moved it to RAM and voila.



By [Neal Bridges \(Nbridges\)](#) on Monday, December 30, 2002 - 01:49 pm: [Edit](#)

Danny; glad to hear that 😊

Neal

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Triple precision numbers

[Quartus Handheld Software: Discussion Forum: General](#): Triple precision numbers



By [Gary Wiese \(Garyjwiese\)](#) on Friday, December 27, 2002 - 01:28

am: [Edit](#)

I am in the middle of defining words to square a fraction, but I am running into trouble when the number is too big. I am going out of the limits for double cell. Here is what I have so far.

```
255 7 16 m-df
4087 0 16 0      / m-df ( n n n -- d d )
                  takes a mixed number and
                  turns it into a double
                  cell improper fraction.
```

```
dfsq -8111 254 256 0 / dfsq multiplies 4087 by
                      its self and the same
                      for 16.
```

```
df-m -288 81 256    / df-m turns it back to a
                      mixed number.
```

These words work fine when the number doesn't go out of range of a double.

Is there a way to turn -288 into a single or double cell number so I can make a readable fraction.

I found a file by Tim Hendtlass that has triple precision words, but I don't see how I could use them to fix my problem.

Gary

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Input problems

[Quartus Handheld Software: Discussion Forum: General: Input problems](#)



By [Gary Wiese \(Garyjwiese\)](#) on Sunday, December 15, 2002 - 10:30

pm: [Edit](#)

Can anyone look at this code and tell me if you see anything wrong? I am getting garbage from the variables and can't see why.

```
variable cdint
variable cdnum
variable cdden
variable htint
variable htnum
variable htden
2variable cd
2variable ht
2variable 2cd
2variable 2ht
2variable eqnum
2variable eqden
```

```
: get-itemid ( --itemid )
  event >abs itemid ;
```

```
6 constant InputFieldLen
1000 constant cdintFld
1010 constant cdnumFld
1020 constant cddenFld
1030 constant htintFld
1040 constant htnumFld
1050 constant htdenFld
1300 constant RadiusBtn
1001 constant WarningBox
1400 constant raintFld
1410 constant ranumFld
1420 constant radenFld
1111 constant MainFrm
```

```
create cdintBuf InputFieldLen 1+ chars ALLOT
create cdnumBuf InputFieldLen 1+ chars ALLOT
create cddenBuf InputFieldLen 1+ chars ALLOT
create htintBuf InputFieldLen 1+ chars ALLOT
create htnumBuf InputFieldLen 1+ chars ALLOT
create htdenBuf InputFieldLen 1+ chars ALLOT
```

```

: get-input ( -- ) get-itemid
cdintBuf dup cdintFld field>string string>float f>d d>s cdint !
cdnumBuf dup cdnumFld field>string string>float f>d d>s cdnum !
cddenBuf dup cddenFld field>string string>float f>d d>s cdden !
htintBuf dup htintFld field>string string>float f>d d>s htint !
htnumBuf dup htnumFld field>string string>float f>d d>s htnum !
htdenBuf dup htdenFld field>string string>float f>d d>s htdden ! ;

```

Gary



By [Steve Bohrer \(Skb\)](#) on Monday, December 16, 2002 - 11:38 am: [Edit](#)

Not part of the problem, but, perhaps you could save some space by making an interger conversion for this case, rather than using string>float and converting the result to interger each time. Or, at least make a word of the repeated sequence "field>string string>float f>d d>s".

To debug this, you can set up your form so you can run the Quartus console on it, and then you can look at the intermediate results. See the wiki page [DebuggingOnYourForm](#) for hints.



By [Mike Will](#) on Monday, December 16, 2002 - 02:39 pm: [Edit](#)

I notice you're writing htnum twice, stepping on the first one.

Mike



By [Gary Wiese \(Garyjwiese\)](#) on Monday, December 16, 2002 - 05:54 pm: [Edit](#)

I think I have narrowed it down somewhat, but there is still something wrong with the way it displays the variables in their respective fields. What I did was load the variable directly and used the console to see what I had on the stack, it loads them properly, but does not display them properly.

```

: test 45 cdint ! 3 cdnum ! 4 cdden ! ;
: test1 test cdint @ cdnum @ cdden @ output ;

: output ( -- ) get-itemid d. raintFld
  string>anyfield d. ranumFld string>anyfield
  d. radenfld string>anyfield ;

```

In the console

```
test1 ok
```

4 3 45 is on the stack, then I

```
d. \ which is a word to put the number in a
    string : d. 0 <# #s #> ;
    then the stack has
312 2 \ I assume this is an address and a length
2drop
d.
313 1 \ good so far, but then
2drop
d. 313 1 \ I don't understand, I would think it
    would be 314 1 correct?
```

Gary



By [Steve Bohrer \(Skb\)](#) on Tuesday, December 17, 2002 - 10:33 am: [Edit](#)

The words `< #` and `# >` return a pointer to the start of the converted string in an internal buffer that is at a fixed location. Thus, the results of any `< # # >` conversion are overwritten by the next conversion. So, you need to convert one number, then copy it to its field, and then do the next number.

So, what you are seeing shows this: The converted string is always in the same area. If it was three characters long, it would start at 311.



By [Gary Wiese \(Garyjwiese\)](#) on Tuesday, December 17, 2002 - 05:59 pm: [Edit](#)

Thanks Steve, I understand, thought I had a problem with quartus for a minute. You also made a suggestion to define a word to shorten up my code, I normally do, but I wanted you guys to see what I was doing so I wrote it out.

Thanks Mike, I looked and looked and still didn't see that until you pointed it out.

Gary

Add a Message

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How do I make my app. remember data after I close it.

[Quartus Handheld Software: Discussion Forum: General](#): How do I make my app. remember data after I close it.



By [Gary Wiese \(Garyjwiese\)](#) on Monday, December 2, 2002 - 07:29

pm: [Edit](#)

I have a couple of programs I use for work and I found out today it would be really nice if it would remember the data in the input fields. It never really became a problem, but today I had to keep entering data when I was switching from one program to the other. Is there a place on the wiki that would explain this process in detail.

Gary Wiese



By [Amr Malik](#) on Monday, December 2, 2002 - 09:52 pm: [Edit](#)

I think Ron Doerfler's DataBase Tutorial talks about saving some values to the System Preferences Database.

QUOTE

Let's see how we read back the list number we save in the Saved Preferences database that Palm provides as a store for all applications. In our case, we only need to save the list number we were last viewing. The following code is located in the DBTutorial-Headers file:

```
\ Preference variables.
\ For this program, only the list
\ number is saved on exit, so that
\ that list is brought up when the
\ app is restarted.
here constant prefs
variable listnum
here prefs - constant prefs-size

1  constant PrefsVersion

: save-prefs ( -- )
\ Saves preferences to the system
\ Saved Preferences database.
prefs-size prefs >abs
```

```
PrefsVersion [ID] DBtu
PrefSetAppPreferencesV10 ;
```

```
: get-prefs ( -- flag )
\ Retrieves saved preferences and
\ overwrites the variables.
```

```
prefs-size prefs >abs
PrefsVersion [ID] DBtu
PrefGetAppPreferencesV10 ;
```

```
\ Default values
0 listnum ! \ Overwritten if Prefs read.
```

The PrefsVersion value is stored in the Saved Preferences Palm database along with the data. If there are no saved preferences for our app, or if the version number has changed, then no data is read back and the default value of listnum is not overwritten. Remember that if you change the number or layout of the variables stored in the Saved Preferences database, you need to change the PrefsVersion value to create a new saved data layout.

END-QUOTE



By [John Newell](#) on Tuesday, December 3, 2002 - 07:40 am: [Edit](#)

Perhaps you know but in case you don't:

You don't have to save the Preferences every time that you change one of the values that you want to save in Preferences.

You merely need to catch the appStopEvent (which Quartus does for you as the system exit request exception -257) and do the saves before exiting the program.

e.g.

```
.
.
: goPrint
\ Main program
;
-257 constant byeThrow
: go ( -- ) \ Program entry point
['] goPrint catch \ Catch exceptions
\ If the application is exiting,
\ store settings:
```

```
byeThrow
= if
  save_prefs
else
\ Other exception
then
;
```

See Event Handling section in the Quartus Forth Manual.

Regards
John

 By [Kris Johnson \(Kdj\)](#) on Tuesday, December 3, 2002 - 10:54 am: [Edit](#)

See <http://kristopherjohnson.net/wiki/PreferencesTutorial>

-- Kris

 By [Gary Wiese \(Garyjwiese\)](#) on Tuesday, December 3, 2002 - 07:23 pm: [Edit](#)

Thanks guys, I will look over the material.

Gary

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

About launching RsrcEdit

[Quartus Handheld Software: Discussion Forum: General](#): About launching RsrcEdit



By [totoetlititi](#) on Saturday, November 30, 2002 - 11:25 am: [Edit](#)

Hello !

I'm programmer (in C langage), and I want know if it's possible to open a resource or record list when I launch RsrcEdit in my application.

An example: I want edit the Tbmp resource with ID 1235 in the TOTO application with creator TotO when I click in my little button in my application superTOTO, that is possible ?

(it will be very great... !!!!)

What are the parameters ?

Thanks !

Thomas

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Quartus for PalmOS 5 on the ARM?

[Quartus Handheld Software: Discussion Forum: General](#): Quartus for PalmOS 5 on the ARM?



By [Steve Graham \(Steve\)](#) on Thursday, October 3, 2002 - 11:56 am:

[Edit](#)

Neal,

Sony has announced the above at

<http://www.palminfocenter.com/print.asp?ID=4279&s=1>

So, what are your plans for Quartus for this platform?

Steve



By [Neal Bridges \(Nbridges\)](#) on Thursday, October 3, 2002 - 02:31 pm:

[Edit](#)

Steve, see the related thread on this.

Neal



By [Ken Samson](#) on Monday, December 9, 2002 - 04:03 pm: [Edit](#)

Neal,

See the related thread on this. I did ask a question there. Any updates?

Ken

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Re-sends of registered versions

[Quartus Handheld Software: Discussion Forum: General](#): Re-sends of registered versions



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 26, 2002 - 12:48 am: [Edit](#)

I had a complaint of non-receipt of a registered version; concerned about potential mail issue, I re-sent a number of recent registrations.

If you're waiting and haven't received something you've expected to, please let me know at once at support@quartus.net.

Thanks!

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

P.O.S.E.

[Quartus Handheld Software: Discussion Forum: General: P.O.S.E.](#)



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, September 21, 2002 - 02:08

pm: [Edit](#)

I have been program directly on the handheld and would like to start using the emulator. I have the rom dump of my device and was able to move my apps and their resource files from rsrcredit to the emulator. However, I cannot see a way to move the memos from the desktop to the emulator and back, something like a hot sync.

Can someone show me how this is done? I looked in the wiki, but couldn't find anything on subject.

Gary



By [Kris Johnson \(Kdj\)](#) on Saturday, September 21, 2002 - 03:07 pm:

[Edit](#)

Copy and paste is one way. That is, you can open a memo in the emulator, select text, and use the emulator's Copy (by right-clicking on the emulator) and then paste it into a file on your desktop. Similarly, you can copy text from your desktop, and then paste it into the emulator.

There is a command-line tool called Pilot-Xfer (<http://www.palmgear.com/software/showsoftware.cfm?prodID=2473>) that you can use to transfer the MemoDB database between the desktop and a real device. You can drag-and-drop the MemoDB.pdb file onto the emulator to install it.

There is supposedly a way to set up the emulator for HotSync, so that you can do things in Palm Desktop. But I don't know much about it myself.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, September 21, 2002 - 04:25

pm: [Edit](#)

Kris,

I am able to copy text, but it don't copy the entire memo. I have to copy small parts instead of the whole thing. Do I have something set wrong on the emulator or is this how it is.

For some reason, maybe a problem with palmgear, but when I try to

download Pilot-Xfer I am sent to a page not found.

Gary



By [Steve Bohrer \(Skb\)](#) on Saturday, September 21, 2002 - 07:14 pm:

[Edit](#)

I find that hotsync works well for me to get memos into and out of POSE, at least with the Windows Palm Desktop program. I have a second user name, POSE, for the Pose device, and then in the desk top I can copy and paste groups of memos between the two users.

Some notes on making POSE do hotsyncs are on the Wiki at [PalmOSEmulator](#).

Basically, you set POSE to do a modem network hotsync, and set you desktop hotsync to allow network syncs. Also, you need to start the hotsync in Pose directly from the hotsync app, not from the POSE menu.



By [Steve Bohrer \(Skb\)](#) on Saturday, September 21, 2002 - 07:20 pm:

[Edit](#)

As an other option, to initially get all your memos into POSE, you can use RsrcEdit on your handheld to duplicate the MemoDB, and set its backup bit, so the copy gets hotsynced to the backup directory. Then drop this copy into Pose, and use RsrcEdit in Pose to replace the default memoDB with the copy.

Once you have a bunch of memos in POSE, you can use the Pose menu to export the memoDB. You can use this to move all your code to a new version of POSE with a different version EPROM. (It is still free to register as a developer so you can download all the ROMs.)

If you can get the hotsync working, that is easy too, because you can start a new POSE with a blank memory, and then do an initial hotsync to install all your memos and Quartus and RsrcEdit all in one go.



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, September 21, 2002 - 08:38

pm: [Edit](#)

Steve,

I tried the rsrcedit method, but I can't apply the db button of memodb. The backup bit is set, but I can not find it in the backup files in the palm directory.

I have tried the hot sync method, but was not able to get it to work either.

Kris,

Could you send me Pilot-Xfer through email. Something must be wrong with the file at Palmgear.

If you guys have any other options I am willing to try them.

Thanks
Gary

 By [Steve Bohrer \(Skb\)](#) on Saturday, September 21, 2002 - 09:37 pm:
[Edit](#)

The memodb database does not get backed up, because it has its own conduit. When you make a copy with RsrcEdit, you should set it to a different creator so the hotsync program doesn't think it has a conduit, and then it will be handled by the normal backup conduit.

What happens when you do the hot sync? Do you get any response from the desktop hotsync program?

 By [Gary Wiese \(Garyjwiese\)](#) on Saturday, September 21, 2002 - 10:05 pm: [Edit](#)

None, I did every thing on your last post, but no response. Maybe you could give me a more detail aproach. I was a bit confused with some of the directions. I am sure it was my set up that was the problem.

I will give the memodb another try.

Thanks
Gary

 By [Gary Wiese \(Garyjwiese\)](#) on Saturday, September 21, 2002 - 10:58 pm: [Edit](#)

I tried the memodb again and got a copy of the memo data base on the emulator, but I still can't get the memo's in the memo pad on the emulator.

Gary

 By [Kris Johnson \(Kdj\)](#) on Saturday, September 21, 2002 - 11:43 pm:
[Edit](#)

Sorry, but I don't have a copy of pilot-xfer any more. You can try a search on the web.

Here's one link I found:

<http://5star.freemove.com/Palm/Utilities/pilotxfer.html>

-- Kris



By [Steve Bohrer \(Skb\)](#) on Sunday, September 22, 2002 - 10:17 pm:

[Edit](#)

To export my Palm's memoDB to a .PDB file on the desktop:

- 1) In RsrcEdit on the Palm, select MemoDB. Note that it has creator 'memo' and type 'DATA'.
- 2) Press menu, and choose Options>Duplicate Database. RsrcEdit makes a copy of MemoDB named "MemoDBCopY".
- 3) Change the creator of the copy to something that does not have a conduit. I used 'Ride' because that is an id I have registered, and I don't have a conduit nor any files that will conflict with the MemoDBCopY.
- 4) Make sure the backup bit of the copy is checked.
- 5) Press the "Apply" button to apply the changes.
- 6) Exit RsrcEdit and hotsync the Palm.
- 7) Look for the "MemoDBCopY.PDB" file in the "Backup" directory on your host for the username of your palm. The location of the backup directory depends on the version of your Palm Desktop software.

To import this memo file into POSE:

- 1) Start Pose.
- 2) If necessary, drag and drop the RsrcEdit file onto Pose to install it. (Switch out of the launcher app before installing new apps. I usually switch to Calculator, because it has a big silkscreen button and doesn't use any databases I care about.)
- 3) Drag and drop the MemoDBCopY.PDB onto Pose.
- 4) Start RsrcEdit on Pose. Select MemoDB. Choose Menu>Options>Delete Database.
- 5) Select MemoDBCopY. Rename it to "MemoDB". Change the creator to 'memo' and the type to 'DATA'. (Case is important)
- 6) Press "Apply" to apply the changes.
- 7) Exit RsrcEdit

8) Open MemoPad. You should see all the memos from your real device.

The downside of this method, obviously, is that you can't be selective about which memos you move: you get all or nothing. To move memos selectively, you need to get Pose's hotsync working. I'll try to update the instructions for that on the wiki to make them more explicit.

 By [Gary Wiese \(Garyjwiese\)](#) on Monday, September 23, 2002 - 12:24 am: [Edit](#)

Thanks Kris

Steve,

I have it working now, thanks for your directions, it helped me realize that I have to delete one of the memo db's before it would work.

A few more things about the emulator that can't be right. When I launch one of my previous programs, before it will start I get a message that says "My program just called palm os routine "oldFpIlnit", it gives me the option to either continue, debug or reset. I click continue and it runs. When I leave the program I see the same thing but instead of OldFpIlnit I see OldFpIlfree. After I click continue and before it will leave a new message says it found 1 memory leak. When I leave quartus is says it found 2 memory leaks. The programs run very very slow too. I tried to compile a program of mine with quartus and it took so long I ended up resetting to get out of quartus early. This can't be right or is it.

One more thing, while downloading the emulator from Palm, it advertised a Palm simulator. Do you know any thing about the simulator?

Thanks

Gary

 By [Steve Bohrer \(Skb\)](#) on Monday, September 23, 2002 - 09:10 am: [Edit](#)

The bugs you mention are known, and have been discussed here before. ([OldFpIlnit discussion](#)) Not sure if they made it to the wiki, though.

The oldFpIlnit is something that Neal says is not a problem, but just POSE being fussy. The reported memory leaks are also due to Quartus, but since the OS frees all memory when an app exits, this is also not a problem. In POSE's debug settings menu, you can turn these warnings off.

Note also that Quartus apps crash when you return from a popup form on

the DEBUG ROM for OS 3.5 and greater. The non-debug ROMs work fine, and DEBUG ROMs work for OS 3.1, and maybe 3.3.

The latest version of POSE is indeed very slow, perhaps about 4x to 10x slower than the previous version. I had to switch, as the old version was routinely getting into a mode where it said "Stack Overflow" immediately after a reset, and I had to start over from a blank ROM. This problem has never happened with the new version, so, for me I guess its time for a faster PC to make up for the new POSE.

But, recently I tried to install Handspring's version of POSE, and it may be that I'm back to an earlier version. I have not figured out how the different versions of POSE work: it seems I get the same thing, no matter which of the .EXE files I launch.

I think the simulator is for running OS 5 apps on a PC only. The simulator has some sort of PalmOS API library that lets it make calls on the PC that are the same functionality as the ROM api, but the code running is actual 80x86 code rather than an emulated Palm. Or something like that. I don't know if you can use it with Quartus code, or if it is something that only works with the Metrowerks debugger. (I've never tried it.)



By [Steve Bohrer \(Skb\)](#) on Monday, September 23, 2002 - 04:52 pm:

[Edit](#)

Handspring's version of POSE is an offshoot of version 3.0 . It seems faster than the current 3.5 POSE from PalmSource, yet so far has not shown the "stack overflow" problem I had with the old 3.0a-something version from Palm. Thus, the Handspring POSE may be a viable option for slower PCs.

As far as I can tell, it works fine with standard Palm ROMs as well as with Handspring ROMs.

Currently, I have the Palm 3.5 POSE and the Handspring 3.0 POSE installed in different directories. Apparently the version to use is saved in the registry somewhere under a common key, and they use the same key to keep track of the last open device image file.

So, if I go to my Handspring POSE folder and double-click the .exe file, the Handspring version starts up with whatever image I was last using. If I quit that and launch the Palm version, I get the 3.5 version with that image file.

Eitherway, if I quit POSE, and then restart it by double-clicking on the saved image file, it starts whatever version of POSE I last used.



By [Gary Wiese \(Garyjwiese\)](#) on Monday, September 23, 2002 - 06:53

pm: [Edit](#)

Thanks for you help Steve, I'll try it for awhile.

Gary



By [Steve Bohrer \(Skb\)](#) on Monday, September 23, 2002 - 09:09 pm:

[Edit](#)

POSE Benchmarks: With Handspring's current POSE, Quartus loads my app in 35 seconds on an old slow Pentium 2.

The same load (from the same saved POSE state file) takes 4:40 with Palm's POSE 3.5 .

POSE was running the OS 3.1 debug ROM.

Handspring's POSE says version 3.0 on the About dialog, but the download file is named "POSE_3.1H5.zip".

In the Handspring version, I unchecked "UIMgr Data Access" in the Settings>Debug Options dialog, which has been reported to speed POSE up a lot. (I was going to time it with this setting turned on, but I got tired of waiting for it to complete!)

In the PALM version, I unchecked ALL of the Debug Options for the time reported above. I'm not sure how much slower it gets with debug options turned on.

(Of course, with a multi-GHz PC, the Palm version of POSE probably runs quickly enough. On the other hand, on my Visor Platinum, Quartus loads this code in 18 seconds.)



By [Steve Bohrer \(Skb\)](#) on Sunday, September 29, 2002 - 10:32 pm:

[Edit](#)

Instructions for Hotsync with Pose are on the wiki at <http://kristopherjohnson.net/wiki/HotsyncPose>



By [Gary Wiese \(Garyjwiese\)](#) on Sunday, September 29, 2002 - 11:17

pm: [Edit](#)

I am using 4.0.1 for the desk top and I only have three settings to choose from, local USB, local Serial and modem. Sense their was no Network setting I used local Serial. I went through every step with no luck. Tried all the settings in POSE to.

Its no big deal for now, I will continue with what I have always done, use the handheld. My computer is only a 233 and the emulator is far to slow to be useful.

I am going to upgrade in about a month. I'll let you know if its any faster with a 2 gig processor.

Gary



By [Steve Bohrer \(Skb\)](#) on Wednesday, October 2, 2002 - 03:23 pm: [Edit](#)

Gary, Try the Handspring version of POSE for MUCH better speed: http://www.handspring.com/developers/tech_pose.jhtml. The latest version I've tried is "POSE3.1H5", which does everything except Treos. (Note that at the top of the page they point you back to Palm's version of POSE. Read down the page to find the Handspring custom versions.)

I'm not sure where you are looking when you say your only choices are "local USB, local Serial and modem".

Is this in the POSE Hotsync app? The m100 ROM doesn't do network sync, so if that is what you have in POSE, use a different ROM image instead to do the hot sync, then use that POSE to export the MemoDB, and then import that into a POSE with the m100 image. (For this reason, you might want to use a different POSE ROM to do most of your testing, and then only check it on an m100 ROM after you have trapped all the bugs.)

If you only have these choices in the desktop HotSync Manager (NOT the Palm Desktop software, but in the tool that shows up in the system tray), then this is a new one to me. I thought all versions of Hotsync Manager could do network syncs.



By [Gary Wiese \(Garyjwiese\)](#) on Wednesday, October 2, 2002 - 11:41 pm: [Edit](#)

Steve, the rom I am using came from my IIIc. On the handheld the HotSync app has two options, the first is Local with a drop down menu with Direct Serial and IR to a PC/handheld. The second option is Modem with a drop down menu with Palm Modem US/Canada, Palm Modem UK, IBM WorkPad Modem.

The HotSync on my IIIx is a little different, still two options, Local Sync with out a drop down menu and Modem Sync with out a drop down menu.

I also have a m505, but was unable to get a rom image from it because it uses a USB cable instead of a serial cable. I did not see any way to link the rom image to the emulator, the emulators options where only for com port connections.

Gary



By [Steve Bohrer \(Skb\)](#) on Friday, October 4, 2002 - 04:23 pm: [Edit](#)

Gary,

The hotsync app only has buttons for "Local" and "Modem" syncs, but you can use the menu commands to set the "Modem Sync Prefs" and "Lan Sync Prefs" so that when you press the "Modem" button it actually does a network sync. There are detailed instructions for all this (including the menu commands!) on the wiki:

<http://kristopherjohnson.net/wiki/HotsyncPose>

I have done this with a POSE IIIc, although I don't have a real device, so my ROM came from Palm. It is still free to sign up to be able to download ROMs, which makes it possible to test you code on a range of devices. You may have to fax them a signed non-disclosure form, but otherwise the process is very simple.



By [Gary Wiese \(Garyjwiese\)](#) on Monday, October 14, 2002 - 09:46 pm: [Edit](#)

Steve, I finally upgraded my computer from a 233 to a 2.4 ghz and it did speed things up. It still isn't as fast I would have liked, but I am going to try using it anyway.

Gary



By [Gary Wiese \(Garyjwiese\)](#) on Tuesday, October 15, 2002 - 06:52 pm: [Edit](#)

I am having a problem moving the memoDB from my handheld to pose. I did this once before with help from Steve, but I upgraded to a faster pc and I am getting duplicates of every memo.

Here are the steps I went through so far.

- 1: I deleted the memoDB in rcrsedit on pose
- 2: Made a copy of memoDB on my handheld and change the creator ID to something other than memo.
- 3: I did a hotsync and drag the memocopy to pose
- 4: I changed the name of memocopy to memoDB and change the creator ID back to memo

I have duplicates of all the memos and they are not in their respective categorys either, their listed under (all).

Gary



By [Steve Bohrer \(Skb\)](#) on Tuesday, October 15, 2002 - 07:59 pm: [Edit](#)

Sounds strange. If you copy the MemoDB from your handheld, you should have exactly those memos if you drop it into a clean POSE.

The only duplicate memo problems I've had have been the result of hotsyncs -- do you have hotsync working on POSE? If so, the copies of the memos in the Palm Desktop image of the POSE user will have different unique IDs than the ones you drop in, so you will get duplicates on the next sync.

SO, if you have hotsync working with POSE, use copy and paste within the Palm Desktop program to transfer memos. If you don't have hotsync working with POSE, then copying the MemoDB from your handheld should give you exactly what you have on your handheld. In this case, check the "unfiled" category on the handheld and make sure you don't have a bunch of duplicates there! (If so, it is much faster to delete them from the Palm Desktop program than one at a time on the handheld)



By [Gary Wiese \(Garyjwiese\)](#) on Tuesday, October 15, 2002 - 10:20 pm: [Edit](#)

Steve,

I had a bunch of duplicates in the unfiled category so I deleted them and did the whole process over. Every thing is OK now except it still did not put the memo's in their own categories, so I put them back in manually.

One of these days I plan to get it to hotsync, but that will have to wait till I am done with a program I have been working on.

Gary



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 16, 2002 - 12:03 am: [Edit](#)

Gary, if you replace the MemoPad database in the emulator, you have an exact copy of it. Duplicates can't be introduced as part of the process, and the categories should be maintained exactly.

Are you using the MemoPad app to view the database on the emulator, or some other app?

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Wednesday, October 16, 2002 - 12:21 am: [Edit](#)

I am using MemoPad. Here one more thing that seems strange, in the records field it say I have 251 records and in the Size field it has 341054. If this is bytes then it seems a bit high for 251 records. Doesn't each character equal one byte?

Gary



By [Hans Nordstrom](#) on Wednesday, October 16, 2002 - 05:09 pm: [Edit](#)

Gary, your 251 records is about 1.3K on the average. If I remember right a record can have a maximum size of 4K. To me, your average doesn't seem high.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Text align

[Quartus Handheld Software: Discussion Forum: General: Text align](#)



By [Gary Wiese \(Garyjwiese\)](#) on Monday, September 9, 2002 - 12:03

am: [Edit](#)

I would like to center and right justify some text in a program and need a little help. In the files I found `\textalign` that I think would do the trick, but I don't understand some of the stack comments.

What does this mean?

: pixel-width (c-addr u -- width)

I assume that c-addr means char. address.

I think u means unsign number.

and width means it will return the width.

If I want to use this what do I need on the stack to get a char width?

Gary



By [Kris Johnson](#) on Monday, September 9, 2002 - 03:36 am: [Edit](#)

"c-addr u" almost always means the address of the start of a string and the length of the string. This is one of the standard ways of representing a string in Forth. You might want to check out the `StringsTutorial` topic in the wiki.

Here is an example of using pixel-width:

```
: kris-name ( -- c-addr u )  
  s" Kris Johnson" ;
```

```
: gary-name ( -- c-addr u )  
  s" Gary Weise" ;
```

needs `textalign`

```
kris-name pixel-width . \ prints "51"  
gary-name pixel-width . \ prints "47"
```

Note tha the c-addr is for something in Forth dataspace. If you have the absolute address of a string instead of relative address, then use the `FntCharsWidth` trap.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, September 12, 2002 - 12:08

am: [Edit](#)

Thanks Kris, Sorry I didn't get back sooner, been busy. I took your advice and checked out the strings tutorial.

Gary

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Mail delivery problems?

[Quartus Handheld Software: Discussion Forum: General: Mail delivery problems?](#)



[Edit](#)

By [Neal Bridges \(Nbridges\)](#) on Monday, August 26, 2002 - 01:04 pm:

Is anyone awaiting an email from me? I had a report on the weekend of mail not received, and thought it would be wise to inquire.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Bitmap

[Quartus Handheld Software: Discussion Forum: General: Bitmap](#)



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, August 10, 2002 - 09:21

pm: [Edit](#)

In the file \ bitmap 98.10.7 8:45 pm NAB

: bitmap (height width "name" --)

My question what do I use for "name", is this something I have to create before bitmap can write it to the screen? If so, could you give a breif discription on the process to create a bitmap. I have bitmaps in RsrcEdit that I created, do I use these?

Gary



By [Kris Johnson \(Kdj\)](#) on Sunday, August 11, 2002 - 02:50 am: [Edit](#)

The bitmap word creates a new dictionary entry, and "name" is how you can refer to the bitmap later.

For an example, see the Neal's "telephone" example. "tinychars" uses the bitmap word as well, but it is not as obvious.

To use bitmap resources, you may want to look at the [BmputilModule](#) in the wiki, particularly the `draw-bmp-rsrc` word.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Sunday, August 11, 2002 - 06:38 pm:

[Edit](#)

Thanks Kris, got it working and I made a hammer. 😊

One thing though, it will not make any thing bigger than 16 bytes acrossed? I made the length longer but had problems with the width. Not that I will need it, just playing around to see what I can do.

Gary



By [Kris Johnson \(Kdj\)](#) on Sunday, August 11, 2002 - 07:52 pm: [Edit](#)

I'm not sure what you mean by "it", but you are talking about using bitmap, then I think there might be an issue where the bitmap data has to

be a multiple of 16 bits wide.

So, for example, if you want a bitmap that is 20 bits wide, you actually have to put two full cells (32 bits) of data in each row. The twelve extra bits per row will be ignored.

BTW, I haven't actually tried this or looked at documentation. I could be steering you completely off course.

-- Kris



By [John Newell](#) on Tuesday, August 13, 2002 - 07:16 am: [Edit](#)

Gary,

If you don't want to refer to your bitmap by name to draw it then you might want to save dictionary space by redefining the bitmap word.

You might do this if you are using lots of bitmaps and don't refer to them by name (this includes all the tinyxxx stuff - lower(26), nums(10), symbols(31), upper(26) saving 93 name definitions).

```
\ bitmap 98.10.7 8:45 pm NAB
```

```
\ 13/08/02 JRN
```

```
: bitmap ( height width "name" -- )
  bl parse 2drop \ No create jrn
  \ create
  tuck , , \ width height
\ bytes/line (must be even)
  7 + 8 / dup 1 and + ,
  0 , \ flags
  0 , 0 , 0 , 0 , \ reserved
\ does> >abs WinDrawBitmap \ No does jrn
;
```

To refer to them I issue 'here' before defining them. (For all the tiny stuff I copy them to a table at an index position equal to the ascii value of the character. i.e. 'A' would be at the 65 position).

Regards
John

Add a Message

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Password:

E-mail:

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Discussion board glitch

[Quartus Handheld Software: Discussion Forum: General](#): Discussion board glitch



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 6, 2002 - 04:56 pm:

[Edit](#)

The discussion board had a minor problem yesterday; I've resolved it. Let me know if you encounter any further difficulties.

Thanks!

Neal

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Email responses

[Quartus Handheld Software: Discussion Forum: General](#): Email responses



By [Neal Bridges \(Nbridges\)](#) on Monday, August 5, 2002 - 12:57 am:

[Edit](#)

Sorry for the slow response to email this weekend, folks -- hope to be caught up by tomorrow.

Thanks for your patience!

Neal

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Strange behavior

[Quartus Handheld Software: Discussion Forum: General: Strange behavior](#)



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, August 1, 2002 - 10:53 pm:

[Edit](#)

I have written up a small program to test things, but some reason I can not get it to work. I get an Exception if file: error

Here is what I have so far. Now all it will do is beep when a button is pressed, or it will when I get it working.

```
\ nextpre
```

```
needs fields
needs ids
needs resources
needs Events
needs string2anyfield
needs string>float
needs case
needs Forms
```

```
6 constant InputFieldLen
1000 constant PreBtn
1100 constant NextBtn
1300 constant IndexFld
1400 constant ValueFld
1800 constant StepFld
1900 constant StartFld
```

```
variable steps
variable start
variable index
variable value
```

```
(ID) tgjw (ID) rsrc use-resources
```

```
create stepBuf InputFieldLen 1+ chars ALLOT
create startBuf InputFieldLen 1+ chars ALLOT
```

```
: get-itemid ( --itemid )
  event >abs itemid ;
```

```
: field-string ( -- )
  field>string string>float f>d d>s ;

: get-input ( -- )
  stepBuf dup stepFld field-string steps !
  startBuf dup startFld field-string start !

: menu-stuff ( -- ) get-itemid ;

: button-stuff ( -- ) get-itemid
  case
  NextBtn of beep endof
  PreBtn of beep endof
  endcase ;

: do-event ( ekey -- ) ekey
  dup menuEvent = if menu-stuff else
  dup ctlSelectEvent = if button-stuff
  then
  then drop ;

: go ( -- ) start begin do-event again ;
```

go

include nextpre

Exception in file: nextpre

menu-stuff? undefined word

Gary



By [Kris Johnson \(Kdj\)](#) on Friday, August 2, 2002 - 08:29 pm: [Edit](#)

It looks like you forgot a semicolon at the end of get-input.

The reason you get an "undefined word" error is because the lack of semicolon means that get-input is still being compiled when ": menu-stuff" is encountered. So, the compiler just adds a call for ":" to get-input and then tries to do the same for menu-stuff. But menu-stuff isn't defined, so it is an error.

I think the "safe" module included with Quartus will help catch things like this. Just "include safe" before anything else.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Friday, August 2, 2002 - 08:42 pm: [Edit](#)

I looked and looked and I still didn't see that 😊 It was driving my nuts, because it works in other programs. To bad Quartus doesn't tell the reason for the error like other compilers do. The compilers at the local college would break it down so I could narrow it down.

Thanks
Gary



By [Neal Bridges \(Nbridges\)](#) on Friday, August 2, 2002 - 08:45 pm: [Edit](#)

It doesn't by default, but if you

include safe

you'll find the error detection greatly expanded.

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Friday, August 2, 2002 - 09:01 pm: [Edit](#)

Thanks Neal, I didn't know that. I tried it and it showed ;? control structure mismatch

If I saw that I would have found the missing ;

Gary



By [Kris Johnson \(Kdj\)](#) on Friday, August 2, 2002 - 11:37 pm: [Edit](#)

FWIW, I found the flaw in your program in about five seconds. How? Because I've made the same mistake myself dozens of times, and I now know that an "undefined word" right after a ":" is usually because of a missing semicolon. After some experience, you'll usually know what the error messages mean, even if they don't really tell you what the problem is.

It is confusing for newbies, but bear in mind that the Forth compiler is working exactly as it should. There are cases when people do want ":" in the middle of a definition, so it is not always desirable for the compiler to complain when there is no semicolon before it.

It's something you have to accept if you are using Forth: it is a very powerful and versatile tool, but you have to do some extra work to understand what it is doing and why it isn't doing what you thought you told it to do.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Friday, August 2, 2002 - 11:57 pm: [Edit](#)

I am learning with every error what that error means, but I am sure it will happen again. After you told me what the problem was I could not believe I missed it.

Gary



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, August 3, 2002 - 12:05 am:

[Edit](#)

By the way, I want to include safe every time I run Quartus, how would I do that.

I put include safe in \ startup.quartus, but it didn't work.

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 3, 2002 - 03:55 am:

[Edit](#)

Putting it in startup.quartus should do the trick, Gary. Have a look, make sure it's executing.

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, August 3, 2002 - 05:51 am:

[Edit](#)

I have noticed that it does not work if I include safe before every thing else, but it does if I include safe after an error has occurred.

```
include safe ok
include nextpre
exception in file: nextpre
menu-stuff? undefined word
```

but if I do it like this it works

```
include nextpre
exception in file: nextpre
menu-stuff? undefined word
include safe
exception in file: safe
;? control structure mismatch
```

So how do I make sure its executing?

Gary



By [Kris Johnson \(Kdj\)](#) on Saturday, August 3, 2002 - 01:58 pm: [Edit](#)

You may want to check to see whether you have more than one memo with "\ safe" as the first line. Also check whether you have more than one startup.quartus.

One way to verify whether safe is actually being included is to add this line to the end:

```
.( Safe included )
```

This will cause "Safe included" to be printed to the Quartus console when it is included. You might want to try the same thing with startup.quartus to be sure it is working.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, August 3, 2002 - 02:23 pm:

[Edit](#)

I only have one of each file, and I added

```
.( startup.quartus )  
.( safe included )
```

with no change in results. Both are printed in the console, but safe will not work until I include it after the error and then include the file in question.

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 3, 2002 - 03:34 pm:

[Edit](#)

It's a bit confusing in this case. The error is being detected differently in both cases.

Quote:

```
include safe ok  
include nextpre  
exception in file: nextpre  
menu-stuff? undefined word
```

The error is being detected -- you've got an unterminated definition just

before 'menu-stuff?'.

Quote:

but if I do it like this it works

```
include nextpre
exception in file: nextpre
menu-stuff? undefined word
include safe
exception in file: safe
;? control structure mismatch
```

In this case you're seeing the error just as you did in the first case, followed by another error subsequent to the first when you include the 'safe' module.

Neal

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Problem with 2r>, 2>r, 2r@, >r, r>

[Quartus Handheld Software: Discussion Forum: General](#): Problem with 2r>, 2>r, 2r@, >r, r>



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, July 20, 2002 - 09:38 pm:

[Edit](#)

Do these words work in the console? I thought I have used them before, but now I can't get them to work. Here is what I am doing.

```
1 2 3 \ on the stack
```

```
2>r \ I expected to have 1 left on the stack, but I get a fatal error.
```

I have core-ext included in the file that I use them in. I thought these work in the console as well as the compiler.

Gary



By [Kris Johnson \(Kdj\)](#) on Saturday, July 20, 2002 - 10:17 pm: [Edit](#)

No, you can't use them from the console, because they change the return stack and so the interpreter crashes. The return stack must remain properly balanced.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, July 20, 2002 - 10:29 pm:

[Edit](#)

One more question about the interpreter and a compiled app. When I am working a project and try to run it, I type include Myproject and it will run. Is this considered to be interpreted?

When testing word definitions in the console by including the file their in, this is interpreted, correct?

For example, I have a file that has a word defined like this.

```
: word ( n n -- r r ) 2>r ;
```

In the console I type

```
1 2
```

```
word
```

Will this crash the interpreter or is this ok.

Gary



By [Kris Johnson \(Kdj\)](#) on Sunday, July 21, 2002 - 12:03 am: [Edit](#)

Your example will crash. What happens is that the interpreter sees "word", looks up its compiled definition, and calls it. It's fine while it runs, but when it tries to return back to the interpreter, it will crash because the interpreter's return address is no longer at the top of the stack (1 and 2 are).

This is not really anything special about the interpreter. Any code that calls "word" will lead to a crash. The standard Forth rule is that if a word puts values onto the stack, it must remove them from the stack before returning. (You can break this rule to achieve certain purposes; see the ReturnStackMagic topic in the wiki for examples.)

You can think of the interpreter as just another subroutine. It reads input, and when the input requires it to call a compiled definition, it does so.

The terms "interpretation" and "compilation" and "compiled app" are used loosely, which sometimes leads to confusion among newbies. Here is some explanation that I hope will help:

- The "Forth interpreter" is the program that runs while you are running Quartus. It is basically a loop that reads input lines and "interprets" them over and over.
- To "interpret" a line, the interpreter grabs a space-delimited word and looks up the word's definition in the dictionary. If there is a definition, then that definition is executed. It then looks up the next word on the line and does the same thing.
- Some words, particularly ":" and "[", put the interpreter into "compilation state". When in this state, the interpreter does not look up definitions and execute them--instead it adds code to a compiled definition.
- When you include a file, it is essentially the same as typing it all in line-by-line from the console.
- A "standalone application" (also sometimes called a "compiled app") is an executable application that only includes the compiled code definitions. It has no Forth interpreter.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Sunday, July 21, 2002 - 01:26 am: [Edit](#)

My fault, I wanted to write it like this.

```
: word ( n n -- r r ) 2>r 2r> ;
```

This would not crash, because the word ":" puts the interpreter into compile state and the stack would be back to its original state.

Gary

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SecretAgent now a freeware product!

[Quartus Handheld Software: Discussion Forum: General:](#)

SecretAgent now a freeware product!



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 18, 2002 - 06:52 pm:

[Edit](#)

I've today changed the status of Quartus SecretAgent from a commercial product to freeware. Find it here: <http://quartus.net/products/secretagent>

Neal

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Stack related problem "I think"

Quartus Handheld Software: Discussion Forum: [General](#): Stack related problem "I think"



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, July 4, 2002 - 11:05 pm: [Edit](#)

Ok this is driving me crazy, could someone tell me what is going on here. I wrote some definitions to calculate fractions and return fractions. The definitions work in the console, but some don't when displayed in their fields.

```
: mix>fr ( n n n -- d n )
/ Turns a fraction into a double and a single. Every fraction is turned into 64's. It
compensates for the number of doubles on the stack too. My program calculates two
doubles at a time, so it will do this
0 1 2 mix>fr 0 5 8 mix>fr and returns
32 0 64 40 0 64

/ takes a fraction like 1 32/64 and returns 1 1/2.
: reduce ( n n n -- n n reduced)

/ these will be turned back to fractions and reduced later
: -fr ( d n d n -- d n ) drop rot drop d- 64 ;
: +fr ( d n d n -- d n ) drop rot drop d+ 64 ;

/ these return a fraction already reduce
: /fr ( d n d n -- n n n ) drop rot drop
  2dup2>r ud/mod d>s rot rot 2r@
  2swap 64 s>d d* 2swap ud/mod 2swap 2r> 2
  s>d d/ d- 2dup
    d0< if 2drop d>s 64 else
      2dup d0= if 2drop d>s 1 + 64 else
        2drop d>s 1 + 64
      then
: *fr ( d n d n -- n n n ) drop rot drop d>s 1
  m*/ 4096 um/mod swap 64 /mod >64 ;
```

I have test all these on the console and they work as long as they don't go over 999 63 64.

This is what I get on the console

```
0 1 2 mix>fr 0 5 8 mix>fr
32 0 64 40 0 64 is left on the stack, then I multiply with *fr
0 5 16 is on the stack, at this point I would store them into variables dhalf ! nhalf ! ihalf ! Now the
stack should be empty.
```

I fetch the data from the variables and move them to their fields and this is what get with same data as the last example 1 1 4 which is doubled not half. There are some other calculation that are confusing me too. I think thier all related in some way, but I am lost at this point. I have isolated all the calculations and found them to be correct in the console. I checked to see if all the data I enter was being stored correctly and it is. I have concluded that my data is correct and my math is correct then my answers should be correct too, but their not, at least in the program their not.

As you probly can see I am a newbie at this, so my definitions are not what a real program would have come up with. If you could give me some pointers I would be grateful.

Gary



By [Gary Wiese \(Garyjwiese\)](#) on Friday, July 5, 2002 - 12:10 am: [Edit](#)

I forgot one thing >64 reduces to the nearest 64th.

Gary



By [Kris Johnson \(Kdj\)](#) on Friday, July 5, 2002 - 02:53 pm: [Edit](#)

I'm not sure I understand what you're asking.

It's not perfectly clear to me what your `mix>fr` word does, but by looking at the examples, I take it that it intended to take a number like $3\frac{1}{2}$ (three and one-half) and convert it to $224/64$. So the initial representation is (3 1 2) and the final representation is (224 0 64), where (224 0) is a double-cell representing the numerator.

(BTW, if you are consistently converting everything to 64ths, you can probably simplify things by leaving the denominators off the stack. But if your calculations are working, there's no need to change the code.)

I strongly recommend that you use the tester module to create a large set of test cases for your calculation words. This would provide some additional assurance that the calculations are correct. See the `udmultiply-test.txt` memo in the <http://kristopherjohnson.net/cgi-bin/twiki/view/Main/UdMultiplyModule> page for an example of how to use tester.

Now, I'm not sure what you're asking. I think you're saying that the calculations work correctly when you run them from the console, but when you display the values in GUI fields, the displayed values are incorrect.

If that's the case, then you should be examining the GUI code.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Friday, July 5, 2002 - 09:31 pm: [Edit](#)

Yes, Kris that is exactly what `mix>fr` does. I never thought about leaving the 64 off until I actually needed it, I will try that.

I don't know what could be wrong with the GUI, isn't it just to display results? Some results work fine in the GUI and others don't. I even switch them around thinking the GUI was messed up some how, but it looks like the result is incorrect.

I will go over the wiki stuff you posted and see what happens.

Thanks
Gary

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No registration code after 5 days.

[Quartus Handheld Software: Discussion Forum: General](#): No registration code after 5 days.



By [paul](#) on Friday, June 21, 2002 - 06:46 pm: [Edit](#)

I purchased Quartus Forth 5 days ago through Palmgear. I have not received my activation yet. I have contacted palmgear twice. They have resent the info to Quartus, but still no activation. What do I do to get action on this mater???

Paul



By [Neal Bridges \(Nbridges\)](#) on Friday, June 21, 2002 - 06:49 pm: [Edit](#)

Paul, I wish you had written me directly; I've received no notice from PalmGear at all that you didn't receive your registration!

My apologies for the delay. Please write me directly -- sales@quartus.net -- let me know your sales order number, and I'll re-send immediately.

Neal



By [paul](#) on Friday, June 21, 2002 - 06:56 pm: [Edit](#)

I just the info.

Paul

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name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

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Samsung SPH-I300 support

[Quartus Handheld Software: Discussion Forum: General](#): Samsung SPH-I300 support



By [Pat Phelan](#) on Monday, June 3, 2002 - 02:55 am: [Edit](#)

Please forgive me if this is an inappropriate place for this posting, but I'm new to this forum.

Does anyone know if Quartus Forth runs on a Samsung SPH-I300 phone? The phone is Palm-compatible running Palm OS 3.5.2 on a DragonBall processor.

Can anyone comment on the compatibility of Quartus Forth and this phone, and if they know if you can use the TCP/IP connectivity and other special features that the device offers?

-PatP



By [Neal Bridges \(Nbridges\)](#) on Monday, June 3, 2002 - 01:45 pm: [Edit](#)

I've had no reports about the Samsung phone, Pat, but it should work -- I'd like to know. Give it a try!

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 4, 2002 - 09:05 pm: [Edit](#)

There is a wiki page for the device. But there is little info on it.

<http://kristopherjohnson.net/wiki/SamsungI300>

Please share whatever you do find out about the I300. I've been thinking about getting one myself.

-- Kris



By [Donnie Walker](#) on Tuesday, June 25, 2002 - 11:27 am: [Edit](#)

I have tried using Quartus Forth on the Samsung SPH-I300 phone, and whenever I write a return in the graffiti area it comes back with a fatal error (invalid memory handle).

Donnie



By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 25, 2002 - 01:36 pm:

[Edit](#)

Donnie, are you running any other extensions, HackMaster modules, etc.?

Neal



By [Donnie Walker](#) on Tuesday, June 25, 2002 - 05:17 pm: [Edit](#)

Nope, not running any extensions.

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

The Magically Moving Wiki

[Quartus Handheld Software: Discussion Forum: General](#): The Magically Moving Wiki



By [Kris Johnson \(Kdj\)](#) on Wednesday, May 29, 2002 - 10:42 pm: [Edit](#)

The wiki is being moved to a new site. I'd appreciate it if people would try it out:

<http://kristopherjohnson.net/cgi-bin/twiki/view>

Your passwords from the old site should work fine on the new site.

I'll leave both sites up for a few days. Please use the new one. If everything works, I'll set up redirects from the old site to the new one.

Please let me know about any problems.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, May 30, 2002 - 01:37 am:

[Edit](#)

I've adjusted the left-hand menu selections to point to the new location.

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, May 31, 2002 - 07:55 am: [Edit](#)

The new site seems to be working fine. I've set up redirects so that URLs to the sleepless-night.com wiki should automatically go to the new site.

I've set up a couple of new "webs" in the wiki. One, IC, is going to be devoted to discussions of independent contracting and consulting. The other, KJ, is my own personal space that will hold stuff that is of no interest to anyone but me. You can visit either of these webs by clicking the links in the upper-right corner of the wiki pages.

I considered moving the Quartus-related stuff to its own web, but decided against it. Quartus Forth, Quartus RsrcEdit, Palm OS, and the Forth language topics are all so interconnected that I decided to just leave them in the Main web for now.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, May 31, 2002 - 08:26 am: [Edit](#)

There is one minor issue: after changing an existing topic, sometimes the "diff" function doesn't work. The problem gets corrected after the next time someone makes a change to the topic.

I suspect this is due to changes to the name of the user account on the server under which the wiki software runs. But it could also be due to differences in other server software (RCS, difftools, etc.)

I'll look into this, but it's not that big a deal.

-- Kris

 By [Kris Johnson \(Kdj\)](#) on Sunday, August 11, 2002 - 12:56 pm: [Edit](#)

The wiki has been moved for a couple of months now. Does anyone notice any difference, for better or worse? I don't know whether others have the same trouble connecting to it that they did with the sleepless-night site.

I think the new site is a little slower to respond, but it seems to suffer less downtime.

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Sunday, August 11, 2002 - 05:07 pm: [Edit](#)

Kris, it has been more consistently reliable for me since you last moved it.

Neal

 By [Gary Wiese \(Garyjwiese\)](#) on Sunday, August 11, 2002 - 06:32 pm: [Edit](#)

Its been about the same as before, but I never had any trouble before either.

Gary

 By [Richard Chamberlain \(Rac\)](#) on Monday, August 12, 2002 - 04:47 am: [Edit](#)

Kris,

I was unable to connect to it before from home, but now I can...

So that's good.

 By [Kris Johnson \(Kdj\)](#) on Tuesday, August 13, 2002 - 09:16 pm: [Edit](#)

Thanks for the responses. I've made a configuration change that should speed up the response time quite a bit while viewing. (It will still be a little slow when editing.)

-- Kris



By [Kris Johnson \(Kdj\)](#) on Saturday, November 9, 2002 - 05:47 pm: [Edit](#)

FYI, the sleepless-night.com domain is moving to a different web hosting provider. It will no longer have the automatic redirection to the current wiki site at <http://kristopherjohnson.net/wiki/>.

If anyone is still using the sleepless-night.com URLs to access the wiki, you will need to switch to kristopherjohnson.net.

-- Kris

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Getting Ascii values

[Quartus Handheld Software: Discussion Forum: General: Getting Ascii values](#)



By [Leland Williams \(Leland\)](#) on Tuesday, May 28, 2002 - 06:02 pm:

[Edit](#)

I am writing a program in gforth, (just as a mock-up in console mode, I'll Quartus-ize it later) and I am working on making it more readable, so I am reworking some CASE blocks. Right now the CASEOF puts an ASCII value on the stack for certain numbers, but that is not very readable, so I looked in the gforth manual, and noticed that if I attach a tick (') to the beginning of a character, eg. 'a, that would put the ascii value of 'a' on the stack. I tried it in Quartus, but it didn't work. Is there some equivalent to that in Quartus ?



By [Julian Fondren](#) on Tuesday, May 28, 2002 - 06:14 pm: [Edit](#)

```
CHAR a CHAR abc
```

```
: uppercase? ( c -- f ) [CHAR] A [ CHAR Z 1+ ] LITERAL WITHIN ;
```

```
: CHAR WORD 1+ c@ ;
```

```
: [CHAR] CHAR POSTPONE LITERAL ; IMMEDIATE
```

```
: ASCII STATE @ IF POSTPONE [CHAR] EXIT THEN CHAR ; IMMEDIATE
```



By [kdj](#) on Tuesday, May 28, 2002 - 06:15 pm: [Edit](#)

"char a" in interpret mode or "[char] a" inside a definition will do the same thing.

gforth's behavior is not standard Forth.

-- Kris



By [Julian Fondren](#) on Wednesday, May 29, 2002 - 02:26 pm: [Edit](#)

If you really like the gforth behavior, though:

```
: ?LIT STATE @ IF POSTPONE LITERAL THEN ;
```

```
: GFORTH-CHAR WORD 1+ 1+ C@ ?LIT ; IMMEDIATE
```

ta-da! Example usage:

```
GFORTH-CHAR 'a
```

```
: lowercase? GFORTH-CHAR 'a GFORTH-CHAR 'z 1+ WITHIN ;
```

```
GFORTH-CHAR \a
```

Note from the last example that *any* character may be used in place of the tick-mark that is gforth's syntax, and yet GFORTH-CHAR will still pick out the character you mean. Isn't this wonderful? GFORTH-CHAR even understands more complex syntaxes such as

```
GFORTH-CHAR >A< -Is-THE-CHAR-I-MEAN
```

However, it fails on

```
GFORTH-CHAR THE-CHAR-I-MEAN-IS:A
```

but at least this is better than gforth's syntax, and anyway future versions of GFORTH-CHAR are expected to fix this problem when the DWIM word is completed.

If you want something closer, but less intelligent than GFORTH-CHAR, to gforth's syntax, you might consider hacking Quartus's outer interpreter.



By [Kris Johnson \(Kdj\)](#) on Wednesday, May 29, 2002 - 06:52 pm: [Edit](#)

Why would anyone prefer to write "gforth-char 'a" to "char a"? 😊

Another potential solution (if you like the gforth notation) is this:

```
char a constant 'a
char b constant 'b
char c constant 'c
\ ... etc ...
```

-- Kris



By [Leland Williams \(Leland\)](#) on Friday, May 31, 2002 - 12:46 am: [Edit](#)

Man ! Where else can you get such interesting and erudite replies like the ones above. Thank you both, I'll be digesting them for days.

For now I will use the standard char [char] since it seems more readable.

But - why use [char] in definitions ? What is so different about char and [char]? Are they 2 separate words, or do the square brackets modify something ?



By [Neal Bridges \(Nbridges\)](#) on Friday, May 31, 2002 - 01:06 am: [Edit](#)

char and [char] are in fact two distinct words.

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, May 31, 2002 - 07:35 am: [Edit](#)

`[char]` is an immediate word, and will compile a character code literal into a definition.

`char` is not immediate. If you put it inside a definition, then that defined word will read a character when the word is run.

The ASCII word defined by Julian Fondren above will do "the right thing" depending upon whether you are compiling or interpreting. It acts like `[char]` when compiling and like `char` otherwise.

For example,

```
: ascii-a ( -- c )
  [char] a ;
```

```
ascii-a emit \ will print "a"
```

```
char b constant const-b
```

```
const-b emit \ will print "b"
```

```
: emit-twice ( "c" -- )
  char dup emit emit ;
```

```
emit-twice a \ will print "aa"
```

```
emit-twice b \ will print "bb"
```

```
: ascii STATE @ IF POSTPONE [CHAR] EXIT THEN CHAR ; IMMEDIATE
```

```
: ascii-c ( -- c )
  ascii c ;
```

```
ascii d constant ascii-d
```

```
ascii-c emit \ prints "c"
```

```
ascii-d emit \ prints "d"
```

-- Kris

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Question about popup resources

[Quartus Handheld Software: Discussion Forum: General](#): Question about popup resources



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, May 18, 2002 - 09:15 pm:

[Edit](#)

I have app. that uses popuptriggers to input data and I am having a problem getting the data returned, all I get now is garbage.

Here is what I have now:

```
6 constant InputFieldLen
1000 constant ListNum
1112 constant PopupNumSpan
1112 constant PopTrgNumSpan
1001 constant ListDen
1113 constant PopupDenSpan
1113 constant PopTrgDenSpan
1114 constant PopupNumOff
1115 constant PopupDenOff
1116 constant PopupNumBal
1117 constant PopupDenBal
1114 constant PopTrgNumOff
1115 constant PopTrgDenOff
1116 constant PopTrgNumBal
1117 constant PopTrgDenBal
```

```
create spanintBuf InputFieldLen 1+ chars ALLOT
create spannumBuf InputFieldLen 1+ chars ALLOT
create spandenBuf InputFieldLen 1+ chars ALLOT
```

```
variable ispan
variable nspan
variable dspan
```

```
: get-input ( -- )
spanintBuf dup SpanFld field-string ispan !
spannumBuf dup PopTrgNumSpan field-string nspan !
spandenBuf dup PopTrgDenSpan field-string dspan ! ;
```

When I print the variables to a field I get garbage back. Is there something I must do differently when using popuptriggers to get data from the user?

Gary



By [Neal Bridges \(Nbridges\)](#) on Friday, May 24, 2002 - 03:34 pm: [Edit](#)

Gary, I see no takers for your problem -- what does your 'field-string' function return?

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Friday, May 24, 2002 - 04:16 pm: [Edit](#)

Neal thanks for getting back. I think my problems is a little more complex than I thought.

I defined field-string like this to save time.

```
: field-string  
  field>string string>float f>d d>s ;
```

I got some info from Dave Bennett that should put in the right direction. I will be trying to do some work on it this weekend, but it being a holiday makes it hard.

Gary

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Email clients

[Quartus Handheld Software: Discussion Forum: General: Email clients](#)



By [Neal Bridges \(Nbridges\)](#) on Monday, May 6, 2002 - 07:18 pm: [Edit](#)

Any recommendations for a decent one? Eudora is not my friend.

Neal



By [kdj](#) on Monday, May 6, 2002 - 11:33 pm: [Edit](#)

I've been using Yahoo! Mail for the past few years. I don't miss having a "thick client" e-mail program, and it makes it easy for me to use e-mail no matter where I am or who's computer I'm using.

-- Kris



By [Jim Hendricks \(Jimh\)](#) on Tuesday, May 7, 2002 - 09:39 am: [Edit](#)

Believe it or not, I've been happily using MS Outlook Express. I use Yahoo! to pop my regular mail when I'm on the road.

I don't like using a web client all the time due to the speed of going through multiple e-mails. Even on a high speed connection, going from 1 e-mail to the next costs a few seconds whereas in a PC client the wait is a fraction of a second. I receive 20-50 e-mails per day so this is important to me. I also archive a lot of my e-mail, the web clients don't make that so easy since you are limited as to the size of your mailbox.

Jim



By [Brian Chirgwin \(Bchirgwin\)](#) on Tuesday, May 7, 2002 - 12:58 pm:

[Edit](#)

I switched from Eudora to Pocomail (www.pocomail.com) about 6 months ago. Very similar to Eudora, but with more features. Can even import your Eudora Address and email. The Junk Mail Filtering works great. The scripting language is also useful.



By [Kris Johnson \(Kdj\)](#) on Tuesday, May 7, 2002 - 06:14 pm: [Edit](#)

I was happy with corporate-mandated MS Outlook (non-Express) back when I was a working man.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 7, 2002 - 08:29 pm: [Edit](#)

Giving Pocomail a try now. Thanks for the feedback, all!

Neal



By [Dave Bennett \(Dbennett\)](#) on Wednesday, May 8, 2002 - 11:42 am:
[Edit](#)

Hmmmm. If this is for the Palm, I'm currently using Eudora. Not too bad. I used Multi-mail for a year before that. On the PC (Linux) side, I use Kmail or emacs. 😊



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 8, 2002 - 04:46 pm:
[Edit](#)

For the desktop, where I'm Win32 most of the time.

Neal

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E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Quartus Forth for Pocket PC

[Quartus Handheld Software: Discussion Forum: General: Quartus Forth for Pocket PC](#)



By [John Newell](#) on Friday, May 3, 2002 - 08:21 am: [Edit](#)

Neal,

Is there any chance of you making a Pocket PC version of Quartus Forth? I would like to compile my programs to run on handhelds that work in that environment. I don't know the API of Windows so it may be too different to be viable. Any thoughts?

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Friday, May 3, 2002 - 07:11 pm: [Edit](#)

Hi, John. I have no immediate plans to port Quartus Forth to the Pocket PC.

Neal



By [John Newell](#) on Sunday, May 5, 2002 - 09:50 am: [Edit](#)

Neal,
Thanks for replying.

Don't get me wrong, I accept your statement about no immediate plans and understand that you have other priorities with regard to Quartus Forth but i'd just like to get a feeling of the views of other Quartus Forth users on the subject if they would like to comment.

I like the Palm platform and I like using Quartus Forth ...but I see a lot of people with the Pocket PC also. If I wish to have code that runs on both platforms I guess I'll have to start using something like C that has cross platform support.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Sunday, May 5, 2002 - 01:46 pm: [Edit](#)

C will not give you cross-platform support between the Palm and Pocket PC, except in the very broadest sense -- you'd be using a C compiler (a different one) in both cases. The same C code will not run on both platforms; they're hugely different.

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, May 5, 2002 - 04:35 pm: [Edit](#)

If you are interested in a Forth for Pocket PC, you can check out dsForth from <http://www.delosoft.com>.

But as Neal says, the operating systems' APIs are so different that cross-platform code is difficult to achieve, regardless of programming language or development tool.

You may want to check out Waba or other Java-esque tools.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, May 5, 2002 - 09:45 pm: [Edit](#)

Java will only allow you cross-platform compatibility to a point; anything device-specific you want to do means the use of device-specific APIs, and again you've lost your cross-platform compatibility.

If you stay within the bounds of something like, say, the MIDP API, your app will port between a number of devices -- but you'll be operating under significant constraints, for instance: the inability to have an input field and a bitmap on the same screen; no floating-point; etc.

Cross-platform compatibility is a pipe-dream. Attempting to achieve it means accepting dramatic limitations in the functionality available to your application -- the greater the number of differing devices, the greater the limitations.

Neal



By [Mike Will](#) on Sunday, May 5, 2002 - 11:00 pm: [Edit](#)

Somewhere, over the rainbow, where skies are blue, someone is working on a good PalmOS simulator to run on PocketPC. That's the only real solution to cross-platform, IMHO

Mike



By [Neal Bridges \(Nbridges\)](#) on Sunday, May 5, 2002 - 11:05 pm: [Edit](#)

Even then, you'd be running inside a rubber room; the app would run, but would it have access to the hardware and databases resident in the host Pocket PC environment? Would the users have to interact with it as a Palm app, instead of a Pocket PC app, with all the concomitant differences in the GUI controls? And etc.

Neal



By [Jim Hendricks \(Jimh\)](#) on Monday, May 6, 2002 - 07:39 am: [Edit](#)

Java on the desktop does bring with it very good cross platform ability, but the cost is in a very large runtime lib, and less than stellar performance with the GUI. Both of these costs are too costly for a small resource limited HC (Hand Computer). I program in Java for a living and would love to program it for my Palm, but each time I look at the runtime, I'm disuaded. I now have a Clie with 16Meg internal, 1.6Meg flash, and a 64Meg MS, which would cause me to reconsider, but when I look at the GUI of the various Palm Java equivalents, I get upset again because they are so disfunctional compared to their PC equivalents.



By [Mike Will](#) on Monday, May 6, 2002 - 08:07 am: [Edit](#)

Hey, don't knock being inside a rubber room until you've tried it. The simulator would be a tightly coded translator between the PalmOS and the PPC hardware. For example, beaming could be written as if you're on a Palm, but would act using the PPC's chipset. The screen would be 160x160 or one of the other 'standards' like Clie or HandEra.

The POSE emulator proves the feasibility of this approach. Throw the possibility of them both being ARM-based in the future into the mix and I don't think I'm talking science fiction here.

In fact, I'm sure I've seen such a simulator (and another for the Nintendo Gameboy) before. I think I dismissed them because they weren't very well done.

Mike



By [Neal Bridges \(Nbridges\)](#) on Monday, May 6, 2002 - 11:27 am: [Edit](#)

Mike, even assuming it all goes as you suggest -- that's cross-platform compatibility across two devices, with the app's origin on the Palm side.

Add a third device to the mix -- say, a RIM Blackberry -- or consider a PPC app you'd like to have run on the Palm, and again you're out of the game.

Neal



By [Mike Will](#) on Monday, May 6, 2002 - 03:00 pm: [Edit](#)

You're absolutely right. That's my point, really. There is no such thing as cross-platform code. There is only abstracted code. Java has been abstracted to a virtual environment that runs on top of a viciously

platform-dependent kernel. In fact, a Java Virtual Machine **is** a simulator.

To me, that's the beauty of Forth. It's the lowest level environment that can be used to achieve platform-independence. Forth's virtual machine is the stack, which can be implemented in 100 bytes of simple code. I don't count C as a language. It's only an standardized set of assembly calls, each of which must be painstakingly created for each target.

I'm often amazed at how easy it is to get a 20-year-old hunk of Forth working again on a modern machine. That just doesn't happen with any other language.

Mike



By [Jim Hendricks \(Jimh\)](#) on Monday, May 6, 2002 - 03:21 pm: [Edit](#)

Your right Mike, Java is really a simulator, that's why they call the runtime a VM. The Java language is targeted for a Java CPU which does not exist. The VM as implemented on each platform is actually a JavaCPU emulator.

Forth is also a VM in that the Kernel produces the same non-native(to the CPU) environment. The beauty of the Forth VM is how simple it is and yet how much functionality it provides without going outside the VM (which is what you do in the case of inline ASM). The dang blasted thing of that simplicity though is the total elimination of Media. Your in Forth media amounts to TTY output & simple beeps. I have actually dreamed of a vocabulary of graphic and sound words which could be established as an optional standard. This would mean that if you have an app that relies on this vocab, you can run your app in any Forth that has an implementation of this vocab.

That of course still leaves out all the rest of things like comms etc. but it would make things simpler for writing apps for multiple platforms.

BTW,for John, if you find that DSForth works fine for you on PPC, you may want to consider doing the UI as primitives. Rather than using the built-in UI on the Palm, you draw the lines etc. for creating buttons, text fields etc. This would mean your platform dependant code is limited to how do I draw on the screen, and how do I receive events. This is the latest approach in Java with the whole Swing initiative. This may not produce a GUI that's as fast as the native GUI on either platform, but it does provide you with simpler porting.



By [John Newell](#) on Wednesday, May 8, 2002 - 07:32 am: [Edit](#)

Thanks to everyone for their contributions. Lots to think about.

Regards
John

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Receiving the registered version

[Quartus Handheld Software: Discussion Forum: General](#): Receiving the registered version



By [Julian Fondren](#) on Wednesday, April 10, 2002 - 07:47 pm: [Edit](#)

I just ordered Quartus Forth (yay!) from palmgear oh, maybe ten minutes ago, and since

1. It appears that Neal must send Quartus Forth to me manually,
2. Neal has historically been unable to reach me through email, and
3. There are several threads under this topic about people not getting the registered version,

I have decided to become preemptively worried and upset. How long does it usually take? PalmGear days 1/2 days... bad for 'instant gratification' right off the bat.



By [Neal Bridges \(Nbridges\)](#) on Thursday, April 11, 2002 - 11:33 am:

[Edit](#)

Your order just came in from PalmGear, Julian. I shall spare no effort in getting the software out to you tonight. 😊

I take it my reply to your earlier mail never arrived?

Thanks for your registration!

Neal



By [Julian Fondren](#) on Thursday, April 11, 2002 - 07:06 pm: [Edit](#)

Great! I'll look for it.

No, I've never received email from you.

Thank you =)



By [Julian Fondren](#) on Friday, April 12, 2002 - 06:01 pm: [Edit](#)

Have you sent it yet, Neal? ...



By [Neal Bridges \(Nbridges\)](#) on Saturday, April 13, 2002 - 02:40 am:

[Edit](#)

Yes indeed, earlier this evening. Let me know if it made it!

Neal

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Is there a "And" that works with If , then.

[Quartus Handheld Software: Discussion Forum: General](#): Is there a "And" that works with If , then.



By [Gary Wiese \(Garyjwiese\)](#) on Monday, March 18, 2002 - 07:20 pm:

[Edit](#)

Is there something in Forth where I can use "and" with a If Then test.

For example:

```
: test
  denominator 0 = if and
    integer 0 = if zero error
  then ;
```

Or is there a why to do it without using and.

Gary



By [Julian Fondren](#) on Monday, March 18, 2002 - 09:10 pm: [Edit](#)

ITYW

```
: test denominator 0= integer 0= and
if zero error then ;
```

or maybe just

```
: test denominator integer or 0=
if zero error then ;
```

Your supplied code belies a misunderstanding of both Forth control-flow and such words as 'and'; I suggest a good tutorial... um, the documentation that comes with Gforth is pretty good.



By [Kris Johnson \(Kdj\)](#) on Monday, March 18, 2002 - 10:20 pm: [Edit](#)

Also see Neil Bawd's ANDIF word, at <http://home.earthlink.net/~neilbawd/toolbelt.html#ANDIF>.

This lets one write code such as this:

```
: test
  denominator 0 = andif integer 0 = if
```

```
zero error
then then ;
```

This evaluates the conditions in a "short-circuit" manner, such that the stuff after ANDIF will not be executed at all if the first condition is false.

(Also note that you need a number of THENs equal to the number of IFs.)

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Monday, March 18, 2002 - 10:21 pm:

[Edit](#)

Thanks Julian, It worked just the way I wanted. Can I get that documentation on the internet without purchasing GForth?

Gary



By [Kris Johnson \(Kdj\)](#) on Monday, March 18, 2002 - 10:23 pm: [Edit](#)

The manual for GForth is available here:

<http://www.complang.tuwien.ac.at/forth/gforth/Docs-html/gforth.html>

GForth is free software.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Monday, March 18, 2002 - 10:45 pm:

[Edit](#)

Thanks Kris

Gary

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

E-mail trouble

[Quartus Handheld Software: Discussion Forum: General](#): E-mail trouble



By [Neal Bridges \(Nbridges\)](#) on Monday, February 11, 2002 - 02:41 pm: [Edit](#)

Having a very public email address means spam, and in the last month I've been literally inundated with it. I'm filtering as best I can, but there's always a chance I'll lose wheat along with the chaff.

If you've written and feel ignored, please write again; alternatively, post here -- this place is all signal and no noise, thankfully.

Neal



By [Brian Chirgwin \(Bchirgwin\)](#) on Monday, February 11, 2002 - 04:05 pm: [Edit](#)

If anyone has any good tips for filtering out SPAM I would like to know what they are. I haven't found filters to work. As you have already stated some important messages can be thrown out with the SPAM making your business suffer lost sales, not theirs.

I believe the only way to rid spam is to put the SPAMMERS out of business. This takes a united effort and can only be accomplished by having spam cost the spammer \$\$\$\$. This means taking the time to contact them and ask questions wasting their time. Ask for a brochure to be mailed (Just to have them waste money). The spammer will increase sales staff because of all the sales calls they are getting. In fact, if enough people call and ask questions it would create a type of denial of service as "real" sales would not be able to get through having them loose sales. Have them burn revenue hiring more people and buying more phone lines and other resources. Eventually, antispam calls will overtake them and put them out of business. New companies of course will not use spam as it will be to costly.

The above works with telemarketing. I haven't received a sales call in over a year. If you hang up a telemarketer will call someone else. The goal is to have the telemarketer hang up the phone on you. After two or three calls you will be BLACKLISTED (or at least it seems this way). If you keep a telemarketer on the phone for 15 - 30 minutes that quite a few calls they can't make.

The following was sent to me a few weeks ago about snail-mail. I haven't done this yet. I am collecting those paid envelopes though:

When you get ads (I call them SPAM even though it isn't 100% true) in your phone or utility bill, include them with the payment. Let them throw it away.

When you get those pre approved letters in the mail for everything from credit cards to 2nd mortgages and junk like that, most of them come with postage paid return envelopes, right?

Well, why not get rid of some of your other junk mail and put it in these cool little envelopes!

Send an ad for your local dry cleaner to American Express. Or a pizza coupon to Citibank. (I especially liked this!)

If you didn't get anything else that day, then just send them their application back! If you want to remain anonymous, just make sure your name isn't on anything you send them.

You can Send it back empty if you want to just to keep them guessing!

Eventually, the banks and credit card companies will begin getting all their junk back in the mail.

Let's let them know what it's like to get junk mail, and best of all THEY'RE paying for it! Twice!

Let's help keep our postal service busy since they say e-mail is cutting into their business, and that's why they need to increase postage again!

Yes, if you can't tell, I hate spam.



By [Heather Risedorph \(Rise1525\)](#) on Monday, February 11, 2002 - 04:30 pm: [Edit](#)

I wish I had more time to annoy marketers...

I would be leary about contacting spammers from email or web ads because then they'll have your phone number. You can try to say that your number is 555-5555 but then you risk the whole caller ID thing. I don't want to get more telemarketing just because I tried to cut down on email and web ad marketing.



By [Kris Johnson \(Kdj\)](#) on Monday, February 11, 2002 - 06:12 pm: [Edit](#)

See <http://www.junkbusters.com/> for some advice about reducing annoyances.

-- Kris



By [Chapman Flack](#) on Monday, February 11, 2002 - 11:26 pm: [Edit](#)

I tend to agree that "cost them money" is the only workable solution. I used to spend time on it but I confess I haven't recently.

Here's an idea for a new sector of the economy: spam-response-centers. Let me push a button on my phone that instantly transfers the telemarketer to my local S.R.C. whom I pay a slight monthly fee to employ people to keep telemarketers busy asking stupid questions until they give up. I can also drive my junk mail basket down to the S.R.C. once a month and dump it in their hopper, where it would provide employment for people to open it, destroy the personally identifying parts, fill the reply envelopes with interesting stuff, and drop 'em back in the mail.

One of the defenses I hear increasingly is that I should say nice things about telemarketers because they have a legitimate job they were able to get and it's hard and people say mean things to them. My sympathy is limited because the "legitimate job" was invented in my adult memory and first used for the sleaziest purposes and has only become remotely acceptable through wearing down people's outrage. But anyway, here's a solution for the poor persecuted telemarketing drones: quit, and get jobs at S.R.C.s, and people will like you! 😊

SpamCop may be one of the closest things available on line; there's a link at spamcop.com.

-Chap



By [Dave Bennett \(Dbennett\)](#) on Tuesday, February 12, 2002 - 12:09 pm: [Edit](#)

Take those postage paid return envelopes, tape them to a brick, and mail them. Personal experience, it works. You'll never get anything from those folks again.

Dave



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, February 14, 2002 - 08:46 am: [Edit](#)

Just to add my one experience in getting a spammer to stop. I was getting several spam ads per day, coming from the same domain name. I had tried their "opt out" link but that apparently only proved my e-mail address was valid and the junk continued to pour in. I began a search of anti-spam sites

to see what I could find, and low and behold, on one of them the company that was sending this junk to me was profiled - owner, address, and most importantly, the owner's e-mail address. Interestingly, his own address appeared to be with a separate ISP.

I sent him a note telling him that I didn't want any further unsolicited e-mail from his company, and that I would be charging him \$100 per item that I received in the future as a service charge to handle it. I finished the note with a statement that said if he sent further unsolicited material it constituted a contractual agreement to my terms.

Of course, I received no response and the spam continued. However, each day after that I sent him an updated "invoice" that listed the number of items I had handled since putting him on notice and a balance due at \$100 per item. When the balance got up over \$2,000, the spam suddenly stopped coming.

My guess is that the guy figured that if the "bill" got high enough I would be able to find a lawyer to pursue it on a contingency basis and that he might actually have to pay something, so it was easier to just remove me from the list. The key was getting lucky and finding the guy's e-mail address. Not typical, but it enabled me to actually win one.

Barry



By [Chapman Flack](#) on Friday, March 1, 2002 - 07:18 pm: [Edit](#)

I should have said spamcop.net above. It's the service I was thinking of. Spamcop.com has apparently been DNSnapped by some outfit that has nothing to do with spamcop.net.

Spamcop.net has an excellent service (a free registration version is available) where you just forward any spam you receive in its entirety (or paste it into a web form), and spamcop:

- goes through the routing headers of the e-mail to determine which are valid, which are forged, and which ISP(s) were likely the true injection sites;
- tests possible injection sites to see if they are misconfigured to act as open relays;
- writes spam reports addressed to the abuse addresses at those ISPs, -with your e-mail address blinded- so they can't just add you to their live list;
- allows the administrators to reply to your report via spamcop.net (not

revealing your address) if they need to.

It's an excellent service. I've known about it for a while but just started using it. I recommend it. It makes reporting spam very easy without compromising your address, and the more people who do it, the better.

-Chap



By [Julian Fondren](#) on Monday, March 11, 2002 - 09:22 pm: [Edit](#)

Neil, I've re-sent you a previous question, with similar total lack of response. Is this an answer, or does your antispyware block hotmail? (Or what?)



By [Neal Bridges \(Nbridges\)](#) on Monday, March 11, 2002 - 09:35 pm:

[Edit](#)

Worse than that; I got your question, and replied. I'll re-send.

Neal



By [Julian Fondren](#) on Monday, March 11, 2002 - 10:17 pm: [Edit](#)

err, bother; I don't think Hotmail is accepting it, for some reason. Could you please try, if it's not too much bother, (created just now) cleverjulian@yahoo.com?

Thanks.



By [Thomas Affinito](#) on Monday, March 18, 2002 - 10:16 pm: [Edit](#)

Hi Neal,

I've been trying to get a copy of 1.2.6R from you thru email and have not heard from you yet...maybe I got SPAM filtered?

When you get the chance....

Thanks!

Tom

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Large Strings

[Quartus Handheld Software: Discussion Forum: General](#): Large Strings



By [Joe Nasal \(Jsn\)](#) on Saturday, February 9, 2002 - 05:37 pm: [Edit](#)

Hi all:

I'm trying to populate a scrollable field with a large string (several hundred characters over several lines). I've tried creating a zero-terminated string with z", but when I get over some (variable) critical length (around 200 characters) Quartus fails to compile the code and bails with a "Fatal Exception", resets my box, etc. I'm a newbie, so the chances I've missed something are great...

My approach is this -- within a colon word I start typing, z" blahblahblah...blahblahblah " What's between the quotes is several hundred characters; as I'd mentioned it spans several lines in my text editor. Ideally, I'd like to embed carriage-returns in the string for formatting purposes, but I don't know how to do this...

...which brings up another question: can I somehow take the contents of a string resource (tStr) and use them to populate a field? Since this is "static" text it would be convenient for me to define these long strings for reference in a string resource.

Thanks,

Joe

Add a Message

Username:

not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

Integer math

[Quartus Handheld Software: Discussion Forum: General](#): Integer math



By [Gary Wiese \(Garyjwiese\)](#) on Friday, February 1, 2002 - 10:49 pm:

[Edit](#)

When doing calculations on fractions is there a better way than floating point. Floating point is more understandable to me than integer math, but I here that integer math is better then floating point. I am having a hard time understanding integer math, is there some place where I can learn it? In my next program I need to do simple calculation on fractions, like $150 \frac{1}{2} - 4 \frac{5}{8}$ and have the result converted back to a fraction.

On paper this is easy, but on a computer you have cell overflow and underflow. Can anyone give me some examples showing how to do this in integer math? I will be doing $/ * + -$ on these numbers, so far this stuff is giving me fits.

Is there any place on the web to learn about doing fractional calculations in integer math?

Gary



By [Kris Johnson \(Kdj\)](#) on Friday, February 1, 2002 - 11:30 pm: [Edit](#)

To deal with integer overflow, you could:

- Use double-cell integers rather than single cells
- On intermediate values, reduce the fraction to lowest terms. There is a "gcd" (greatest common denominator) word defined in the wiki that could help.

But it depends upon what sorts of numbers you will be using. The calculation " $150 \frac{1}{2} - 4 \frac{5}{8}$ " fits into single cells just fine.

Integer math is "better" in that it gives you exact answers. And integer math is faster than floating-point math. But if handling numbers without worrying about overflow is more important than getting exact rational answers, floats are probably better (but remember that floats can overflow/underflow too).

Another possibility is to use fixed-point numbers instead of fractions. For example, if all of your calculations will be on units expressed in eighths (multiples of $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$), then you can just use an eighth as your basic

unit for calculations, and only convert it to/from fractional form for display/input.

Finally, you could implement a "bignum" kind of data type, which is the generic term for an integer of arbitrary size.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, February 2, 2002 - 12:12 am: [Edit](#)

Most of the numbers will be like my examples and "gcd" on the wiki would be a great help. However I did not know that you would do calculations as you would on paper, I thought that you would do them in a way the computer works. This is where I get confused.

I have tried to use fixed-point numbers, but found it to be even more confusing. I have a book here called Starting Forth by Leo Brodie and he has a section on fixed-point. It is very brief and leaves me with more questions than answers.

Integer math is something I should be learning and getting comfortable with. This is the main reason for using it. For me, using it is the best way to learn. I just need some pointers on the way.

I don't have any ideal of how to implement a "bignum" data type, a bit over my head. Maybe some day I will, but not yet 😊

Thanks
Gary



By [Kris Johnson \(Kdj\)](#) on Saturday, February 2, 2002 - 12:40 am: [Edit](#)

I'm not sure if you still have a question or not, but...

You implement arithmetic with ratios on a computer pretty much the same way that you do with on paper. For example, to calculate "150 1/2 - 4 5/8", the steps are:

- Convert each number to a ratio. $150 \frac{1}{2} = \frac{301}{2}$, and $4 \frac{5}{8} = \frac{37}{8}$.
- To add ratios, the formula is " $\frac{a}{b} + \frac{c}{d} = \frac{a*d + b*c}{b*d}$ ". So in our case, $\frac{301}{2} - \frac{37}{8} = \frac{(2408-74)}{16} = \frac{2334}{16}$.
- Use gcd to reduce it to $\frac{1167}{8}$.
- Express the result as $145 \frac{7}{8}$.

So, just write some Forth words to perform the above operations. For example, you might have a word with stack effect (whole numerator denominator -- numerator denominator) that converts a whole+fraction to a ratio, another word with stack effect (num1 den1 num2 den2 -- num den) that adds two ratios, a word that reduces a ratio to lowest terms, and one that converts a ratio back to a whole+fraction representation.

To do fixed-point, you could just decide to do all the calculations as eighths. so 150 1/2 is 1204 eighths, and 4 5/8 is 37 eighths, and 1204-37=1167, as above.

Fixed-point is easier than rational, as long as you have a convenient unit to use.

There are some esoteric algorithms and optimizations to do the above more efficiently, but if you want to understand the basics, I suggest you start with the straightforward approach.

If you haven't already, you might want to check out the <http://sleepless-night.com/cgi-bin/twiki/view/Main/ScaledArithmetic> topic in the wiki.

-- Kris



By [Chapman Flack](#) on Saturday, February 2, 2002 - 01:15 am: [Edit](#)

"Integer math is better in that it gives you exact answers" - only if you're going to implement arbitrary precision bignums, do everything in rational arithmetic, and avoid any irrational values (or represent and manipulate irrational factors symbolically - in which case you'll be using Maple or Mathematica, or effectively implementing the kernel of one of those yourself).

Otherwise the statement is a common misunderstanding that results from thinking too vaguely about how integers and floats are similar and different. There are more details in the BasicFloatingPointTutorial on the wiki.

Integer and float arithmetic is imprecise. Either one will happen to be exact (if you do a little extra work to round integer results correctly) if the result of the operation is exactly representable in the format--which is more likely to happen in float format because there are more bits to work with and the exponent can be scaled. All other results will be inexact, whether in integer or float arithmetic. But the imprecision in single-float format will be on the order of one part in 16 million, where in single-cell integer the bound is 256 times larger (worse), one part in 65 thousand. Moreover the imprecision of the float will be consistently bounded by one part in 16 million, i.e.

0.000006%, over a huge range of values, while the imprecision in integers will be all over the map. For example, $32767 \cdot 2 /$ is within 0.003%, but $1 \cdot 2 /$ is off by 100%. Both of those calculations in float arithmetic are not only within 0.000006%, they're exact--both values are exactly representable in float format.

Float arithmetic (without a coprocessor, which the DragonBall doesn't have) will be slower than the bare integer operations. Whether it will be slower than the code you might have to write to deal with scale conversion and gcd reduction and other issues you may need to address in integers can be harder to predict. Another question is which time measure is more expensive: running CPU cycles, or your own development/debugging time? Of course the answer depends on the project.

"Floats can overflow/underflow too" - true, but only at values something like 10 to the 33rd times larger or smaller than with single cell integers. And what happens at overflow is completely different. If you're using IEEE floats, the result of any overflow will be a properly signed infinity, any underflow will give properly signed zero, and all those results will propagate correctly through later calculations so your final result is appropriate. You can check the floating point status register or generate an exception if an overflow has occurred. An overflowed integer will be some unrelated smaller or negative integer that will turn the following calculations into garbage arbitrarily far from the correct result, and will not, in QF, be signalled by any exception.

Floating point standards were written to give programmers an easy way to get dependably accurate results in a variety of mathematical situations without a lot of tedious coding time spent on scaling, representation, reduction, over/underflow, and the like. For any programming task that isn't obviously well suited for integers--that is, when there's a serious question which way to go--my leaning would be to develop first in float, and view integer techniques as a possible optimization to apply later if you have to, starting in the tightest loops and continuing as needed to meet a given speed objective. My two cents, anyway, but there they are.

-Chap



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, February 2, 2002 - 01:25

am: [Edit](#)

Basicly I started out by doing it in terms of paper. I have a couple of words difined already.

My problems started when I had a denominator of 64, I began to run in to the overflow problem.

The straightforward approach is good for me, I just wasn't sure it was the

correct approach.

The fixed point in Start Forth must have been the esoteric approach. To be honest I never thought about converting every thing to all one denominator. The numbers I am dealing with will be in numbers of 64ths and bigger.

Thanks Kris, I will give it a try.

Gary



By [Chapman Flack](#) on Saturday, February 2, 2002 - 01:51 am: [Edit](#)

One more word in defense of floats: you can think of a float as a big integer combined with a scale factor that's a power of two. If you're working all in 64ths or any other power-of-two denominator then the exactness issue is a non-issue; in fact the integer code you write to scale and operate in 64ths and what the built-in float operations do will be equivalent (ignoring the rounding and over/underflow protection the float ops do for you).

-Chap



By [Kris Johnson \(Kdj\)](#) on Saturday, February 2, 2002 - 08:44 am: [Edit](#)

Floats generally are better for "scientific" or "engineering" applications, where you are using measured quantities or using numbers that cannot be expressed in ranges of 2^{16} or 2^{32} .

But when doing "number theory" or "fraction" applications, integers and ratios are better (and often necessary).

As Chapman says, if all your numbers will be in 64ths (or some other power of two), then floats will not cause any problems and would probably be a lot easier to use than ratios.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Saturday, February 2, 2002 - 12:16 pm: [Edit](#)

Thanks guys, I now have a better understanding of the differences in floating point and interger math. If I run into problems I will let you know.

Thanks again

Gary



By [Chapman Flack](#) on Monday, February 4, 2002 - 04:35 pm: [Edit](#)

I'm still not clear on Kris's assertions of superiority (or necessity) for

integers or ratios by type of application. What I've tried to do above is set out some of the considerations precisely, to counter the odd conventional wisdom persisting in parts of the Forth world that floats are somehow fuzzy compared to integers.

There are two kinds of number representation: limited precision, and unlimited precision. Floats, single and double cell integers, and ratios of single or double cell integers ALL fall in the first category. The only way to see unlimited precision is to implement bignums, arbitrary sized integer ratios allocated in dynamic memory, as you see in Maple and Mathematica. Those techniques are indeed often necessary for number theoretic applications. But it usually seems people asking the float/integer question in the Forth world are thinking ordinary, fixed size integers.

In that case, the choice between floats, integers, or integer ratios is a choice between three different limited precision approaches. The choice needs to be made knowing that ALL of those approaches suffer from inexactness whenever the true result of a calculation is not representable in the chosen format. So it makes sense to compare the relative error (difference between true result and computed result, as percent of true result) for the different alternatives. Those numbers are in my post above, and on the wiki. To summarize:

1. There is no exact single-cell integer value that is not also an exact single-float value.
2. There are many exact single-float values that are not exact single-cell integers.
3. 1 and 2 also describe the comparison between double-cell integers and double floats.
4. If you compare double cell integers to single floats, neither clearly wins; each format has values it can represent exactly that the other can't.
5. 4 also describes the comparison between integer ratios and floats.
6. When a single float fails to exactly represent a value (within range), it will be within 0.000006% of the true value.
7. When a single cell integer fails to exactly represent a value (within range), it may be off by as little as 0.003%, or as much as 100%.
8. I'm too lazy to work out the representability and relative error details for ratios of fixed-length integers, but a little playing with the ContinuedFractions module shows that occasionally you can better approximate a given value in a single-cell integer ratio than a single float,

and sometimes you can't get very close; it all depends on the value in question.

There will always be applications where one representation or another will be more appropriate, and there will be good reasons for making a choice. It's just that the persistent notion of integers being "exact" and floats being "not exact" is, well, too inexact to be one of them.

-Chap



By [Kris Johnson \(Kdj\)](#) on Monday, February 4, 2002 - 05:33 pm: [Edit](#)

Gary specifically asked about how to do arithmetic with fractions, so that's how I answered. I assumed that allowing the user to enter something like "150 1/2 - 4 5/8" and to provide a result in a similar format was a fundamental requirement of the application.

If, in Gary's case, displaying the result as "145.875" is acceptable, then by all means, use floats. And if the user might be entering "15000000000 1/2 - 4 5/8", then again, floats would be appropriate.

In many applications, using floats and rounding appropriately will give you the correct answers. I am not claiming superiority of floats over ratios in the general case.

But there are those cases where floats won't work. For example, $2/3$ cannot be represented perfectly as a float (unless you have a trinary computer). It can be represented accurately as an integer ratio. So, $(2.0 / 3.0) * (3.0 / 2.0)$ almost never equals 1.0000000, whereas $2/3 * 3/2$ does equal $1/1$.

If you are solving systems of equations, or factoring integers, or doing some other types of algorithms where there is a huge difference between "equal" and "almost equal", floats don't work. Those types of applications may be rare, but they do exist.

Many applications don't need bignums or unlimited precision. In the example Gary gave to start this topic, single-cell ratios work fine.

Rather than proposing that one general technique be used to solve all problems, I simply propose that one look at the specific requirements of the particular problem one is trying to solve, and use the simplest solution.

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Monday, February 4, 2002 - 06:40 pm:

[Edit](#)

150 1/2(/ - + *) 4 5/8 is pretty much what the input will look like. The application is going to be used by Carpenters (I hope). Have you ever heard of a Carpenter who needs anything smaller than a 64th. Most of the ones I work with don't even know where to locate a 64th, but I wanted to be as accurate as possible.

Kris my question was answered and I now have some words defined for the application. However, I did need to use double cell instead of single cell. My example was only one I pick off my head at the time, I found that some of the numbers I tested would overflow, mainly because of the 64th issue.

I am having fun, a few more months of this stuff and should be experts like you and Chap 😊



By [Chapman Flack](#) on Monday, February 4, 2002 - 09:58 pm: [Edit](#)

Kris, neither one of us is proposing that one general technique be used to solve all problems. And we both agree that it is important to look at the specific requirements of the problem to be solved. But we are still talking at cross purposes with this "equals" vs. "almost equals" issue.

You provide an example, $2/3$, that is exact in single integer ratios but not in single float. You don't provide an example, say $600\ 39/128$, that is exact in single float but not in single integer ratio. You don't provide an example, such as $12345 / 67890$, where neither ratio nor float is exact but ratio offers a better approximation ($823/4526$), or one such as $135790 / 2468$ where neither approach is exact but float is a better approximation. That is, there are four cases from which examples can be drawn in completely symmetrical fashion, but you have presented only the one that makes integers look more "exact" than floats.

Once more from the top: a representable float value is every bit as exact as a representable integer or ratio value. EACH choice of format also has its unrepresentable values, all of which will be inexact. Then the choice of format should be influenced by a comparison of the error magnitudes to be expected under each choice.

"If you are ... doing ... algorithms where there is a huge difference between 'equal' and 'almost equal', floats don't work." This statement again suggests that the float format is somehow unique in having limited precision. If you are doing that kind of algorithm, hasty analysis of the error bounds for WHATEVER format you choose, won't work.

Most of the work I know of in solving large systems of equations is actually done in floating point, a choice made not so much on which format will give the smallest errors (in the best, or worst, or average, case), but on which has the most predictable, tractably analyzed, error behavior--another

dimension worth thinking about.

"I assumed that ... $150 \frac{1}{2} - 4 \frac{5}{8}$... was a fundamental requirement" This seems to confuse internal and external representation. I'm sure you didn't mean to suggest code can't be written to input and output floats in fractional notation, or ratios with radix points.

Again, we agree that for any given application, one representation or another will probably turn out to be most suitable, and the choice should be made by looking at the specific requirements of the particular problem. My point is one really has to -look-, each time: nostrums like "floats aren't exact" short-circuit that.

-Chap

 By [Kris Johnson \(Kdj\)](#) on Monday, February 4, 2002 - 11:53 pm: [Edit](#)

OK. I'm an idiot. You win.

-- Kris

 By [Heather Risedorph \(Rise1525\)](#) on Tuesday, February 5, 2002 - 10:11 am: [Edit](#)

No, keep arguing. This stuff is interesting. 😊

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, February 5, 2002 - 12:15 pm: [Edit](#)

There are a number of considerations to keep in mind when using floating-point. Tests for equality are usually slower, and if you're not careful, tiny inaccuracies can accrue and affect results.

I have a fondness for bignum libraries -- I used one in the SCX Calculator. They're cumbersome for some types of operations, however.

Neal

 By [Chapman Flack](#) on Tuesday, February 5, 2002 - 05:14 pm: [Edit](#)

Although once again, the accrual of tiny inaccuracies is not a consequence of the choice of representation, but of doing the sort of calculation whose intermediate values may lie outside the exactly representable set.

Remember, every fixed-cell-size number representation is an attempt to map an infinite set of values onto a finite set of bit patterns, so for any representation you choose, there will be a finite set of values it can represent exactly, and an infinite set that it can't.

Whatever representation you choose, inaccuracy will accrue if you are doing any sort of calculation where you can't guarantee up front that every initial and intermediate value will happen to be a member of your finite representable set. The care that's needed in doing that kind of work would be needed no matter the choice of implementation. Because floating point is often chosen for that kind of work, the association forms that floating point is what's tricky, not doing tricky work. But that's a mistake, since the reason f.p. is chosen so often for those jobs is to be less tricky, and accrue error at a slower, more predictable, more manageable rate, than other simple alternatives.

The test for equality of two single-float values (supposing them both in registers) is a 32-bit compare, one instruction on a 68k, and is appropriate except when your analysis tells you accrued error may be enough to separate two values you need to find equal. That calls for testing with a tolerance (in floating point or any other representation) which is slower.

All IEEE basic floating operations come with a guarantee, courtesy of the standard, of producing "the correctly rounded result"--corollary: any two basic operations that, applied to their actual operands, would produce the same ideal mathematical result, will also produce actual results that satisfy simple strict equality test.

-Chap



By [Gary Wiese \(Garyjwiese\)](#) on Tuesday, February 5, 2002 - 07:24

pm: [Edit](#)

Ok, I have heard this term three times now "bignum". What do you mean by "bignum"? Is it a library of words defined to calculate very large numbers? If so, how large?

Gary



By [Chapman Flack](#) on Wednesday, February 6, 2002 - 10:54 am: [Edit](#)

Yes, it's a library for doing calculations in integers, or ratios of integers, with no precision limits (except for available memory). Instead of making each value 16 bits, or 32 bits, or 64 bits, each value is as many bits as it needs--so they're all allocated in memory chunks of varying sizes. A bignum operator first allocates enough memory to hold the result and then calculates it out. There's a "BIG" module, for example, in the Forth Scientific Library.

Such libraries let you do things like number theory problems, cryptography, and combinatorics. They can represent any rational number exactly (if

you've got enough memory) without the unrepresentable "holes" you face with fixed-length integer ratios or floats. On the other hand, they slurp memory and CPU cycles and they still leave you no better off if you need to work with irrational numbers or transcendental functions.

Software like Maple and Mathematica combine bignums with symbolic manipulation so irrational values stay in symbolic form throughout a computation (an answer that should be, say, $12345 * \text{Pi} / 67890$ will actually be displayed that way) so you get precise solutions even to those kinds of problems. (Of course if that answer is supposed to tell you how many meters of lumber you need, you'll still have to reduce it to a usable approximation before you get out the saw.)

-Chap



By [Dave Bennett \(Dbennett\)](#) on Thursday, February 7, 2002 - 09:11

am: [Edit](#)

Gary,

In the upgrade I'm working on for InchCalc I'm using doubles. Before I used bytes- one for the numerator and one for the denominator and another for the inches. With doubles I use one, the top byte for the numerator the bottom for the denominator. In the other double I use the first 2 bits for feet (I only need 2 as the 3rd foot rolls over to yards.) and the rest for yards. The input can be in any number of feet and I'm allowing a display selection for feet/inches or yards/feet/inches so the user can work with what is comfortable for them.

Dave



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, February 7, 2002 - 10:21

pm: [Edit](#)

Dave,

What do you mean when you say, you used the top byte for the numerator and the bottom byte for the denominator. How did you keep them apart, I mean for calculations.

When I multiplied the denominator to the whole number to convert to a fraction from a mixed number I would sometimes get an overflow error. Usually when the denominator was in 64ths, so I defined a word to convert the mixed number to a improper fraction using a double in the numerator and a single for the denominator. This kept me out of overflow trouble.

Gary



By [Dave Bennett \(Dbennett\)](#) on Friday, February 8, 2002 - 10:36 am:

[Edit](#)

I would use this

```
000000 00 0000 0000
```

The first set of zeros is the yards,
The second set is feet,
The third set is the numerator,
The fourth set is the denominator.

You can set up a mask to get just the yards.

```
1111110000000000
```

AND your double with this and you'll get just the yards. Likewise,

```
0000001100000000
```

 will get you just the feet, etc.

You might want to download BinaryBuddy from my site (www.micoks.net/~dbennett) and play with this some. It allows you put in a binary number, than create masks for ANDing and ORing and XORing and shows you the result. (I wrote it to use as a tool when I wrote InchCalc.)

Also, there are examples of how I used this type of thing already in the InchCalc source code, also available at my site.

Dave



By [Heather Risedorph \(Rise1525\)](#) on Friday, February 8, 2002 - 02:12

pm: [Edit](#)

Dave,

I just looked at your binary buddy program and it looks awesome! I have it downloaded. I wish I had this visual aid for all those times I was doing bit manipulation in C. 😊 Thanks for the contribution.



By [Dave Bennett \(Dbennett\)](#) on Friday, February 8, 2002 - 02:25 pm:

[Edit](#)

Thanks for the kind words.

I used to do a lot of binary masking stuff with CP/M programs and could pretty much do it off the top of my head back then. Not having had to do it for several years, I wasn't able to do it off the top of my head any more so

I wrote this app to do it for me. There have been a lot of downloads of this app from Palm Gear so I suspect a lot of people were in the same boat I was and found it helpful.

Dave

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Need to make a font resource

[Quartus Handheld Software: Discussion Forum: General](#): Need to make a font resource



By [Paul Randall \(Paul\)](#) on Thursday, January 24, 2002 - 07:47 am: [Edit](#)

I need to pull the font data from a fonthack font and install it as a tFNT or _fnt type resource in RsrcEdit. There's no way to cut&paste the data that I can see. Has anybody done this?

I'm thinking I will have to write some code to accomplish this.



By [Kris Johnson \(Kdj\)](#) on Thursday, January 24, 2002 - 08:13 am: [Edit](#)

If the font data is already a resource, you should be able to just copy and paste it in RsrcEdit.

BTW, what you're trying to do would be copyright infringement if you don't have the permission of the hack's author.

-- Kris



By [Paul Randall \(Paul\)](#) on Thursday, January 24, 2002 - 09:02 am: [Edit](#)

That's just it, I open the fonthack font in RsrcEdit and its just a database with one record containing the font data.

I am planning on doing this with a font of my own design created in Font Editor by symbioForge, not someone else's work. That program saves in fonthack compatable format so I am trying to figure out if I can accomplish this before I pay for that program (I have no general need for a font editor). It's a very nice on-board font editor BTW.

So... I need to write code to open the fonthack db and copy the data into my resource db???

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RsrcEdit

[Quartus Handheld Software: Discussion Forum: General: RsrcEdit](#)



By [Gary Wiese \(Garyjwiese\)](#) on Sunday, January 20, 2002 - 04:52 pm:

[Edit](#)

I have notice that RsrcEdit has found a home here at Quartus, according to individeo. Does this mean it will be updated and supported through Quartus's web site? Or is it only going to be distributed through Quartus in its present release?

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, January 20, 2002 - 11:15 pm:

[Edit](#)

RsrcEdit will certainly be kept alive. I'll support it, and hope to update it.

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Monday, January 21, 2002 - 08:18 pm: [Edit](#)

Thanks, thats good to know.

Gary



By [Ken Butterfield](#) on Monday, February 11, 2002 - 05:03 pm: [Edit](#)

Hi Neal

I am a long time user of Quartus. I have version 1.26r. I may have a user account, but I did not locate it or my password if I do. I just downloaded the latest RSRCEdit. Thanks so much for keeping this alive! I notice that the problems with copying and pasting a list are now fixed. This was a long term bug I thought woul go on forever. I have just started a revision of several of my programs and I am updating my tools at the same time. Is there a new version of quartus? Do you recommend any editor besides the memopad (pEdit for instance). What is your current favorite suite for onboard programming?

Thanks again for supporting RSRCEdit and QUARTUS

Ken Butterfield

kbutterfield@lanl.gov



By [Brad Dalton](#) on Monday, January 27, 2003 - 08:06 am: [Edit](#)

Is there ever going to be an update to RsrcEdit?

As far as I'm aware there hasn't been an update since it was purchased by Quartus.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 28, 2003 - 04:16 pm:

[Edit](#)

You're correct, Brad; I haven't yet issued an update. It is in the works. My timeframes are limited by my available personnel -- only myself and one cat are presently on staff here at Quartus, and the cat rarely writes code.

Neal



By [Brad Dalton](#) on Sunday, February 16, 2003 - 01:45 pm: [Edit](#)

My main wish is for the Tbmp editor to work with HiRes images :-)

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Another Quartus app

Quartus Handheld Software: Discussion Forum: [General](#): Another Quartus app



By [Paul Randall \(Paul\)](#) on Monday, January 14, 2002 - 06:27 am: [Edit](#)

I just put my pattern editor app up at palmgear. If you have a need to create and use custom 8x8 patterns in your app, this baby's for you. You can copy the data (hex) as text to the clipboard and paste into your source.

<http://www.palmgear.com/software/showsoftware.cfm?sid=87114420020114025621&prodID=39088>

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Newbie: How do I get the library (.txt) files loaded?

[Quartus Handheld Software: Discussion Forum: General](#): Newbie:
How do I get the library (.txt) files loaded?



By [Bob Gibson \(Ragibson\)](#) on Friday, January 4, 2002 - 05:57 pm: [Edit](#)

It has been a long time since I played with Forth, and I'm looking forward working with it.

While looking at some of the Tutorials, I came across a sample that started with "needs toolkit" I was very glad to find the distinction elsewhere between "include" and "needs". However, I don't want to go through the error prone process of manually entering the contents of the library files into memo pad. Is there an easy way to download a PC txt file as a PDA memo?

Thanks
Bob



By [mielikki](#) on Friday, January 4, 2002 - 07:25 pm: [Edit](#)

If you are talking about importing the library files into MemoPad, that is described in the manual.

If you are talking about importing an arbitrary TXT file into MemoPad, use the Palm Desktop software. Here are details for the Windows version of Palm Desktop:

- Launch Palm Desktop
- Select MemoPad from the View menu
- Select Import from the File menu
- Select "Text (*.txt)" in the Files of Type drop down
- Select the file you want to import
- Click Import

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Palmgear's rates have gone up

[Quartus Handheld Software: Discussion Forum: General](#): Palmgear's rates have gone up



By [Paul Randall \(Paul\)](#) on Thursday, January 3, 2002 - 07:56 am: [Edit](#)

I just noticed that palmgear's cut of software sales changed from 20 to 25%. Minimum checks went from \$100 to \$200 as well. Did anyone receive a note from them about this? I didn't.



By [Mike Will](#) on Thursday, January 3, 2002 - 10:12 am: [Edit](#)

I suggest a few of us get together and start a tech-oriented palm/PPC software site. It wouldn't be hard to do a better job than what's out there now.

Mike



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, January 3, 2002 - 10:57 am: [Edit](#)

Palmgear did send out notices on the changes, actually after a couple of e-mails that told developers they were reviewing the situation.

As I understand it, the rates go up for anyone that is not having Palmgear handle their registrations on an exclusive basis. If you do have Palmgear handle registrations exclusively then the rates don't change. Also I understand they will "de-list" any programs that are on the Palmgear site but don't let Palmgear handle any registration at all.

To be honest, I don't find their approach objectional. For all of the complaints - and I've had mine as well - Palmgear has remained a key site for people to find Palm software. As a result, they have been targeted time and time again by other sites that simply want to take their postings and put them onto their sites. Palmgear, and any other commercial site, has to make money to stay in business. Between other sites siphoning stuff off and the lawsuit they had to deal with from Handango's investors, Palmgear hasn't had the easiest path to travel while undergoing significant growth. By the way, the 25% service charge for programs that get registered by multiple sites is still less than Handango charges (they raised their rates to 30%).

I still feel strong loyalty to Palmgear for joining me in my Char-Ware project, where they donate all of their service charge profits on these programs along with my cut to the Juvenile Diabetes Research Foundation. Along the way I approached several other sites to try to set up similar

deals, but they either refused outright or like Handango, responded with a "we'll get back to you on that", never to be heard from again.

I don't like being paid slowly either, but it seems to me that Palmgear is honestly trying to fix the problems and move forward in a fair manner. Being an optimist, I am hopeful that Palmgear is putting their difficulties behind them and better days lie ahead.

Barry Ekstrand



By [Wade Carlson](#) on Thursday, January 3, 2002 - 12:01 pm: [Edit](#)

Why does everybody keep saying Handango is charging 30%? This is not true (it has only been stated by PalmGear, go figure). I am still being charged 20%, plus I get an additional 5% on sales that originate from my own website (so really only 15% !!!)



By [Michael Curtis](#) on Thursday, January 3, 2002 - 03:30 pm: [Edit](#)

I just visited the Handango site, and their [partners page](#) says 30%. Maybe the higher rate is only for new registrations?

MJC



By [Paul Randall](#) on Thursday, January 3, 2002 - 03:32 pm: [Edit](#)

None the less, I am a rinky-dink first-time shareware developer and when I learn that Palmgear will hold my money for an entire year if I don't sell \$200 worth (a distinct possibility for me) AND they did not even notify me of this change, I just happened upon it at the Partners page... Well I am not too thrilled.

I do realize the value of the traffic at that site and the convenience of maintaining my own product page. These are good things.

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Can a field be used for input and output?

[Quartus Handheld Software: Discussion Forum: General](#): Can a field be used for input and output?



By [Gary Wiese \(Garyjwiese\)](#) on Sunday, December 23, 2001 - 10:03

pm: [Edit](#)

I have a program that has two input fields and I would like to make one of them, both input and output, is this possible?

What I have is something that needs two angles entered in two fields. One of them can be calculated with another form. I set it up so that calculation is outputted to the field in question, however, when I enter the second angle nothing happens. Its acking as if I didn't enter anything in the first field. I stored the value in the variable where the first field would store if enter manually. Do I need to do something differently with that field?

It works fine when the value is entered manually.

I would like it to work manually or with the calculation.

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, December 23, 2001 - 11:03

pm: [Edit](#)

Yes, you can programmatically place values into an input field without any problem.

Neal

Add a Message

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E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Posting on Palm Gear

[Quartus Handheld Software: Discussion Forum: General](#): Posting on Palm Gear



By [Gary Wiese \(Garyjwiese\)](#) on Sunday, December 23, 2001 - 03:45 pm: [Edit](#)

I've been trying to post my app on Palm Gear and I don't get a reply back. Is there a problem with Palm Gear? I filled out the form and it says it will review my application and get back to me. Did this two times now with no response.

Gary



By [Kris Johnson \(Kdj\)](#) on Sunday, December 23, 2001 - 04:52 pm: [Edit](#)

FWIW, I had no problem updating my application to a new version yesterday. But that's different from adding a new application. And it seems that other new applications are being added.

Is this the first app you've submitted to PalmGear? Maybe they give extra scrutiny to new developers.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, December 23, 2001 - 05:00 pm: [Edit](#)

BTW, I've noticed that after updating the version on PalmGear, the new version (along with description) also automatically showed up on [freewarepalm.net](#) and [palmgamingworld.com](#). Does anyone know what the relationship is between these sites?

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Sunday, December 23, 2001 - 05:56 pm: [Edit](#)

Gary,

I had a problem posting since I use Linux & Konqueror. However, I emailed and they called me at home (!), asked what was the problem and then downloaded the app from my site and completed the posting for me. They have a problem with anything except Netscape. They are even having to tell IE users to go to Netscape right now. (?)

Kris,

I posted Horse Race on PalmGear and it was translated (description) and posted on a German site. I didn't have a screenshot of it, but they made one (!) for their site. (Which I promptly stole.) (OK, but now I'm getting German language ads for German casinos!!!) I think the other sites troll Palm Gear, download the apps, and add them to their sites without developer consent. I did receive an email from the German site, after the fact, asking if that was OK. But that hardly is "OK" to PalmGear.

I don't think there is a solution since "information (read programs) want to be free" on the internet. ;)

Dave

 By [Gary Wiese \(Garyjwiese\)](#) on Sunday, December 23, 2001 - 06:59 pm: [Edit](#)

Dave, I use IE, so I tried with netscape and got the same response. I sent a message explaining my problem. I guess I will have to wait some more.

Gary

 By [Gary Wiese \(Garyjwiese\)](#) on Sunday, December 23, 2001 - 07:01 pm: [Edit](#)

Kris, yes it is my first.

Gary

 By [Gary Wiese \(Garyjwiese\)](#) on Sunday, December 23, 2001 - 09:40 pm: [Edit](#)

Palm Gear contacted me and I got it settled. My Compound Angle Finder is now posted on there site.

Gary

 By [Kris Johnson \(Kdj\)](#) on Monday, December 24, 2001 - 04:17 pm: [Edit](#)

FYI, www.palmblvd.com and www.visorvillage.com are two more sites that apparently automatically mirror changes on PalmGear.

-- Kris

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, December 27, 2001 - 08:22 am: [Edit](#)

Just to add a comment or two about the mirroring phenomenon. After

looking at the number of downloads at these other sites it seems to me that the PDASite sites (www.palmbld.com and www.visorvillage.com) actually get a fair amount of traffic. I contacted them to correct the description of my charitable shareware and they were very fast and responsive - those programs had the listing changed to "char-ware" within minutes. My assessment is that these sites may help boost sales, and if the registration is done through Palmgear they will get a benefit from the mirroring in the end.

As an aside, I uploaded a couple of my programs to CNET, and it took over 2 months before they were active on their system. I had sent a half a dozen e-mails to them along the way trying to find out the status and why it was taking so long; none were answered. Long after I gave up they finally showed up on their site.

Barry



By [Kris Johnson \(Kdj\)](#) on Thursday, December 27, 2001 - 09:47 am:

[Edit](#)

I tried CNET as well. My submission of JacksOrBetter was rejected (a few weeks after submission) because the description I gave was "not specific enough". I didn't want to spend the time figuring out anything more specific than "video poker simulator", so I gave up.

-- Kris

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

E-mail:

Palm market breakdown by OS?

[Quartus Handheld Software: Discussion Forum: General](#): Palm market breakdown by OS?



By [Paul Randall \(Paul\)](#) on Wednesday, December 19, 2001 - 09:42 am:

[Edit](#)

Does anyone know the breakdown of the Palm market by OS version. i.e. if my app is 3.5 or above what percentage of Palm owners get cut out as potential customers?

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Quartus for ARM

[Quartus Handheld Software: Discussion Forum: General: Quartus for ARM](#)

 By [Kris Johnson \(Kdj\)](#) on Saturday, December 15, 2001 - 12:44 pm: [Edit](#)

Neal, you've mentioned a port of Quartus to the ARM architecture a few times. Can you give us an update on the status of this, and give us details about any ways in which it will differ from M68K Quartus?

Thanks,
-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Saturday, December 15, 2001 - 02:30 pm: [Edit](#)

I haven't got enough information about Palm OS on the ARM to get too specific. I'd like such a port to be the same kind of tool that Quartus Forth is now, on the M68K.

I have a toolchain for ARM development, and all the required references. I'll know more when Palm provides an ARM POSE.

Palm has said that the ARM Palm OS will do M68K emulation for legacy apps. How effective that'll be, I can't guess at this point.

Neal

 By [Kris Johnson \(Kdj\)](#) on Saturday, December 15, 2001 - 03:04 pm: [Edit](#)

Can we assume there will be an ARM assembler/disassembler included?

If not, should someone start working on one? 😊

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Saturday, December 15, 2001 - 03:15 pm: [Edit](#)

Have at it! 😊 I have a rudimentary version of both, but would be glad to see a full version.

Neal

 By [Kris Johnson \(Kdj\)](#) on Friday, December 21, 2001 - 11:50 pm: [Edit](#)

Can you give us some information about how Quartus will use the ARM? Specifically:

- Which registers have special use in Quartus?
- What are the calling conventions?
- Can you give examples of how basic Forth words are implemented (DUP, DROP, @, !, EXECUTE, etc.)?
- Is there anything else that would be useful for us to know?

Thanks,
-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Saturday, December 22, 2001 - 02:29 am: [Edit](#)

Kris, much of that will depend on what the ARM Palm looks like. I won't be digging into it heavily until Palm is providing emulators, and hardware is available.

Neal

 By [Richard Chamberlain \(Rac\)](#) on Saturday, December 22, 2001 - 07:49 am: [Edit](#)

Speaking of ARM processors I've just bought myself a sharp zaurus. It's really nice, runs linux - I've got 128mb of compact flash in there so lots of room, which I'm putting it to good use at the moment -- I've got the three new star wars previews on there.

Somebody has done a port of pForth to it - but I've not yet tried it.

Richard

 By [Mike Will](#) on Saturday, December 22, 2001 - 11:24 pm: [Edit](#)

Can anyone recommend a good textbook on ARM? I saw one at Barnes&Noble in Chicago a few months back but didn't buy it then and haven't seen it again since.

Mike

 By [Neal Bridges \(Nbridges\)](#) on Saturday, December 22, 2001 - 11:35 pm: [Edit](#)

The official reference is the ARM ARM -- the ARM Architecture Reference Manual. Amazon had it, last I looked.

Neal

 By [Kris Johnson \(Kdj\)](#) on Saturday, December 22, 2001 - 11:40 pm: [Edit](#)

I believe the ARM ARM is available free in PDF format as well, with the evaluation version of the ARM Developer Suite.

Check http://www.arm.com/devtools/ads_eval?OpenDocument

-- Kris

 By [Mike Will](#) on Monday, December 24, 2001 - 09:38 am: [Edit](#)

Ah, free. That word is magic to a Scot like me 😊
Thanks Kris.

That's quite a selection of development toys - I mean tools - listed on that site too.

Mike

 By [Kris Johnson \(Kdj\)](#) on Monday, December 24, 2001 - 10:37 am: [Edit](#)

Yes, cool toys. But the ADS starts at \$5,500, so I'll have to be extra, extra nice next year so that Santa may bring me one. 😊

-- Kris

 By [Kris Johnson \(Kdj\)](#) on Monday, January 14, 2002 - 12:26 am: [Edit](#)

I received my evaluation copy of the ARM Developer Suite (ADS), and it does indeed include a PDF copy of the ARM ARM, along with an ARM Assembler Guide, and a bunch of docs related to the development environment.

The developer suite consists of the Metrowerks CodeWarrior IDE along with a C++ compiler, the RogueWave implementation of the Standard C++ Library, the ARMulator, and a bunch of other stuff. If you just want the documentation, you can choose the "Custom" install option and uncheck all the boxes that are not related to PDF documentation.

The ADS evaluation period is 45 days. I don't know if installing just the documentation starts the clock ticking. I'll let you know in 46 days. 😊

-- Kris

 By [Kris Johnson \(Kdj\)](#) on Friday, January 18, 2002 - 08:54 am: [Edit](#)

A few days after receiving the ADS, I received the "ARM Technical Publications CD" separately. This CD includes all the docs, and doesn't require you to run a Windows installer program to get to them.

Does anyone know which specific ARM core(s) or architecture(s) will be used by the ARM-based Palm OS handhelds?

-- Kris

 By [Chapman Flack](#) on Friday, January 18, 2002 - 05:31 pm: [Edit](#)

Here's a Palm press release:

http://www.prnewswire.com/cgi-bin/micro_stories.pl?ACCT=153400&TICK=PALM&STORY=/www/story/12-17-2001/0001635310&EDATE=Dec+17,+2001

And here's a sales aid:

http://focus.ti.com/pdfs/vf/wireless/omap1510_bulltn.pdf

-Chap

 By [Ken](#) on Thursday, November 7, 2002 - 11:14 pm: [Edit](#)

Neal,

So now the ARM is real, and I've got the 'simulator'. At some time when your version for the ARM looks to have promise, I would be willing to spend some time working on a tutorial for it using the simulator, and as things progress getting real hardware and working with it. Feel free to email me if you think it is an idea you like.

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Clearing a field

Quartus Handheld Software: Discussion Forum: [General](#): Clearing a field



By [Gary Wiese](#) on Thursday, December 13, 2001 - 11:25 pm: [Edit](#)

How do I clear a field of its value? In my program I have two fields that output info. If the user enters a 0 for input it will crash because of divid by 0 error. However, I test for this and catch it before anything bad happens, but I would like to clear the output fields to a clear state before getting more input. Is this possible?

Gary



By [Neal Bridges \(Nbridges\)](#) on Friday, December 14, 2001 - 04:06 pm:

[Edit](#)

One way: use the string2anyfield.txt library and place an empty string in your field.

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Wednesday, December 19, 2001 -

07:27 pm: [Edit](#)

Hello, I have been trying to hide a field and I can't get nothing to work. My program works fine with out hiding the fields, but I have limits set so the user can not go beyond them. The limits work and the alert boxes popup, but it leaves bad results in the fields. I would like to hide these results from view.

Below is what I tried. I tried a number of other ways too. But I can't get it work. What might I be doing wrong?

```
: limit-crown ( -- )
  CrownLimitBox FrmAlert \ When a limit is reached it brings up an alert box, which
works fine, I just can't get it to print #### in the fields.
  bevelAngle s" ####" \ I tried switching the postions, no help
  string>anyfield ; \ bevelAngle is the field I want to block from view

: limit-wall ( -- )
  WallLimitBox FrmAlert
  miterAngle s" ####"
  string>anyfield ;
```

I know there is z" and c". I know z" is for a 0 terminating string. I don't know what that means in my program and I don't know what or if any benefit c" would have either.

Gary



By [Neal Bridges \(Nbridges\)](#) on Thursday, December 20, 2001 - 02:44

pm: [Edit](#)

Hi Gary. Are you just trying to clear fields?

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, December 20, 2001 - 08:02

pm: [Edit](#)

Yes Neal, write now when the user enters a number out of the range for the purpose of the program I catch it, but it still leaves bad values in those fields. I want to hide them or clear them out altogether, but haven't had much luck.

The program ask for a angle in degrees and returns angles in degrees, but the angle has to be within 0-90 on one field and 0-180 on another. If you enter 91 on the first field nothing bad happens, but it leaves a value on the output field that doesn't make sense. The other field has to be greater than zero or it crashes with divide by zero error. I catch all these contitions, but I don't like leaving those senseless values in the output fields, looks unprofessional.

I thought about entering ##### in the output fields when a bad condition is incountered, but I tried many different things and nothing seems to work. When I catch a bad condition I take care of it and then try to enter ##### in the output field.

What happens is the program calculates those bad values and does nothing with my coverup string.

This is what I have now;

```
create crownangleBuf
InputFieldLen 1+
chars ALLOT
create wallangleBuf
InputFieldLen 1+
chars ALLOT

57.2957795130823e fconstant radsize

fvariable w-angle
fvariable c-angle
fvariable uangle
fvariable miter
fvariable bevel
variable wall
variable crown

: deg>rad ( deg -- rad ) radsize f/ ;
: rad>deg ( rad -- deg ) radsize f* ;

: start ( -- ) StartForm ShowForm
  crownAngle FieldFocus ;

: start-wallangle ( -- )
  wallAngle FieldFocus ;

: get-itemid ( --itemid )
  event >abs itemid ;

: display ( -- ) 10e f*
  0.5e f+ f>d
  <# [char] ° hold # [char] . hold #s
  #> ;

: get-input ( -- )
  crownangleBuf dup crownAngle
  field>string string>float c-angle f!
  c-angle f@ f>d d>s crown !
  90e c-angle f@ f- deg>rad uangle f!
  c-angle f@ deg>rad c-angle f!
  wallangleBuf dup wallAngle
  field>string string>float w-angle f!
  w-angle f@ f>d d>s wall !
  w-angle f@ 2e f/ deg>rad w-angle
  f! ;

: output ( -- )
```

```

miter f@ display miterAngle
string>anyfield
bevel f@ display bevelAngle
string>anyfield ;

: limit-crown ( -- )
  CrownLimitBox FrmAlert ; \it works to here as expected
  \ bevelAngle hideobject \ there may be a bug in ezUIbases that defines hideobject,
  Travis is looking into it. I try to leave #### on this field nothing happens, goes on
  like it isn't there

: limit-crown ( -- ) \ this doesn't work either
  CrownLimitBox FrmAlert
  s" ####" bevelAngle
  string>anyfield ;

: limit-wall ( -- )
  WallLimitBox FrmAlert ;
  \ miterAngle hideobject

: calc ( n -- A )
  c-angle f@ fsin w-angle f@ ftan
  f/ fatan rad>deg miter f!
  w-angle f@ fcos uangle f@ fsin f*
  fsin rad>deg bevel f! output ;

: test-value ( -- ) get-input
  crown @ 0 = if limit-crown get-input
  else
    crown @ 90 > if limit-crown get-input
    else
      wall @ 0 = if limit-wall get-input
      le w-angle f! \ without this I get a fatal error.
      \ why do I need to do this? It puts a 1 on the float
      \ stack so I don't get a fatal error again. If limit-wall is
      \ called then it calls get-input before leaving, correct,
      \ then why would I get a fatal error?
      else
        wall @ 180 > if limit-wall get-input
        then
        then
        then
        then calc ;

: handle-menu ( -- ) get-itemid
  dup AboutMenu = if
  AboutBox FrmAlert drop
  else dup HelpMenu = if
  HelpBox FrmAlert drop
  then
  then ;

: do-event ( ekey -- ) ekey
  dup menuEvent = if handle-menu
  else dup ctlSelectEvent = if
  test-value
  then
  then drop ;

: go ( -- ) start begin do-event again ;

```

Gary

Add a Message

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Array of Strings

[Quartus Handheld Software: Discussion Forum: General](#): Array of Strings



By [Joe Nasal \(Jsn\)](#) on Wednesday, December 12, 2001 - 11:42 am: [Edit](#)

Hi folks:

Relative Forth newbie here who is having a blast with QF... 😊

Can someone point me in the right direction with respect to creating an array of string values? How do I push:

"foo"

"bar"

"baz"

onto array X and then retrieve "foo" from the list by passing the proper index to X? A bit of code (or a pointer to the right spot in the wiki) would be appreciated.

Thanks in advance,

Joe



By [Mark Beckman \(Mbeckman\)](#) on Wednesday, December 12, 2001 - 01:12 pm: [Edit](#)

Below is a memo I wrote for just such a task.

The value for the `StringOutOfRange` constant is completely arbitrary and can be replaced with what ever value you want. Perhaps this might be a good place to try the exception model from the Wiki [Exception Module](#).

An example first:

```
Include StringList
```

```
6 StringList StringTest
```

```
: initStringTest
```

```
s" foo " StringTest New$ drop
```

```
s" bar " StringTest New$ drop
```

```
;
```

```
initStringTest
```

\ Or with a defining word...

```
: addstr StringTest New$ drop ;
: initStringTest2
s" baz " addstr
s" It was the best of times." addstr
s" It was the worst of times." addstr
;
initStringTest2

: test 6 0 do
cr i stringtest @$ type
loop ;
```

code follows:

```
\ StringList (Jan 2001 MLB)

\ A set of words to deal
\ with lists of strings
\ the actual strings are
\ assumed to be defined
\ elsewhere (with s" from file
\ for instance). String list
\ just keeps track of the string
\ address and counts.
\ this version assumes a max of 255
\ strings per table. If you need
\ more change the c@'s to @'s the
\ 1+ s to 2 + 1- s to 2 -
\ the 1 cells to 2 cells and,
\ "c, 0 c," -> ", 0 ,"
```

47 constant StringOutOfRange

```
\ define an Array of n String pointers
\ the string (A C)
: StringList ( n --) \ "name"
  create dup c, 0 c, 2* cells allot ;
\ Structure of a StringList:
\ byte 0 - max # of strings
\ byte 1 - idx of next string
\ cell 1-(n*2) - string pointers
```

```

\ returns the max number of
\ stings in list T
: max$ ( t -- i )
  c@ ;

\ returns the index that the
\ next call to New$ will use
: next$ ( t -- i )
  1+ c@ ;

\ set the value returned by next$
: !next$ ( i t -- )
  1+ c! ;

\ Increment the value returned by next$
: next$++ ( t -- )
  1+ dup c@ 1+ swap c! ;

\ ! A C into table T at index I
: Insert$ ( A C I T -- )
  2dup max$ < 0=
  if StringOutOfRange throw then
  swap 2 * cells + [ 1 cells ] literal + 2! ;

\ Add the string at A, cnt C to
\ table T, returns table index
: New$ ( A C T -- i )
  >r r@ next$ r@ ( A C nxt_indx T )
  Insert$
  r@ next$ r> next$++ ;

\ Fetch the string A, cnt C from
\ index N of table T
: @$ ( n t -- A C )
  2dup max$ < 0=
  if StringOutOfRange throw then
  swap 2 * cells + [ 1 cells ] literal + 2@ ;

\ A couple of words to treat
\ a string list as a stack

: Push$ ( A C T - )
  \ New$ checks overflow
  New$ drop ;

: Pop$ ( T - A C )

```

```
dup 1+ c@
\ check for stack underflow
dup 0= if StringOutOfRange throw then
1- swap 2dup 1+ c! @$ ;

: drop$ ( T - )
  Pop$ 2drop ;

: swap$ ( T - )
  dup >r pop$ r@ Pop$ 2swap
  r@ push$ r> push$ ;
```



By [Joe Nasal \(Jsnn\)](#) on Wednesday, December 12, 2001 - 01:45 pm: [Edit](#)

Mark:

Thanks -- just what I was looking for. Much appreciated. I'll give this a whirl and report back.

Joe



By [Joe Nasal \(Jsnn\)](#) on Friday, December 14, 2001 - 08:53 am: [Edit](#)

Mark:

This interface works well in my code.

Thanks again for your help.

Joe



By [Mark Beckman \(Mbeckman\)](#) on Saturday, December 15, 2001 - 10:01 pm: [Edit](#)

Joe,
Glad I could help.

Mark

Add a Message

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Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Comparing floats

[Quartus Handheld Software: Discussion Forum: General](#): Comparing floats



By [Gary Wiese](#) on Monday, December 10, 2001 - 11:39 pm: [Edit](#)

What am I doing wrong here. I have a float that I want to check for 0, this does not work.

```
num f@ 0e = if do-something
  num f@ 180e > if do-something
  then
then
```

It will work if I turn them into a single like this

```
num f@ f>d d>s num !
  num @ 0 = if do-something
  num @ 180 > if do-something
  then
then
```

Gary



By [Neal Bridges \(Nbridges\)](#) on Monday, December 10, 2001 - 11:48 pm: [Edit](#)

= and > are for integers. You need to use the FLOAT equivalents... F~ and F< are the closest matches, but you'll need to restructure your code.

Conversion to an integer works too, as you've discovered.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Fractional input and output

[Quartus Handheld Software: Discussion Forum: General](#): Fractional input and output



By [Gary Wiese](#) on Thursday, December 6, 2001 - 08:41 pm: [Edit](#)

I have a project that will be using fractions. What is the best way to tackle this?

There will be at least 4 inputs from the user and its going to be in fractional form. My problem is how do I set up to enter the fractions? If there are 4 parts in fractional form then there will have to be at least 12 fields needed to enter the data. Is there a better way to do this?

The user will enter measurements in and get measurements out. How would I go about doing the calculations in forth? Do I leave them in there fractional form or do I change them into a float and then do the calculations?

Gary



By [Kris Johnson \(Kdj\)](#) on Thursday, December 6, 2001 - 10:21 pm: [Edit](#)

If a decimal approximation is acceptable as an answer, then yes, I'd suggest using floats.

But there are applications where numerator and denominator of the result must be exact. In that case, you either need to limit the range of the inputs to avoid overflow, or you need some kind of "bigint" data type.

-- Kris



By [Gary Wiese](#) on Thursday, December 6, 2001 - 11:04 pm: [Edit](#)

To avoid overflow I must have the numbers within +32767 and -32767 for a single cell number correct.

I don't expect the numbers to go beyond that range. The inputs will probably be limited to a number not more than 320 inches. So for example my limit would be 320" 63/64. To turn this into a improper fraction for calculations 20543/64. Which is well within the range of a single cell number correct.

And yes my numerator and denominator must be as close as possible at least to the 64th.

Do you think making calculation this way is the best approach?

Gary



By [Kris Johnson \(Kdj\)](#) on Friday, December 7, 2001 - 01:04 am: [Edit](#)

As long as all the intermediate results will fit in a single cell (or double cell), then I'd say this is best. If there is any chance of overflow, it may be easier to go with floats.

It's not clear what you are doing with these numbers. You say the user is putting measurements in and getting measurements out. What sort of calculation is done to produce the output measurements?

20543/64 is easy to handle. But if you multiply that by 2 (the naive way, by multiplying the numerator), then the numerator will overflow a signed cell. and if you multiply by 4, you'll overflow an unsigned cell.

Also, are the calculations multiplications and divisions, or are there additions/subtractions involved? Multiplying fractions is easy. Adding fractions isn't too bad either. But if the formula is complicated, float operations may be easier.

-- Kris



By [Mark Beckman \(Mbeckman\)](#) on Friday, December 7, 2001 - 12:09 pm: [Edit](#)

Perhaps the best way here is to not use fractions at all, at least internally. Make your base unit 1/64th and convert all inputs to that. Make all of your internal calculations using integers and convert back when you need to display a result.



By [William Tanksley](#) on Friday, December 7, 2001 - 05:28 pm: [Edit](#)

I'd agree with Mark Beckman here -- at least, I suspect I would. Don't use floats unless you have to, and rational numbers are great, but in this case they also seem like overkill.

If your base unit is 1/64th, it's very easy to convert back and forth: look for "fixed point" to get some ideas.

-Billy



By [Dave Bennett \(Dbennett\)](#) on Friday, December 7, 2001 - 05:57 pm: [Edit](#)

Look at the source for my InchCalc program, Gary. It has all the math for

converting to & from fractions for measurements already done.

It does use a 64th base and then I just do binary tests to do reductions to reach the lowest denominator.

Dave



By [Gary Wiese](#) on Friday, December 7, 2001 - 07:20 pm: [Edit](#)

Dave, I will have a look at your program. I will be doing the calculations with intergers internally and then converting to 1/64 for display purposes.

However, the biggest concern for me is how do I set up the visuals in rsrcedit. As I mentioned earlier, I will need at least 12 input fields. Is this the best way to get the needed input from the user? Can it be done another way?

I was thinking of a pull down menu that will have the numerator and denominator and the user would need to tap one in, instead of entering it manually. I would only need to know how to do this. 😊

Gary



By [Dave Bennett \(Dbennett\)](#) on Saturday, December 8, 2001 - 12:57 pm: [Edit](#)

Are you working with hip rafters or stair layouts to get that many inputs? If so, I would arrange the input in sections. Explain how to measure the section, then take the input for that section, then move to the next section. Each section would have a screen, perhaps a crude (in my case) bitmap of what they should be seeing.

Even if the user doesn't really understand the overall task of, let's say "roof layout", they can most likely understand "This board goes from here to there, measure it like this, input the measurement here". Then go to step two.

The readme file on InchCalc walks through the source in detail explaining how the binary operators work to handle reduction. Since InchCalc is a 4 function calculator for fractional inches, it already has all the necessary words for performing these tasks with fractional inches. You may be able to just wrap your specific task around what is there.



By [Gary Wiese](#) on Sunday, December 9, 2001 - 12:32 am: [Edit](#)

Not roof layout, baluster layout. First I need the span then the size of balusters being used. One other measurement I call the offset, the

difference in the thickness of the newel post from the turning to the flat non-turned. The next measurement would be the desired space between balusters, but I could put this in a preference list.

The output would be the centers and the spaces needed to fill the span. The measurements would have to be reduced to the 1/64. I already have words defined for the reducing and the calculations I just have to get them together.

Your idea about the bit maps was one way I thought about.

Gary

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Error in a standalone

[Quartus Handheld Software: Discussion Forum: General](#): Error in a standalone



By [Gary Wiese](#) on Sunday, December 2, 2001 - 04:03 pm: [Edit](#)

I have a program I want to turn into a stand alone, but I am getting an error when I try to run it. It creates the standalone alright, but I get a fatal error when I run it.

The error message is MemoryMgr.C,Line: 4365,null handle

I have gotten this before on another program, it was caused by me not defining a bitmap in the make file. However, in this file everything is included. I checked it many times thinking that I may have forgotten something. I didn't there all there.

Gary



By [Gary Wiese](#) on Sunday, December 2, 2001 - 04:16 pm: [Edit](#)

Sorry, I posted a little to soon. I changed a number of a resource and didn't update it in the form. It works now.

Gary

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Alignment of a field

[Quartus Handheld Software: Discussion Forum: General](#): Alignment of a field



By [Gary Wiese](#) on Saturday, December 1, 2001 - 12:21 am: [Edit](#)

I have a field in RsrcEdit that I would like to be right aligned, but when I set the alignment to right it does not change. Am I doing something wrong here or is this some kind of bug?

Gary



By [Dave Bennett \(Dbennett\)](#) on Saturday, December 1, 2001 - 08:57 am: [Edit](#)

I just did this with an app and it worked for me. I just set the alignment to Right in RsrcEdit as you described and it inputs on the right side, pushing text left as I enter it. When I load a field and display it, the text is also right aligned.

Perhaps another parameter is overriding the behaviour you are seeing?



By [Gary Wiese](#) on Saturday, December 1, 2001 - 11:22 am: [Edit](#)

Its working for me now to. I tried to get a field in an app to be right aligned that was originally left aligned. I created a new form and it works ok.



By [Dave Bennett \(Dbennett\)](#) on Saturday, December 1, 2001 - 04:27 pm: [Edit](#)

The number of characters allowed and the height/width settings seem to confuse this as well.



By [Kris Johnson \(Kdj\)](#) on Saturday, December 1, 2001 - 10:41 pm: [Edit](#)

Which version(s) of RsrcEdit are you guys using?

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Sunday, December 2, 2001 - 08:59 am: [Edit](#)

1.017b

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Mail problems

[Quartus Handheld Software: Discussion Forum: General: Mail problems](#)



By [Neal Bridges \(Nbridges\)](#) on Monday, November 26, 2001 - 10:25 pm: [Edit](#)

Two reports this week of mail not received from me -- please let me know if you're waiting on anything.

Thanks, and sorry for the inconvenience!

Neal

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How to make a standalone

[Quartus Handheld Software: Discussion Forum: General](#): How to make a standalone



By [Gary Wiese](#) on Monday, November 26, 2001 - 12:14 am: [Edit](#)

I have a program that is ready to make it a standalone, but I can't get it to work. I get Exception 537 rased when I try. Does anybody know what that means.



By [Neal Bridges \(Nbridges\)](#) on Monday, November 26, 2001 - 12:21 am: [Edit](#)

As per errlist.txt (available in the File Area), 537 is DmErrAlreadyExists. It's likely you have another file in your Palm that has the same name, but a different creator ID.

Neal



By [Gary Wiese](#) on Monday, November 26, 2001 - 12:39 am: [Edit](#)

I got it to make the PRC, but now when I try to open the standalone I get another Fatal Alert, this one says MemoryMgr.c,line:4365, NULL handle

Gary



By [Neal Bridges \(Nbridges\)](#) on Monday, November 26, 2001 - 09:46 am: [Edit](#)

That can have several causes. Are you copying over all required resources?

Neal



By [Gary Wiese](#) on Monday, November 26, 2001 - 05:51 pm: [Edit](#)

Thanks for the reply Neal, I got it to work last night about 3 am. Your right I forgot a bitmap. Seems to work fine now.

Gary

Add a Message

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Using controls like buttons

[Quartus Handheld Software: Discussion Forum: General](#): Using controls like buttons



By [gjwiesea](#) on Sunday, November 25, 2001 - 01:59 pm: [Edit](#)

Can someone tell me how to get these buttons to work? I check all the definitions to see if there is a problem with them and they seem to work ok on there own, but when I try to get the buttons to work they don't. Here is what I have so far.

```
needs ids
needs resources
needs Events
needs fields
needs string>float
needs string2anyfield
needs case
needs condthens
```

```
(ID) gary (ID) rsrc use-resources
```

```
6 constant InputFieldLen
1000 constant StartForm
1100 constant EndForm
1300 constant 10Btn
1310 constant 15Btn
1320 constant 20Btn
1330 constant 25Btn
1700 constant Billinput
1800 constant TipOutput
1820 constant TotalOutput
```

```
create billBuf InputFieldLen 1+
chars ALLOT
```

```
fvariable Bill
fvariable Tip
fvariable TipRate
fvariable Total
```

```
: get-bill ( -- )
  billBuf dup
  Billinput field>string
  string>float
  Bill f! ;

: display ( -- )
  100e f*
  0.5e f+ f>d
  <# # # [char] . hold #s [char] $ hold #> ;

: output ( -- )
  Tip f@ display TipOutput string>anyfield
  Total f@ display TotalOutput string>anyfield ;
```

```

: calc ( -- )
  Bill f@ TipRate f@ f* Tip f!
  Bill f@ Tip f@ f+ Total f! output ;

: getrate ( -- ) case
  10Btn of .10e TipRate f! calc  endof
  15Btn of .15e TipRate f! calc  endof
  20Btn of .20e TipRate f! calc  endof
  25Btn of .25e TipRate f! calc  endof
  endcase ;

: handle-menu ( itemid -- ) ;

: do-event ( ekey -- )
  dup menuEvent = if
    event >abs itemid handle-menu
  else dup ctlSelectEvent = if getrate
    then
  then ;

: go
  StartForm ShowForm
  Billinput FieldFocus
  begin get-bill
  ekey do-event
  again ;
go

```

When I run this nothing happens when I click a button. Its supposed to load a varaiable and then calc then calc will output the results.

Gary

 By [Steve Bohrer \(Skb\)](#) on Sunday, November 25, 2001 - 03:59 pm: [Edit](#)

You need to test the item id in your getrate word. In the example above, you test that the event type is equal to a ctlSelectEvent, but then do not fetch the item id field which identifies which button was selected. So, your case is comparing your button codes to the value ctlSelectEvent.

 By [Gary Wiese](#) on Sunday, November 25, 2001 - 04:32 pm: [Edit](#)

Thanks Steve, could you give me a little help. I don't know how to fetch the item id field.

Gary

 By [kdj](#) on Sunday, November 25, 2001 - 06:10 pm: [Edit](#)

Check the MultipleButtons topic in the wiki. I noticed the same thing Steve did.

-- Kris

 By [Gary Wiese](#) on Sunday, November 25, 2001 - 06:34 pm: [Edit](#)

I did still not working.

Gary



By [Gary Wiese](#) on Sunday, November 25, 2001 - 11:20 pm: [Edit](#)

I tracked it down and it is working as expected. However, it leaves me with another question, why didn't it get passed?

```
: do-event ( ekey -- ) ekey
  dup ctlSelectEvent = if \nothing was getting passed here.
  else get-itemid getrate \but when I added this it forced it to getrate, why
  didn't it go though.
  then
  drop ;
```

I would have thought that it was a ctlSelectEvent and it would equal and passed. It wasn't?

Gary



By [Kris Johnson \(Kdj\)](#) on Monday, November 26, 2001 - 09:37 am: [Edit](#)

I wouldn't expect it to work as you have it now. If the event is not of type ctlSelectEvent, then using get-itemid is not necessarily going to give you one of your button item codes.

You might try printing out the values returned by ekey and then looking in the events modules to see what those codes are.

-- Kris



By [Gary Wiese](#) on Monday, November 26, 2001 - 05:48 pm: [Edit](#)

Good ideal, tell how 😊

Gary



By [Kris Johnson \(Kdj\)](#) on Monday, November 26, 2001 - 05:53 pm: [Edit](#)

The quick-and-dirty way would be to do something like this:

```
\ Display number in upper left corner of screen
: .debug ( n -- )
  0 0 at-xy ." ( " . ." ) " ;

: do-event ( -- )
  ekey
  dup .debug
  \ Then handle the value
  \ ...
;
```

This will display the event code number in the upper left corner of the screen. But note that this will be overwritten by every event. So you may want to be more selective about what you display--for example, only display the number if it is not ctlSelectEvent.

-- Kris



By [Gary Wiese](#) on Monday, November 26, 2001 - 07:15 pm: [Edit](#)

Did this and I get 7. I checked PalmOS 3.5 SDK Reference for the value of a ctlSelectEvent

and it had nothing on its value, expect that its true when the control is depressed; otherwise, false.

Gary

 By [Neal Bridges \(Nbridges\)](#) on Monday, November 26, 2001 - 07:35 pm: [Edit](#)

I don't know where you're looking, Gary, but `ctlSelectEvent` is in fact equal to 7.

Neal

 By [Gary Wiese](#) on Monday, November 26, 2001 - 07:45 pm: [Edit](#)

Whereabouts did you find it? I didn't see anything about a value.

Have you been following the last few posts about the problems I was having and do you have any advice?

Gary

 By [Neal Bridges \(Nbridges\)](#) on Monday, November 26, 2001 - 08:00 pm: [Edit](#)

The events library is what you need to look at; it contains an enum that gives values to the event names.

The construct

```
begin
  ekey dup ctlSelectEvent = if ... then
  drop
again
```

will perform what's between `if` and `then` whenever a `ctlSelectEvent` occurs. I don't know exactly what you're encountering, but I can say that much with certainty.

Neal

 By [Gary Wiese](#) on Monday, November 26, 2001 - 08:47 pm: [Edit](#)

Here is what I have to this point.

```
: get-itemid ( -- itemid )
  event >abs itemid ;

: do-event ( ekey -- ) ekey
  dup ctlSelectEvent = if \ I couldn't get anything passed here.
  else get-itemid getrate
  then
  drop ;

: go
  StartForm ShowForm
  Billinput FieldFocus
  begin get-bill
  do-event
  again ;
```

get-bill is where I enter and store the value into a variable. Then I click a control button to store another value into a different variable.

However, when I click the control button nothing happened, I then inserted a beep in different areas to see what was going on and found that I couldn't get passed the (= if) after the ctlSelectEvent. So I added the else to force it to getrate where it determines what button was press and then stores the correct amount in a variable.



By [Gary Wiese](#) on Monday, November 26, 2001 - 09:11 pm: [Edit](#)

Neal, the only place I could find a listing of the events and there number was in Quarus Forth Manuel under Event Handling. It said, ctlSelectEvent is 9 ctlEnterEvent was 7. I assume this is not the value, but a listing #.

I got 7 from a debug test of my program. When I pressed a control button it read 7.

Gary



By [Kris Johnson \(Kdj\)](#) on Monday, November 26, 2001 - 09:52 pm: [Edit](#)

I think you're right--ctlSelectEvent is 9 and ctlEnterEvent is 7.

I don't know why you are getting the Enter event, but not the Select event. In RsrcEdit, you can make a button a "Button" or a "PushButton"--maybe this has something to do with it?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, November 26, 2001 - 10:00 pm: [Edit](#)

Right -- Select is 9. My bad eyes.

I can tell you why -- 'get-bill' is some kind of event-eating routine, yes? How is it implemented? You're getting the ctlEnterEvent, then passing control around the loop to your 'get-bill', and the ctlSelectEvent is going bye-bye.

You need to handle your input field just as you would any button -- you cannot -- and need not -- wait for input.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, November 26, 2001 - 10:00 pm: [Edit](#)

Something else I notice is that you have this loop:

```
begin get-bill do-event again
```

Calling get-bill between each event may be screwing things up. Try calling it only for events that require a recalculation.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, November 26, 2001 - 10:26 pm: [Edit](#)

Kris' response is sharper than mine. He's right. Extract the value from the field at the time you need it, and not every time you loop for an event.

Neal



By [Gary Wiese](#) on Tuesday, November 27, 2001 - 12:17 am: [Edit](#)

Well I have been playing around with this for about 2 hours now, here is what I have so far.

```
: get-itemid ( -- itemid )
  event >abs itemid ;

: getrate ( -- )  get-itemid case
  10Btn of .10e TipRate f! calc  endof
  15Btn of .15e TipRate f! calc  endof
  20Btn of .20e TipRate f! calc  endof
  25Btn of .25e TipRate f! calc  endof
endcase ;

: get-bill ( -- )
  billBuf dup
  Billinput field>string
  string>float
  Bill f! ;

: do-event ( ekey -- ) ekey
  dup ctlSelectEvent =  if  getrate
  then
  drop ;

: go
  StartForm ShowForm
  Billinput  FieldFocus  get-bill
  begin  do-event  again ;

go
```

So far all the events work properly, but I have found that there is something wrong with get-bill and I can't see it. When I enter a number in the field and click a button \$0.00 is printed, so one of my variable must have 0 in it. I think its variable Bill. I tested it with a number I stored in it manually and it works. I can't see anything wrong, I hope you can.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 27, 2001 - 01:10

am: [Edit](#)

Gary, it feels as though you're trying to do a jigsaw-puzzle by putting all the pieces in a box and shaking it. 😊

Your fvariable, named Bill, can only be set using your 'get-bill' function. Have a look at your 'go' function, and tell me when, and how often, 'get-bill' is being called.

I'd venture a guess that the best place to call 'get-bill' is in 'calc'.

Neal



By [Gary Wiese](#) on Tuesday, November 27, 2001 - 06:52 pm: [Edit](#)

To answer your first question 1 time at the beginning, but never really gets there because of do-event. 😊

You wrote this earlier;

"You need to handle your input field just as you would any button -- you cannot -- and need not -- wait for input."

I was going to ask how, but now I understand.

I bet you really get a kick out of the learning process 😊 All I can say is be prepared for more.

I can't tell you how much sleep I lose over stuff like this. That's me, I need and want to be challenged.

Gary



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 27, 2001 - 07:22

pm: [Edit](#)

Your 'get-bill' is being called once, yes -- and it's reading nothing in the field, and hence setting the fvariable 'Bill' to zero. 'Bill' never gets changed again at that point.

Hope you're having fun, even though it means lost sleep! 😊

Neal



By [Gary Wiese](#) on Tuesday, November 27, 2001 - 09:24 pm: [Edit](#)

As you may know I am a Carpenter by trade. I have be doing it for so long now that sometimes it can be a bit boring. This is my hobby, it helps break up the monotony.

And yes, I am having fun.

BTW I just finihed adding menus to the program and they work fine. Thanks to this one, I now have a little more knowlege to tackle the next. The next program I will actually be using for my work.

Gary

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Using Case

[Quartus Handheld Software: Discussion Forum: General: Using Case](#)



By [Gary Wiese](#) on Saturday, November 24, 2001 - 08:06 pm: [Edit](#)

Can any one tell me what I am doing wrong here?
Below is a snipet of what I have now.

needs case
needs events

```
: getrate ( -- )case
    10Btn dup of .10e TipRate f! endof
    15Btn dup of .15e TipRate f! endof
    20Btn dup of .20e TipRate f! endof
    25Btn dup of .25e TipRate f! endof
endcase ;

: MainEvent ( -- )
    ctlSelectEvent dup = if getrate then ;
```

The 10Btn... are buttons I have defined in a form. I would like to store a rate in a variable when I click one of the buttons.

I think I have something wrong in getrate maybe with the case statement, but I am not sure.

Gary



By [Gary Wiese](#) on Saturday, November 24, 2001 - 08:12 pm: [Edit](#)

Sorry a tpyo, omit the dup after ctlSelectEvent

```
ctlSelectEvent = if getrate then ;
```

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 08:27 pm: [Edit](#)

I assume you have a main loop that calls EKEY, and then calls MainEvent?

How is it not working?

Neal



By [Gary Wiese](#) on Saturday, November 24, 2001 - 08:39 pm: [Edit](#)

First: it doesn't what for me to enter the bill amount, it opens up and goes straight to the MainEvent. It never gives me a chance to enter anything.

```
create billBuf InputFieldLen 1+
```

```
chars ALLOT
```

```
fvariable Bill  
fvariable Tip  
fvariable TipRate  
fvariable Total
```

```
: get-bill ( -- )  
  billBuf dup  
  Billinput field>string  
  string>float  
  Bill f! drop ;  
  
: display ( -- )  
  100e f*  
  0.5e f+ f>d  
<# # # [char] . hold #s [char] $ hold #> ;  
  
: output ( -- )  
  Tip f@ display TipOutput string>anyfield  
  Total f@ display TotalOutput string>anyfield ;  
  
: calc ( -- )  
  Bill f@ TipRate f@ f* Tip f! drop  
  Bill f@ Tip f@ f+ Total f! drop ;  
  
: getrate ( -- ) case  
  10Btn dup of .10e TipRate f! calc output endof  
  15Btn dup of .15e TipRate f! calc output endof  
  20Btn dup of .20e TipRate f! calc output endof  
  25Btn dup of .25e TipRate f! calc output endof  
  endcase ;  
  
: MainEvent ( ekey -- )  
  ctlSelectEvent = if getrate then ;  
  
: start ( -- )  
  StartForm ShowForm ;  
  
: go start Billinput FieldFocus begin get-bill ekey MainEvent again ;  
go
```

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 08:43

pm: [Edit](#)

I see a problem -- change 'dup of' to just 'of' in each case. The 'dup' is not required.

Neal



By [Gary Wiese](#) on Saturday, November 24, 2001 - 08:53 pm: [Edit](#)

I also moved the ekey from go and moved it up to MainEvent and I removed the dup in the case statment.

```
: MainEvent ( -- ) ekey
  ctlSelectEvent = if getrate then ;

: go start Billinput FieldFocus begin get-bill MainEvent again ;
  go
```

Now it will wait for me to enter the bill amount, but nothing happens when I click one of the buttons until I try to leave the program, then I get a fatal error and have to reset.

Gary

 By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 08:57 pm: [Edit](#)

Gary, without setting up all your source and resources, my hands are a bit tied for debugging.

With the situation you're facing, I'd use the divide-and-conquer method: I'd reduce the functionality of app till it's working perfectly, and then add functions back in one at a time to see what throws it off-balance. That'll identify which of your functions is going astray, and you can diagnose further from there.

Neal

 By [Gary Wiese](#) on Saturday, November 24, 2001 - 09:07 pm: [Edit](#)

I have done that, removed everything that I could to see if something wasn't working. I guess I will have to try something else. I kinda think it has to do with getrate.

I am going to set up getrate in the console and see if it loads up the variables properly.

Ok thanks for your help.

Gary

 By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 09:13 pm: [Edit](#)

It may be getrate -- but getrate depends on calc and output, output depends on display, and so on.

Neal

 By [Gary Wiese](#) on Saturday, November 24, 2001 - 09:41 pm: [Edit](#)

Neal, here I have a little program to load a variable using getrate. Can you see what is wrong with it, because it dosen't work either.

```
\ test
```

```
needs string>float
needs case
needs Events
needs float-ext
```

```
fvariable Bill
fvariable Tip
fvariable TipRate
fvariable Total
```

```
10 constant inputlen
create inputbuf inputlen allot
```

```
: input ( -- ) inputbuf dup inputlen accept cr string>float f>d ;
```

```
: getrate ( -- ) input case
1 of .10e TipRate f! endof
2 of .15e TipRate f! endof
3 of .20e TipRate f! endof
4 of .25e TipRate f! endof
endcase ;
```

```
: MainEvent ( ekey -- ) ekey
  ctlSelectEvent = if getrate then ;
```

```
: output ( -- ) TipRate f@ f. ;
```

```
: go begin getrate output again ;
go
```

This is what I get when I enter a 1

```
include test 1
```

```
-
```

```
then 2
```

```
-
```

```
and so on.
```

Gary

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 09:45

pm: [Edit](#)

One problem -- F>D in 'input' leaves a double-cell value on the stack, which isn't what you want -- you want a single-cell value.

One tip -- test each function you create, as you create it, to be sure that it takes and leaves only what you expect on the stack.

Neal



By [Gary Wiese](#) on Saturday, November 24, 2001 - 10:02 pm: [Edit](#)

Neal I got it to work when I added D>S, but is there a better way to enter a number then what I have.

```
10 constant inputlen
create inputbuf inputlen allot

: input ( -- ) inputbuf dup inputlen accept cr string>float f>d d>s ;

: getrate ( -- ) input case
  1 of .10e TipRate f! endof
  2 of .15e TipRate f! endof
  3 of .20e TipRate f! endof
  4 of .25e TipRate f! endof
  endcase ;

include test 1
0.1 2
0.15000001 3
0.20000001 4
0.25000001
```

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 10:03 pm: [Edit](#)

Definitely better ways. ACCEPT is not particularly well-suited to application use on the Palm.

You seem to have a handle on it already, in the first app you posted: set up a field, and read the value from it.

Neal



By [Gary Wiese](#) on Saturday, November 24, 2001 - 10:10 pm: [Edit](#)

I see, that does make more sense. Ok, going to test each function out that way.

Thanks again

Gary

Add a Message

Username:

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E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

New version of Discussion Forum software installed

[Quartus Handheld Software: Discussion Forum: General](#): New version of Discussion Forum software installed



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 05:49

pm: [Edit](#)

I've just put some bug fixes into the Discussion Forum software. Let me know if it does anything odd.

Thanks!

Neal

Add a Message

Username:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

Delays in responding today, Friday November 16, 2001

[Quartus Handheld Software: Discussion Forum: General](#): Delays in responding today, Friday November 16, 2001



By [Neal Bridges \(Nbridges\)](#) on Friday, November 16, 2001 - 01:45 am:

[Edit](#)

Sorry for delays in getting back to people tonight. My internet connection has gone down -- in fact for customers all across the city -- so I'm connected presently with a piece of wet string and a hopeful thought.

With luck I'll be back up to speed today.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Acrobat Index for Message Archives

[Quartus Handheld Software: Discussion Forum: General](#): Acrobat Index for Message Archives



By [Matthew Burke \(Mmb\)](#) on Thursday, November 15, 2001 - 05:07

pm: [Edit](#)

Well I've downloaded the message archives and I also downloaded the pdf index, unzipped it as per directions and now what?

It doesn't seem to actually do anything so I assume I've messed something up. I'm using Reader 4.0 on a Win box.



By [Neal Bridges \(Nbridges\)](#) on Friday, November 16, 2001 - 12:36 pm:

[Edit](#)

Hi, Matthew. That index allows you to search all the archive PDFs at once, from within Adobe Acrobat Reader.

Neal



By [Matthew Burke \(Mmb\)](#) on Saturday, November 17, 2001 - 05:49

pm: [Edit](#)

Neal,

I was in a hurry when I posted the other day. I should've added that I see no difference in search behavior whether I have the index file(s) or not. If I select find or find again, it scans through the whole currently open document---it doesn't search through the additional docs.

My assumption is that if I had these indices installed correctly it would behave differently, i.e. if acrobat reader was actually making use of the index, it wouldn't be scanning through the whole file. Oh, I'm using Acrobat Reader 4 and have tried this on a Win2K and a Win95 box.

Thanks.



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 17, 2001 - 10:34

pm: [Edit](#)

In my Adobe Acrobat 4.0, there's a "Find" and also a "Search". If the index files are available in the same place that the PDFs are, "Search" will use the index files to search across all PDFs. Is it possible that you have the index files in a different spot?

Neal



By [Matthew Burke \(Mmb\)](#) on Monday, November 19, 2001 - 08:44 pm:

[Edit](#)

Aha. I don't have a "search" option anywhere, not even greyed out. I just have the free reader. It sounds like you have the whole Acrobat package. I wonder if they bundle a more feature-full version.



By [Neal Bridges \(Nbridges\)](#) on Monday, November 19, 2001 - 10:18

pm: [Edit](#)

I think -- correct me if I'm wrong -- that the feature is in the standard Acrobat Reader. It's the second of the pair of binocular-icons in the toolbar.

Neal



By [Matthew Burke \(Mmb\)](#) on Tuesday, November 20, 2001 - 09:27

am: [Edit](#)

Um...what second binocular icon? Ok, at some point when I have a few minutes I'll go check out adobe's site and download reader again. The about box claims to be Acrobat Reader 4, but maybe I have some screwy beta or something.



By [Matthew Burke \(Mmb\)](#) on Tuesday, November 20, 2001 - 07:21

pm: [Edit](#)

Well, now I have Reader 5. Not sure why, cause I clicked on the link to download Reader 4.05. Whatever. It has a nifty second pair of binoculars which makes use of the index file! What fun (as I accidentally turn up incredibly stupid posts I made two years ago <g>).



By [Gary Wiese \(Garyjwiese\)](#) on Friday, December 14, 2001 - 12:11

am: [Edit](#)

When I search the archives it gives me a review of where it found the search criteria, but when I click an item it does not go to that item, is it supposed to.

Gary



By [Neal Bridges \(Nbridges\)](#) on Friday, December 14, 2001 - 01:23 pm:

[Edit](#)

Gary -- if you're talking about clicking on an item returned by the Adobe Acrobat search function, in the dialog box -- yes, it should come up on screen.

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Friday, December 14, 2001 - 07:03

pm: [Edit](#)

When I click on one it gives me a warning that the item is not found or I have deleted it.

Something is goofy, it must be found if it was on the list of found items. 😊

Guess i'll pay adobe a visit.

Thanks

Gary

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Registration Alternatives To Palmgear / CGI info needed

[Quartus Handheld Software: Discussion Forum: General:](#)

Registration Alternatives To Palmgear / CGI info needed



By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, October 26, 2001 - 05:21

pm: [Edit](#)

I guess I surrender....I am looking at alternatives to Palmgear because of the very long time lapses in receiving payment for software sales. One option that looks good is Kagi (www.kagi.com); I am setting up an account and will see if I can get their software distribution system to create a real-time system for me.

A second option, relayed to me by Russ Webb (developer of the RPN calculator program for Palm OS) is to use PayPal and set up a CGI (script?? program??) to distribute the registered version when a user pays their fee through PayPal. Unfortunately, I know little about CGI stuff. Would anyone be able to point me in the right direction to figure out where to get a CGI program or script (or where to learn to write one) that could handle such a task? I'm sure I am naive about what is needed, so any help will be appreciated.

By the way, Kagi's rates look pretty good - they charge 6.5% up to a maximum of \$3.00 for their commission plus a service charge of 3.5% plus \$0.50. Bottom line is a \$10 order comes in with total fees of \$1.50, or 15% total. The effective percentage drops as the order value increases (10.5% on a \$50 order, 7% on a \$100 order....). What I'm not sure of yet is if multiple products add together to give you this break or not, but even at the low end it is very competitive to Palmgear (20%) and much lower than Handango (30%).

PayPal looks like it could be even better - a Standard Paypal account has transaction fees of 2.9% + \$0.30 per transaction. If I can figure out the CGI thing, this might be a good option.

As always, comments & help is appreciated.

Barry



By [Kris Johnson \(Kdj\)](#) on Friday, October 26, 2001 - 05:40 pm: [Edit](#)

CGI, which stands for Common Gateway Interface, is the standard way that web servers pass control off to programs to process a user request. Basically, when the web server receives a POST request from a web

browser (generally because the user pressed a button), then web server launches the CGI program, passing a bunch of environment variables to it, and then returns the CGI program's output to the user.

CGI programs can be written in any programming language that allows you to read environment variables and write to standard output. Perl is a popular choice, due to its text manipulation capabilities, but C, C++, Python, and Java are also popular. I believe Neal uses some gForth for the Quartus web site, although I don't know if he does any CGI.

Alternatively, if PayPal sends you an e-mail notification, maybe you can write a smart e-mail filter.

More info on CGI can be found at the www.w3.org web site. But if you give some more information about what programming languages you use, or what web server you use, someone can give you some tips. There are lots of CGI examples out there to copy-and-paste from.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, October 26, 2001 - 05:42 pm: [Edit](#)

Actually, now that I look, it appears that www.w3.org doesn't have much.

Check this out instead: <http://httpd.apache.org/docs/howto/cgi.html>

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Saturday, October 27, 2001 - 07:29 am: [Edit](#)

Barry,

When someone pays by paypal you get a confirmation email so you going to have to have an isp who will set up an alias to push that onto your script I believe. I think Kris's suggestion of an email filter might be easier.

I've done the backend development on quite a number of sites, using perl,python and php at various times. Php will probably your easiest choice of the three to get something up and running quickest. Have a look over the docs at www.php.net - really simple stuff.

Alternatively find out what your isp has installed and send me a mail and I'll see if I can point you in the right direction.

Richard

ps sorry about the '.' below the message got submitted twice somehow and there doesn't seem to be a delete?!



By [Richard Chamberlain \(Rac\)](#) on Saturday, October 27, 2001 - 07:34

am: [Edit](#)



By [Neal Bridges \(Nbridges\)](#) on Saturday, October 27, 2001 - 02:30

pm: [Edit](#)

Most of Quartus.net is dynamically created using CGI -- largely Perl, but some gforth.

Neal



By [PenreeSoft](#) on Sunday, April 7, 2002 - 09:24 am: [Edit](#)

eSellerate is great for software sales, they take out 10% though.

<http://www.esellerate.net>

Add a Message

Username:

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

M505 USB & Linux

[Quartus Handheld Software: Discussion Forum: General: M505 USB & Linux](#)



By [A.Schönfeld](#) on Saturday, October 20, 2001 - 05:16 pm: [Edit](#)

How do I make a palm m505 (OS 4.0) with an USB-cradle & Linux work together ?



By [Kris Johnson \(Kdj\)](#) on Saturday, October 20, 2001 - 06:19 pm: [Edit](#)

What problems are you having?

I think you need a fairly new Linux kernel for USB support. There's a HOWTO or mini-HOWTO out there somewhere for getting USB Visors to work with Linux--I don't know if the same techniques work with the new Palm handhelds.

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Sunday, October 21, 2001 - 08:21 am: [Edit](#)

You can have a look here for information:

<http://www.milosch.net/visor/>

You basically need to make sure your kernal supports USB - so thats version 2.4 and above basically.

Add a Message

Username:

not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

ToDo Database

[Quartus Handheld Software: Discussion Forum: General: ToDo Database](#)



By [Denrael](#) on Monday, October 15, 2001 - 04:55 pm: [Edit](#)

I'm looking for a way to do some massaging of the todo database. Are there any examples out there in forth that can point me the right way?

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Promblem with f! and f@

[Quartus Handheld Software: Discussion Forum: General: Promblem with f! and f@](#)



By [Gary Wiese](#) on Sunday, October 7, 2001 - 12:22 pm: [Edit](#)

I think I am doing something wrong here and I can't figure it out. I want to print a float number to the screen in the console and I get a fatal error every time.

Here is what I have

```
\ ftest
```

```
fvariable num
```

```
.501e f!
```

```
: do ( -- ) fdup num f@ f. ;
```

```
: go MainForm begin do again ;
```

```
go
```

In the console I do this

```
include ftest
```

```
Fatal error
```



By [Neal Bridges \(Nbridges\)](#) on Sunday, October 7, 2001 - 12:29 pm:

[Edit](#)

Try

```
.501e num f!
```

Neal



By [gwiese](#) on Sunday, October 7, 2001 - 03:07 pm: [Edit](#)

Would this be an acurate definition of ftan

```
: ftan ( -- ) fsin fcos f/ ;
```

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, October 7, 2001 - 03:23 pm:

[Edit](#)

No -- at the very least you'd need FDUP and FSWAP in there.

Here's a working version courtesy of Trevor Steele, from the archives:

```
: ftan ( f: r -- r )
  fdup fsin fswap fcos fdup f0= if
  fdrop fdrop 9e18 else f/ then ;
```

Neal



By [Gary Wiese](#) on Sunday, October 7, 2001 - 05:23 pm: [Edit](#)

I am trying to put together a program to give compound angles. I know quartus returns values in radians. Here is what I have so far.

```
38e fsin 45e ftan f/ fs. 0.18296862e0
```

expected, but now I need to fatan to get the angle. Do I change back to degrees before or after the fatan. I have tried both and neither value is correct. What I need is this:

```
38 sin 45 tan / atan = 31.6
```

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, October 7, 2001 - 05:36 pm:

[Edit](#)

This, again from the archives, is a FATAN that works with the built-in Quartus Forth floats:

```
: f+u ( u -- ) ( F: r -- r+u ) 0 d>f f+ ;
```

```
: f*u ( u -- ) ( F: r -- r*u ) 0 d>f f* ;
```

```
: FATAN ( r -- arctan )
  fdup ( F: r r )
  fdup fdup f* fswap ( F: r r^2 r )
  1 20e f* f>d drop abs 14 +
  ( 1 count )
  0e ( F: r r^2 0 )
  do ( F: r r^2 val ) ( -- )
    \ val=(i*i*r^2)/(i+i+1+val):
    i 2* 1+ f+u ( F: r r^2 tb )
    fover i i * f*u ( F: r r^2 tb ta )
    fswap f/ ( F: r r^2 ta/tb )
  -1 +loop ( F: r r^2 val )
  fswap fdrop ( F: r val )
```

```
\ val=r/(1+val):  
le f+ f/ ( F: arctan ) ;
```

FSIN and FTAN take an angle -- in radians -- and produce a ratio, not an angle. FATAN takes such a ratio and returns an angle in radians. Thus, you must convert to degrees after the FATAN.

Neal



By [Gary Wiese](#) on Sunday, October 7, 2001 - 07:38 pm: [Edit](#)

I understand fsin and ftan take an angle and produce a ratio. I was doing every thing in degress then turning them into degrees again. I was not aware that quartus needed radians before the calculations. I did this and it worked like you expected.

Here is how I turn degress into radians.
57.2957795130823e fconstant radsiz

```
: deg>rad ( deg -- rad ) radsiz f/ ;  
: rad>deg ( rad -- deg ) radsiz f* ;
```

From one of your earlier posts.

Is this still the correct way to change degrees to radian and radians to degrees. It seems to work, I would like to know if you think there is a better way.

Thank you for your time
Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, October 7, 2001 - 07:41 pm:

[Edit](#)

Ok -- the confusion re degrees and ratios came up in an earlier thread, so I wanted to be sure the distinction was clear. Confusion on that point would make things difficult.

The ANSI Forth Standard mandates that the trig functions work in radians.

The code you have is the right way to convert between degrees and radians -- multiplication or division by the appropriate constant, as required.

Neal



By [Gary Wiese](#) on Sunday, October 7, 2001 - 08:04 pm: [Edit](#)

Thanks Neal, when you said archives I thought you ment the file area. I didn't find any thing in the file area, however I did have some of the definitions needed except ftan. I did a search of the ARCHIVES and found the definitions.

Sorry I will check every where before I post.

Thanks again 😊

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, October 7, 2001 - 08:07 pm:

[Edit](#)

Not a problem, Gary -- ask questions anytime. That's why I'm here.

Neal



By [Gary Wiese](#) on Sunday, October 7, 2001 - 08:18 pm: [Edit](#)

I know, but I like to find the answer before I ask. I learn faster that way. I was stuck and could not find anything that would do the trick. Sometimes just a little piece of info helps more than the whole answer. When I ask questions before I could always find my way thought it, except this time. However I am on my way, its working the way I expect now.

Thanks

Gary



By [Kris Johnson \(Kdj\)](#) on Sunday, October 7, 2001 - 08:35 pm: [Edit](#)

Someone may want to post some of these things to the wiki so that they don't get "lost" in the archives.

-- Kris

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Minor mail problems

[Quartus Handheld Software: Discussion Forum: General](#): Minor mail problems



By [Neal Bridges \(Nbridges\)](#) on Thursday, October 4, 2001 - 01:27 pm:

[Edit](#)

I've had a complaint of non-received mail earlier this week; if you're expecting a reply or registration from me and haven't received it, please do let me know.

Thanks!

Neal



By [Paul Randall \(Paul\)](#) on Thursday, October 4, 2001 - 08:08 pm: [Edit](#)

Hello Neal,

Yes, I've been expecting my registration code.

order # pilotgears-1185692

Thanks, Paul Randall

marxalot@earthlink.net



By [Neal Bridges \(Nbridges\)](#) on Friday, October 5, 2001 - 12:05 am: [Edit](#)

It has been re-sent. Thanks again for your registration!

Neal

Add a Message

Username:

Password:

E-mail:

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Problem with mathlib

[Quartus Handheld Software: Discussion Forum: General](#): Problem with mathlib



By [Gary Wiese](#) on Sunday, September 30, 2001 - 01:06 am: [Edit](#)

When I am in the Quartus console and enter this:

needs Mathlib

I get Exception in file: sdfd
included by: Mathlib
(2>r)? undefined word

I checked sdfd and it has
needs core-ext where 2>R not 2>r is defined.

I thought Quartus is not case sensitive, Is this the problem?

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 30, 2001 - 06:47 pm: [Edit](#)

Quartus Forth is definitely not case-sensitive, Gary. Something else odd is happening there.

It looks to me that you're searching for (2>r) -- including the parentheses.

Neal



By [Gary Wiese](#) on Sunday, September 30, 2001 - 07:54 pm: [Edit](#)

What do you think is causing the error? I wasn't searching for (2>r) instead I found 2>r, thinking it was causing the error.

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 30, 2001 - 09:27 pm: [Edit](#)

Looks like Chapman's excellent Floatlib code relies on his own version of core-ext, available here:

<http://www.sleepless-night.com/twiki/pub/Main/CoreExtModule/core-ext.txt>

Neal



By [Gary Wiese](#) on Sunday, September 30, 2001 - 09:29 pm: [Edit](#)

Thanks Neal, I will load it up.

Gary



By [Gary Wiese](#) on Sunday, September 30, 2001 - 10:22 pm: [Edit](#)

Can you tell me where I can find the whole project Chapmen has been working on with this subject? In the process of trying to get something to work I find my self getting deeper and deeper into things I do not have and need. First the core-ext was different then the one I had and then I needed inifini, which I found and now have, but now I need xts and can not find it any where.

Gary



By [Neal Bridges \(Nbridges\)](#) on Monday, October 1, 2001 - 09:01 am:

[Edit](#)

It's on the Wiki, under FloatLib.

Neal



By [Gary Wiese](#) on Monday, October 1, 2001 - 08:34 pm: [Edit](#)

I hate to be a pain, but I keep getting errors with mathlib. Here is what I am getting now.

needs mathlib

Exception in file: inifini

included by: Mathlib

can't patch (bye)

I have all the files plus some that are needed. I have been jumping all over the wiki looking for these missing files and I think I have them all now.

Gary



By [Neal Bridges \(Nbridges\)](#) on Monday, October 1, 2001 - 08:36 pm:

[Edit](#)

Hi Gary. I worked with the Floatlib in an older incarnation that didn't use Chapman's patch routines; I'm hoping he's around and can comment!

Neal



By [Neal Bridges \(Nbridges\)](#) on Monday, October 1, 2001 - 08:45 pm:

[Edit](#)

Have a look at Chapman's PatchModule on the Wiki, for a start.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Benchmark 2.0 with Visor Pro - 2nd attempt

[Quartus Handheld Software: Discussion Forum: General](#): Benchmark 2.0 with Visor Pro - 2nd attempt



By [George Lin](#) on Saturday, September 29, 2001 - 12:18 am: [Edit](#)

Hi all, I recently bought a Visor Pro and run Benchmark 2.0 on it. To my surprise, the result was a 'mere' 162%. I had expected a score around 204% considering it uses the same processor as the Visor Platinum. I was wondering if anyone else has the same 'problem'. Any feedback would be greatly appreciated! Thanks for reading.



By [Ron Doerfler](#) on Saturday, September 29, 2001 - 11:34 pm: [Edit](#)

This has been noticed by others, although the performance does not seem slower. See the first comment on the following review page:

http://www.palminfocenter.com/view_Story.asp?ID=2362&MODE=FLAT#22440

The response to that comment has a link to another review in which the reviewer found PocketMark to show this slower-than-expected result, but the reviewer tested an app and found it was significantly faster than the Platinum. This link is:

<http://www.visorcentral.com/page/0-6-121-2-6.htm>

Cheers,

Ron



By [George Lin](#) on Monday, October 1, 2001 - 03:17 pm: [Edit](#)

Wow, thanks for the info and links. Makes me feel a lot better about my purchase, though the difference between benchmarks and real-world usage is something to think about.

-George

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

16 MB expansion card for the M505

[Quartus Handheld Software: Discussion Forum: General: 16 MB expansion card for the M505](#)



By [Gary Wiese](#) on Wednesday, September 26, 2001 - 11:19 pm: [Edit](#)

Hello, has anybody out there had any trouble with 16MB expansion card for the M505? When I insert mine it says the card is Read Only, I tried it with and without the lock on and I get the same results.

Gary



By [Daniel E. Jarman \(Crashmstr\)](#) on Thursday, September 27, 2001 - 10:56 am: [Edit](#)

Is this a card with software on it, or just a MMC or SD card?

I have used a 32MB MMC and now a 64MB SD card (neither from Palm), and have not seen that problem.

Crash!



By [Gary Wiese](#) on Thursday, September 27, 2001 - 03:27 pm: [Edit](#)

Its a memory card, no software on it. I am taking it back today, it may just be a bad card or maybe a bad M505, hope not.

Gary



By [Gary Wiese](#) on Thursday, September 27, 2001 - 07:25 pm: [Edit](#)

There was nothing wrong with card, it was the M505 that was bad. No problem, they had another and seems to work fine.

Gary



By [Daniel E. Jarman \(Crashmstr\)](#) on Friday, September 28, 2001 - 12:28 pm: [Edit](#)

Glad you got your problem solved.

I would be helpless without my extra memory.

Crash!

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Library file is an MPEG

[Quartus Handheld Software: Discussion Forum: General](#): Library file is an MPEG



By [Paul Randall \(Paul\)](#) on Wednesday, September 26, 2001 - 07:54

am: [Edit](#)

I downloaded the Quartus evaluation package and find that the library file is a windows media player MPEG file.

I downloaded again but same thing. Could this be a windows ME thing? Or am I seriously misunderstanding something?

I should be able to copy that to my palm to make library definitions available for compiling, right?

I am eager to start playing with Quartus. I was using Forth back in the eighties on a apple II and then a mac plus. It's been a while. The last programing I did was in futurebasic on a mac.

Anyway, any help would be appreciated.

Paul



By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 26, 2001 -

09:04 am: [Edit](#)

Hi, Paul. The library file is in fact a MemoPad Archive file, suitable for use with the Windows Palm Desktop software.

It sounds like your system is configured to think anything with a '.mpa' extension is an MPEG file. If, however, you use the Palm Desktop software to open the .mpa file, you'll have no trouble.

Neal



By [Steve Bohrer \(Skb\)](#) on Wednesday, September 26, 2001 - 03:06

pm: [Edit](#)

Actually, I'm curious about how it looked as an MPEG. Any hidden messages?



By [Paul Randall \(Paul\)](#) on Wednesday, September 26, 2001 - 05:23

pm: [Edit](#)

Actually Windows media player scoffed at playing it as a movie.

It seems like palm desktop could not see the file, because I was going to try and hotsynch it anyway. But let me try again when I get home.

Best wishes, Paul



By [Steve Bohrer \(Skb\)](#) on Wednesday, September 26, 2001 - 08:01

pm: [Edit](#)

Rather than a direct hotsync, you need to load the file into the memopad of the Palm Desktop program.

In my version of the desktop, I click on the "Memo" button to bring up a view of all my installed memos. Then, I select the "File" menu, and choose "Import..." and I get a file-select box looking for "Memopad Archive (*.mpa)" files. I find the file, and open it up, and all the memos get added to the current category. (So, you might want to make a category like "Forth Lib" first, and select that before you import.)

After all the archived memos are imported into the Palm Desktop program, then they will be installed to the device at the next hot-sync.

You can hot-sync individual Palm databases (typically *.PRC or *.PDB files) to your handheld, but the Memopad archive is a format understood only by the Palm Desktop software on the PC.



By [Paul Randall \(Paul\)](#) on Wednesday, September 26, 2001 - 08:06

pm: [Edit](#)

Thanks! That worked.



By [Marc Ram](#) on Saturday, September 29, 2001 - 07:21 pm: [Edit](#)

I note Pauls' comment about the MPA only being recognised by the PC version of Palm Desktop (my mac thinks it's a quicktime movie as well) and I'm wondering, is there any workaround for my problem short of using a PC? I am using my Mac Laptop to hotsync my palm and the Mac Palm desktop does not recognise the Memofile archive format. (or I don't know how to get it to).

Is it possible to load the individual library sources via cut and paste into individual memos and compile them into a library file on the palm?

I realise that the PC option is a lot easier, but that means that I have to wait until I get back from my two week road trip to my Desktop PC.



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 30, 2001 - 06:51

pm: [Edit](#)

Marc, I've mailed you something that might help; let me know!

Neal



By [Marc Ram](#) on Sunday, September 30, 2001 - 10:34 pm: [Edit](#)

Thanks Neal!

The .nla file in the .sit file imported perfectly, certainly a more efficient solution than the route I initially took.

I was poking around the discussion area and found a reference to a MemoDb.pbd file in the section discussing loading the library into the emulator. Installing that worked as well, but you need to be aware that it will wipe out your existing notes (I was aware and so backed up first).

Marc



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 2, 2001 - 09:40 pm:

[Edit](#)

That's great, Marc. Thanks for the feedback.

Neal



By [Geof Holman](#) on Friday, November 16, 2001 - 12:51 am: [Edit](#)

Hello, I just down loaded the Forth. I have Mac too and have the same problem with the .mpa files looking like a Quicktime movie. Could you send me the work round. Also if I puchurce the software is there any non-html docs. Either a printed manual or Pdf...Thanx



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 17, 2001 - 10:35 pm: [Edit](#)

Geof, I missed this somehow. Sorry about that. I'll send you the Mac version I have shortly.

There's a PDF version of the manual in the File Area; let me know if you have any trouble finding it.

Neal

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Benchmark on Handera 330

[Quartus Handheld Software: Discussion Forum: General](#): Benchmark on Handera 330



By [Tom Poling](#) on Thursday, September 6, 2001 - 01:20 am: [Edit](#)

Hi

I got a Handera 330 last month replacing a Palm IIIxE. I was surprised there seemed to be hardly any performance difference even with a CPU that is twice as fast. I felt the xE was an adequate performer but expected much more zip with the 330.

I downloaded the Benchmark program and it shows the 330 running 244% of the xE! Most of my usage is typical Organizer stuff and a few games but I guess those do not exercise the CPU like a benchmark. Are there benchmarks that exercise a system in a "real world" manner? It would be interesting to compare systems on mundane tasks. Also, I wonder if those that overclock their Palms really see any real benefit.

The one application I have that speed would help is an Excel spreadsheet imported into Quicksheet. The file does a Vlookup to find an item on another sheet out of 320 entries. On a 200 MHz PC it is almost instantaneous, on the 330 it takes about 8-10 seconds. Any comments?



By [Kris Johnson \(Kdj\)](#) on Thursday, September 6, 2001 - 07:04 am: [Edit](#)

I don't notice much more "zip" in my Visor Platinum over the older Visor Deluxe, despite the faster CPU. I wonder if raw CPU speed really matters.

-- Kris



By [Daniel E. Jarman \(Crashmstr\)](#) on Thursday, September 6, 2001 - 10:40 am: [Edit](#)

I might just be me, but after having used an overclocked Prism, and now an overclocked m505, using an old Palm V for development and testing seems really slow in comparison, especially for application switches and tap response. That said, most applications aren't CPU bound, so you won't see much of a difference while in a particular application.

And yes, overclocking does make a difference on those applications that could use a little more out of the processor, like doing a recalc on a large spreadsheet. On the other hand, it doesn't make much difference on Klondike.

Crash!



By [brettrix](#) on Sunday, November 4, 2001 - 10:06 pm: [Edit](#)

I noticed a pleasant improvement in rapid graffiti recognition when I removed my IIIxe's memory wait-states with Cruise Control. (This boosted my benchmark to about 150% above stock).

I'm looking forward to better graffiti recognition when I purchase a HE 330 soon.

But, PalmOS tries to be lazy when it is waiting for user input, as this saves power. So you probably won't see the difference between a 33mhz machine waiting and a 16mhz machine waiting! ;-)

-Brett

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Link updates

[Quartus Handheld Software: Discussion Forum: General](#): Link updates



By [Neal Bridges \(Nbridges\)](#) on Friday, August 31, 2001 - 03:29 pm: [Edit](#)

I've corrected some of the links from the "Online Resources" section of the manual. Let me know if you find any that don't work.

<http://quartus.net/products/forth/manual/online.htm>

I've also added Handango as an option for purchasing Quartus Forth, and corrected a problem with the RegSoft link.

<http://quartus.net/products/forth>

Neal



By [Mark Beckman \(Mbeckman\)](#) on Saturday, September 1, 2001 - 12:14 pm: [Edit](#)

Newsgroup comp.lang.forth (via Google)

points to http://groups.google.com/groups?oi=djq&as_q=&as_ugroup=pilot.programmer&num=25

and

Newsgroup pilot.programmer (via DejaNews)

points to

<http://www.dejanews.com/dnquery.xp?QRY=%7Eg+pilot.programmer&DBS=2&maxhits=25&format=terse&showsort=score&ST=QS&LNG=ALL>

Which are effectively the same place (and neither are comp.lang.forth)



By [Neal Bridges \(Nbridges\)](#) on Saturday, September 1, 2001 - 03:22 pm: [Edit](#)

Thanks Mark -- fixed!

Neal

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Password:

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Quartus Forth Manual in PDF format -- updated

[Quartus Handheld Software: Discussion Forum: General](#): Quartus Forth Manual in PDF format -- updated



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 05:51 pm: [Edit](#)

I've updated the Adobe Acrobat PDF version of the Quartus Forth manual, removing the background quadrille pattern that made it slow and cumbersome to print.

<http://quartus.net/files/PalmOS/Forth/Docs>

Neal



By [Mike Will](#) on Wednesday, August 29, 2001 - 09:11 pm: [Edit](#)

Thanks Neal.

Your solid effort at maintaining and distributing both the forum archives and the Quartus manual are much appreciated, even if thinly applauded. It's also nice that you leave them editable.

Here's a tip for those using Acrobat if folks don't already know it. When building specific-topic sub-PDFs (I assume others do this too), it's best to Extract pages of interest to a new file instead of Deleting extraneous stuff to pear down a PDF. Acrobat (5) has the annoying habit of not shrinking the PDF when pages are deleted.

Mike



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 10:15 pm: [Edit](#)

Thanks, Mike. I'm glad the materials are useful.

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, August 30, 2001 - 05:37 pm: [Edit](#)

Something I'd like to see is some sort of "Quartus mega search" page that lets me simultaneously search the manual, the discussion forum, the discussion archives, the wiki, and the file area for keywords. (And maybe throw in comp.lang.forth and Palm's knowledge base as well.)

Any ideas about how to do this? (Or whether it is even possible?)

-- Kris



[Edit](#)

By [Neal Bridges \(Nbridges\)](#) on Thursday, August 30, 2001 - 05:58 pm:

The Quartus Search page covers a lot of that ground -- the manual, the wiki (I update the index at intervals), and the file area. The archives and the external sites aren't part of the search, though.

Neal

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Updated Forum Software

[Quartus Handheld Software: Discussion Forum: General](#): Updated Forum Software



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 25, 2001 - 12:00 am:

[Edit](#)

I've updated the Forum software tonight. Please let me know if anything odd happens, or if you continue to get 'Internal Error 500' on occasion when posting.

Thanks!

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 29, 2001 - 04:05 pm: [Edit](#)

FYI, I just got the dreaded Internal Error screen when I added a message to the Wiki Status topic.

I did a Back and then resubmitted, and it worked.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 04:08 pm: [Edit](#)

Got one today too - but not a '500' error. Different, anyway. 😊 Thanks for the report.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 29, 2001 - 04:11 pm: [Edit](#)

I didn't notice whether mine was a '500' or not.

-- Kris

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New Discussion Forum Archive

[Quartus Handheld Software: Discussion Forum: General](#): New Discussion Forum Archive



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 11:17 pm:

[Edit](#)

Now available -- archive10.pdf, holding all Discussion Forum messages since last December 17th in Adobe Acrobat format.

<http://www.quartus.net/files/PalmOS/Forth/Archive/>

Neal



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 03:45

pm: [Edit](#)

Also available in the Archive file area, an Adobe Acrobat index of all archives from 1 to 10.

<http://www.quartus.net/files/PalmOS/Forth/Archive/>

Neal

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Problem with III xe

[Quartus Handheld Software: Discussion Forum: General](#): Problem with III xe



By [E. Ross Helton](#) on Thursday, August 23, 2001 - 05:57 pm: [Edit](#)

Hi Gang,

I was wondering if anyone had ever had this problem. I have a IIxe. Every so often when I turn it on it is asking me to do a reinstall of the hacks, and if I check the date hasn't rolled over.

Does anyone know of a software which can cause this. Also what is the software which can keep the buttons from turning on the Pilot by accident?

Thanks

Make it a good day!

Ross



By [Steve Bohrer \(Skb\)](#) on Thursday, August 23, 2001 - 06:28 pm: [Edit](#)

Ross, I hope this is not too vague to be useful.

The "re-install hacks" prompt is how hack master responds to a reset. So, my assumption is that some program caused a reset at a time you were not actively using your palm. Do you have any hacks that do stuff at midnight? Or, it could be a non-hack app that wakes up via an alarm (or perhaps via some other mechanism?)

I think the date has not rolled over because the system is in a funny suspended state while hack master has this prompt active: I think that hack master hooks into the reset process (or perhaps it just catches a reset startup code broadcast) and does not let the reset process continue until you answer its prompt.



By [Mark Beckman \(Mbeckman\)](#) on Thursday, August 23, 2001 - 07:14 pm: [Edit](#)

Ross, if Steve is correct you can at least relieve the symptoms by using X-master instead of Hackmaster. X-master has the option of automatically restoring your hacks after a reset (after a 2-3 second pause so you can cancel).

Also of use to people that program on their palms:

There is a Hack, "Crash" by Daniel Seifert that will intercept fatal errors that

require you do a reset, and do it for you (after a pause).

X-master is freeware at www.linkesoft.com. Version 1.3 is the most current, non-beta release.

Crash is "Cardware" at www.dseifert.com. I believe that version 1.2 is the most current.



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 23, 2001 - 10:52 pm:

[Edit](#)

One solution for your other query -- keeping the application buttons from turning on the device -- is here:

<http://palmgear.com/software/showsoftware.cfm?prodID=3043>

Neal



By [E. Ross Helton](#) on Friday, August 24, 2001 - 10:24 am: [Edit](#)

Thanks for all of the suggestions. I had been playing with the hacks to see if one of them could be the problem. I had a Daylight savings hack that I thought could be the problem, but after unhooking it, I found it wasn't the issue. I deleted some others which I really wasn't using and still had the problem. The button on issue I solved, because I found there wasn't any way it could accidently be that problem.

So I will try "Crash" and "XMaster". Hopefully in a few days I will see good results.

Thanks for the suggestions for for taking the time to answer.

Make it a good day!

Ross



By [Steve Bohrer \(Skb\)](#) on Saturday, August 25, 2001 - 04:08 pm: [Edit](#)

It seems that X-Master will hide the symptoms by letting the reset complete automatically, but probably will not deal with the root issue of some application waking up your Palm and crashing it. Again, it is not necessarily a hack. I use a couple of applications that do logging or other processing that requires them to wake up at least once per day.



By [E. Ross Helton](#) on Friday, August 31, 2001 - 05:04 pm: [Edit](#)

Hi Gang,

I have installed X-Master and the crash program. I still have the problem of the Palm III xe not moving forward and the hacks needing to be reinstalled on boot up. It isn't every day, but at least twice a week.

I agree it has to be a program, does anyone have any suggestions as to what programs they know that might cause this.

I have deleted several programs and several hacks.

I use Northstars' backup module. Does anyone know if that program has had this problem. I have the version which puts itself into the flash memory.

Could it be that one?

Thanks for suggestions.

Make it a good day!

Ross



By [Steve Bohrer \(Skb\)](#) on Saturday, September 1, 2001 - 09:39 pm:

[Edit](#)

With X-Master, you need to enable "Auto-Restore After Reset" in the "Options>Preferences" menu to get it to reactivate the active hacks after a reset without a prompt. This option is off by default.

To test it, use X-Master's "Extensions>Soft Reset" to reset you palm. You will see the dialog asking if you want to reactivate the extensions, and it should go away after a few seconds.



By [E. Ross Helton](#) on Tuesday, September 4, 2001 - 11:13 am: [Edit](#)

Hi Steve,

Thanks for the information. I had missed seeing that part of XMaster. I activated it and did a soft reset and it worked as you said.

Now we will see how it affects my Pilot.

Still working on seeing what programs may be giving me problems. Haven't nailed down any ones which solve the issue.

Thanks to everyone for the help and info.

Make it a good day!

Ross



By [E. Ross Helton \(Erossh\)](#) on Thursday, September 6, 2001 - 10:50

am: [Edit](#)

Hi Gang,

The XMaster software and setting of its option solved my problem.

Haven't had a problem with my Palm IIxe in days.

Thanks

Make it a good day!

Ross



By [Neal Bridges \(Nbridges\)](#) on Monday, September 10, 2001 - 01:27

pm: [Edit](#)

Glad you were able to find a solution, Ross!

Neal



By [E. Ross Helton \(Erossh\)](#) on Monday, September 17, 2001 - 01:22

pm: [Edit](#)

Hey Gang,

Spoke too soon. the problem wasn't software. On Friday (09/14) it took a powder. It is on its way back for replacment under warranty.

Thanks for all of the suggestions. I will still use some of the software discussed. I had found it to be useful.

Make it a good day!

Ross



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 18, 2001 - 06:45

am: [Edit](#)

Ross, the best time for a product to fail is under warranty!

Neal



By [E. Ross Helton \(Erossh\)](#) on Tuesday, September 18, 2001 - 09:19

am: [Edit](#)

Hi Neal,

It sure is! I think that this is the first time I have ever had one that did.

Make it a good day!

Ross

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Possible hiccup in the discussion board software

[Quartus Handheld Software: Discussion Forum: General](#): Possible hiccup in the discussion board software



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 19, 2001 - 05:02 am:

[Edit](#)

I had a couple of reports of trouble with the discussion board today; please let me know if it's still happening.

Thanks!

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, August 19, 2001 - 01:48 pm: [Edit](#)

Everything seems fine now.

What I saw: I posted a message, and got the "Internal Server Error" page. I hit the Back button on the browser and submitted it again, and got a page saying that the message had already been posted. After that, I couldn't see anything: the Last Day and Last Week links had the "This forum is awaiting your messages" smiley face. The Topics and Tree View were empty.

-- Kris

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What's up out there?

[Quartus Handheld Software: Discussion Forum: General](#): What's up out there?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 14, 2001 - 06:16 pm:

[Edit](#)

A soapbox here. Let us know what you're working on!

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, August 14, 2001 - 10:25 pm: [Edit](#)

I'm going to try to finish up the JacksOrBetterTutorial on the wiki. I'll try to do one topic per day, so it should be done in a week or so.

I'd like to say I'm doing other more interesting things with Quartus, but I can't. My day job is taking up all my time and energy. But once this project is over, I plan to have a lot of free time...

-- Kris



By [Jamie Cairns \(Jamie\)](#) on Tuesday, August 14, 2001 - 10:35 pm: [Edit](#)

I'm working away on my "Trucker's Little Helper" program, learning Forth and the Palm OS at the same time. (almost have UI down pat, working on DB now) If I had more than a couple hours a week to spend on it, maybe the learning cliff would become a learning curve...

Jamie

(Neal - I'll reg as soon as I get one working app...)



By [Brian Chirgwin \(Bchirgwin\)](#) on Tuesday, August 14, 2001 - 11:35

pm: [Edit](#)

I am learning Forth right now. I have a list of applications I want to develop, but I need to learn the language and programming the Palm OS first.

I am thinking of a source code (or generic memo/doc) revision manager and bug/feature app that works on the palm. This will definitely not be my first app as it is beyond my current capability and I need to crawl before I try to get to the moon. If and when I complete it I will release it. Anyway, I've put quite a bit of thought into this and it doesn't seem too difficult, well at least not once I learn the language, the OS, etc... I do need to test performance of some of my ideas, but Forth code seems small, so I don't think the Palm will have a problem. Would anyone other developers have an interest in such a product?



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 15, 2001 - 01:31 am: [Edit](#)

I would definitely be interested in a revision control system for my source memos. I've thought about doing such a thing myself, but it's low on my priority list.

-- Kris



By [Trevor Steele](#) on Wednesday, August 15, 2001 - 03:25 am: [Edit](#)

I have now finished my latest update of my Scorebook application, which now supports the US and Canadian targets. I have also been approached by some smallbore shooters (in the UK and Brazil!) to do a similiar application for their discipline. I'm currently investigating the possibilities, however work has been taking up a lot of my time lately.

I still enjoy visiting the forum on a regular basis although it's some time since I've posted anything. Keep up the good work Neal.

Trevor Steele

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, August 15, 2001 - 08:06 am: [Edit](#)

I am in the process of updating WealthBuilder, which meant I had to first split it into modules to allow for further growth. I have a couple of other projects in the planning stages; as always, time is the limiting factor.

Barry Ekstrand

 By [Jim Hendricks \(Jimh\)](#) on Wednesday, August 15, 2001 - 08:27 am: [Edit](#)

Working on a game for shareware release, hope to have it out within the next 2 months. Will then return to some of my previous projects to see if I can turn them into a source of revenue.

Jim

 By [John Newell](#) on Thursday, August 16, 2001 - 07:50 am: [Edit](#)

Working on a utility which will produce a memo/Doc source file, for Forth/C, from a Resource database but with meaningful labels.

E.g. A resource file called Pril with a menu bar with an About menu item, an About alert, and a form entitled "Source List Generation" which has an OK and Cancel button would produce

```
1000 constant PRImb_mbar    \ Menu Bar
1010 constant PRImi_About   \ Menu Item
1000 constant PRIal_About   \ Alert
2000 constant PRIf0_SLG     \ Form
2910 constant SLGbu_OK      \ Button
2920 constant SLGbu_Cancel \ Button
```

The layout of the labels will be configurable so you could end up with "\$OK_bu2910\$".

Should also generate the Quartus Forth "make file".

John

 By [John Newell](#) on Thursday, August 16, 2001 - 07:51 am: [Edit](#)

What about you Neal?

John



By [Matthew Burke \(Mmb\)](#) on Thursday, August 16, 2001 - 09:27 am:

[Edit](#)

Ok since I've been posting for quite some time and have yet to release a finished app, you guys can take this list with a grain of salt. Although not actually finishing anything, I have been having a lot of fun tinkering with Quartus as I have time---and that's what counts, no?

Apps:

Solar System Explorer---this is the animation toy I was recently posting about. I still intend to write up something on the wiki about the pitfalls of color and double buffering.

BF Virtual Machine---search back in the archives. Search way, way back. Yes, I still haven't finished this. Recently, I did re-architect a lot of it.

PAGT---the Palm Abstract Game Toolkit. This is a series of modules for making it easy to do up 2 player ab games (chess, shogi, trax, etc) in Quartus and as soon as I have a beta (alpha?) done, I'll release it for others to play with.

Finally, I, too, have been thinking about some sort of version control system. Given that other folks have expressed interest in this, I'll go ahead and open up a topic for this.



By [Kris Johnson \(Kdj\)](#) on Thursday, August 16, 2001 - 10:02 am: [Edit](#)

Regarding version control and resource helpers, you might want to take a look at the <http://sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthDevelopmentEnvironment> topic in the wiki.

-- Kris

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Password:

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Critic on Quartus

Quartus Handheld Software: Discussion Forum: [General](#): Critic on Quartus



By [Harry Winter](#) on Monday, August 6, 2001 - 03:08 am: [Edit](#)

Critic on Quartus?

In her latest book on ANSI Forth, <Forth Application Techniques>, E. Rather begins with a definition by Wil Baden:

< "Forth is a language for direct communication between human beings and machines. Using natural language diction and machine-oriented syntax, Forth provides an economical, productive environment for interactive compilation and interpretation of programs, low-level access to computer-controlled hardware, and the ability to extend the language itself." >

Every implementation of a "somewhat standard" Forth, be it quartus, quintus, sextus, or whatever, will have most of the above characteristics. What I am concerned with here about "Quartus" are two items, the <direct communication> and the <low-level access to computer-controlled hardware>. The first item apparently has to do with the "specialized" characteristics of the Palm OS, which is quite different from the "general purpose" features of the Windows OS's. The very nice Windows programming interface provided by Forth Inc. are a good example, but the simple or even primitive interface of Fig Forth or the MaxForth implementation for the Motorola chips (HC11, HC12 and 68000), which I am now using, provides a simple, easy to understand direct interface.

In Windows systems you can still use the RS232, Com1/2 with up to 1Mega Baud rate and connect it to a simple text editor suitable for Forth programming. The two RS232 ports of the Palm OS apparently have no such general-purpose nature. So why does Quartus not provide a "Hack" to do so?

A feature of most Forth system is the ability to "vector" EMIT and KEY to different types of drivers, and maybe Quartus can do it, but where is the "simple" explanation of how to? The only driver for the RS232 I am aware of is the one described in Handsprings publications, the <Keyboard Support Remote UI>. [Terribly complex, Header, Body, CRC, and a whole bunch of other crap] Then, of course, there is the <HotSync> feature, which works with USB, but also IR and simple RS232 at better than 230 Kbaud on my basic Visor. Where is the <low-level access to this computer-controlled hardware> in Quartus for all of this? And by-the-way, has anyone read Handsprings< White Paper > about the <Springboard Interface>? Their basic idea is that new <peripherals> for Palm Computers will become the big driving force in proliferating the PDAs. Where are the "hooks" in Quartus to operate this interface? (The only drivers I am aware of are in C language.)

Having the OS completely divorce the programmer from the hardware is the antitheses of Forth! --- It's a sacrilege! ---- Ok, I believe I know your answers - you can get this feature on this web-site and you can buy that part here, and you can "include" this and that etc.,etc.. It's like saying you can get the missing tires for our car at Sears and you can buy the headlights at Farm and Fleet and you can get the left seats at Well, I rather have a car I can drive of the lot!

The ravings of an old man,--- Harry



By [Mike Will](#) on Monday, August 6, 2001 - 08:38 am: [Edit](#)

I agree, Harry. I must say though, that Neal is in a tough spot. Folks like you and I are always asking for more transistor control, while others want object template libraries!

On the weekend, I found a review of Quartus where it was criticized as being too "spartan". Isn't that a *good* thing? On PC's and embedded systems, I use eFORTH (how's that for spartan?)

Mike



By [Neal Bridges \(Nbridges\)](#) on Monday, August 6, 2001 - 10:07 am:

Harry, while Quartus Forth does provide high-level access to the Palm OS, it certainly doesn't divorce you from direct control of the hardware. In fact, you can control individual lines of the RS232 port if you so desire.

Low-level control of the Palm's DragonBall hardware is accomplished via memory-mapped ports. You can access them directly in Quartus Forth, and quite simply (with !a and @a and friends). The exact addresses and values for controlling various aspects of the hardware change as the hardware changes; the Visor Deluxe is different from the Palm m505 which is again different from the Handera, and so on.

If I read you correctly, you want to redirect RS232 input to use it as a terminal interface to Quartus Forth. That's harder to do on the Palm OS than it would be on most desktop operating systems, because the Palm doesn't support streaming, file handles, and redirection in the same way that, say, Windows does.

That said, it wouldn't be impossible to work something up, but it wouldn't be as simple to do as it might be on a larger OS.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, August 6, 2001 - 08:43 pm: [Edit](#)

One "feature" of Palm OS is that all the applications run in Supervisor mode, so there is nothing preventing anyone from accessing whatever low-level hardware features they want. Just check the DragonBall documentation to find out the CPU instructions and the memory locations to poke/peek, and you can accomplish whatever you want.

I don't see a reason for Neal to provide nice "wrappers" for such things. Anyone who needs them should be able to whip up whatever they need.

-- Kris



By [Jamie Cairns \(Jamie\)](#) on Tuesday, August 7, 2001 - 10:01 am: [Edit](#)

I'm having a difficult time understanding the problem...

I'm having difficulty with the language being as 'seemingly' low-level as it is, since I'm used to the old Algol-like procedural languages, but from my understanding of the design concept of Forth, in general - not Quartus in particular - is that it is the small footprint, extensibility and the size and efficiency of the compiled object that are it's prime advantages. If a specific word doesn't exist in the kernel, or core, or whatever you want to call it, write one.

Allegories about cars from companies that quit selling them over 50 years ago seem misplaced - if you want a vehicle that does everything but drive itself, you can get it off the lot - at a price. But, if you want a real performance vehicle, then you do have to go here for some parts, and there for others - the stock "off-the-lot" car doesn't cut it as a race-car.

Quartus Forth, with it's small, efficient compiled objects, seem to be a good indicator of what's wrong with many oversized, complicated, very verbose languages out there.



By [Mike Will](#) on Tuesday, August 7, 2001 - 01:57 pm: [Edit](#)

Speaking for myself (not Harry), I'm not advocating nice wrappers. I'm advocating a complete, low level tool with which to develop commercial grade apps. That includes beaming, launchcodes (done), callbacks, re-vectored I/O, etc. What about Neal's built-in float package? Wasn't that written to protect us from the vagaries of the PalmOS?

Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 7, 2001 - 02:07 pm:

[Edit](#)

Yes, one of the reasons that the built-in float package is there because floats were unreliable in the earliest versions of the Palm OS. However, it's not practical to try to wrap all the low-level hardware functions of each Palm device. The Palm OS itself does this to some degree, and if you're stepping outside of those bounds, you're in difficult territory -- the hardware is a moving target.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 8, 2001 - 12:55 am: [Edit](#)

Neal, here's what we want:

- Tighter integration with the operating system
- Less dependence upon the operating system
- Take advantage of Palm OS
- Be more like Windows and DOS
- Direct low-level access to every hardware feature of every handheld model that uses Palm OS (current and future)
- High-level abstractions on top of the hardware
- More features
- Smaller footprint
- Low price and outstanding no-cost support
- And please have this done by tomorrow.

Seriously, I don't understand why people spend their time complaining about the "deficiencies" of Quartus. It's simple, it's easy to customize and extend. If there's a feature you want that it doesn't have, you can probably add it yourself.

Expecting Neal Bridges to do all the digging through documentation to find out what memory locations to strobe for every single handheld is not reasonable. If Neal had a staff of people available to do that, and if he charged what Forth, Inc. and other vendors charge for their products, then maybe we could expect that. But that's not how it is.

Right now, we have direct access to the hardware. If Neal was to put together a vectored I/O system and streaming I/O in the kernel, then people would be complaining that Neal's stuff takes them too far away from the bare metal. And really, how many people are there out there who need to communicate via an RS232 interface? I find the screen works pretty well for direct communication with the hardware!

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 8, 2001 - 12:57 am: [Edit](#)

Well, I hope you have at least a few of the items on that list already. 😊

Seriously, that's the nail on the head. Quartus Forth is an extensible system; most anything can be added to it, and the contributions here in the File Area and the exemplary entries in Quartus Forth Wiki are a testament to that.

Neal



By [Mike Will](#) on Wednesday, August 8, 2001 - 05:41 pm: [Edit](#)

I do *NOT* want things that can be added with higher level words. In the biggest app I've written so far, I spent 2% of my time writing higher level Forth and 98% of my time trying to interface Quartus with the PalmOS (and dealing with the PalmOS on its own).

Kris, have you tried beaming or inserting a sorted record from within a Quartus app? Modifying the kernel is something that only Neal and God can do. When Neal tells me he no longer wants suggestions, I'll shut up. I don't make idle request just to waste our collective time. In fact, if anyone has argued in favour of keeping blubber out of the kernel in the past, it's yours truly.

Mike



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 8, 2001 - 05:43 pm: [Edit](#)

Your suggestions -- and everyone's -- are certainly appreciated, Mike.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 8, 2001 - 08:03 pm: [Edit](#)

My comments weren't really directed at your comments, Mike. I'm sorry if I left that impression. I agree that there are some features that would be nice to have in the kernel.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Thursday, August 9, 2001 - 11:20 am: [Edit](#)

The Palm OS is really the problem. When the Palm first arrived on the scene it was far better than any other PDA before it. However, I personally believe the Palm OS has had its day in the sun and we are seeing the end. When I can put a full Linux implementation running Xwindows on an iPAQ, "Why use a rudimentary OS like Palm?" is more than a casual query. Quite frankly, the Palm OS simply isn't "good enough" for what developers and users are demanding from their PDAs at this point in time.

The Palm was a breakthrough device that expanded the concept of personal computing as it was previously understood by the non-technical public; but (BIG mistake #1 by 3COM) it was merely marketed as an "organizer" instead of a computing platform. Palm has stayed on the "organizer" bandwagon to this day despite other companies finally "getting" that PDAs and mobility are the future of computing platforms.

The things everyone wants that are mentioned in the above posts are already available in operating systems like Linux and Windows. The real question is "Does the world need another fully functional OS?" Whether "yes" or "no", I doubt that Palm has the capital or technical resources to actually develop, let alone successfully market such an OS.

As much as I have enjoyed the Palm device, I am seriously considering the future of PDAs sans the Palm OS. I frankly expect be able to use my Palm OS based device for another year at best. I think Palm, Inc. has seen the handwriting as well. Their recent spin-off of the OS portion of the company from the products division places them in a position to make the same mistakes others have before them: "we're an OS only company". Which begs the question "Why would you purchase an embedded OS when there are so many free ones out there?"

Like fully functional and still usable operating systems such as CP/M, DOS, Windows/286, Concurrent DOS/386, and OS/2; the PalmOS may hang on in the sidelines, but I don't think it is going to be known in the mainstream PDA future.

Quartus forth, to me, was the greatest Palm app ever developed. It opened the device up to me to

write the apps I wanted, when I wanted, wherever I happened to be. The biggest frustration was my own inability to program at the low levels I sometimes needed, but the people on this forum have always been the best Palm resource ever. I have never had as much fun with any computing device as I have had with my series of Palm devices and Quartus forth. But that will not save the Palm. 😞

Fully functional operating systems with the myriad development and end user features we all expect in a "real" computing environment are possible where megabytes of RAM, powerful processor, and 1gb drives the size and weight of a quarter are commodities. And in the case of Linux, there thousands of developers working on base operating system enhancements and improvements daily on over 20 different hardware platforms. An app developed on Linux runs on all of them; hence the potential marketplace is a lot larger than in the Palm vs. Win/CE userbase.

It is harder and harder to personally justify the efforts required to overcome the limitations of the Palm OS. (Where's the fully functional graphics API that'll allow me create an app that'll draw images on my PDA at a job site, turn them into DXF files on the shop floor and upload them to the CNC Router?) Neal can't do it all alone, and there are just too many "we need"s out there pulling in too many directions.

Enjoy Quartus forth for what it is: a powerful tool that helped redefine how people thought about and used computing devices.



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 9, 2001 - 11:31 am:

[Edit](#)

Thanks for the kind words about Quartus Forth. It sounds like you're playing "Taps", for the Palm, though, Dave. 😊

The Ipaq is a powerful device, no mistake. But it still fills a different niche than does the Palm. The Palm has far greater battery life, and is much smaller and lighter than the Ipaq; this means the Palm gets carried more places and is more ubiquitous.

The next step for Palm is an ARM-based PDA. Where that will take them remains to be seen.

Neal



By [Mike Will](#) on Thursday, August 9, 2001 - 01:20 pm: [Edit](#)

Well, perhaps we're going in too many directions at once here, but...

1) I personally don't need the Palm to do anything more than what it already does; I would just like Quartus to fully support what's there now. This would allow me to abandon CodeWarrior and keep Quartus, which is my goal.

2) I agree that Quartus is the coolest piece of software ever invented. Neal's support for it and its users is unbelievable. I wouldn't ever ask Microsoft or Sun or Oracle for the stuff I routinely ask Neal for, yet I pay them many thousands of dollars each year. However, I also don't say kind things about them when they're not in the room, as I do for Neal.

3) I always enjoy reading the thoughtful posts of fellow Quartuscans like Kris and Dave (what ever happened to Erwin? 😊)

4) I see the future a bit differently than Dave. I think the PC has been shrunk almost beyond its useful limits. You still need a lot of bulky I/O (especially graphics) to make it useful as a PC. I see more progress in the opposite direction: smaller, simpler, lower powered devices that can move ever closer to real human symbiance. I expect to see implantable human memory expansion in my lifetime. Anyone who thinks that a true man-machine interface will be based on Windows (or Unix) is dreaming in Pan-O-Vision.

5) I have re-established Chuck Moore as one of my personal yogis (thanks to Kris' Wiki content). His horror at bloatware is refreshing and entertaining (but seriously Chuck, "what up with that crazy

ColorForth dealio? Must be some seriously good weed in silicon gulch these days.").

Mike



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 9, 2001 - 02:20 pm:

[Edit](#)

Mike, if it will make you feel better, please do send me thousands of dollars. 😊

Neal



By [Mike Will](#) on Thursday, August 9, 2001 - 05:27 pm: [Edit](#)

Thanks, Neal. It would.

But first, I must write a commercial grade Quartus app 😊



By [Kris Johnson \(Kdj\)](#) on Thursday, August 9, 2001 - 09:16 pm: [Edit](#)

The message that opened this topic suggests that Quartus is somehow not really Forth, because it does not provide "direct communication" nor "low-level access" with the hardware. I think that is clearly wrong, as Quartus provides whatever low-level access one could want. There are some "mid-level" OS integration issues that could be improved upon, but I don't think that really has anything to do with the "Forth-ness" of Quartus.

But there's a much larger discussion (flame war?) about what really constitutes Forth. The quote from FAT is one definition, but not the only one (or even the "official" one). Other Forth users feel differently. Depending upon who you talk to, Forth is

- a high-level programming language
- a low-level programming language
- a machine language
- a scripting language
- a command processor
- an operating system kernel
- a philosophy of software/hardware design

None of these is completely right, and none is completely wrong. Different people use Forth for different purposes, and as long as it serves those purposes, they are using it correctly, in my opinion.

As long as you have a dictionary and two stacks, you have Forth, as far as I'm concerned. The rest is just a matter of taste.

-- Kris



By [Harry Winter](#) on Friday, August 10, 2001 - 03:27 am: [Edit](#)

From the <Grouchy old man> who opened this discussion. (I too have a name Kris, besides my self appointed title.) And you are right, I should not have questioned the "Forth-ness" of Quartus, it is really the Palm OS that I am so pissed about. Neal did precisely what many critics of Forth have demanded for so many years, <provide a tighter and better integration into the operating system of the computer>. Trouble is, if the OS is too specialized and limited, then so is the Forth compiler/interpreter.

What Dave Bennett writes in his post, beginning with <The Palm OS is really the problem ... > is what I had strongly felt on an "intuitive level" This OS provides no general purpose I/O and I have the "feeling" that the control over the LCD display will also be too restrictive. (I have to face the display problem when my <Tricorder> peripheral design is finished.) Just as the early operating systems from Microsoft would not provide the performance needed by PC game developers, the Palm OS restricts program development for anything that does not do an "organizer job".

[Concerning the display, very likely, you are all too young to remember these early days of PC games. Programmers had to violate many rules (laws?) of Microsoft's OS, and it took a long time, and the growth of a multi-billion dollar game-industry, before Bill Gates got the message. No one took the game programmers to court for violating the laws of Bill Gates, --- it is not a crime Neal!]

What is Forth Kris? My personal "Bible" for this is Phil Koopmans book, STACK COMPUTERS, about the virtual Forth engine, but I am really getting to old for all the "new-fangled" stuff, e.g. I have no idea what an <object template libraries> is.

For me, a "good old Forth" is something that has a TIB and a PAD, which I can use in compile as well as in run mode. And there are other variables in RAM for KEY and EMIT, which point to Control Blocks for the input and output routines. These routines always came with the Forth system; I never had to write them myself! Did you know that the <CodeWarrior> people also found it necessary to use the serial link (RS232) for the communication job in their Console Mode when using the debugger?

Page 8 of < http://www.handspring.com/developers/tech_faq.jhtml > and their version R7 also supports debugging through USB. However, the instructions for getting this to work takes a whole paragraph, and all the buttons you must push or not push takes more than ten fingers. (And a younger brain than mine.)

To find out how fast the DragonBall (The MC68EZ 328, 16.58 MHz for the basic Visor) can operate its serial links, I downloaded Motorola's specs, -> 300 to 115 Kbaud standard rates and 1 Mega-byte max. It has a 12-byte input and 8-byte output FIFO. That makes for a RELATIVELY POWERFUL PERIPHERAL INTERFACE. The USB, however, is only a slave version to be connected to a host processor. (Not a peripheral)

Neal, for all the different versions, there must be a place in the Palm OS where it does all the vectoring for the I/O registers, including the UART control registers, after all, it is the same processor chip. If you should ever find the time to write any new routines, such a serial I/O would make this old man very happy, and maybe many other designers of peripherals for the Palm computers also. (Don't listen to Kris for this.)

The present Palm OS provides no "simple" and "general purpose" interface to any peripherals. What is provided is specialized and complex "plug-and-play" stuff for computer-complete-illiterates.

Harry, retired.



By [Kris Johnson \(Kdj\)](#) on Friday, August 10, 2001 - 06:23 am: [Edit](#)

The future of the Palm OS is hazy. On the one hand, its simplicity is beneficial. As long as Palm wants to continue selling 256K devices, I think they will need Palm OS.

A "real operating system", like Linux, running on a handheld is nice, but there are some tradeoffs. It needs more memory, and requires more sophistication on the part of the user.

I haven't tried an iPaq, as they are so expensive. I played around with Agenda Computing's handheld for a while. It was nice to have Linux on a handheld, but I really got tired of having to go to a console to kill processes that wouldn't die.

If Linux is going to succeed on mass-market handhelds, developers are going to have to make it as easy to use as Palm OS. Based upon what is happening with Linux on the desktop, I don't think things will ever get that simple. If you have a complex operating system, then developers write complicated applications for it.

But Linux handhelds would be great for specialized applications where you can assume a certain level of sophistication and training for the users.

-- Kris



By [Mike Will](#) on Friday, August 10, 2001 - 09:38 am: [Edit](#)

Why I like Chuck Moore's writings so much is that he is very hesitant to concede that complexity = power. I wouldn't be too quick to discard the PalmOS as underpowered. Finicky and weird, perhaps, but quite nimble for single task, single user apps.

Witness apps like thinkDB (a relational database with good features and performance). When I run thinkDB on my Vx and put it next to my PIII-800 Oracle workstation at work, it's hard to see much difference in performance for small databases! There are also some smooth, compelling games I've seen for the PalmOS (Zaxxon, SimCity).

I'd like to see a palm operating system written from the ground up in Forth (or Lisp). Perhaps someone could whisper it into Microsoft's ear so they could then claim to have invented threaded languages and make them a commercial success.

Mike



By [Kris Johnson \(Kdj\)](#) on Friday, August 10, 2001 - 01:26 pm: [Edit](#)

I agree. I'm quite happy to continue using Palm OS as is for what I do with it (organizer, note-taking, and games).

But as Harry notes, the simplicity and "single-mindedness" of Palm OS is leading to a lot of customized, incompatible interfaces for peripherals and other features. Every OEM is extending things just a little bit to suit their needs, but they are all going in different directions. And the proliferation of Hackmaster hacks and other system extension tools makes things chaotic and unstable.

Unfortunately, it is often true that generality = complexity.

-- Kris



By [Mike Will](#) on Friday, August 10, 2001 - 04:50 pm: [Edit](#)

Palm down 93% from 52-week high.
Handspring down 96% from 52-week high.

Maybe none of us will need to worry about the PalmOS for much longer.

Mike



By [Kris Johnson \(Kdj\)](#) on Friday, August 10, 2001 - 05:36 pm: [Edit](#)

Stock price doesn't necessarily have anything to do with whether the companies will stay in business.

But, as someone who bought PALM at \$44/share, I've certainly been paying attention. ☹

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, August 10, 2001 - 06:38 pm:

[Edit](#)

True. The entire tech stock market is greatly deflated nowadays; Palm's poor showing is on par with their competition, plus or minus depending on which leg any particular company was putting its weight when the bubble popped.

Neal



By [Steve Bohrer](#) on Saturday, August 11, 2001 - 08:42 pm: [Edit](#)

I don't want to put words in Harry's mouth, but it seems the key issue he is fussing about is the relatively less "interactive" nature of Quartus than many forths on the desktop: Graffiti is way slower for most of us than keyboards, and it seems that Harry wants to plug in a serial terminal and have at it. Harry, have you tried a Palm keyboard?

Also, of course, Quartus does not have the dictionary in compiled apps, so executables do not have access to the full forth system. This makes Quartus different than most desktop Forths. I have no direct experience, but I know many "embedded" Forths are cross-compiled on a PC to generate code for a simple device. I imagine that such systems also leave the dictionary and interpreter behind. I believe that this is a valid design choice for a limited device like the Palm, as well.



By [Mike Will](#) on Saturday, August 11, 2001 - 11:05 pm: [Edit](#)

It seems strange to label a 16MHz 68000 machine with 8Meg of RAM as a "limited device" for Forth. Harry: this thread of yours is starting to make me feel like a fossil too!

Mike



By [Harry Winter](#) on Monday, August 13, 2001 - 07:03 am: [Edit](#)

OLD AGE HAS "ONE" ADVANTAGE

One gets to look back on a lifetime of "evolution in electronics" to see the trends.

My first experience with (FIG) Forth was on the RCA chip-set, the time of the 8008, the 6500 and the first ATARI with 8-bit micros at one and two MHz . The serial I/O was a 300 Baud RS232 driven by a "bit-banger". (Anyone still know what that is?)

Do you really believe Mike that I consider a 32-bit 16MHz 68000, with all its high-speed I/O, a "limited device"? I don't, but Intel, TI and Motorola are cooperating on the specification of a new v6 ARM chip to replace it. (EETime, August 6, page 45) -<<< Texas Instruments, for its part has pledged to develop an ARM based wireless processing platform optimized to support the Palm OS. >>> Are you reading this Neal and Dave? It means we will have to live with the Palm OS for many more years to come, and with all its limitations.

What are these limitations? I believe Kris has said it quite nicely: >>> the simplicity --- [I would have said "useless complexity"] and "single-mindedness" of Palm OS is leading to a lot of customized, incompatible interfaces for peripherals and other features. Every OEM is extending things just a little bit to suit their needs, but they are all going in different directions. And the proliferation of Hackmaster hacks and other system extension tools make things chaotic and unstable. <<<

How important are the peripheral interfaces? I believe that, historically, they were "vital" for the incredible business success of the PC. Just imagine you had to use your PC without a printer, without a modem, without a floppy or CD drive and no standard ISA or PCI bus to plug-in other peripherals. The lack of good interfaces for very early PCs created a whole new (cottage) industry. (A Company in Acron Ohio, Quartek, which I know quit well, made a multi million-dollar business just with providing fast RS232 and printer ports and the software-drivers for it.)

The Palm computers are apparently also at this very early stage, and even while the "hardware" is providing the necessary I/O, the OS throws it all <into one pot> to cook it on their <Hot-Sync stove>. [A one-pot stew or what the Germans call an "Eintopf"!]

This limitation is "the one vital flaw" that Jon Titus is not aware of when he wrote his editorial on the Pam computers. And I believe that this "Eintopf" I/O is what's holding back the development of the peripherals Jon Titus is predicting. Since Forth was the original instrument control language, I believe it has the "duty" to provide these missing software-drivers to enable the already existing and powerful hardware I/O.

Here is the article by Jon Titus again, (Just erase it Neal, if you hate repetition.)

TEST POINTS -- USA-special edition, September, -- Europe-edition, Oct./Nov.

PUT AN INSTRUMENT IN YOUR PALM, by Jon Titus, Editorial Director, Test&Measurement World

When IBM introduced its first PC in 1981, it did a smart thing. It provided information about the computer's bus and its software, so almost anyone with some software or electronics experience could produce add-in cards or software for the computer. If IBM had offered a proprietary bus and had hidden the workings of its software, its PC would have been a footnote in history. Instead, the IBM PC became the starting point for many innovative designs.

Another type of small computer lurks, ready to tackle instrumentation tasks. It comes with a built-in display, a touch screen, I/O connection, easy connection to a PC, and an IrDA port. Surprise, it's the computer in all those portable digital assistants, or PDAs, that many of us rely on to store information. Most users wouldn't think of a PDA as an instrument controller, but most IBM PC users didn't think of their word processors as instrument controllers, either.

Recently I bought a Handspring Visor PDA. The Visor runs the Palm operating system (Palm OS), and it comes with an open slot for Springboard modules. I'm intrigued by the possibilities of that open connector. Various companies already offer memory-expansion, modem, game, and camera Springboard modules. Data-acquisition and I/O modules won't be far behind. If you prefer the original Palm PDAs, now you can buy data-acquisition add-ons from Datastick (www.datastick.com)

The specs for the Palm OS and for the I/O connections on these PDAs are open, and you can download them from the Palm OS Web site (www.palm.com). No, you won't have to code in assembly language. You can use freeware tools such as GNU, or buy the Code Warrior C/C++ compiler package from Metrowerks (www.metrowerks.com) for a few hundred dollars. And you can even find a version of Forth for Palm OS (www.quartus.net)

Granted, a Palm Pilot won't control high-speed ATE, but it might suit many portable instrumentation needs. How about a basic DMM module, or a simple logic-analyzer module? Yes, screen sizes are small, and you may dislike using graffiti lettering for data entry, but improvements are coming and accessories such as full-size keyboards are here now. Just remember, IBM PC came with only with a monochrome monitor that displayed simple character-based graphics. Not much potential there, right?

The Palm devices all have three "Hardware types" of I/O, two very high-speed serial (RS232 type) one for wire, one for IR; a USB port to host processors only and a parallel port which is a derivative of the PC-Card bus. (The PC-card bus, the Memory card slot for Palm and Springboard for Visor --- all are 99.9% similar, but just as incompatible as the 99.9% identical Genes for Apes and People!) And the serial I/O, which is "standard" at the hardware level, is all thrown into one pot for one type of application. [Hot-stink]

Is this done for or with "simplicity" Kris? Apparently not, because if I ever had any daubs about what "complexity" was, I would study the very many pages on the Palm web-sites you gave me, which describe the serial I/O routines.

<http://www.palmos.com/dev/tech/docs/palmos/SerialCommunication.html> --- and:

<http://www.palmos.com/dev/tech/docs/palmos/SerialManager.html>

I will try to get the "Forth source-code" for the serial program of the DragonBall 68000, provided by Newmicros Inc.. Like most micros, there are only four or five registers to handle the RS232 links, transmit and receive data register, status register and control register and the Baud-rate register. I suspect that the size difference between Palm Inc. and Newmicros Inc will be greater than 100.

Mike, the "complexity" which Chuck Moore hates so much is the one that "lowers" the power and totally restricts what you can do with it! Just look at his NC4000 (RTX2000), they are "simplicity

incarnate" with super performance. I do the same type of designs with one difference, what Chuck can do in ten weeks takes me ten years to do.

To get a good idea about what Chuck does, take another look at my second last post in "Every Thing Else"--- "Second Forth revolution"--- "Very late Letter to Darren Cook". It's the quote from Wright, just replace "cellular automation" with Forth. I send this article to Chuck many years ago and he was delighted enough to send me a long answer.

Is this the longest posting on this web-site? Sorry about that, --- Old people repeat themselves, and here is another repetition, specifically for Neal.

I believe Forth has the "duty" to provide the missing software-drivers to ENABLE the already existing and POWERFUL HARDWARE I/O of the Palm computers.

Harry

 By [Mike Will](#) on Monday, August 13, 2001 - 11:41 am: [Edit](#)

That's interesting about the quote from Wright on cellular automation. One of my favourite books is "Artificial Life" by Steven Levy (Pantheon 1992). It's all about cellular automata and parts of it read like a Forth instruction manual. Neal, if you like biographies of great names in math and computer science, this is a must read if you haven't already.

Mike

 By [Neal Bridges \(Nbridges\)](#) on Monday, August 13, 2001 - 02:19 pm: [Edit](#)

I think Bob Cunningham holds the record for longest post, Harry, but keep trying. 😊

I daresay it's tough for a programming language to have a 'duty', as such, but certainly if you need something that you think is missing, the best way to make it exist is to create it. I'm happy to help, as always.

Neal

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 14, 2001 - 05:53 pm: [Edit](#)

I'll check that book out, Mike -- thanks!

Neal

 By [Harry Winter](#) on Wednesday, August 15, 2001 - 03:48 am: [Edit](#)

Well Neal, so you are asked your "customers" what they are using your Forth compiler for? It's a good idea, but I hope you realize that the results you are getting also have a "reverse side". Indirectly, they will be telling you for what they are NOT USING your compiler! (And I believe that will be "professional programs", defined as \$100,000 and up. The cost of 6 engineering/programming man-month.) However, in today's World markets you can earn money with nearly anything, such as coffee cups for left-handers or compilers for "geeks", as long as it appeals to a small group of people. (A niche market) I see nothing wrong with that Neal - money is money! The question is, is that what you want to do and want to be recognized for?

Don't know if you are aware of it, a Forth compiler for a small hand-held computer is nothing new. The giant Japanese company <Matsushita Electric, Ltd.> commissioned such a program for their "Quasar" Hand Held Computer, a 1MHz 6500. This was in 1982, before your time, and the job must have taken at least several programmers. It was a BIG job and Matsushita very likely paid millions to get it done.

I believe, the fact that your Quartus uses ANSI Forth makes no big difference, the performance of Forth has not advanced much in the last 20 years. The million-dollar Quasar compiler created

stand-alone program capsules, interfaced with all the sophisticated calculator and other routines, but most importantly could be cross compiled on a desk-top computer (the Apple 2) and drive its own ROM burner. This little thing was teaching me Forth, I even managed to write a decompiler for the tricky "token threaded" Forth code they were using. (It worked 99% of the time)

Why did the other "engineering Geeks" and I buy this Quasar with the Forth compiler? Because I was a "Geek" at the time, meaning, smart and good at engineering, but not fully grown-up! This little hand-held allowed me to pursue my hobby, engineering, wherever I was. It let me carry a "super-toy" in my pocket! This is similar to what Dave Bennet writes in his post:

>>> Quartus forth, to me, was the greatest Palm app ever developed. It opened the device up to me to write the apps I wanted, when I wanted, wherever I happened to be. ---- I have never had as much fun with any computing device as I have had with my series of Palm devices and Quartus forth. But that will not save the Palm. <<<

(Or Neal's present Quartus version.) Asking your fellow geeks (customers) what they are presently using your program for will not tell you how to make it into a "professional" product. This question, if incorrectly interpreted, leads to the classical business mistake, stifling progress and innovation. (Professor Christensen)

As I said many times, while Quartus forth is a powerful program, it has some vital elements missing to make it suitable for a "real" job I want done. The hardware I/O of the DragonBall or ARM needs to be "enabled" for two reasons. Peripheral interfaces and "professional" programming, which is being done on a PC-Workstation with all its resources, not with a 10 cents plastic stylus on a Miki mouse screen.

As you said Neal, >> if you need something that you think is missing, the best way to make it exist is to create it [yourself] << It's honest! = "The customer is an idiot!"



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 15, 2001 - 10:44 am: [Edit](#)

I don't think Neal is treating any of us as idiots. I believe it is Harry Winter who is claiming that the rest of us are unprofessional, inexperienced, and/or just plain stupid.

I don't think there are too many people who are aching to use Forth on Palm OS handhelds for peripheral interface programming, nor are there too many people who want to bypass the Palm OS to do so. There are a few, but probably not enough to make it worth Neal's time. I seriously doubt any Forth product can make a dent in the C/C++-dominated Palm OS development market, no matter how many features it has.

If you think that developing a "professional" (in your opinion) Forth environment makes good business sense, why don't you do so yourself and show the rest of us how wrong we are?

You continue to claim that Quartus is somehow standing in the way of using the serial ports. Maybe that's true--I don't know exactly what it is you are trying to accomplish. But, as has been stated over and over again, Quartus is not standing in your way. I think everything you need is documented. If you do some investigating and programming, you can do it yourself. Why insist that Neal do this work for you for your specific purposes?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 15, 2001 - 11:04 am: [Edit](#)

Thanks, Kris.

Harry, certainly I don't think any Quartus customer is an idiot; on the contrary, they show remarkably good taste and intelligence by choosing to run my products. 😊

I disagree about Standard Forth not mattering. I wouldn't be in the Forth compiler game if not for the ANS Standard; it's a solid baseline, and highly desirable to the customer base.

Perhaps you can be more specific about what it is you want to achieve, Harry, and how you feel the current system is holding you back? You've talked about the Springboard interface, and that's all there; the Handspring API is fully enabled, and the Springboard interface itself is simply memory-mapped I/O.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 15, 2001 - 11:40 am: [Edit](#)

Just out of curiosity: if Neal did come up with a "Quartus Forth Professional" product, which did everything everyone is asking for, and charged \$500 or \$1000 for it, how many units do you think would sell?

Neal is open to suggestions and is always working to improve Quartus. This is great. But it's also valid for us to make "anti-suggestions" if we like Quartus the way it is and don't want any dramatic changes.

If the time ever comes when using Quartus requires me to use a cross-compiler and a terminal emulator to develop my programs, I'll just buy CodeWarrior.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 15, 2001 - 11:53 am: [Edit](#)

An interesting thought, Kris. I wonder what could possibly go into such a Quartus Forth that would justify making it a whole order of magnitude more costly?

Neal



By [William Tanksley](#) on Wednesday, August 15, 2001 - 01:31 pm: [Edit](#)

Harry, I have to guess what you're asking for. I can see two things: your main complaint is that PalmOS doesn't have good enough driver support (very true, and the Springboard standard is supposed to remedy that; PalmOS 4 is also supposed to help), and your second complaint appears to be that the debugger isn't good enough (you mentioned this in your second post).

It so happens that there's a Forth-based debugger for PalmOS, named "debuffer", at <http://debuffer.sourceforge.net/>. I don't know if that helps at all, but I think you made some sort of complaint on that issue. If so, good luck.

If I'm totally wrong, please clarify! I've enjoyed your posts and would like to understand this one.

-Billy



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 15, 2001 - 01:41 pm: [Edit](#)

Palm's own debugger is also available free; it allows debugging across the serial interface as well as with the emulator.

<http://www.palmos.com/cgi-bin/sdk40.cgi>

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 15, 2001 - 02:01 pm: [Edit](#)

The additional order of magnitude in price for "Quartus Pro" would be to cover the staff of people that would be needed to update the low-level I/O for every Palm OS handheld that ever comes to market. And to create the cross-compiler, high-level debugger, low-level debugger, Forth editor, Basically, I'm assuming you'd have to do everything Metrowerks does, and everything Forth, Inc.

does.

That price would also be necessary to convince people that it is a "professional" product. No one takes inexpensive (or free) development tools seriously, no matter how powerful they are, unless Microsoft or Sun is the party giving them away.

And of course, you need a big box and thick manuals. The shipping alone for each unit would have to be \$50. No more of this "shareware" thing.

And don't forget the cost of lawyers.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 15, 2001 - 02:36

pm: [Edit](#)

Well, we wouldn't have to eat lawyers every day; just as a special treat now and again, say when there's a new release. 😊

Neal



By [Jim Hendricks \(Jimh\)](#) on Wednesday, August 15, 2001 - 06:58 pm:

[Edit](#)

The Quartus Pro would also have to sport the Forth++ language, even if that means ANSI + Neal & community extras. Or maybe the language needs to be called bagel to go along with that cup of java.

Seriously, I think Harry seems to argue in favor of the "Forth out crowd" who view anything Forth as the realm of geek play toys and there is nothing serious ever produced from Forth. Kinda sad really since I have found the language to be extremely succinct and yet wonderfully fluid. Takes some getting used to wrapping my procedure or OOP warped mind around the different syntax of Forth, but once you get past that speed bump, you find you can develop much faster in Forth because it is so interactive. I can play with the language, experiment, then turn those into real functional stuff in a small amount of time. And from the standpoint of professional, it seems that Forth developers pride themselves on delivering a system written on top of Forth and keeping it a secret except to the other "Forth in crowd". I tend to like it that way. So long as other programmers shun Forth as a geek play language, I can continue to produce code faster than they which also runs faster and has fewer bugs and is not bloated to the point where you need a shoehorn to squeeze it into an older system. More than a year ago I posed the question of how to turn my shop onto Forth. I never was successful. Now, since I was laid off in January and have had to fend for myself, I have found it easy to convince my new boss (me) that Forth is the way to go. Now if I can just find a Forth for windows that I am truly happy with, one which produces native code and simplifies some of the Win API issues. I would love to have a Forth for Windows which has an API like Java. But guess I won't see that 'til I produce it myself.



By [Mike Will](#) on Wednesday, August 15, 2001 - 11:28 pm: [Edit](#)

I think this thread is causing rancor because it's too theoretical.

Forth is a tool best suited to a lone, intense programmer who likes to commune with a CPU (a geek or a samurai, depending on your perspective). C++ is a tool best suited to a collaborative group of 9-to-5 folks (robots or professionals, depending on your perspective).

Most labels are subjective. I just want a sharper sword. Not a more 'pure', 'professional', or 'standard' sword; just a sharper one. Quartus is a good sword. Perhaps not the "Green Destiny" quite yet, but a good sword. The smith has been kind enough to offer us a chair near the forge and has invited comments and suggestions. I intend to neither deify nor insult him.

Mike



By [Harry Winter](#) on Thursday, August 16, 2001 - 03:38 am: [Edit](#)

Being declared "THE WEAKEST LINK" by the powers of Quartus, I'll have go, but if I find a solution to vector EMIT and KEY to the RS232, I might come back. This then is the parting statement of a "condemned engineer", and I hope you will be kind enough to read it. All I ever really wanted was the above feature, which would have solved all my troubles. Such as being too old to write a long program in "Graffiti" and editing it on a tiny screen and not having a simple (cheap) interface for my peripheral designs.

Fortunately, every one of the existing Forth compilers for embedded micros I know of still has this simple feature. NewMicros Inc. gives away for free a very simple PC-editor for program development with all their micro-boards, and there are many more around as free-ware.

I never said I wanted a cross compiler --- it's is not "in the spirit" of Forth.

I never said I wanted a special debugger --- Forth does not need one.

I never said that Quartus using Graffiti and Palm display was a bad idea. Contrary, it's a great idea, which makes the tiny Palm a self-contained programming platform. It lets you try-out small program algorithms on a business flight from California to Montreal.

I never said that Quartus was not a modern and powerful compiler, it truly is and with a price tags that is a give-away.

Having said this, I accept my condemnation as "the weakest link" and bid you farewell.

Harry



By [Kris Johnson \(Kdj\)](#) on Thursday, August 16, 2001 - 09:22 am: [Edit](#)

I don't think any of us wants to see you go, Harry. I'm sorry if I haven't been helpful enough, but I really don't understand what it is you need, and I don't think I'm alone in that.

You don't have to write programs in Graffiti. If that's what your question was about, we can help you with that.

I don't think anyone has condemned you as a weak link. You started this thread talking about how Quartus is "sacrilege" and later that it is not "professional". I disagree with that, so I argued, but I think you've made some other good points as well.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 16, 2001 - 11:01 am:

[Edit](#)

Harry, it's not so tough to have EMIT and KEY work through RS232; the building blocks are all there. BUT -- and this is important -- that wouldn't suddenly make the whole Quartus Forth console work via the serial port, which is what you originally professed to want. The interactive console is based around the Palm GUI, and isn't simply an extension of EMIT and KEY.

You haven't been condemned by anyone here as far as I can tell, and certainly not by me. If you find yourself wanting to write some Quartus Forth apps again, please do come back; all are welcome.

Neal



By [SamuelTardieu](#) on Thursday, August 16, 2001 - 02:25 pm: [Edit](#)

I must say that I totally agree with one point of Harry's message: I too really miss the possibility of overloading emit and key.

While I understand that Quartus Forth is doing clever things in the current implementation of those calls related to the graphical console of the Palm, I do not understand why there is no way to insert

a test at their beginning.

```
variable emitXT  
  
: emit ( c -- )  
emitXT @ ?dup if execute exit then  
[...]
```

and the same thing for key would be enough for those of us who want to use a serial link to do their development.

I would be grateful to you 'till the end of times (maybe even more) if you added this!

Sam

PS/ incidentally, I wrote a tiny incomplete Forth compiler from scratch for the Palm (cross-assembled from FreeBSD) during my last vacation, and the only interface I had was a serial interface

 By [Neal Bridges \(Nbridges\)](#) on Thursday, August 16, 2001 - 02:33 pm: [Edit](#)

Sam, it's a bit more complex than that. What would you expect such a redirection to achieve -- that is, what is it you're trying to do? If it's the same as Harry, to use a serial terminal as a replacement Quartus Forth console, a simple patch into KEY and EMIT won't do the trick.

Neal

 By [Kris Johnson \(Kdj\)](#) on Thursday, August 16, 2001 - 07:54 pm: [Edit](#)

For those people who do want to "hook" into existing words, wouldn't it be fairly easy to write a word that patches code? So that, for example, one could do something like this:

```
: myemit ... ;  
' emit ' myemit patch ;
```

My idea is that PATCH would replace the first few bytes of EMIT with "JMP myemit". This is ugly, but might make it easier for people to customize some aspects of Quartus without the need for kernel changes.

My biggest question for Neal would be how this affects standalone application generation.

-- Kris

 By [Kris Johnson \(Kdj\)](#) on Thursday, August 16, 2001 - 09:53 pm: [Edit](#)

I've implemented my PATCH word. I'm not sure what all the implications of using it are, so use at your own risk.

<http://sleepless-night.com/cgi-bin/twiki/view/Main/PatchModule>

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Friday, August 17, 2001 - 01:48 am: [Edit](#)

Check the Wiki -- Chapman Flack has already done most of this work; perhaps the two can be merged.

Neal



By [SamTardieu](#) on Friday, August 17, 2001 - 04:07 am: [Edit](#)

Oh, I see. I thought Quartus had a typical QUIT inner loop, using KEY or ACCEPT (and EMIT for displaying), and that those routines had been rewritten to accomodate Palm graphical screen.



By [Neal Bridges \(Nbridges\)](#) on Friday, August 17, 2001 - 10:48 am:

[Edit](#)

You're right, Sam. Because of that, ACCEPT is in no way based on KEY. Among other considerations, EMIT is based on TYPE, as opposed to the other way around, and exception messages are written to the screen with a special routine to ensure that they wrap at the edge of the screen. So you see, simply patching EMIT and KEY wouldn't give you console redirection.

Neal



By [Neal Bridges \(Nbridges\)](#) on Friday, August 17, 2001 - 10:57 am:

[Edit](#)

Let me stop for a second and clarify, however. Is it really a major concern for developers to be able to hook a serial terminal up to their Palm in order to use the Quartus Forth console via the keyboard of that terminal? Nothing else would be gained beyond the use of the terminal's keyboard -- surely the Palm folding keyboard is the right answer to that problem. It works in Quartus Forth, the MemoPad, and all other Palm apps, and requires no code modifications.

Neal



By [SamTardieu](#) on Saturday, August 18, 2001 - 05:39 am: [Edit](#)

I do not agree: I would like to be able to use a serial link as the Quartus Forth console to recover the full interactive aspect of Forth (note: this is not a criticism against Quartus Forth, only against Palm's apparent single-tasking system).

More precisely, the way I intend to work if I had a serial console is keep my files on the host (a laptop for example), run the Forth on the target (Palm) and use copy/paste to "feed" the target with my words (manually or semi-automatically).

If a word does not work as expected, I can quickly try a new definition (without leaving Forth to switch to the editor), update it on the host, and reload (copy/paste) only what is needed, not a full file (in case someone suggests to use a MemoDA which allows editing without leaving the running program).

When a bunch of words work correctly, then I can transfer them into a memo, which will be included rather than read from terminal next time I use Quartus, to keep traffic on the serial line low. I can even imagine a word which would take as arguments a name and a version, and would build a Memopad entry with everything input on the serial line up to a predefined delimiter (that part can already be done in Quartus Forth).

Moreover, it is easier to automate test suites on the host, as well as to keep version controlled files (hot topic?).

So yes, it requires two computers (host and Palm), but it solves concerns that neither a Palm keyboard nor the PalmOS emulator can solve (automated tests for example).

Once again, I can live without the ability to use the serial link as Quartus Forth input/output, however, if it is there, I will for sure use it!



By [Harry Winter](#) on Saturday, August 18, 2001 - 07:52 am: [Edit](#)

SAM, your last post makes me break my promise to be only a "silent" reader of this forum, and this message is for your eyes only --- no one else understands it.

What you have said in your last post is precisely what Wil Baden, the leading authority for the creation of ANSI Forth says in the first sentence of his definition, < "Forth is a language for direct communication between human beings and machines." > Elizabeth D. Rather quotes what Bil Baden said in discussing his definition, "This first sentence tries to capture the general spirit of Forth." And for the meaning of the word <environment> in his definition he says: "Forth is not just a language, it's an environment. You and the language become one and invade the machine. ----- Forth is the most interactive of programming languages. Programming and checkout are not separate phases, but intermingled in one interactive sharing."

It never was a question of replacing the \$75 <Folding Keyboard> with two or three pages of new Forth code. (However I would gladly pay that amount for these pages.) It has to do with all the resources of my PC with its large screen. But most importantly, the tight marriage to the Palm OS and its layperson <HotSync> are eliminating the intimate contact between programmer and his machine.

Anonymous



By [Kris Johnson \(Kdj\)](#) on Saturday, August 18, 2001 - 09:51 am: [Edit](#)

Harry, I almost don't want to comment, because I don't want you to consider this as an attack. But in the same way that you think I don't understand you, I think you don't understand me.

I don't understand how a serial link to a handheld can be considered more "intimate" than using the handheld directly. If you want to have all your source on a PC and take advantage of all its other resources, then that's fine--I don't argue with that nor do I not understand the merits.

But I contend that that method is not "direct communication" with the handheld. I become one with the handheld when I am Graffiti'ing or using a keyboard connected directly to it. When I connect to a piece of equipment over a serial link, and use another computer to control the piece of equipment, then I am at least one step removed from it.

Maybe I'm just stupid, but I've never been comfortable using serial links to do embedded development. It seems that I always spend most of my time playing around with baud rates, parity, and null modem cables just trying to get the thing to respond, rather than actually getting work done. That's why I like Quartus: the damn thing actually works!

-- Kris



By [Kris Johnson \(Kdj\)](#) on Saturday, August 18, 2001 - 10:09 am: [Edit](#)

Sam, a lot of what you want to use a serial link for could be done by using POSE rather than an actual device.

-- Kris



By [Jim Hendricks \(Jimh\)](#) on Saturday, August 18, 2001 - 10:29 am: [Edit](#)

I hate to say it, but I think I can see the benefit of a terminal driven client/server development model.

When the Palm first came out, all that was available was cross compiled C which required dev/compile on the desktop, then transfer to the handheld for testing. Once POSE was available, you could simulate the testing on the desktop, but it still is never as good as the experience of holding it in your hand.

Quartus came along and provided the dev/compile in your handheld. This was a great bonus, providing the ability to develop anywhere so long as you had the handheld. But, you did lose the power of your PC during the development cycle. Once again POSE can be used to do the dev/compile on the PC, but the only features that provides is a keyboard and a bigger screen (magnified handheld screen).

If there was a serial terminal capability, there can be client development applications written on the PC which at their heart rely on the terminal to communicate with the handheld to provide actual execution. This would allow for extensions to the development environment. If I am typing interactively, experiementing with some ideas, find the ideas worthwhile, I have to then retype all that into a memo to make it future useful. If I have control over the development environment, I can save all the interactive typing, recall it, block off the lines I want to save into a memo, then send it off to the PC desktop software for sync later (or possibly execute code on the handheld over the terminal link which would save the code to memo). This is just 1 of the possiblilities. I could use the full size of my screen for display of textual results. I could even build multiple custom work-in-progress areas.

I think that the idea for terminal emulation of the quartus environment does offer benefit beyond that of just having a bigger keyboard and bigger screen.

I'm not arguing that Neal should pursue the terminal emulation, only that Harry may not be so far off in requesting it. My read of Harry's post seemed very critical of Quartus because Quartus lacked not only this ability, but also the ability to "hook" the right words so a use could set this ability up for themselves. I myself would not view Quartus badly because of this, but from previous posts of mine you can see that I too have felt the frustration of not being able to do certian things (specifically conditional compilation of a doc source, and use of the built in parser through source redirection) because Quartus does hide some parts of the process that could be beneficial to expose. I am so thankful for the power of Quartus as it is right now though that I have never considered pushing Neal to implement any of my "pet" ideas. Neal has done a great job thus far, and I am confident that as Quartus continues to mature that some of these features that have been mentioned over the years may actually find their way into the product.

Just my long winded 2 cents which I can't afford to give anyway since I am still unemployed!



By [Dave Bennett \(Dbennett\)](#) on Friday, August 24, 2001 - 06:10 pm:

[Edit](#)

Gee, guys. I'm gone for a couple of weeks and this thread explodes! 😊

Neal, I wasn't trying to write off the Palm OS, but Palm, Inc. has set themselves up nicely for a two pronged future. With the Palm OS itself spun off into another company, it can just be a licensing thing. If the Palm OS lives on, they can still make some money.

With the hardware stuff in its own place, and the rumor that Palm is considering the purchase of Be, they can put all the cool consumer oriented stuff in the Be onto a handheld and move a completely different direction.

I really like the idea of a Linux handheld because I personally want a full powered OS onboard. Almost all of my writings are in emacs using LaTeX and I'd love to be able to point my handheld at a printer and get that kind of quality coming out. And with Linux, all of the I/O stuff (and just about everything else) is already there.

No, I'm not giving up on the Palm OS for now. I've got too many projects underway!! Two very cool ones that'll be finished in my lifetime. (Earlier if I win the Lottery.)



By [Harry Winter](#) on Tuesday, September 25, 2001 - 03:11 am: [Edit](#)

Talking about "Money for Neal", (in case he does not win the lottery) I just ordered the "new" Keyboard from Sony (ThumbBoard) for \$40 plus shipping. At least I don't have to learn Graffiti at my age, but how much more powerful would a small Quartus RS232 program be for my PC with large screen for editing programs.

I would gladly have spend \$80 for such a program and I believe so would most progammers. Well Neal, I hope you and Dave win the Lottery!



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 25, 2001 - 11:24

am: [Edit](#)

Have you given any thought toward using the Palm OS Emulator, Harry?

Neal



By [Harry Winter](#) on Thursday, September 27, 2001 - 02:16 pm: [Edit](#)

Palm OS Emulator by Quartus! Congratulation Neal, I did not know that you made money on selling POSE. No wonder you kept that a secret, because using emulators and cross-compilers is really not in the tradition of Forth, it runs on the "Target System" and does not need these. (Better reliability and easy Hardware/Software Codesign.)

--- You are full of deep Secrets Neal ---



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 27, 2001 - 03:48 pm: [Edit](#)

No, Harry -- I don't sell the Palm OS Emulator. It's a free product from Palm, available at www.palmos.com.

Certainly it's not a secret; I mention it at regular intervals. It's a useful tool.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Wiki Status

[Quartus Handheld Software: Discussion Forum: General: Wiki Status](#)



By [Kris Johnson \(Kdj\)](#) on Saturday, July 21, 2001 - 04:46 pm: [Edit](#)

Everyone who is still having problems reaching the wiki at <http://sleepless-night.com/wiki/> please chime in here.

I'm probably not going to have time to mess around with a wiki migration for a couple of months. But if enough people scream loudly enough, I'll try to make time.

Any details you can provide would be helpful:

- Exactly what happens? (timeout, page not found, no permission to access the page, ...)
- Does it always fail, or just once in a while?
- Who is your ISP? Have you asked them about it?
- Do you have trouble reaching any other web sites?
- If you do a "ping sleepless-night.com" and a "tracert sleepless-night.com", what do you see?
- What browser and what operating system are you using? What are the version numbers?

Thanks,
-- Kris



By [Kris Johnson \(Kdj\)](#) on Saturday, July 21, 2001 - 05:05 pm: [Edit](#)

BTW, here is an approximate transcription of the conversation I had with my web hosting provider over this issue:

KDJ: Some users report problems accessing my web site. Mostly timeouts, but some can't connect at all.

Techie: (clickity-click) It looks like it is working fine.

KDJ: Yes, it works fine for me and for a lot of other people. But a few have problems.

Techie: How many people are having this problem?

KDJ: Two or three.

Techie: What browser version are they running?

KDJ: I don't know.

Techie: What operating system are they running?

KDJ: I don't know.

Techie: Who are their ISPs?

KDJ: I don't know. I think a couple of them are in England.

Techie: Are these static pages or CGI scripts?

KDJ: CGI

Techie: Are you sure your CGI scripts are working?

KDJ: Pretty sure. This is an off-the-shelf package that works well everywhere else I've installed it.

Techie: Well, I don't see what we can do about it. It sounds like a problem on their end, or a problem with your CGI scripts. All of our equipment is set up properly.



By [Neal Bridges \(Nbridges\)](#) on Saturday, July 21, 2001 - 07:35 pm:

[Edit](#)

Sounds like standard help-desk fare -- the problem is never with them. 😊

Neal



By [Richard Chamberlain \(Rac\)](#) on Sunday, July 22, 2001 - 02:20 pm:

[Edit](#)

Well I've still got a problem, but I'm not getting much joy with my isp. I can get it with another isp.

Just something I've got to live with I guess.

Richard



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 22, 2001 - 02:34 pm: [Edit](#)

Richard, try accessing the Wiki via <http://www.safeweb.com>. It's a sort of secure proxy; you don't need the security in this case, but it might let you get at the site if your ISP has difficulty.

Neal



By [Richard Chamberlain \(Rac\)](#) on Sunday, July 22, 2001 - 04:37 pm:

[Edit](#)

Thanks for the suggestion Neal - that works perfectly.

Richard



By [Kris Johnson \(Kdj\)](#) on Sunday, July 22, 2001 - 07:05 pm: [Edit](#)

That's pretty cool, Neal. Thanks!

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, July 27, 2001 - 11:33 pm: [Edit](#)

Don't be concerned with the large number of detected changes to the wiki over the next couple of days. I'm running through and doing some cleanup.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Tuesday, July 31, 2001 - 10:06 pm: [Edit](#)

I'll be out of town for the next week or so. If the wiki goes kablooeey, I'll fix it when I get back.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, August 24, 2001 - 02:18 pm: [Edit](#)

Traffic on the wiki has been pretty light for the past few weeks. I assume that is due to people having better things to do during July and August than sitting in front of a computer.

But just in case anyone out there doesn't know about "the wiki": visit <http://sleepless-night.com/wiki>

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 02:22 pm:

[Edit](#)

Overall traffic, or just new posts?

Neal



By [Mike Will](#) on Friday, August 24, 2001 - 02:47 pm: [Edit](#)

Kris,

Handspring trading at \$2.90 today

Palm announcing it's spinning off (read: jettisoning) its OS/Dev division

I'm dusting off my COBOL and Smalltalk books so I can continue to make a living ☹

Mike



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 03:01 pm:

[Edit](#)

These things come and go, from a professional standpoint. From the hobbyist perspective, though, they run constant and strong. Writing software is a wonderful pastime.

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, August 24, 2001 - 04:37 pm: [Edit](#)

New posts is what I'm talking about. Few new topics, few additions to existing topics, few comments on topics I've added myself. And some of the people who were very active a couple of months ago aren't doing anything any more.

I'm not sure how to judge the number of people who are looking at the wiki. Everytime I've looked at the logs, it appears that the vast majority of the hits are coming from "googlebot" and other web crawlers.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 05:06 pm:

[Edit](#)

These things come and go in waves, and the summer is usually a slow time. Plus the creative batteries need an occasional recharge!

Neal



By [Bob Ryan](#) on Friday, August 24, 2001 - 05:24 pm: [Edit](#)

For my part, I check the Wiki almost daily.

I'm in recharge mode 😊



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 29, 2001 - 04:04 pm: [Edit](#)

I occasionally get requests to write tutorials for the wiki. Since I can't write them all myself (generally because I am clueless about the subject matter), I'll share some of the requests here. If anyone feels like writing them up, go for it!

- A "phonebook" or similar app, demonstrating how to use databases, tables, lists, etc. together in an application.
- IR communications and Beaming
- Accessing things over a network (wireless or wired)
- MathLib
- sound

I've received several compliments about the style of TheDudlStory tutorial I just did (thanks, all). If you are looking for an example of a style that people find useful, you may want to look at that.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, February 17, 2002 - 11:17 pm: [Edit](#)

FYI, the wiki appears to be dead at the moment. I've logged into the server, and everything appears to be "screwed up" (a technical term). The web server process is not running, and user directories are not mounted. So there's not much I can do until Pegasus Web Technologies gets everything fixed on their side.

Next week, I should finally get around to migrating the wiki to another host provider.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, February 18, 2002 - 09:14 am: [Edit](#)

It's working now.

Add a Message

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ABS Problem

[Quartus Handheld Software: Discussion Forum: General: ABS Problem](#)



By [Bob Ryan](#) on Friday, July 20, 2001 - 02:45 pm: [Edit](#)

There seems to be a small problem with the ABS word. From the console:

```
hex
```

```
8002 abs 0< . 0 ok
```

```
8001 abs 0< . 0 ok
```

```
8000 abs 0< . -1 ok    ???
```

I don't really think this is a bug. The standard clearly states that ABS returns an UNSIGNED value, not a positive one. But it did catch me by surprise 😊

I had assumed that ABS would always return a positive value.

Cheers

Bob



By [Neal Bridges \(Nbridges\)](#) on Friday, July 20, 2001 - 04:21 pm: [Edit](#)

Right, it's a bit surprising -- but consider that 0< treats its argument as signed, rather than unsigned; in that context it makes sense.

Neal

Add a Message

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not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

Slow access to Quartus.Net today

[Quartus Handheld Software: Discussion Forum: General](#): Slow access to Quartus.Net today



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 19, 2001 - 04:04 pm:

[Edit](#)

From Pair.com:

Quote:

[Jul 19, 2001, 1:09 PM] Network Problems

Please be advised that the train derailment and resulting chemical spill in Baltimore, Maryland has disrupted the circuits of a significant number of Internet carriers, and shifting traffic patterns, as a result, have in some cases led to reduced performance for many sites. We have received a number of inquiries about this. Please understand that there is little we can do on our end while repair work is pending. Carriers have not been allowed onto the site to begin repairs yet, as far as we know.

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E-mail Virus?

[Quartus Handheld Software: Discussion Forum: General: E-mail Virus?](#)



By [Kris Johnson \(Kdj\)](#) on Wednesday, July 18, 2001 - 07:47 pm: [Edit](#)

BEWARE OF E-MAILS WITH EXECUTABLE ATTACHMENTS

I received an e-mail today, supposedly from a wiki user, that contained an attachment called START.EXE along with instructions about how to fix my registry. Before running it, I checked with the user, and he told me that he did not send it.

He doesn't know who sent the mail, or why it was addressed to me. My only previous contact with this person is through the wiki and the Quartus Forth forum, so I figured I should warn the rest of you. Don't run attachments e-mailed to you!

-- Kris



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, July 19, 2001 - 08:29

am: [Edit](#)

I've had a similar experience, with a family member rather than through the forum or wiki. I received a note from them with an exe attachment but no coherent message, which was odd. I dumped the note and attachment, and let them know that I thought they had a virus.

An interesting aspect is that they run an anti-virus program, but hadn't updated it in several months; it turned out they were infected with a virus that wasn't in the definition file they had. After they updated the definition file their anti-virus program found several infected files. They are now doing weekly updates on the virus definition file to hopefully avoid a repeat.

Beware a false sense of security.....

Barry



By [Kris Johnson \(Kdj\)](#) on Thursday, July 19, 2001 - 02:31 pm: [Edit](#)

I also received something from someone at palmr.com. The message was in Spanish (which I don't speak), and it had a copy of WinRAR attached.

Maybe something funny is going on in the Palm OS community?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 19, 2001 - 02:50 pm:

[Edit](#)

It's just summer -- the little juvenile miscreants have more time on their hands to cobble up variations on existing trojans & viruses. Keep your virus checkers up to date (never bad advice).

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, July 20, 2001 - 11:36 am: [Edit](#)

FYI, I got the following message at work today:

Quote:

Please do an immediate Live Update of your Norton AntiVirus. The Virus Definitions date should be July 17 or 18.

A new virus known as SIRCAM is making the rounds. Like others of late it executes when an enclosed attachment is executed. Although the subject line will vary, the subject and the attachment name will be the same. What makes this email distinctive is the body of the message will include greetings and verbiage in both English and Spanish. Our Exchange Server antivirus software has already intercepted a few of these emails. If received please delete without opening the attachment and then empty your deleted items. For more info go to
<<http://www.symantec.com/avcenter/venc/data/w32.sircam.worm@mm.html>>.

Add a Message

Username:

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E-mail:

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Event and Pen Handling

[Quartus Handheld Software: Discussion Forum: General](#): Event and Pen Handling



By [Kelly Janz](#) on Monday, July 16, 2001 - 10:03 am: [Edit](#)

I'm trying to learn Forth and the Palm SDK and I'm a newbie - recipe for disaster of course, but I'm having fun. I'm trying to make a Palm version of the L-game by DeBono as a learning project, and the Pen event handling is my current problem.

The game is played on a 4 by 4 cell board, and the players each have an L shaped piece. My user interface calls for the player to move their piece by drawing an L shape (from the long leg to the hook in the vacant cells. I read that the PenUpEvent will give me the starting point and the ending point of a pen stroke - but I can't seem to access that data. Could anyone give me a code snippet that shows how to get pen stroke information from penDown to penUp, collecting data points along the path as you go? Please?

Also, to give them some feedback while they are drawing, I want to invert the square cell as their pen goes through it. I borrowed some code from the Dice tutorial app to find which cell the pen was in:

```
\ for detection of specific die taps,
\ define the screen area for each die
\ position...
\ x y width height
create d1rect 15 , 60 , 21 , 21 ,
create d2rect 41 , 60 , 21 , 21 ,
create d3rect 67 , 60 , 21 , 21 ,
create d4rect 93 , 60 , 21 , 21 ,
create d5rect 119 , 60 , 21 , 21 ,

: rect? ( rect y x -- flag )
  RctPtInRectangle 255 and 0= 0= ;

: coords-in-rect?
  >abs coords@ rect? ;
```

My code:

```
100 constant gs \ gridsize
gs 4 / constant cs \ cellsize
20 constant xofs \ x offset
```

```
20 constant yofs \ y offset
create gb xofs , yofs , gs , gs ,
\ the rectangle of the gameboard
```

Does using the constants mess up the Rect structure? My Palm crashes big time when I use coords-in-rect? call, so I guess it must... but it also crashes when I manually call it with the 4 integers of the rect (as in 20 20 100 100) on the stack. Why? What is magic about a Rect?

Last and least, I tried to protect myself from myself with HardException from the wiki. Maybe I missed an needed file, but it doesn't load on my Visor Edge. The error is
"Exception in file: xts

...
? name argument missing"

Any clue what that means?

Thanks for helping a newbie and long time lurker.

Kelly Janz

(who also happens to be KDJ but should not be confused with Kris!)

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 16, 2001 - 03:33 pm: [Edit](#)

Does this work for you?

```
: t RctPtInRectangle ;
create rect
142 , 10 , 17 , 21 ,
rect >abs 5 5 t . -> 8192
rect >abs 14 145 t . -> 1
rect >abs 120 145 t . -> 0
```

Neal

 By [Kelly Janz](#) on Monday, July 16, 2001 - 04:07 pm: [Edit](#)

Thanks Neal - the addition of the >abs seems to work for me. This takes the 16 bit address of my rect variable and makes it 32 bit before the system call - right?

If I had used the coords-in-rect code it would have been done for me, but I was trying to be a bit more basic in the hopes of understanding.

Thanks

Any help with the line drawing code? (Not to be greedy though.)

Kelly

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 16, 2001 - 04:17 pm: [Edit](#)

Happy to help -- what do you need?

Neal

 By [Kelly Janz](#) on Monday, July 16, 2001 - 04:45 pm: [Edit](#)

Sorry - in the first message I said:

The game is played on a 4 by 4 cell board, and the players each have an L shaped piece. My user interface calls for the player to move their piece by drawing an L shape (from the long leg to the hook in the vacant cells. I read that the PenUpEvent will give me the starting point and the ending point of a pen stroke - but I can't seem to access that data. Could anyone give me a code snippet that shows how to get pen stroke information from penDown to penUp, collecting data points along the path as you go? Please?

So that's what I was asking about.

Thanks - Kelly

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 16, 2001 - 04:52 pm: [Edit](#)

Sorry Kelly; somehow I missed the question the first time around.

After penDown, you'll get penMove events until the penUp. If you retrieve the coordinates of the pen at each penMove, you'll have the path. That's an initial hint, at any rate, in lieu of a code snippet. Let me know how far that takes you.

Neal

 By [Kelly Janz](#) on Monday, July 16, 2001 - 05:05 pm: [Edit](#)

Now that I have some coordinates coming back to my point-in-rect instead of crashing, I hope I can make some more progress this evening.

I'm quite proud of myself in that I've taught myself bit logic operations, storing the 16 cells in a bit array and doing the math to put an icon in each cell based on the bits! It's been fun learning something COMPLETELY different. If I make it to the stage of actually wanting to compile the thing, I'll certainly pay up, but right now I'm seeing how far I want to keep

struggling up this hill. The wiki and the forum have taken me quite a way in my eyes at least.

Thanks for your help and thanks to Kris for the wiki too

- Kelly

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Event and Pen Handling

[Quartus Handheld Software: Discussion Forum: General](#): Event and Pen Handling



By [Kelly Janz](#) on Monday, July 16, 2001 - 09:57 am: [Edit](#)

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Also, to give them some feedback while they are drawing, I want to invert the square cell as their pen goes through it. I borrowed some code from the Dice tutorial app to find which cell the pen was in:

```
\ for detection of specific die taps,  
\ define the screen area for each die  
\ position...  
\ x y width height  
create d1rect 15 , 60 , 21 , 21 ,  
create d2rect 41 , 60 , 21 , 21 ,  
create d3rect 67 , 60 , 21 , 21 ,  
create d4rect 93 , 60 , 21 , 21 ,  
create d5rect 119 , 60 , 21 , 21 ,  
  
: rect? ( rect y x -- flag )  
  RctPtInRectangle 255 and 0= 0= ;  
  
: coords-in-rect?  
  >abs coords@ rect? ;
```

My code:

```
100 constant gs \ gridsize  
gs 4 / constant cs \ cellsize  
20 constant xofs \ x offset
```

```
20 constant yofs \ y offset
create gb xofs , yofs , gs , gs ,
\ the rectangle of the gameboard
```

Does using the constants mess up the Rect structure? My Palm crashes big time when I use coords-in-rect? call, so I guess it must... but it also crashes when I manually call it with the 4 integers of the rect (as in 20 20 100 100) on the stack. Why? What is magic about a Rect?

Last and least, I tried to protect myself from myself with HardException from the wiki. Maybe I missed an needed file, but it doesn't load on my Visor Edge. The error is
"Exception in file: xts
...
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Any clue what that means?

Thanks for helping a newbie and long time lurker.

Kelly Janz
(who also happens to be KDJ but should not be confused with Kris!)

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Possible problems with email

[Quartus Handheld Software: Discussion Forum: General](#): Possible problems with email



[Edit](#)

By [Neal Bridges \(Nbridges\)](#) on Thursday, July 12, 2001 - 12:14 am:

Sadly I've had a customer complaint that a registered version sent didn't make it to him; I'm not happy about that and want to make sure it hasn't happened to anybody else.

E-mail doesn't reliably let you know if the letters arrive safely. If you're waiting to hear from me and haven't, I may possibly not be ignoring you -- write me and let me know you're waiting.

Thanks --
Neal

Add a Message

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Did you receive your registered version?

[Quartus Handheld Software: Discussion Forum: General](#): Did you receive your registered version?



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 23, 2001 - 06:32 pm:

[Edit](#)

Hi -- apparently there was a problem sending emails earlier. I've re-sent a number of registrations again today.

If you have registered a Quartus product but have yet to receive it, please let me know. Likewise, if I seem to be ignoring you, it may be the same problem -- let me know!

Neal

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Memo management

[Quartus Handheld Software: Discussion Forum: General: Memo management](#)



By [Hans Nordstrom](#) on Monday, June 18, 2001 - 05:01 pm: [Edit](#)

If you're one of those programmers using memos to harness your code, there's a utility you might have a look at. It's named PalmWiki. Here's the URL:

[PalmWiki](#)

The idea is to handle memos in a hypertext manner. From one memo all the dependent memos can be interconnected, with the help of hyperlinks.

I bet you can save scores of taps with this installed.

Btw. It's a hack. But I guess most programmers have hacks installed, right?



By [Neal Bridges \(Nbridges\)](#) on Monday, June 18, 2001 - 06:55 pm: [Edit](#)

'Hack' is unfortunate nomenclature, as it has connotations of 'hastily written' and 'unstable'. Neither need be true of a HackMaster module; they can be as stable as any other code.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, June 18, 2001 - 07:34 pm: [Edit](#)

I added a module to the wiki that makes it easier to use PalmWiki to navigate between Forth source memos:

<http://sleepless-night.com/wiki/PalmWiki>

-- Kris



By [Hans Nordstrom](#) on Tuesday, June 19, 2001 - 06:48 pm: [Edit](#)

Neal,

my intention with mentioning something as a hack, was just to make a distinction not being a regular application.

Since in the Palm environment there is something named a hack, I didn't even thought it possible to be misunderstood.

I know what an oldtime hack is. I've even been forced to make one or two during the years 😊



By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 19, 2001 - 07:12 pm:

[Edit](#)

I understand. Unfortunately I see in the newsgroups, and sometimes via direct mail, that people misunderstand -- they fear the name 'hack', no matter the context. Of course on the Palm, they're really just system extensions.

Neal



By [Mike Will](#) on Wednesday, June 20, 2001 - 07:49 am: [Edit](#)

Yeah, I don't like hacks. They worry me. I much prefer to install a nice, pristine operating system like OSX or 2000 that takes 1 Meg to say "hello, world". Want extensions? Just wait six months for an entirely new, incompatible release with a fresh crop of fatal bugs. I don't want some programming guru's hands in my computer. I trust Bill. His software is shiny and polished, just like the minds of the people who use it.

But I'm not bitter.

Mike



By [Richard Chamberlain \(Rac\)](#) on Wednesday, June 20, 2001 - 09:22 am: [Edit](#)

Wow you can get all of "Hello, World" in only 1Mb?

You must be a release or so behind.

Richard



By [Hans Nordstrom](#) on Wednesday, June 20, 2001 - 04:35 pm: [Edit](#)

Neal,

I agree. Naming the extensions "hack" was not such a good choice. Maybe at the time of it's creation it was kind of a hack. At least after reading some about programming on the first Pilots. Almost nothing was published about the OS, as I understand.

I would have suggested something like, "System Optional eXtensions"=SOX. But I'm 4 or 5 years late, so I don't expect my suggestion will go any further than this Forum. 😊

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Newbie question about defining words

[Quartus Handheld Software: Discussion Forum: General](#): Newbie question about defining words



By [Gary Wiese](#) on Monday, June 11, 2001 - 08:16 pm: [Edit](#)

I've been reading a section on the wiki about setting check boxes and I don't understand something about how a word is defined.

It defines the word like this.

```
: id>index ( ctlID -- n )
  GetObjectIndex ;

: get-check ( controlID -- f )
  id>indexd
  active-form FrmGetControlValue
;
```

My question is this, why define a word for another word? Why can't you define it like this.

```
: get-check ( controlID -- f )
  GetObjectIndex active-form FrmGetControlValue ;
```

Isn't the first example really replacing `GetObjectIndex` with `id>indexd`?



By [Neal Bridges \(Nbridges\)](#) on Monday, June 11, 2001 - 08:55 pm: [Edit](#)

Yes. In this case, perhaps the programmer felt `id>index` was more descriptive than `GetObjectIndex`.

Neal



By [Gary Wiese](#) on Monday, June 11, 2001 - 09:42 pm: [Edit](#)

Thanks Neal

Your right, it is more descriptive.



By [Kris Johnson \(Kdj\)](#) on Monday, June 11, 2001 - 10:43 pm: [Edit](#)

I'm the guilty party that wrote that code. I had a lot of words that used the convention `THIS>THAT` to map between different "number spaces", and I continued that convention here. I find it easier to remember the word names if they all follow a common convention.

A related question you might have next is why I have this:

```
: active-form ( -- formptr.)  
  FrmGetActiveForm ;
```

This one is not just a case of aesthetics. Use of a system API such as `FrmGetActiveForm` takes several bytes. By factoring this API into its own word definition, the executable is smaller than it would be if I had just used `FrmGetActiveForm` multiple times.

-- Kris



By [Gary Wiese](#) on Tuesday, June 12, 2001 - 12:16 am: [Edit](#)

Thanks for the additional info. It is easier to read.

I never would have thought an API would be smaller when defined in another word.

By the way, what does API stand for?

Thanks for things a newbie needs to know.

Gary



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 12, 2001 - 10:31 am: [Edit](#)

API = Application Programming Interface. Every operating system has an API, which is a set of functions that an application programmer uses to invoke operating system services.

In Palm OS, the API is based upon the "system trap" (or "systrap") mechanism: the parameters are pushed onto the stack, and then a "trap instruction" is used to transfer control to the operating system. When the operating system returns control to the application, the results are retrieved from the stack or from CPU registers. The whole systrap sequence takes a few CPU instructions, whereas calling another Forth word only takes a single four-byte instruction.

-- Kris

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Where is the best place to catch a division by zero error

[Quartus Handheld Software: Discussion Forum: General](#): Where is the best place to catch a division by zero error



By [Gary Wiese](#) on Sunday, June 3, 2001 - 09:09 pm: [Edit](#)

I have a word defined that divides two numbers and displays the result as a reduced fraction. When entering a zero in the denominator I get a fatal error. Which I expect, however I would like to catch the error and change it before that happens.

Where is the best place to catch the error?

- a) After it was entered in the definition
- b) In the event handler

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 3, 2001 - 10:02 pm: [Edit](#)

I'd check the value in the definition itself, and avoid the division by zero completely.

Neal



By [Chapman Flack](#) on Saturday, June 23, 2001 - 12:53 pm: [Edit](#)

See also <http://www.sleepless-night.com/wiki/DivisionByZero>

-Chap



By [Julian Robin Fondren](#) on Saturday, January 12, 2002 - 12:40 pm:

[Edit](#)

: u/ dup if >frac exit then /0-error ;

Would something like that work for you, Gary? Or maybe you could use INFINITY instead of /0-ERROR =) Or simply display the fraction with zero on the bottom, and declare it irreducible?

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Where do I catch a division by zero error

[Quartus Handheld Software: Discussion Forum: General](#): Where do I catch a division by zero error



By [Gary Wiese](#) on Sunday, June 3, 2001 - 09:02 pm: [Edit](#)

Where is the best place to catch a division by zero error?

- a) Just after it was entered
- b) Event handler

I have a word defined to enter a numerator and a denominator. After the numbers are entered it divides and then displays as a reduced fraction. When entering zero in the denominator I get a fatal error. Which I expect, however I would like to catch the error and change it before that happens.

Gary

Add a Message

Username:

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Counting backwards with a do loop

[Quartus Handheld Software: Discussion Forum: General](#): Counting backwards with a do loop



By [Gary Wiese](#) on Saturday, June 2, 2001 - 08:55 pm: [Edit](#)

Is it possible to count backwards with a do loop? For example: I would like to count backwards by 2, like this

```
11 9 7 5 3 1 ok
```

I have tried different approaches, with no success. I seen it done using negative numbers. I can't use negatives I need positive numbers.

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 2, 2001 - 09:53 pm: [Edit](#)

Indeed you can. +LOOP allows that.

```
: 1 11 do i . -2 +loop ;
```

Neal



By [Gary Wiese](#) on Saturday, June 2, 2001 - 10:50 pm: [Edit](#)

Neal, I have tried that one. It goes crazy to the point that I need to reset. It prints a bunch of numbers on the screen. In an endless loop. I have also tried ?do from the Handbook, but that word must not be defined in Quartus.

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 2, 2001 - 10:52 pm: [Edit](#)

Did you try exactly what I gave -- with this correction (I forgot to name the first definition!):

```
: backward  
  1 11 do i . -2 +loop ;
```

Just tried it; works fine. Let me know.

Neal



By [Gary Wiese](#) on Saturday, June 2, 2001 - 11:17 pm: [Edit](#)

Sorry Neal, I had loop instead of the +loop. I know it needed +loop. Your example is the first one I tried and when it didn't work confusion set in. In fact all my versions used loop instead of +loop.

I must be blind

Gary

 By [Neal Bridges \(Nbridges\)](#) on Saturday, June 2, 2001 - 11:18 pm: [Edit](#)

Happens to all of us, Gary. 😊 Glad I could help.

Neal

 By [Gary Wiese](#) on Sunday, June 3, 2001 - 12:32 pm: [Edit](#)

I have a new question, in the following code, does the 3 and 11 get sent to the return stack?

If it does I assume that what is left on the stack remains there, correct?

I am trying to reduce two numbers to lowest terms in the following code, but I am having a trouble.

```
\ reduce

: reduce ( -- )
3 11 do dup i /mod 0 =
  if swap dup i /mod 0 =
    if i / swap i /
  then
then -2 +loop ;

: show cr swap . ." /" . ;

: go MainForm reduce show ;

3 15 go
\ I am looking for 1/5, but I get
0/0 ok
```

 By [Neal Bridges \(Nbridges\)](#) on Sunday, June 3, 2001 - 12:40 pm: [Edit](#)

Surround your text by `\pre{` and `}` to preserve the indentation.

My first step in looking at this problem was to remove all the code in your

DO..+LOOP:

```
: reduce  
  3 11 do -2 +loop ;
```

That done, it nicely preserves the '3' and '15' on the stack. This means the problem is not with the DO..+LOOP construct itself, but with the code inside the DO..+LOOP.

Do a .S at the end -- you'll see a lot of extra numbers on the stack. The problem is that /MOD returns two values on the stack, not one, yet you're never consuming the second one.

Neal

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Interest in a Forth Wiki

[Quartus Handheld Software: Discussion Forum: General](#): Interest in a Forth Wiki



By [Kris Johnson \(Kdj\)](#) on Friday, May 18, 2001 - 01:52 am: [Edit](#)

Question for those of you using the wiki's WebNotify feature: what do you think about the three times per day notification? Is that too often?

John McKeon suggests that once a day would be better. Does anyone agree or disagree?

If we go to once a day, what time would be best?

-- Kris



By [Wolfgang Allinger \(Wall\)](#) on Friday, May 18, 2001 - 03:10 am: [Edit](#)

WebNotify feature: three times per day is too often!

If once a day, what time would be best?
0h00 Central European time for shure :-)

(Kris Johnson (Kdj) on Friday, May 18, 2001)

bye from germany
Wolfgang



By [Kris Johnson \(Kdj\)](#) on Friday, May 18, 2001 - 10:55 am: [Edit](#)

I've changed WebNotify to once per day. It fires off at 17:47 US/Eastern time.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Saturday, May 19, 2001 - 12:46 pm: [Edit](#)

The wiki has seemed really slow for the past couple of days. Is anyone else noticing this?

Maybe it's time for another web host migration...

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 19, 2001 - 12:51 pm:

[Edit](#)

I have noticed it's quite slow lately.

Neal



By [Tim Hulme](#) on Saturday, May 19, 2001 - 12:59 pm: [Edit](#)

Yes, very slow but figured it was my less than state of the art system. Even from the office using DSL it's slow.



By [Jamie Cairns \(Jamie\)](#) on Saturday, May 19, 2001 - 05:11 pm: [Edit](#)

Yup - from home on cable, avg'ing 20-30 secs before page starts displaying, another 12 - 15 to display it all... per page - usually don't see any wait time before, and only 1 - 2 seconds load time...



By [Norman "Buz" Stewart \(Buz\)](#) on Saturday, May 19, 2001 - 07:00 pm: [Edit](#)

I've noticed the same slowness on and off since the site was migrated, not just the past couple of days.



By [Tim Hulme](#) on Saturday, May 19, 2001 - 09:12 pm: [Edit](#)

At home with dial-up (currently running at 42.6 kbps) the changes page took 1 min. 13 sec. to completely load. Most other pages are slow but not as slow as the changes.



By [Kris Johnson \(Kdj\)](#) on Saturday, May 19, 2001 - 09:39 pm: [Edit](#)

Upon logging into the server, I noticed over a dozen CGI scripts (for another site) that have been running *continuously* since May 17. I alerted my host provider--maybe they'll do something about it.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 19, 2001 - 10:46 pm: [Edit](#)

That was my suspicion -- high load averages.

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, May 20, 2001 - 08:27 pm: [Edit](#)

I just checked, and the wiki appears to be back to its normal self. Still not incredibly speedy, but better than it has been for the past few days.

I'm still looking at the possibility of migrating to another server, as

pwebtech seems a little slow even at its best. If I do so, I should be able to do it with less disruption than during the last migration.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Wednesday, May 30, 2001 - 10:30 am: [Edit](#)

The wiki seems to have been running pretty well over the past week. So I'm going to postpone any attempted migration for a while.

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Wednesday, May 30, 2001 - 10:56 am: [Edit](#)

Kris,

I've had several times in the last 48hrs when I've not been able to get on it at all. Just timeouts.

Richard



By [Kris Johnson \(Kdj\)](#) on Wednesday, May 30, 2001 - 05:11 pm: [Edit](#)

Hmm. No problems at all for me. Is anyone else having problems with timeouts or slowness?

If it persists, please let me know the date/times and any other useful information.

Thanks,

-- Kris



By [Kris Johnson \(Kdj\)](#) on Wednesday, May 30, 2001 - 05:46 pm: [Edit](#)

Well, wouldn't you know it: right after I posted the above message, the sleepless-night.com site went down.

I called the host provider, and they said the server was down and they were working on it. The guy sounded a little busy, so I didn't ask too many questions.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 30, 2001 - 10:47 pm: [Edit](#)

It's up now, ticking along quite nicely.

Neal



By [Tim Hulme](#) on Friday, June 1, 2001 - 04:37 pm: [Edit](#)

Kris,

Wiki running very SLOOOOOOOOOWLY again. For the record: at 1:15 pdt 6/1/01 it takes a full 1.15 min. to access the main page. And thats thru DSL connection.

Tim



By [Kris Johnson \(Kdj\)](#) on Friday, June 1, 2001 - 04:43 pm: [Edit](#)

Yeah, same for me. I'm going to be pretty busy over the next couple of weeks, but after that I'll try to move the wiki over to another site.

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Saturday, June 2, 2001 - 03:29 am:

[Edit](#)

Kris,

I was compiling a list of when the site was unobtainable for me but it's about 50% of the time.

I've recently moved to a very reasonable new host (www.34sp.com) who so far seem very supportive.

Are you still doing a back up? would it be easy to get the site going on another domain? If so we could test it using my host and you could move www.sleepless-night.com across if everything was ok.

Just a suggestion,

Richard



By [Kris Johnson \(Kdj\)](#) on Saturday, June 2, 2001 - 12:35 pm: [Edit](#)

I've already set up an account with another host, where I plan to move the wiki. It's just a matter of having two or three spare hours to get the configuration correct and tested.

FWIW, I logged into the server yesterday and found that there was a user with over 1500 CGI processes running. I notified pwebtech, and they immediately killed off all the processes and canceled the offending account.

It was nice that they responded so quickly after I notified them, but it would be nice if they monitored things more closely themselves.

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Sunday, June 3, 2001 - 12:02 am: [Edit](#)

Here's a thought -- write a CGI that monitors the running processes, and automatically sends them an email if it exceeds a given capacity. Then sell them the CGI. 😊

Neal

 By [Kris Johnson \(Kdj\)](#) on Saturday, June 9, 2001 - 12:11 am: [Edit](#)

Has anyone noticed any problems with wiki responsiveness over the past week?

-- Kris

 By [Richard Chamberlain \(Rac\)](#) on Saturday, June 9, 2001 - 11:19 am: [Edit](#)

Kris,

An odd thing I've got four different ISP set up on my PC I can only get to the wiki through 2 of them. I think that was my problem previously.

Very odd.

Richard

 By [Kris Johnson \(Kdj\)](#) on Saturday, June 9, 2001 - 03:13 pm: [Edit](#)

With the two problem ISPs, are they unable to resolve the name, or does it appear to be some sort of routing problem?

Could you try doing a traceroute to get some idea of what's going on?

If you'll let me know which two ISPs are the problem, maybe I can ask my host provider to look into it.

-- Kris

 By [Dave Bennett \(Dbennett\)](#) on Saturday, June 9, 2001 - 05:48 pm: [Edit](#)

Kris,

I get to sleepless-night.com about every other attempt. My ISP blocks the use of ping and traceroute (they are so lame that everyone was using it to show them where their problems were) so I can't be of any help there.

It just seems to be either a very busy site, or on a very busy segment of the net.

 By [Neal Bridges \(Nbridges\)](#) on Saturday, June 9, 2001 - 09:41 pm: [Edit](#)

I've had no problems at all accessing the wiki the last week -- fast and reliable.

Neal

 By [Kris Johnson \(Kdj\)](#) on Sunday, June 10, 2001 - 09:52 am: [Edit](#)

Everyone who's having problems: try <http://www.kristopherjohnson.net>. That will likely be the new home of the wiki when I get around to moving it. Let me know if that one isn't going to work either. 😊

-- Kris

 By [Richard Chamberlain \(Rac\)](#) on Sunday, June 10, 2001 - 01:55 pm: [Edit](#)

Kris,

Heres the trace:

```
1 * * * Request timed out.
2 165 ms 151 ms 165 ms lei-dam2-b-fa00.inet.ntl.com [213.104.190.205]
3 165 ms 164 ms 138 ms not-core-b-pos510.inet.ntl.com [62.254.0.233]
4 151 ms 151 ms 151 ms lng-bb-b-atm100-255.inet.ntl.com
[213.105.172.90]
5 261 ms 274 ms 247 ms mae-east-gw2-atm110-2.inet.ntl.com
[213.105.172.209]
6 315 ms 248 ms 274 ms mae-east-gw1-fa000.inet.ntl.com
[194.168.118.221]
7 302 ms 247 ms 247 ms f0.iad1.verio.net [192.41.177.196]
8 234 ms 247 ms 247 ms p1-1-0.r02.mclnva01.us.bb.verio.net
[129.250.2.122]
9 275 ms 247 ms 261 ms p4-6-2-0.r00.stngva01.us.bb.verio.net
[129.250.2.146]
10 261 ms 274 ms 234 ms p4-6-0-0.r00.phlapa01.us.bb.verio.net
[129.250.3.106]
11 247 ms 275 ms 247 ms p4-0-0.r01.phlapa01.us.bb.verio.net
```

[129.250.3.154]
12 247 ms 247 ms 234 ms p4-6-0-0.r00.nycmny06.us.bb.verio.net
[129.250.3.126]
13 275 ms 261 ms 275 ms p1-0-0-0.r00.nycmny02.us.ra.verio.net
[129.250.16.210]
14 288 ms 316 ms 288 ms d3-11-0-0.a00.nycmny03.us.ra.verio.net
[129.250.126.90]
15 275 ms 260 ms 234 ms s0.pnap-nyc.ny.us.customer.verio.net
[204.141.126.238]
16 247 ms 247 ms 247 ms border11.ge2-0-bbnet1.nyc.pnap.net
[209.191.128.81]
17 233 ms 233 ms 234 ms nac-1.border11.nyc.pnap.net [209.191.130.94]
18 248 ms 247 ms 248 ms a0-0-0-1010.core1.oct.nac.net
[209.123.11.149]
19 247 ms 233 ms 247 ms vlan1.msfc1.oct.nac.net [207.99.21.35]
20 289 ms 247 ms 233 ms 207.99.8.198
21 247 ms 261 ms 247 ms 64.21.136.85

Trace complete.

Your new isp works fine btw.

Richard



By [Dave Bennett \(Dbennett\)](#) on Sunday, June 10, 2001 - 11:41 pm:

[Edit](#)

Kris,

The new site loads almost instantly!



By [kdj](#) on Monday, June 18, 2001 - 11:18 am: [Edit](#)

A few people are having problems accessing the =sleepless-night.com= site. For me and for others, it works fine. Without more information, I don't know how to resolve this.

I'd appreciate it if users who are having problems could try the following, and send the results to me at kris@sleepless-night.com:

Try "ping sleepless-night.com". If it doesn't succeed, let me know. If it does succeed, please let me know what kinds of times you are getting.

Try "tracert sleepless-night.com" (Unix) or "tracert sleepless-night.com" (Windows) and send me the output.

Thanks,

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, June 18, 2001 - 11:23 am: [Edit](#)

Also, if you are having problems, please let me know who your ISP is, so I can pass this along to my hosting provider.

And finally, if you are having problems, *please* tell me about it. As far as I know, everything works perfectly for everyone except for two or three people--if this is not the case, I'd like to know.

Thanks,

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 19, 2001 - 03:05 am:

[Edit](#)

Kris,

My ISP (UK based) is ntlworld. I've also tried yahoo which also fails. I've got one isp that works but I rarely connect with that one, mainly ntlworld as it's my free connection.

Richard



By [Mark Browne \(Markbrowne\)](#) on Tuesday, June 19, 2001 - 05:49

am: [Edit](#)

Kris,

My (also UK based) ISP is Demon, and I am getting ping times of around 350ms, so no problem there.

Mark



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 19, 2001 - 07:04 am: [Edit](#)

Richard, have you asked your ISP about this? It sounds like the problem is on their end.

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 19, 2001 - 07:14 am:

[Edit](#)

Well I'll try. As I say I've got three isps set up on my PC but only one of them works. Which I think is pretty odd.

Richard



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 19, 2001 - 09:40 am: [Edit](#)

Richard,

I'll check with my hosting provider. But it seems that all the people who have problems with the wiki say that their ISPs have problems with other sites as well. That leads me to think that it's a problem with those ISPs or some intermediary, rather than with the host.

My hosting provider does not go out of its way to help with problems. I'll need some evidence that they have something wrong before they'll do anything about it.

You say that only one ISP works. How do the others fail? (Timeout, host unreachable, hostname unknown, ...)

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 19, 2001 - 02:18 pm:

[Edit](#)

both timeouts.

I've mailed ntl so I'll see what they say. I haven't had any issues with other sites (or not that I've notice anyway).

Thanks,

Richard



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 19, 2001 - 02:30 pm: [Edit](#)

Sorry, I misunderstood. When you said that "yahoo" fails, I thought you meant that you can't access Yahoo! from your ISP. I didn't know yahoo was an ISP.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 19, 2001 - 02:33 pm: [Edit](#)

Sorry, I misunderstood. When you said that "yahoo" fails, I thought you meant that you can't access Yahoo! from your ISP. I didn't know yahoo was an ISP.

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 19, 2001 - 03:57 pm:

[Edit](#)

yep, sorry that wasn't very clear was it.

I'll keep you informed if I make any progress.

Richard



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 20, 2001 - 12:18 am: [Edit](#)

I'm going to be incommunicado for the next week or so. So if anything goes wrong with the wiki, it will have to wait until I get back.

-- Kris

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Forth tutorials

[Quartus Handheld Software: Discussion Forum: General](#): Forth tutorials



By [Rodney](#) on Sunday, July 15, 2001 - 12:46 pm: [Edit](#)

I'm working thru the Hello World example. I find that the B version does not work for me. It appears that the information I enter for the About... box does not get retained when I exit. Anyone know what I might be doing to cause this?



By [Raymundo Peralta \(Rayo\)](#) on Wednesday, July 25, 2001 - 07:20 pm: [Edit](#)

Hi,
I am new in forth programming. I am studying the examples and the library files of Quartus Forth with no problem.
Right now I have a newbie question.
Where can I find a good explanations about the words immediate, postpone, does>?. I was looking the quartus manual and the ans forth documentation and I found a little bit confusing the definitions. Is there some good explanation?
thanks.



By [Kris Johnson \(Kdj\)](#) on Friday, July 27, 2001 - 11:18 pm: [Edit](#)

I took a stab at explaining IMMEDIATE and POSTPONE here:
<http://sleepless-night.com/cgi-bin/twiki/view/Main/ImmediateWord>

Let me know if it is or is not clear. And maybe others can improve it.

And don't get discouraged if you don't get it right away. This is one of the things about Forth that commonly confuses people.

-- Kris



By [Bob Ryan](#) on Saturday, July 28, 2001 - 06:11 am: [Edit](#)

When a word is created the address of the next free location in data-space is compiled into its definition. This is done automatically, but if you want to actually allocate some memory you have to do that yourself.

The default action of a created word is to put the address compiled into it on the stack. For example, one way to define the word variable is:

```
: VARIABLE  
  create 1 cells allot ;
```

```
VARIABLE var
0 var !
```

When the word `var` is executed it will put the address of its reserved memory on the stack.

`DOES>` tells a created word what actions, in addition to the default, it should do when it is executed. For example, you could define `CONSTANT` this way:

```
:CONSTANT
  create ,
  does> @ ;
```

```
0 CONSTANT zero
```

When the word `ZERO` is executed it first does its default action, putting the address of its allocated memory on the stack, then it executes the words following `DOES>`. In this case fetching the value stored at the address on the stack.

 By [Neal Bridges \(Nbridges\)](#) on Saturday, July 28, 2001 - 12:25 pm:
[Edit](#)

Generally right, Bob -- but one small technical correction: what you say about a dataspace address being automatically compiled into a new definition is only true of words made with `CREATE`, `VARIABLE`, and `2VARIABLE`. Quartus Forth `CONSTANTS` and normal `'` definitions don't have a dataspace address compiled in (none is required).

Neal

 By [Bob Ryan](#) on Saturday, July 28, 2001 - 04:56 pm: [Edit](#)

Good point!

My definition of `CONSTANT` above was only intended to show how `CREATE` and `DOES>` work.

The definition of `CONSTANT` used by Quartus is much more efficient than the one I gave.

 By [Leland Williams \(Leland\)](#) on Tuesday, May 28, 2002 - 05:55 pm:
[Edit](#)

Sorry to be so quiet lately, but I am doing some university classwork in C++ (bleah) and wonder if `IMMEDIATE` is somewhat equivalent to the inline declaration in C++. For those wondering, an inline function, when 'called' by

another function, is not actually jumped to but it's code is inserted into the other function just as if the programmer had put it there in the first place.



By [Jim Hendricks \(Jimh\)](#) on Tuesday, May 28, 2002 - 06:01 pm: [Edit](#)

No, IMMEDIATE instead indicates when the word will execute. Normal words execute when interpreting the code, IMMEDIATE words execute when the word is being compiled. This gives you the ability to modify the behaviour of the compiler.

Hope this helps,
Jim



By [kdj](#) on Tuesday, May 28, 2002 - 06:02 pm: [Edit](#)

Quartus has an INLINE word which is similar to a C++ 'inline'. But it is not quite the same, because declaring a Forth word inline can change the semantics of the word's usage. See <http://sleepless-night.com/cgi-bin/twiki/view/Main/InlineOptimization> and <http://sleepless-night.com/cgi-bin/twiki/view/Main/InlineWordCantContainExit>.

Also note that the C++ 'inline' is really just a "hint" to the compiler. The compiler is not forced to inline a function declared as 'inline', and it may inline functions that are not declared 'inline'.

IMMEDIATE is different from 'inline'. It changes how the compiler works, but does not necessarily cause any code to be inlined. See <http://sleepless-night.com/cgi-bin/twiki/view/Main/ImmediateWord> for more details.

-- Kris

-- Kris

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

There's a PDB archive with all the Quartus library memos. You can load it into the emulator:

<http://www.quartus.net/files/PalmOS/Forth/Library/MemoDB.zip>

What I usually do is HotSync my handheld (which has all my "real source") and then load that MemoDB into the emulator.

-- Kris



By [Daryl Lee \(Daryl\)](#) on Wednesday, September 12, 2001 - 11:06 am:

[Edit](#)

Shame on you, Neal! I just installed the Emulator, uploaded my ROM (OS3.5 for my IIIc), installed Quartus 1.2.1U, and when I executed it, I got an error from the emulator: "Quartus 1.2.1U just called OldFplInit..." which apparently is reserved for system use only. I got a similar error exiting Quartes when OldFplFree was called. Of course, I ignored them, and everything else seems to be okay. Is there something I should be doing to avoid that?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 12, 2001 -

11:11 am: [Edit](#)

Possibly there's a switch in the emulator to turn that warning off, Darryl. It's yet another pointless warning from the emulator; nothing bad is actually happening.

Neal



By [Daryl Lee \(Daryl\)](#) on Wednesday, September 12, 2001 - 12:41 pm:

[Edit](#)

Kewl. There's a switch called "Proscribed function call". Turned that off, and things are peachy. This is my first foray into the emulator, and there's a lot of stuff I can control. Something new to learn everyday. Thanks for the response.

Add a Message

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Welcome to Quartus Forth (PalmOS version), for questions, comments and discussion of the PalmOS version of the [Quartus Forth](#) on-board compiler.

You may enter any of the discussions below by clicking on the appropriate link. Or, to start a new discussion of your own, click on the "Create New Conversation" button.

Simple 2D Graphic Problem that I just cannot figure out...

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Simple 2D Graphic Problem that I just cannot figure out...



By [Tod Wulff \(Todwulff\)](#) on Thursday, April 3, 2003 - 12:43 am: [Edit](#)

I am struggling with a seemingly simple problem. I have searched and searched most all of the search engines, and it seems that my problem is probably so trivial that it had never deserved the time it would take for someone to draft anything describing it's resolution. I found text on a million other, much more complex, graphic topics, but not simple line geometry... OK, 'nuf with the frustration.

I have a line from $x_1, y_1 - x_2, y_2$. I am trying to draw only a (dynamic) portion of the line.

If the line has a delta x or delta $y = 0$, then it is simple to draw with only basic math functions needed to calculate the beginning and ending coords.

If the line begins from any xy coord and ends at any other xy coord, then other math algorithms are needed. These are the one that I cannot locate guidance for.

Obviously, Pythagorean's theorem will play a role in calculating the overall line length, but figuring out the starting and ending (segment length is known) xy coords on this line is what I am struggling with.

ALSO, is there text out there describing how to implement the square root (and other more complex) mathematical functions using scaled/integer arithmetic?

Thanks in advance for the guidance, and please forgive my ignorance 😊.



By [Kris Johnson \(Kdj\)](#) on Thursday, April 3, 2003 - 04:17 am: [Edit](#)

A square-root routine is available here:

<http://www.quartus.net/files/PalmOS/Forth/Library/square.txt> There are also some trig functions and similar things at <http://www.quartus.net/files/PalmOS/Forth/Library/>.

Regarding your line issues, it's not clear to me what you are trying to do. Are you trying to clip a line within a rectangle, draw a line of a predetermined length anchored at one point and pointing toward another,

or something else?

Usually when I do stuff with lines, I start with the plain-old equation for lines:

$$y = mx + b$$

and work from there.

-- Kris



By [Tod Wulff \(Todwulff\)](#) on Friday, April 4, 2003 - 01:43 pm: [Edit](#)

Kris, Couple of different things come to mind.

One being using a line segment to visualize sending a projectile downrange (i.e. missile command style where the user chooses a destination and the origin is the gun. Instead of rolling a ball around to move a cursor and pressing fire, the pen would serve that function). Knowing origin and destination coords and projectile 'size' (segment length) it seems as this would not be too difficult, but I am still working through it. Lack of use of geometrical (if that is even a word) math in so many years is really showing my weakness in that area... 😊

I have some code (a mature alpha) that I can send to help to illustrate.

-Tod



By [Heather Risedorph \(Rise1525\)](#) on Friday, April 4, 2003 - 02:09 pm: [Edit](#)

Tod,

I'm known in my office as the person you go to with those weird math problems. I'm not sure I understand what you are wanting. If you can't find it, send me an email? I've done a lot of line and coordinate calculations recently for a 4 bar mechanism problem at work (although I haven't figured out the answer yet -- your problem sounds like it's a lot easier).



By [Kris Johnson \(Kdj\)](#) on Friday, April 4, 2003 - 06:32 pm: [Edit](#)

I once wrote a missile-command-style game (about 15 years ago, on a Mac, in assembly).

Basically, I used the Bresenham line-drawing algorithm to figure out the points to be traversed by the missile, and then some simple trig to figure out how far down the screen it should be on every screen-drawing "tick".

-- Kris

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BYE vs. (BYE)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): BYE vs. (BYE)



By [Wade Carlson](#) on Tuesday, April 1, 2003 - 10:35 pm: [Edit](#)

Is there a difference between BYE and (bye)? The reason I'm asking, is because I'm having a user with OS 5.0 say that my app crashes randomly on exit. I'm not sure if it's related to this or not (I'm using (bye)). Do I even need to use bye or (bye) at all if my app just ends?



By [Steve Bohrer \(Skb\)](#) on Wednesday, April 2, 2003 - 12:52 pm: [Edit](#)

The [events page](#) of the Quartus manual says

Quote:

Of special interest is how appStopEvents are handled. Quartus Forth gives you full control over what happens when your application exits. When Quartus Forth (or a stand-alone Quartus Forth application) receives an appStopEvent from the system, a -257 THROW code is generated. Under normal conditions, this THROW code will be caught by the default exception handler, and the application will simply exit via (bye); you may, however wish to CATCH this exception code and take care of any required cleanup before calling (bye) yourself.

Thus, (bye) will be called by Quartus if your app "just exits". If you catch the exit throw, then it seems you are supposed to call (bye) yourself.

I tried a simple test with POSE of a do-nothing app (mainform begin ekey . again) that catches the throw and then just drops the throw code and ends. Within Quartus, of course, it just returns me to the "ok" prompt. When compiled as a stand-alone, it exits without any complaints from POSE, but some internal cleanup is not done (e.g. I don't get POSE's usual warning about "OldFplFree"). Other apps (and the test app) seem to run fine after such an exit, but perhaps the system is left in a bad state.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, April 2, 2003 - 01:26 pm:

[Edit](#)

(bye) can be called explicitly by an app, but if your app just exits, (bye) is also called automatically.

For explicit exits from within your code where it might be easier than falling out of the bottom of the main function, use BYE. That sends the -257 THROW code, which is caught by the default handler, which calls (bye) and

exits.

Neal



By [Wade Carlson](#) on Thursday, April 3, 2003 - 06:13 am: [Edit](#)

So, to summarize (if I understand correctly), if your using CATCH, if you use (bye) from within your code, it will bypass any cleanup routines you may have implemented with CATCH and just exit your app, but if you use BYE, it will simply send a -257 THROW and be caught by your cleanup routine before exiting?



By [Neal Bridges \(Nbridges\)](#) on Thursday, April 3, 2003 - 10:19 am: [Edit](#)

...and if you don't have a cleanup routine, the default exception handler will catch the -257 and exit properly anyway. Alternately, exiting by simply leaving the main function of your application will also exit your app cleanly.

Neal

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Quartus forth + kyocera 6035 = ???

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Quartus forth + kyocera 6035 = ???



By [Khyron Singh](#) on Saturday, March 29, 2003 - 08:47 am: [Edit](#)

Hi all,

I searched the forum for '6035' and 'kyocera' but found nothing of value. I'm trying to write/run quartus forth programs on the kyocera 6035 palm phone. the test programs i've copied from online tutorials compile, but don't do anything except return without even clearing the screen.

I'm a newbie to forth. On the palm, I'm running the programs by firing up the interpreter, then typing 'include my_prog [ENTER]' where my_prog is the memo containing quartus forth code and [ENTER] is the graffiti for 'newline'. Even something as simple as the mirror demo program on the sleeplessnight wiki forth tutorial behaves this way (ie. not doing anything at all)

Has anyone had any experience with this? Are there any known issues with quartus forth running on the 6035?

Any info would be appreciated.

Thanks!



By [Khyron Singh](#) on Saturday, March 29, 2003 - 08:59 am: [Edit](#)

Actually, the following code works

```
: go
  page
  ." Hello, World!"
  begin ekey drop again
;
go
```

However, anything more complex, such as the Dudl tutorial or the mirror tutorial code from the wiki site doesn't.

Thanks.



By [Neal Bridges \(Nbridges\)](#) on Saturday, March 29, 2003 - 03:15 pm:

[Edit](#)

I'm curious to know why that happens, Khyron. I've never tested on a Kyocera. Do they provide a version of the Palm emulator?

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, March 29, 2003 - 04:31 pm: [Edit](#)

Have you tried downloading the KDJMirror.prc standalone executable (attached to the MirrorTutorial page), or any other standalones built using Quartus? Do they work?

Also, after entering "include whatever-memo [ENTER]", are you then entering "go [ENTER]" to run the program?

-- Kris



By [Khyron Singh](#) on Saturday, March 29, 2003 - 07:59 pm: [Edit](#)

It's emberassing that the problem could be so trivial. 😊 I typed "go" after the "include" line and the mirror program "miraculously" worked...

The dudl program works as well. QForth is so cool...

Now I can finally implement the program I've always wanted for the palm (while learning forth at the same time): a flash card program that lets you use drawings as the thing you are being tested on.

Thanks for the help, Kris. Your wiki site and tutorials are really helpful. 😊



By [Kris Johnson \(Kdj\)](#) on Sunday, March 30, 2003 - 01:12 am: [Edit](#)

Well, considering that neither the MirrorTutorial nor TheDudlStory tell you to type "go", it's not surprising you didn't try it. I'll update the tutorials.

Glad you got it working,

-- Kris

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Palm Pilot Professional tips

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Palm Pilot Professional tips



By [Heather Risedorph \(Rise1525\)](#) on Monday, March 24, 2003 - 12:46

pm: [Edit](#)

My mom recently got a Palm Pilot Professional that uses Palm OS 2.0 ... it has no color, no backlight, no IR, and less than 1 MB RAM.

Does anyone have tips for writing applications for it? I haven't worked in Forth in awhile. I had the opportunity to trade my Palm IIIc for an iPaq and put Linux on it, so I did. Mom's having a hard time finding applications that will won't cause a fatal exception on her handheld and has asked if I could possibly manage a solitaire program for her.

I guess another question I would have is about my Forth license. I purchased the full version for my IIIc in November 2001 and I still have that on my computer somewhere. Would it still be legal with my license to use an emulated development environment to write for the pilot pro?



By [Neal Bridges \(Nbridges\)](#) on Monday, March 24, 2003 - 01:50 pm:

[Edit](#)

Hi, Heather. You can work with the Professional. Memory is a bit tight.

Your license will be fine; e-mail me the HotSync name on the Pro, and we'll consider it a transfer.

Neal

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Tungsten High Resolution Support

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Tungsten High Resolution Support



By [Dave Tuttle](#) on Friday, March 21, 2003 - 01:27 pm: [Edit](#)

Hi,
I'm interested in using Quartus Forth for game development on the Tungsten. I'm currently using SuperWaba, but it's a little slow. Does QF support 320x320 resolution? In other words, if I draw a line from 0,0 to 160,160 does the line extend halfway across the screen or all the way?
Thanks,
Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, March 21, 2003 - 06:06 pm: [Edit](#)

By default, you're working a screen mapped to 160x160. To draw in 320x320, you'd need to tell the system about it first. I haven't ported over the required systraps yet; if someone wants to have at it, I'd be pleased.

Neal



By [Dave](#) on Saturday, March 22, 2003 - 02:41 pm: [Edit](#)

Ok, thanks.

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"Fatal exception" after brightness is adjusted

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): "Fatal exception" after brightness is adjusted



By [Krzysztof Bywalski](#) on Tuesday, March 18, 2003 - 01:39 pm: [Edit](#)

Hi there,

I have a strange problem in my application and it seems to be Forms related. I am using Palm m515 and the problem occurs when the brightness is adjusted (by tapping on the upper right corner of the Graffiti area). When currently active Form is a form brought to the screen by FrmPopupForm everything is fine, but when a form became active with ShowForm then after changing the brightness settings "Fatal exception" occurs and soft reset is necessary (all Hacks are disabled). I have gone through the Discussion Forum and found some related topics (with MainForm as a solution) but it did not help. I have no idea what could be wrong... Have you encountered anything similar ?

Krzysztof



By [Neal Bridges \(Nbridges\)](#) on Tuesday, March 18, 2003 - 03:18 pm:

[Edit](#)

Krzysztof, that's curious. I'm unable to reproduce that here. What version of Quartus Forth are you using?

Neal



By [Krzysztof Bywalski](#) on Wednesday, March 19, 2003 - 03:37 am: [Edit](#)

I am using version 1.2.6R. I have just checked how my application behaves when it is generated from Quartus Forth 1.2.5R and it is exactly the same problem.

Krzysztof



By [Tod Wulff \(Todwulff\)](#) on Saturday, March 22, 2003 - 06:10 pm: [Edit](#)

Something to look @ that may not be related is the hack manager that you are using. I use TealMaster. It has a little bit of a bug in that when a profile is enabled and a crash ensues mandating a reset, one can tell it not to reactivate the hacks upon restart, but sometimes it does anyway. I have had to go into TealMaster, select a profile and then reselect off for the hacks to be truly turned off... Maybe what you are seeing is related? Probably not, but figured I would throw it out there...



By [Steve Bohrer \(Skb\)](#) on Saturday, March 22, 2003 - 10:11 pm: [Edit](#)

General debugging, but, how simple a sample of code can you reproduce this result with? If you can get it small, you can post it. Also, have you reproduced this with other forms, or is there something funky with that form only.



By [Krzysztof Bywalski](#) on Monday, March 24, 2003 - 10:26 am: [Edit](#)

I am quite sure that the problem is not caused by a hack (all hacks are disabled and a couple of restarts occurred since that time).

I have created as simple form as possible (just clean form and nothing in it) and below is the code I have used for tests. And it is still the same problem: when ShowForm is used "Fatal exception" occurs. But everything is ok when FrmPopupForm is used instead.

In my opinion this suggests that the problem has nothing to do with the form itself (two different forms were used: from my application and the one I have created for tests).

But the code seems to be correct too...

Krzysztof

-257 constant byeThrow

```
: go
TestForm ShowForm
\ FrmPopupForm
begin
['] key catch
byeThrow = if
(bye)
then drop
again ;
```

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Implementing a String Stack a good idea?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Implementing a String Stack a good idea?



By [Tod Wulff](#) on Monday, March 17, 2003 - 09:18 pm: [Edit](#)

Through my many hours of online research, I have come across some implementations of ANS Forth that have libraries with provisions for a third stack - a (dynamic?) string stack.

Being new to the language, would this be something that a person in my position would benefit from trying to use/implement during the learning curve?

Is it something that is being done in other areas besides the educational institutions i.e. in production useage?

It seems interesting that one could implement an additional stack and have it be a viable tool...

Is this a thought process that has usefulness in other areas besides strings?

Let me know your thoughts and suggestions.

-t



By [Kris Johnson \(Kdj\)](#) on Monday, March 17, 2003 - 11:23 pm: [Edit](#)

I think you'd learn more by trying to implement a "real program" than an abstract exercise like this.

I think that Forth, more than most other programming languages, is very well suited to solving specific problems, and not so great for creating generic "libraries".

Just my two cents,
-- Kris



By [Mark Beckman \(Mbeckman\)](#) on Tuesday, March 18, 2003 - 04:58 pm: [Edit](#)

For what it's worth there was a previous discussion of string stacks:

[String Stack](#)



By [Tod Wulff \(Todwulff\)](#) on Tuesday, March 18, 2003 - 09:05 pm: [Edit](#)

Thanks. I will look into it.

-t

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Quartus Labs Tungsten T

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Quartus Labs Tungsten T



By [Neal Bridges \(Nbridges\)](#) on Monday, March 17, 2003 - 04:51 pm:

[Edit](#)

Good news; I have a Tungsten T in hand. Palm OS 5, and a snappy little device to boot.

Neal



By [Wade Carlson](#) on Tuesday, March 18, 2003 - 07:52 am: [Edit](#)

Woohoo! Good news indeed!



By [Mike Will](#) on Tuesday, March 18, 2003 - 12:24 pm: [Edit](#)

Have fun with it, Neal.

I'm enjoying a hardware thrill myself. I just got a Commodore PR100 calculator (ca 1976) via eBay. This was the first programmable machine I ever owned.

No OS5, no Forth, 72 steps (the shift key counts as a step!), and it loses all its programming when you turn it off! It also takes two seconds to calculate a cosine.

Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, March 18, 2003 - 03:29 pm:

[Edit](#)

I've seen [that calculator](#), Mike. Looks like fun.

Neal



By [Frank](#) on Thursday, March 20, 2003 - 05:03 am: [Edit](#)

Cool device, that calculator! WOW!

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A Quartus development environment question...

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): A Quartus development environment question...



By [Tod Wulff](#) on Monday, March 17, 2003 - 01:50 am: [Edit](#)

This question probably stems from my ignorance of many facets of the Forth language and onboard programming in general, however, I figured I would throw it out there to see what kind of feedback I would get.

It seems as if a GUI was developed for the interface, that development on the platform would be quickened.

What I am referencing is a layout similar to the Launcher X GUI, with tabs or gadgets that would allow for the programmer to switch between views of the interpreter, return stack, data stack, other? stacks, dictionary, environment (Global/Local variables/constants, memory) vitals, memo editor, debugging/stepping/breakpoints, external word sets, hardware info/controls, etc.

If this tool was developed in Forth in a .pdb doc file (as I suspect that it would exceed the 4k limitation of memos 😊), and then started via the '\startup.quartus' link (including the docinc words), that this could be a viable option for integrating it into the set of tools that the programmer has available to him/her for development on the platform.

I understand that real estate is a prime concern on the Display, but the interface that Benc/Little Mobile Creations has come up with in Launcher X is quite intuitive and impressive AND the additional real-estate that some of the newer platforms have available by shrinking the graffiti area out of the way would help to offset this issue.

I would love to have this be my first tangible project with Quartus Forth, but frankly I feel that it may be over my head, seeing as I do not have 20+ hours per week to make a 1000+ man-hour project come to fruition in a reasonable time frame.

Well, I hope that I have stimulated some thought processes. I hope that this is not boringly redundant or typical of others who are just starting with the language/platform, but I suspect that it may be...

I look forward to any replies - pro or con.

Thanks!

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Implementing 'endif' word

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Implementing 'endif' word



By [TodWulff](#) on Sunday, March 16, 2003 - 05:05 pm: [Edit](#)

I am having a problem, most of it being the fact that, admittedly, I am a new user with SOME programming experience from some years past (BASIC and Assembly for the 6800 family).

I am finding that I am having a hard time with defining the 'endif' using the following:

: endif ' then execute ;

or

: endif ['] then execute ;

or

; endif [' then] execute ;

or some other permutatios - all unsuccessful.

I have searched the librarys to see if it is predefined in some of the other libraries, it is not.

Can someone provide the proper guidance, or point me in the right direction, please?

Thanks in advance.

Also, on a side note, I ran across something that was, at least to me, unexpected. When QF initializes, and I type in 'endif', I get the expected undefined work dialog. If I try to enter a simple 'then' as the initial word entered in a session, instead of getting the 'stack underflow' error dialog, I get 'dictionary overflow' error dialog. Subsequent 'then's cause the expected stack underflow dialog. Just a curiosity, i guess...



By [Kris Johnson \(Kdj\)](#) on Sunday, March 16, 2003 - 11:41 pm: [Edit](#)

I think you need to make the word IMMEDIATE, as it is a compile-time word.

For example, this works:

```
: endif postpone then ; immediate
```

as does this:

```
: endif [' ] then execute ; immediate
```

(Note that "[" has no spaces in it.)

BTW, I don't know why you are using ENDIF instead of THEN, but if it is not for portability with some old code, I'd suggest you get used to using THEN to end an IF (even if it does seem weird).

-- Kris

 By [Tod Wulff](#) on Monday, March 17, 2003 - 01:08 am: [Edit](#)

Thank you Kris - 'tis appreciated.

:o) Yes, it is weird, and I am trying to get the weirdness out of the way so that I can stumble through the concepts and not the syntax...

I do understand and appreciate your suggestion.

Again, Thanks.

-t

 By [Neal Bridges \(Nbridges\)](#) on Monday, March 17, 2003 - 12:35 pm: [Edit](#)

Tod, it is common for newcomers to Forth to want to change the cosmetics to appear more like their favourite language. It's just free advice, and worth about that much, but I suggest you don't do that. You'll be establishing an artificial barrier in your learning process, as you'll have to mentally translate all samples of Forth you read into your private version before you can begin to understand them.

Neal

 By [Tod Wulff](#) on Monday, March 17, 2003 - 04:53 pm: [Edit](#)

Neal/Kris,

I thought that this feature/ability was one of the wonderful things 'bout Forth, the ability to have it be extensible to meet the needs (desires) of the programmer.

However, being of sound? intellect, I understand and I will mitigate my useage of the language in this fashion...

I guess that I am a little confused as one of the tutorials linked to off of Kris' wiki actually mentions doing it, but I think that it was accompanied by disclaimer.?.

Thank you.

-t

 By [Neal Bridges \(Nbridges\)](#) on Monday, March 17, 2003 - 04:55 pm: [Edit](#)

Certainly it's possible to do it, and Forth makes it easy to do it. I nonetheless think it's not a productive technique for the beginner, as it cuts him off from existing source material; likewise, it's not something anyone beyond a beginner would find useful. Hence my recommendation.

Neal

 By [Tod Wulff](#) on Monday, March 17, 2003 - 08:24 pm: [Edit](#)

Ok, thanks.

Please take the opportunity to flame me if I endup posting any code that makes use of this inappropriate adaptation. 😊

-t

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Where can I find ondo library

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Where can I find ondo library



By [jack](#) on Thursday, March 13, 2003 - 01:54 am: [Edit](#)

A tutorial on Wiki says to type in "needs ondo", where can I find this library?

thanks



By [Kris Johnson \(Kdj\)](#) on Thursday, March 13, 2003 - 11:25 am: [Edit](#)

See <http://kristopherjohnson.net/wiki/OnDoModule>

-- Kris

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Wiki Tutorials?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Wiki Tutorials?](#)



By [n00b](#) on Wednesday, March 12, 2003 - 10:14 pm: [Edit](#)

Hello, I tried accessing a couple of links off of this board leading to Quartus Forth tutorials on the Wiki (I'm not even sure what that means), but the links are all down. Aside from the great beginner tutorial posted in the files area, can someone please direct me to Palm Specific Tutorials aimed towards beginners with no coding experience?

Thank you



By [Kris Johnson \(Kdj\)](#) on Wednesday, March 12, 2003 - 10:30 pm: [Edit](#)

The wiki should be working (it works for me). The main tutorials link is here:

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/QuartusForthTutorials>

If you can't access that for some reason, please let me know.

You may find the tutorials to be pretty tough if you have absolutely no coding experience. The tutorial writers have tried to be helpful, but I suspect the tutorials may come off as gibberish to somebody who has never used any other programming language.

-- Kris



By [n00b](#) on Thursday, March 13, 2003 - 12:02 am: [Edit](#)

Yay! thank you very much. I am trying to decide whether to purchase QF because I had previously worked with PDAToolBox in conjunction with Rsrcedit, shellmaker and various "user-friendly" development tools but I found out quickly the limitations of such an environment and I wish to give programming a go.

I don't particularly have lots of time to learn a language, but I tend to catch on quickly when taught and I hope to be able to learn how to develop simple single database record entry programs soon.

Anyways, thank you very much Kris. I'll look into that page when I get the time =)

Laurence



By [gwiесе](#) on Thursday, March 13, 2003 - 06:58 pm: [Edit](#)

Laurence,

I started out the same way, no programming experience. I wanted to write programmes to use for work, so I gave it a try. It took a long time to get going, but I stuck with it and I now have three programs running perfectly I use for work.

This is nothing more than a hobby for me, so I don't care if I ever become an expert programmer like Kris and Neal just to name a few. I figure out what I need to do know on the next project and keep building from there. I lerk around here looking for something new to try and go from there.

Try these out [My programs](#).

You can guess what my work is.

Gary

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Using Libraries on the Palm Emulator?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Using Libraries on the Palm Emulator?



By [n00b](#) on Tuesday, March 11, 2003 - 07:43 pm: [Edit](#)

Hello everyone, can someone please help me figure out how to get the Libraries that came with QF onto the Palm Emulator? I know there is a .mpa file provided but I cannot sync my Emulator to the Palm Desktop so it is useless. I don't even know if its possible to paste from the desktop into the Emulator, so the only other option would be to retype all the memos into the emulator which would be a rather tedious and unpleasant experience. Please help!

Thanks!



By [gwiese](#) on Wednesday, March 12, 2003 - 12:53 am: [Edit](#)

You could copy and paste, but that is slow too. The memo will only copy so much at one time. I also did it by copying the entire memo db and pasted it on to the emulator. I made a copy of the memo db in rsrcredit and copied it on to the emulator then deleted the original memo db and renamed the copied data base with the original db's creator id.

It is possible to hotsync the emulator, but I haven't had much luck doing that. There is a place on the wike that will walk you through the process.

Gary



By [Kris Johnson \(Kdj\)](#) on Wednesday, March 12, 2003 - 10:34 pm: [Edit](#)

You can grab a Memo database containing all the Quartus libraries from here:

<http://www.quartus.net/files/PalmOS/Forth/Library/MemoDB.zip>

Unzip it and then just drag and drop the MemoDB.pdb file onto the Emulator. This will install the new MemoDB (warning: you will lose all your existing memos).

-- Kris



By [Steve Bohrer \(Skb\)](#) on Sunday, March 16, 2003 - 11:39 pm: [Edit](#)

If you get HotSync working with POSE, then it is easy to copy and paste your source memos between POSE and your real device, in the Palm

Desktop software. Some notes are on the wiki at [HotsyncPose](#)

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Central European language compilations with QF

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Central European language compilations with QF



By [Dave Bennett \(Dbennett\)](#) on Tuesday, March 11, 2003 - 11:18 am:

[Edit](#)

Has anyone used the PiLoc language localization software for the Palm OS (<http://www.paragon-gmbh.com/> or Handango) with Quartus to create foreign language applications? Specifically, I'm interested in using Czech. Thanks.

Dave

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Newbie Question about implementing Forth into Palm

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie Question about implementing Forth into Palm



By [n00b](#) on Tuesday, March 11, 2003 - 01:30 am: [Edit](#)

Hello everyone, I just downloaded QF a few days ago and I've been reading manuals and tutorials to try and get a sense of how to use the program. After reading a few materials I've gathered that the main code and the makePRC are separate files, but I do not completely understand how the code gets to become a program on the palm with forms and fields and labels etc. I have previous experience with Rsrcedit but what I'm wondering is once a form and fields are made in Rsrcedit, how does the QF code integrate with it?

Thank you, and sorry for the ignorance, I'll try and read up some more



By [Kris Johnson \(Kdj\)](#) on Tuesday, March 11, 2003 - 10:13 am: [Edit](#)

After calling MakePRC to create the standalone executable, you then use use-resources and CopyRsrc to copy resources from your RsrcEdit-generated resource database to the standalone.

See <http://www.quartus.net/products/forth/manual/standalo.htm>

-- Kris



By [n00b](#) on Tuesday, March 11, 2003 - 07:41 pm: [Edit](#)

Thank you very much

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Neal, we need some answers....

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Neal, we need some answers....



By [Wade Carlson](#) on Monday, March 3, 2003 - 12:48 pm: [Edit](#)

Neal, I am up against a wall and we all need some answers.

I am getting complaints from customers that my applications aren't running correctly on Palm OS 5.0 devices. They seem to run okay on the palm os 5.0 simulator, but only on the release version. The debug version won't seem to start any Quartus compiled apps.

So, I am faced with some hard decisions: Do I go out a buy a Palm OS 5.0 device so I can narrow down where the problem may be so that I can let you know where it is (if it is something I can't workaroud)? Or do I abandon Quartus to try and learn C++ (and spend the time porting my apps to C++)? Or do I keep waiting patiently that you are going to magically release some new Quartus Forth version that solves all problems.

Neal, please give us some answers, you owe us that at the very least. Many of us (including myself) have donated you money to purchase a Palm OS 5.0 device (see this link [Compiling a standalone prc under os 5.0](#)), but we haven't received any answers yet. You have been promising an update for for various issues for almost 2 years now.

What we need to know:

What are you currently working on? What do you have left to fix? What are the known issues? Where do you plan to take Quartus Forth, or have you abandoned it in pursuit of something greater?

If you're not able to work on it, why? Are you having health problems, etc. When will you be able to work on it, etc.

Inquiring minds need to know. Thanks. No hard feelings against you Neal, we just need some honest answers....



By [Neal Bridges \(Nbridges\)](#) on Monday, March 3, 2003 - 02:12 pm: [Edit](#)

Hi, Wade. Certainly I'd like to know what problems your users are reporting; it's all helpful. The debug simulator is indeed a cramping pain in the posterior, and not all that useful as a testing platform.

I think it's important to re-state that Quartus Forth is, at heart, a hobbyist platform, created by a hobbyist for hobbyists, and priced accordingly. While

I recognize that some customers have used it to create and sell professional apps -- and I applaud that effort -- Quartus is not Metrowerks, nor Palm, and thus I have to play catch-up with changes as they occur. I'm in the same boat you are, in that regard.

The known issues lay primarily in the OS5.0 camp. My plans are for Quartus Forth to support Palm OS 5.0.

I do require a device in-hand in order to nail down the remaining issues. I haven't bought one yet, but will shortly. The key reason for the delay is revenue -- the serious slump in sales that has hit the entire Palm development community over the last months, coupled with PalmGear's unfortunate unwillingness to pay monies owed. I've been waiting for new sales revenues, beyond the other expenses of running the business, to cover the remaining cost of the device.

Your donations are certainly appreciated. If, however, you feel you're not happy to have made the donation for any reason, please do let me know and I'll return it immediately.

Neal



By [Dave Bennett \(Dbennett\)](#) on Monday, March 3, 2003 - 04:46 pm:

[Edit](#)

One question I have about Palm OS 5.0 is how much effort is Palm putting into this version of the OS? I've seen press reports that devices will be available from Handspring later this year with OS 6.0. This looks as if OS 5.0 was just a transient move by Palm to quell the complaints about it not moving forward on the OS front for such a long period of time.

With Palm's recent OS and Hardware divisions laying off so many people, (and their lead OS architect leaving) I wonder if Palm is actually going to be able to deliver any stable OS in the near term. (Their OS strategy, if you can call it that, still seems to be without direction and leadership.) Sony's literature on OS 5.0 leads one to believe that Sony put a non-Palm, or at least a transitional version of bluetooth into their devices using OS 5.0.

And Palm's release of their Tungsten W is the dumbest move I've ever seen. Their own published research, used in anti-PocketPC marketing, showed that people would not spend \$499 for a PDA, yet this is exactly what they released.

Maybe Sony or Samsung will buy the Palm OS and put some serious, market driven, oomph into it.

Dave



By [Neal Bridges \(Nbridges\)](#) on Monday, March 3, 2003 - 05:18 pm: [Edit](#)

OS5.0 represents a shift from one type of CPU -- the Motorola DragonBall -- to an entirely different ARM CPU that emulates the DragonBall in software. I can't speak for how much effort they'll be putting into OS5, but it will be the base platform on which successive versions are built for the new ARM CPU.

Neal



By [Wade Carlson](#) on Tuesday, March 4, 2003 - 01:43 am: [Edit](#)

Neal, I think you should give yourself some credit. Quartus is more than just a toy or hobby. It's an awesome development tool, and it's listed under Palm's development tool webpage on the same page as Metroworks.

My program errors are reproducible, but it is hard to nail down exactly where in my code it is happening (one of my program calls another applet to do beaming, and it crashes after that on a OS 5 device, so I'm not sure if it happening before it beams, during, or after that is the problem). I guess I will probably end up buying a Tungsten or something. A couple years ago I had the same problem with the Handspring devices crashing with my programs. I finally had to buy one, to which I was then able to nail down the problem to a bug with PICK and ROLL.

Anyways, why can't you at least give us an idea of what are the known issues you are working on for OS 5? Perhaps someone here could even give you some help?



By [Kit Latham](#) on Tuesday, March 4, 2003 - 07:28 am: [Edit](#)

Gentlemen,

Am i alone in having problems with QRsrcEdit under OS5? If not is this something that will have to be deferred until after the Quartus/OS5 version?

I find QRsrcEdit does not work at all on my Tungsten; I hope I am just being stupid....

Thanks in anticipation and I also look forward to the Quartus/OS5 version, Quartus is a great product.

Kit



By [Mike Will](#) on Tuesday, March 4, 2003 - 12:41 pm: [Edit](#)

Neal,

Here's a way to get a Tungsten T cheap:

- 1) Go to Staples which is offering them at \$599
- 2) Bring the current issue of Toronto Computes, specifically the ad for Grey

Tech on page 27 which advertises the Tungsten for \$519

3) Ask for the 150% price matching guarantee, which should put the final price around \$475.

4) Be sure to get the coupon for the free digital camera too (you may have to go to Future Shop for that).

Voila! You're walking in OS5 land...

Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, March 4, 2003 - 02:29 pm:

[Edit](#)

Kit, I've had reports of proper functioning of Quartus RsrcEdit under OS5. What version are you running?

Mike -- thanks for the tip!

Neal



By [Neal Bridges \(Nbridges\)](#) on Tuesday, March 4, 2003 - 02:31 pm:

[Edit](#)

Wade, I appreciate the kind words. I don't yet have a full list of issues; I'm waiting to test on real hardware to generate just such a list, in conjunction with help from beta-testers when I have a build suitable for the purpose.

Neal



By [Christopher J. Smith \(Missilemax\)](#) on Tuesday, March 4, 2003 - 07:00 pm: [Edit](#)

To all, I have a Tungsten|T and have been working out bugs with my software and have them nailed my problems to these two areas:

1. Make sure you are not playing sounds when your program exits. I use asynchronous sounds alot in my games. (I don't think this is a Quartus issue, but rather a OS5 issue.)
2. When Compiling on the TT do not use CopyRsrc to get your resources into your prc. Instead create a seperate stand alone that copies them into your PRC after it's built in Quartus.

There may be other areas...I'll post other problems and fixes as I find them, and I am happy to test apps for any Quartus developers.

-Chris



By [Ron Doerfler](#) on Tuesday, March 4, 2003 - 11:36 pm: [Edit](#)

And I can add one more problem area. I have two applications that have had PalmOS 5.0 failures reported by several users, TeamFile and TeachFile. Some reported indiscriminately that there were errors, others that they occurred only in exiting the app (which I duplicated with the PalmOS 5.0 Simulator). In both cases, I had used the old-fashioned callback method of handling events. When I changed this to the current method, the Simulator exited OK. When I sent out this new beta to those who had reported the errors, and those that responded said it now works OK.

The current method handles events by this method:

```
: go (--)  
['] (go) catch  
byeThrow = if  
...  
then ;
```

rather than following the original "event-handler" technique using callbacks. Fortunately, my database tutorial uses the more modern (well, post-1999 or so!) mechanism. However, if you have any callbacks at all, you may want to look at them.

I might also add that TeachFile launches back and forth between software modules using SysUIAppSwitch, and there doesn't appear to be any problems with OS 5.0.

Ron

 By [Dave Bennett \(Dbennett\)](#) on Wednesday, March 5, 2003 - 09:35 am: [Edit](#)

Well, maybe I ought to get into predicting the future. 😊 Sony's chairman and CEO, Nobuyuki Idei says he wants to buy Palm OS! 😊

<http://www.theregister.co.uk/content/54/29592.html>

The full interview is here.

http://www.alwayson-network.com/comments.php?id=246_0_2_0_C

Dave

 By [Wade Carlson](#) on Wednesday, March 5, 2003 - 10:18 am: [Edit](#)

But Neal, you still haven't given us a timeline. That is all I ask. Without deadlines, much would not be accomplished in society. Can you give us a

date? A week? A month? 6 months? A year? Whatever it is, let us know. At least then I can make an informed decision on what I need to do.



By [Kit Latham](#) on Wednesday, March 5, 2003 - 11:46 am: [Edit](#)

Neal

I am using 1.017b, I have re-installed it and it now seems ok on new files but still won't open some I created on my Visor. I'll carry on, I am content if it works on new stuff.

Thanks for the help.

Kit



By [Joe Nasal \(Jsn\)](#) on Wednesday, March 5, 2003 - 02:36 pm: [Edit](#)

Neal:

Buy a T now (through 5/17) and Palm will send you a free camera for it:

<http://www.palm.com/promotions/veo/>

If I may -- why not update quartus.net to say that QF does not fully support OS5? No ambiguities, that way.

Developers:

Why not update your product documentation to say that your product does not support OS5, or that you will presently not support your products under OS5 (caveat emptor)?

I saw no guarantee from Neal when purchasing QF that he would promise to keep up with the latest releases of PalmOS.

And -- let's get real. QF is powerful software and through OS 4.x people have used it to create commercial-quality apps. However, if you're relying on a \$69 tool supported by a development team of 1 to run your own commercial enterprise, then you get what you pay for.

Learn C and either buy CodeWarrior or download gcc tools.

Neal -- thanks for great software. I hope it doesn't die and that you find the time to get it updated.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, March 5, 2003 - 03:35 pm:

[Edit](#)

On the other hand, the commercial enterprises under discussion are also usually one-man outfits. And the discussion forum here brings a lot of talent to bear on problems that arise.

Neal



By [Neal Bridges \(Nbridges\)](#) on Wednesday, March 5, 2003 - 03:36 pm:

[Edit](#)

Wade, targets are hard to estimate; there are too many variables. I do have a modified compiler out in the hands of a couple of OS5.0 testers right now, so the ball is in fact in play.

Neal



By [Joe Nasal \(Jsn\)](#) on Wednesday, March 5, 2003 - 03:50 pm: [Edit](#)

Neal:

I think that your point is made "in the same hand" and not the other one.

This is not open source, but it is not your typical "commercial" development enterprise by any stretch. You charge a nominal fee for the software, which really must come down to not much more than time & materials for you. This is irrespective of the ongoing palmgear payment collection fiasco...

You ask for neither a maintenance contract nor royalties from your developers.

For this, I say we should either get out the assemblers and start coding our own Forths or continue to support you the best we can.



By [Wade Carlson](#) on Wednesday, March 5, 2003 - 05:53 pm: [Edit](#)

Joe Nasal, I think your points are well made as well. And if I need to learn C and purchase codewarrior, I will. I am not blaming anyone. As I have said before, Quartus is a great product. However, before I can make a decision as to what I need to do, I need information.

Neal, I'll ask again. Please give us a deadline. You have been in the programming business long enough to know that there will be unexpected variables out there and how to plan for that unexpected time. Whatever your unexpected variable time has been in the past (maybe 30%), estimate your expected completion date and add 30%.



By [Mike Will](#) on Wednesday, March 5, 2003 - 10:22 pm: [Edit](#)

Wade, please don't be too quick to speak for 'us'. A separate header dataspace and a PPC version are higher on my list of needs than are OS5 fixes. I suspect others have their own wish lists too.

Mike



By [Neal Bridges \(Nbridges\)](#) on Thursday, March 6, 2003 - 11:50 pm:

[Edit](#)

Wade, it isn't something I can set a reliable date to, presently. I'll know better as I proceed, and I'll keep you posted.

Neal



By [Neal Bridges \(Nbridges\)](#) on Friday, March 7, 2003 - 04:08 pm: [Edit](#)

Wade, reading back over the specific difficulties you're having with your app vis-a-vis beaming -- it's possible that it's an issue with OS5 handling various calls in subtly different ways than it used to, rather than a Quartus Forth issue. Testing in order to isolate that specific problem on an actual device will doubtless be necessary.

Neal



By [Wade Carlson](#) on Friday, March 7, 2003 - 07:23 pm: [Edit](#)

For what it's worth, I went out and bought a Tungsten T. It turns out the problem I had with one app was related to the way OS5 handles files differently. It had nothing to do with Quartus. The problem with beaming I had with my other app turns out that it runs fine on the Tungsten. I tracked it down to a bug with the OS on certain Sony devices. So, it turns out, Quartus is not to blame!

I also ended up buying Deitel's "C++ How to Program" book. I hear it's one of the best. We'll see how long it takes me to get through the 1300 page book.....



By [Dave Bennett \(Dbennett\)](#) on Saturday, March 8, 2003 - 09:21 am:

[Edit](#)

Sony has patches available for some of their PDAs on the support area of their website. My T665C had a patch that needed to be applied to fix some problems in the OS. It was about 7k in size.

The instructions said to soft reset the device. This was one of the problems, it wouldn't soft reset. Make sure you do a sync before attempting any patch application. I sync'd, hard reset, applied patch via sync, soft reset, and sync'd again; as per their directions.

Maybe a patch will fix the issue you encountered.

Dave

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Using Local Variables in Quartus Forth

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Using Local Variables in Quartus Forth



By [Andrew Johnson](#) on Saturday, February 22, 2003 - 10:01 am: [Edit](#)

I am interested in conserving memory in a large program. I can find no information on local variables but I have used them on the PC running SwiftForth.

Is it possible to release memory from variables, arrays and buffers after you have used them?



By [Kris Johnson \(Kdj\)](#) on Saturday, February 22, 2003 - 12:22 pm: [Edit](#)

Use of local variables in Forth is a controversial subject. Purists say that all "local data" belongs on the stack, and use of variables is bad style. Others disagree, saying that there are some situations where local variables are better than using a lot of convoluted stack manipulations.

The tinylocals module included with Quartus is one method of getting locals with Forth.

Another way of using locals with Quartus is here:

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/M68kLocalModule>

-- Kris



By [Andrew Johnson](#) on Monday, February 24, 2003 - 07:49 am: [Edit](#)

Thank you, Kris.

I'll take my time to digest this.



By [Kris Johnson \(Kdj\)](#) on Monday, February 24, 2003 - 11:17 am: [Edit](#)

You might also want to look at Julian Fondren's suggested words for picking items off the return stack, at

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/ReturnstackModule>.

-- Kris

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Altering Palm OS apps...

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Altering Palm OS apps...



By [mrtester](#) on Thursday, February 20, 2003 - 01:38 pm: [Edit](#)

I want to disable the button within the Palm clock application that allows the user to change/adjust the time.

I don't want the users to have this ability to changing the time.

Any ideas.

MrTester



By [Wade Carlson](#) on Friday, February 21, 2003 - 07:04 am: [Edit](#)

Um, why would you want to do that?

The app is in ROM, so you can't directly modify it, but you could make another copy of it and place it in RAM. The RAM copy should supercede the ROM copy. With RsrcEdit, you could just find the appropriate form in that app and remove the button, but again, why would you WANT to do that?

Besides that, you don't need the palm clock application to change the time. You can do it programmatically, and any other clock type program could change the time if the user installed or created such an app. Are you trying to create some copy-protection scheme? This isn't the best way to go about it.

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Hardware detection & capabilities

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Hardware detection & capabilities



By [Dave Bennett \(Dbennett\)](#) on Thursday, February 13, 2003 - 09:21 am: [Edit](#)

Well, I got a new PDA. It's a Sony. I didn't need a color screen, but it was the only one available with the capabilities I liked. I signed up for the Sony developer program and got their emulator and Sony specific header files, but don't want to write "Sony only" code.

Does anyone have any code samples for detecting the kind of device and its capabilities? I'd like to be able to conditionally execute code based on available hardware features.

Dave



By [Jim Hendricks \(Jimh\)](#) on Thursday, February 13, 2003 - 09:27 am: [Edit](#)

Dave,

In the docs that come with the headers it explains how to detect if the device is a Sony.

I'm real busy at the moment so I don't have time to look it up for you, but figured you would want to know.

You also have in the PalmOS API the features manager which allow you to check if specific features are available on the hardware.

Jim

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Factoring words

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Factoring words



By [Dave Bennett \(Dbennett\)](#) on Tuesday, February 4, 2003 - 03:14

pm: [Edit](#)

I have several words that are of the same form; they return the lower or upper nibble of a byte. Is it worthwhile to set up a common nibble stripper rather than do the "15 AND" in each word?

I guess the question is, "How much factoring is 'too much'?"



By [nbridges](#) on Tuesday, February 4, 2003 - 03:37 pm: [Edit](#)

It depends. "15 AND" is an easily-understandable idiom; I'd be inclined to factor if it would aid in the readability of the code, by answering the question 'why is he taking the lower nibble of that byte'? To that end, I'd name the factored phrase something other than 'low-nibble' -- something more specific and meaningful to the application.

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, February 4, 2003 - 10:00 pm: [Edit](#)

I'd factor "15 AND" into its own word just to avoid the possibility of accidentally using it when not in DECIMAL base.

Look at

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/M68kLogicalModule> for words that you can use to define "15 AND" as a single-instruction INLINE word.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Wednesday, February 5, 2003 - 10:01

am: [Edit](#)

Thanks, guys. The point is, I also have 240 AND and the counterparts for setting the upper nibble and the lower nibble. I am using one byte to store the values of two closely associated values that the user will use together. Neither value can ever be greater than 12, so using one byte to store both is good for maximum storage, minimal memory usage. This app promises to be "too big" memory-wise on the face of it.

But it just isn't these two values, I have several byte-sized variables that

are used for multiple storage values; most are upper/lower nibble, which is why I wondered about the factoring.

Is Kris' idea about INLINing the best memory saving solution? That is my main concern.

Thanks, again.

Dave



By [Steve Bohrer \(Skb\)](#) on Wednesday, February 5, 2003 - 12:18 pm:

[Edit](#)

If you are trying to tweak and tune, rather than wondering "what is the stylistically best general solution" one method is to use disasm to check how big a sequence of code compiles to be, and compare that to the overhead of defining and calling a word instead.

For simple operations, assembly shortcuts can help. Kris Johnson has developed a bunch of handy 68000 tweaks; see his wiki [M68kSpecificWords](#) page, and specifically [M68kLogicalModule](#). His word literal-and does what you want inline with two cells of code space, which is the same as a call to a compiled word. Of course, there is some overhead for defining literal-and. Check the code size of the normal case, and then you can count how many times you need to use literal-and to be a payoff. Or, you could make a fast-to-compile test module to get these numbers experimentally.

It would be interesting to know how much applying these tweaks throughout changed the code size of a large project.



By [Kris Johnson \(Kdj\)](#) on Wednesday, February 5, 2003 - 08:52 pm:

[Edit](#)

Also remember that there are tradeoffs between codespace and dataspace. When you try to take full advantage of every bit of every byte in dataspace, you generally have to write a lot more code to pack and unpack those values. Simpler code will take up less codespace, but might be wasteful of dataspace.

If you don't know which you are going to run out of first (dataspace or codespace), I'd say don't worry about it until you do. Just keep the code well-factored, and it should be easy to tweak things later.

If you run out of both codespace and dataspace, then things get complicated. Using the Database Manager instead of Forth dataspace is the most straightforward way to get a lot more data memory available, although you'll have to start using double-word addresses for everything.

There is no straightforward way to handle lack of codespace, but there are some hacks available (see the wiki and forum archives).

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Thursday, February 6, 2003 - 08:31 am: [Edit](#)

I guess I'll run with what I've been doing and see what happens. Codespace is what I was more concerned about; this is the largest app I've undertaken. Also the first app where I'm attempting to use the Database Manager.

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Making Graffiti Soun

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Making Graffiti Soun



By [Mikael Fernstrom](#) on Tuesday, February 4, 2003 - 11:49 am: [Edit](#)

I've downloaded the QF (excellent stuff!) and have been trying to figure out how I can pick up pen movements in the Graffiti area, and then to do some simple sound synthesis for audio output while writing... I've looked at the simple sndcmd. I haven't found the Graffiti API. Where should I look?



By [John Newell](#) on Wednesday, February 5, 2003 - 07:30 am: [Edit](#)

Mikael,

In the event loop you can check for penUp and penDown events and then obtain the x,y coordinates of the pen if required. These will occur whenever the pen touches the screen, be it on the visible area or the Graffiti area. See the Palm OS Companion for a description of the event loop and the System Event Manager section of the Palm OS Reference manual for API calls. E.g. EvtGetPen.

For more about Event Loops I suggest you search the Wiki for EventLoop.

Regards
John



By [Mikael Fernstrom](#) on Wednesday, February 5, 2003 - 09:32 am: [Edit](#)

John,

Many thanks. I started to explore penUp/Down but didn't get them to work in the Graffiti area ...?

I guess, at the end of the day, I'm aiming at stitching in a callback function into the Graffiti code iself. I'm just downloading the Companion + Ref Man. Will look at Wiki.

/Mikael



By [Dave Bennett \(Dbennett\)](#) on Wednesday, February 5, 2003 - 10:19 am: [Edit](#)

You might get some help from looking at TheDudlStory on the wiki site.



By [Steve Bohrer \(Skb\)](#) on Wednesday, February 5, 2003 - 12:36 pm: [Edit](#)

Once the system event handler gets a pen down in the graffiti area, the system "captures" the pen and doesn't return any pen-move or other

events until the pen is released. If you want regular graffiti processing to occur along with your sounds, this is necessary. But, if you want to track the pen yourself, and not have any Graffiti processing going on, then don't pass pen-downs in the graffiti area to handleEvent.

If you want to cooperate with graffiti, the [Graffiti Manager API](#) has some hooks into the pen strokes queue that the system uses, but I've never experimented with it. Looks like many of these calls are made as not implemented with the new Graffiti 2 system, so any solution using them may be limited to current devices only.



By [Mikael Fernstrom](#) on Thursday, February 6, 2003 - 05:42 am: [Edit](#)

Wow. Good feedback. I'm in for yet another afternoon's hacking. I worked through the documentation (Comp + Ref Man) and it seems that QForth does not support the new sampled/streamed sound functions (yet). Is this correct?

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Causes - Fataals

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Causes - Fataals



By [Mike Will](#) on Monday, February 3, 2003 - 06:02 pm: [Edit](#)

The only part of user support I don't enjoy is dealing with those poor souls who've experienced a fatal crash (requiring a memory wipe) while running one of my apps. I'd like to pick everyone's brain to build a list of the most common causes of this malady.

To start it off, here's one:

A broken exception handler, particularly one that handles the hard keys. I've had a lot of trouble here. I'd love it if someone would share a bit of code that handles this one rigorously.

Many thanks in advance for any thoughts.

Mike



By [Neal Bridges \(Nbridges\)](#) on Monday, February 3, 2003 - 06:05 pm:

[Edit](#)

One note: The cause of a crash is commonly not the app currently running, but some app previously running that left the Palm in a perilous state, only to crash when your app starts up.

Neal



By [Mike Will](#) on Monday, February 3, 2003 - 10:26 pm: [Edit](#)

By "perilous state", do you mean under/over locked chunks, un-closed databases and such? Or, do you mean something to do with the processor's state (stack, exit conditions, etc)? And, is there any way to test for obvious instability, perhaps to allow a graceful exit?

I realize this is a very open-ended question. I just like to pick this forum's brains because they're quite meaty.

Mike



By [Neal Bridges \(Nbridges\)](#) on Monday, February 3, 2003 - 10:28 pm:

[Edit](#)

Mmm, meaty brains. 😊

By 'perilous state', I mean with lower memory regions corrupted, usually. Something has written to a place it shouldn't -- and that's hard to test for.

Neal

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Custom Fonts

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Custom Fonts



By [Ben Norrington](#) on Thursday, January 30, 2003 - 10:15 am: [Edit](#)

I am trying to write a Rapid Serial Visual Projector (see Rapid Reader) that reads doc format (as my first ever Forth program).

So far it emits a numbered list of docs and then you can enter a number (the database index) to view the doc. I am confident that I can get it to display x words at a time on the screen with Double Buffering based on another post (thanks Kris Johnson). All that is left for a working version is big fonts (bigger than the biggest standard font)

But I am really stuck on how to get it to load a custom font; such as those used by FontHack123. I can open the database that contains the font but I cannot figure out how to set the system to use it. I have looked at the FontHack123 c code but I am not sure what it is doing.

Any pointers would be great

Thanks

Ben



By [Ben Norrington](#) on Thursday, January 30, 2003 - 10:49 am: [Edit](#)

btw my problem is that when I open the font database I don't have resIDs for the fonts which I seem to need to setup the font for use

This is a brief version of what I think FontHack123 does to make resIDs

```
for(index= 0; index(lessthan)fontswefound; index++) {  
  bref= DmOpenDatabase(rec->cardNo,rec->dbID, dmModeReadOnly);  
  vh= DmQueryRecord(dbref,rec->index);  
  ptr= MemHandleLock(vh);  
  FtrSet(CRID,ftrLockedFonts+index, (UInt32)vh);  
  DmCloseDatabase(dbref);  
}
```

If there is another way to make a font from a database of a font that would be great. This way seems way to long and complicated.

Thanks

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Using NEEDS or INCLUDE in a stand-alone application

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Using NEEDS or INCLUDE in a stand-alone application



By [Shinji Igarashi](#) on Saturday, January 25, 2003 - 02:01 am: [Edit](#)

Hello; This is Sinji Igarashi from Japan.
My English is bad...sorry.
My stand-alone app read initial forth memo file
(data and definition word) when start up.
-Compileing is end
But my stand-alone app occurd Fatal Exception Error when start.

My forth cord is next.

```
: readfile s" sample" included ;  
\ Main entry point:  
: go  
readfile \ data read  
show-panel  
redraw  
begin ekey do-event again  
;  
\ go
```

Please show me your nice advice.



By [Ronny Svensson](#) on Tuesday, January 28, 2003 - 02:51 pm: [Edit](#)

I don't think that a stadalone can include forth code. That the standalone only contains code and data without headers or compiler code.

Ronny



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 28, 2003 - 04:14 pm:

[Edit](#)

You're correct, Ronny. INCLUDE and INCLUDED are not available in stand-alone apps.

To read data from a memo, it will be necessary to search and open the memo yourself, and read in the data. Example code for this exists in the libraries and on the Wiki.

Neal



By [ShinjiIgarashi](#) on Thursday, January 30, 2003 - 10:53 am: [Edit](#)

Mr.Neal and Mr. Ronny
Tanks for all your help.

I understand that stand-alone itself apps open read and interpret the memo.

Neal & Ronny Tanks
ShinjiIgarashi

Add a Message

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Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Dynamic Created Linked Lists

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Dynamic Created Linked Lists



By [Andrew Johnson](#) on Friday, January 24, 2003 - 03:30 pm: [Edit](#)

I want to create a list, display it in a window with one item per line and then be able to pick an item and jump to another window.

I want to scroll the list if it is too big to display in one window (Joe Nasal has already sorted me out on this - thanks Joe).

I've searched for linked lists but can't find much.

Can anybody direct me?



By [Steve Bohrer \(Skb\)](#) on Friday, January 24, 2003 - 09:41 pm: [Edit](#)

Depending how big the list is, and how often you need it, it may be easiest to store the items to a database and use a custom list draw callback to display them. I have found this to work well for lists of data files; it is not too slow when I build the database on the fly. But, you need a custom draw callback.

The other approach is to build an array of pointers to zero-terminated strings in RAM, and then have the system draw that list for you. I've not tried this approach, because I already had the "draw from database" stuff working when I needed the file list, but it might make sense for small, temporary lists. The [SysFormPointerArrayToStrings](#) sysstrap that will take a block of zero-delimited strings and make an array of pointers to the strings for you, but I've not tried it. However you set the list, be aware that the Quartus version of LstSetListChoices has a bug -- see the wiki [QuartusForthBugs](#) for a fix. You need this routine either way to make a list go.



By [Andrew Johnson](#) on Tuesday, January 28, 2003 - 10:13 am: [Edit](#)

Steve,

I hope you can give me some more help.

I've been trying to put all this together and I think one approach is:

1. Get all the text into one big block. Each item (field) in the list is null terminated.

i.e. description 1 null description2 null ...
While we do this, we count the number of items.

2. Use SysFormPointerArrayToStrings to work up an array of pointers to the beginning of each item. This gives us a way of associating Item1 with its starting address. Item2 with its starting address etc. Access to the new array of addresses is via the memory handle returned. (At this point, I can't get the memory handle to do anything. I don't know how to use it to access the array.)

3. Display in a window the names of the items. In this case it is a list of bars. So we work up a list of bars taking just the beginning of each item's text. Each line in the window can be associated with an item number.

4. We track the line numbering of the items in window even if they are scrolled so that if one is picked, we know which line number the pick was made on, so we can retrieve the address, open a new form and display all the information in the item's own window.

Now the questions are:

Am I on the right track?

How do I use the memory handle to get at the array?

Thank you for your assistance.



By [Steve Bohrer \(Skb\)](#) on Tuesday, January 28, 2003 - 02:16 pm: [Edit](#)

You can use the OS's List routines to handle your steps 3. and 4. The system will draw the items, scroll the list up and down to show different items, and let the user click and select an item. When the user clicks on an item in the list, you get a LstSelectEvent. The event record for this event tells you which item was selected, and then you can open a new form and display the info for that item.

You define the list as a resource with RsrcEdit. Use Neal's GetObjectPtr word to get a listPtr to this resource item, and lock the handle you get in

step 2. to get a pointer to the text items. Pass the list pointer, the text pointer, and the count of items to the system routine LstSetListChoices . Run your event loop, and look for LstSelectEvents. Should work, but, as I said above, I've only done lists with draw routines, not with a pointer to text.

Be sure to use the patch for LstSetListChoices, or you will crash hard at that point.

There is a very brief [overview of lists](#) in the [Palm OS Programmer's Companion](#) in the User Interface chapter.

The [Palm OS API reference](#) covers lists in [chapter 14](#).

Let us know how it goes. If you get a handy sample, put it on the wiki.



By [Andrew Johnson](#) on Tuesday, January 28, 2003 - 04:03 pm: [Edit](#)

Thank you for your prompt reply, Steve.

This may take me a couple of days, however, I will certainly document all this on the WIKI when I get it to work.



By [Andrew Johnson](#) on Wednesday, January 29, 2003 - 03:44 pm: [Edit](#)

Steve,

I've written a program to demonstrate this process and made up a simple resource containing a form and this form contains an empty list.

My program does not seem to make a valid array of addresses to the null terminated strings. It then locks up when trying to attach this array of addresses to the list resource.

Can you see my error(s)?

Source follows:

```
\ listmaker by ARJ 29 Jan 2003
\ This program makes a simple array of
\ pointers to null terminated strings
\ inside a block of text. It then passes
\ this array of pointers for use in a
\ list resource to display in a form
\ THIS PROGRAM IS NOT WORKING YET !!!
```

NEEDS events
NEEDS forms
NEEDS ids
NEEDS resources

(id) test (id) rsrc use-resources

9000 CONSTANT firstForm \ number of the form
9001 CONSTANT rsrcListID \ number used in form to create a list
CREATE textblock 256 ALLOT
2VARIABLE mHandle.
2VARIABLE textItemsPtr.
2VARIABLE listPtr.

: LstSetListChoices \ redefine to avoid bug
(numItems &itemsText. &list. --)
(hex) A1B8 systrap
2DROP 2DROP DROP ;

: SetBar1 \ creates text block for Bar 1
S" Whisky Bar" 2DUP textblock
SWAP MOVE textblock + 0 SWAP c!
DROP ;

: SetBar2 \ creates text block for Bar 2
S" LoneStar Cowboy Bar"
2DUP textblock 11 +
SWAP MOVE textblock + 11 + 0 SWAP c!
DROP ;

: See \ to see if block has the text with nulls between
textblock 31 TYPE ; \ each bar description

: GetHandle (--) \ to process "textblock" and make an array of
2 textblock >ABS \ addresses to the null terminated strings
SysFormPointerArrayToStrings
mhandle. 2! ; \ to store the array handle

: Lock&SetPointer \ to lock the array of addresses and
mhandle. 2@ MemHandleLock \ get its address
textItemsPtr. 2! ;

: AttachListToListRsrc (--) \ attached list to resource
rsrcListID GetObjectPtr listPtr. 2! \ HOW DOES THIS KNOW
2. textItemsPtr. listPtr. \ WHICH TYPE OF RESOURCE ??
LstSetListChoices ;

```
: EventLoop \ list should already be displayed by now
BEGIN
\ do an event loop here
AGAIN ;

: Go ( -- )
SetBar1
SetBar2
GetHandle
Lock&SetPointer \ seems to point to incorrect address
AttachListToListRsrc \ locks up POSE - "object not in form"
error
firstForm ShowForm
EventLoop ;
```



By [Andrew Johnson](#) on Wednesday, January 29, 2003 - 09:08 pm: [Edit](#)

Steve,

I see it! I need to get the form up before attaching the new list to the resource.

I'll polish up the code and post it on the WIKI.

Thank you so much for all your help.



By [Andrew Johnson](#) on Thursday, January 30, 2003 - 10:30 am: [Edit](#)

Steve,

OK, now I'm trying to finish off by catching the LstSelectEvents. I've got text from an email sent to me "Palmerised" and in the Palm as a file stream. It is now displaying the first part of each bar review as a list in a window. I'm ready to pick one entry and go to an new window and display all details in a memo field created on the fly.

My event loop is not behaving and all I can get is 0s and 1s. Here is my code:

```
: HandleListSelectEvent ( eid -- eid )
DUP
120 currentx !
10 currenty !
." SelEvt: " . ; \ I just get 0s & 1s here

\ Event loop:
```

```
..... other code then
begin
-1. event >abs EvtGetEvent
handleEvent
LstSelectevent @
HandleListSelectEvent
drop
again ;
```

Can I have a clue, please?



By [Steve Bohrer \(Skb\)](#) on Saturday, February 1, 2003 - 06:24 pm: [Edit](#)

Unless you have special reasons for needing to call EvtGetEvent directly, just use EKey or (Ekey) instead. Either way, the event information is stored in the global buffer named event. (Ekey uses this automatically, and in your sample above, you pass the address of event to EvtGetEvent.)

The first few fields of the event record are the same for every event, and different events put different items into the data union part of the event structure; the SDK include event.h has the details. The variable data begins at 8 bytes past the start of the event record, thus "event 8 + @" fetches the first word of the event specific data.

For a LstSelectEvent record, this variable field is defined in C as

```
struct lstSelect {
    UInt16      listID;
    struct ListType *pList;
    Int16      selection;
} lstSelect;
```

Remember that this part of the record is 8 bytes past event. Thus, "event 8 + @" gets us the ListID, "event 10 + 2@" gets us the list pointer (which is 4 bytes long), and "event 14 + @" gets us the id of the selected item.

Given all this, a more useful test word for HandleListSelectEvent might fetch and . the selection field of the event record, e.g. "event 14 + @ ." You don't need the dup and drop if you just fetch that value in the word where it is used.

The first field of the structure (at offset 0, so fetched by "event @") gives you the event type. This is a constant enumerated value, from the list defined in Quartus' Events memo. You want to compare this value to the constant "LstSelectEvent" to determine if the current event is a list select. Your code seems to fetch from the constant value LstSelectEvent, which does not make sense.

A bonus of EKey is that it returns the event type for you, so you don't need to fetch it; also, EKey calls `handleEvent` for you.

Here's a more typical event loop for your example:

```
begin
  -1. (Ekey) \ returns event type on stack
  LstSelectEvent = if
    HandleListSelectEvent
  then
  again
```

For a full program, you'd probably want to dup the event type before testing with `if`, so that you could test for other values when it is not a `LstSelectEvent`. `Cond...thens` is useful for a series of `ifs`, as is Kris Johnson's `ondo` module, which is on the wiki.

For much clearer info on all this, take a look at the wiki description of events: [EventsModule](#)



By [Andrew Johnson](#) on Saturday, February 8, 2003 - 12:33 am: [Edit](#)

Steve,

Thank you. I got the list number to pop out of the event loop. I am working on getting the next window to pop up and display the relevant text now with scrolling and a link to the map.

Again, I have learnt much about how to translate C header info to something useful in Forth code.

When I get the null terminated string list to memo field display working, I'll put it on the wiki.

Thank you again for your comprehensive help.



By [Andrew Johnson](#) on Wednesday, February 12, 2003 - 08:53 am: [Edit](#)

Steve,

I got the windows working. The first window displays a list of bars & pubs. As the list is more than one page, it shows little page up & page down icons.

When you click on to a list item, you go to the next window and see the details. You can then click on a back button and go back to the list view. The text field used for the details has a scrollbar attached courtesy of Joe Nasal and Brette Blatchley (thank you guys). The window only shows the scrollbar if there is more than one page of text.

I am just cleaning up now and making sure the code is stable. I am checking I've unlocked memory blocks and freed the handles.

I couldn't see how to turn off the little page up/ page down icons on the list view and use the scrollbars instead. It would be nice to have the same look and feel for both windows. Is it possible to have the same scrolling for the list view as the text field?

Thank you for your help. I've now done some things that others might like to hear about. When my account is working on the wiki, I'll post my code.



By [Steve Bohrer \(Skb\)](#) on Thursday, February 13, 2003 - 06:30 pm: [Edit](#)

As far as I know, the OS List tool always shows scrolling with the little arrows, and a scroll bar is not a standard option.

You might try a table control, as I think they have hooks for scrolling. I've not tried using one, but there is a good tutorial on the wiki.

Alternatively, if you are not using it for anything else, it is easy to trap the up and down keys, and use them to page the list, or to select the next item in the list, which ever works better in context.



By [Andrew Johnson](#) on Monday, February 17, 2003 - 10:22 am: [Edit](#)

Thank you Steve. I understand what you've said and I will look into it on the WIKI.

I have almost got the whole thing working and will put what I've got on the WIKI too.



By [Andrew Johnson](#) on Saturday, February 22, 2003 - 10:13 am: [Edit](#)

I have got the whole module working now. I can generate a list of items, page up and down, pick one and then go to another form showing the details in a scrollable window.

The text block I'm working on is about 20K bytes so there is a big delay when switching.

If anybody wants the code I'll email it. I can't get into the WIKI yet because I've lost my password.

Thank you so much Joe, for all your help.



By [Neal Bridges \(Nbridges\)](#) on Friday, February 28, 2003 - 04:38 pm:

[Edit](#)

I'd like the code, Andrew. Is your wiki password back up & running now?

Neal

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

WinSetClip - anybody know the &r. structure?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): WinSetClip - anybody know the &r. structure?



By [Andrew Johnson](#) on Tuesday, January 21, 2003 - 08:03 pm: [Edit](#)

I am trying to clip the drawing area in a form so that the bottom line of screen area does not get drawn on messing up the icons.

I've found the WinSetClip API call but I can't find any documentation on setting up the structure for the clipping rectangle.

Anybody know how to set up this structure?



By [Steve Bohrer \(Skb\)](#) on Tuesday, January 21, 2003 - 08:31 pm: [Edit](#)

Rectangles are defined in [chap 44](#) of the PalmOS API reference, and in the header rect.h

Basically, the rectangle is four words: left, top, wide, high. For the os routines, you pass a pointer (with >abs) to the four words.

If you are setting the clip to a constant rectangle, you can create a name, and then comma the four values into it.



By [Andrew Johnson](#) on Friday, January 24, 2003 - 01:17 am: [Edit](#)

Steve,

Thank you for that. I have sorted out the header and the window is clipping nicely.

I have learnt something about translating C type defs into Forth too.

Much appreciated.

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Program runs from console but will not compile

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Program runs from console but will not compile



By [Andrew Johnson](#) on Tuesday, January 21, 2003 - 05:19 pm: [Edit](#)

If I include all the files, then run it from the console, my program runs perfectly . If I compile it, I get some warnings about writing to the unused part of the stack and then a reset.

I've checked all my resources and I'm using a makefile that worked before Christmas. I've made some minor changes since but can't work out why it will not compile.

Can anybody suggest how to track down the problem?



By [Andrew Johnson](#) on Tuesday, January 21, 2003 - 07:29 pm: [Edit](#)

Problem solved! I found an existing database that clashed with the files being created. I just cleaned off the old files and then the compiling worked.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, January 22, 2003 - 11:52 am: [Edit](#)

Andrew, my favourite kind of problem -- the kind that solves itself 😊

Neal

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This is a public posting area. If you do not have an account, enter your full

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name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

Quartus memory leaks in POSE ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Quartus memory leaks in POSE ?



By [Henk Zwaenepoel \(Henkz\)](#) on Tuesday, January 21, 2003 - 03:57

am: [Edit](#)

for testing purposes, I've been running Quartus forth (not the registered version - still waiting for that one) on the latest POSE (available from Palm with a 505 ROM image). And just starting up and leaving (with bye) causes 7 memory leaks ; is this known ? Quartus Forth also seems to take a long time to initialize its workspace (while it doesn't on a real Palm (mine = m515)). So it could be something of the emulator. Something like an Assembler call bypassing all the regular PalmOS canals for reserving space. An application (Year from quartus) also leaks (5 this time). Is anybody else playing with POSE ?



By [Henk Zwaenepoel \(Henkz\)](#) on Tuesday, January 21, 2003 - 05:24

am: [Edit](#)

Sorry for this -

I have now checked the other messages for POSE, (should have started with that) and found some answers. If I understand correctly, any memory leaks left by Quartus, or an application developed using Quartus are cleaned up by PalmOS.

(still don't know _why_ they occur)

The slow startup is very probably related to POSE itself.

I'm still only learning forth and Qforth...



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 21, 2003 - 10:42 am:

[Edit](#)

Hi, Henk. The slow startup is caused by some of the debug settings in POSE. Experiment with those settings, you'll find there's one specifically that's the culprit.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Form Resources

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Form Resources



By [Carl Zmola \(Zmola\)](#) on Tuesday, January 7, 2003 - 12:03 am: [Edit](#)

I have been trying to get up and going, and have been running into some strange problems.

I have created an application with my own form resources (formid 1102). I have put a button on the form to drop back to the console. When I call COLD I get back to the console, but I have to recompile my project. If I call ABORT, I get the following fatal error

```
form.c line 1272 object not in form.
```

and have to reset my palm. I am assuming that loading a second resource database has unloaded the default resource database. Is there a convenient way to get around this for testing purposes?

Carl



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 7, 2003 - 07:55 am: [Edit](#)

I think you can just call "MainForm" and then return from your application code to get back to the Quartus console.

Calling ABORT from your app gives you an error message because it is trying to use a control on the main form, which is not the active form. If you do "MainForm abort", it might work.

-- Kris



By [Steve Bohrer \(Skb\)](#) on Tuesday, January 7, 2003 - 08:53 pm: [Edit](#)

Rather than aborting, you can just drop out of what ever word you are running. Or, if you are running a loop that calls EKey, you can catch the appStop event and drop it rather than calling bye. This will return you to the console.

But, once the Quartus console starts, it tries to write to a specific text field, which is present on the Quartus forms, but not in your form. This causes the error. To avoid it, you can either call MainForm before you exit, to bring

up a Quartus form with the proper field; or you can copy this field to your form for debugging with your form active.

For debugging on your form, see the wiki [DebuggingOnYourForm](#)



By [Carl Zmola \(Zmola\)](#) on Tuesday, January 7, 2003 - 11:35 pm: [Edit](#)

I tried calling MainForm Abort and it didn't seem to help.

I just performed the copy of field 1103 and used ABORT. The system does not crash, but the console form is not reloaded.

I will try to define my own exception and catch that from my (EKEY) loop next, but exiting the main word will not reshew the console form, will it?

I guess I can reduce the size of the application that I am testing to speed up load time, but I would like to be able to read and modify variables and rerun my form to make sure it is working as I expect.

I will fully digest the DebuggingOnYourForm link and try raising an exception before going further.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, January 8, 2003 - 10:25 am: [Edit](#)

If MainForm Abort fails, it's likely because your custom form is also numbered 1000, and thus will be found first by MainForm. Number your own form something else, say 2000, and MainForm will again display the default console form.

Neal



By [Carl Zmola \(Zmola\)](#) on Thursday, January 9, 2003 - 01:34 pm: [Edit](#)

Thanks, I have followed Steve's advice and successfully exited out of my eventloop with an exception.

I added the field numbered 1103 and things work well for my purposes.

Also, Neal was correct, I had a form numbered 1000 in my resource DB which caused problems.

Thanks for all your help.

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Quartus Console

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Quartus Console](#)



By [Neil](#) on Monday, January 6, 2003 - 03:28 am: [Edit](#)

Hi,

I was wondering if there is any way to have Quartus pass console I/O to memo while I am typing in examples as a record of my sessions.

Thank you,

Neil



By [Neal Bridges \(Nbridges\)](#) on Monday, January 6, 2003 - 03:41 pm:

[Edit](#)

Hi, Neil. There's no simple way to do that presently. I find the preferred mode of operation is to write code snippets in memos, and then test them at the console -- that way you have the best of both worlds.

Neal



By [Neil](#) on Monday, January 6, 2003 - 08:58 pm: [Edit](#)

Thanks Neal,

That is what I have been doing it was just a thought. I am really enjoying myself playing with Quartus Forth. Thanks for making it Neal.

I haven't got anywhere yet. I am still typing in the examples from Inching Forth. I am having problems with Words. I keep getting stack underflow errors :) I will start posting questions soon when I feel a little more confident.

Please all bear in mind that I have never programmed in my life. I failed math at school and some of my questions may seem really trivial.

I am trying to work things out for myself but I am becoming unstuck.

Regards to you all.

Neil

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Compiling a standalone prc under os 5.0

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Compiling a standalone prc under os 5.0



By [Ingo Mathyl](#) on Sunday, January 5, 2003 - 11:56 am: [Edit](#)

At first a Happy New Year to all quartus users!

Last days I did some test with quartus on my new tungsten T under os 5.0.

When I used to compile some applications like duco or others, it breaks at the end of compiling with an "Exception xxxxx raised". (xxxxx is an address)

I did more tests with all applications and wrote a little prog without any resouces.

All progs without resources did compile and all progs with resources broke with "Exception xxxxx raised"

(Of course I loaded the resources at first)

Have anyone the same trouble?

Is this a generell problem of quartus under os 5.0? Maybe quartus can't access the resources or can't link it to the prog because quartus runs in "68000 emulation mode".

Thanks for your help

Ingo



By [Neal Bridges \(Nbridges\)](#) on Sunday, January 5, 2003 - 12:34 pm:

[Edit](#)

Ingo, what exception is raised?

Neal



By [Ingo Mathyl](#) on Sunday, January 5, 2003 - 12:55 pm: [Edit](#)

Hi Neal,

it is not the same number at any time.

When I compile f.i. the "hello world" from Steven

Donahue make-hw there comes "exception 21069 raised".

When I compile make-year there comes "exception 16722 raised" an so on.

Ingo



By [Neal Bridges \(Nbridges\)](#) on Sunday, January 5, 2003 - 12:57 pm:

[Edit](#)

Interesting. I would like to send you an instrumented version of the code to run; would you mind?

I don't yet have a Tungsten T, so your help would be appreciated.

Neal



By [Ingo Mathyl](#) on Sunday, January 5, 2003 - 01:22 pm: [Edit](#)

Yes, of course! Send me the code.
Glade I can do it.

Ingo



By [Steve Bohrer \(Skb\)](#) on Sunday, January 5, 2003 - 09:07 pm: [Edit](#)

Neal, do you accept PayPal? Perhaps we could each donate a couple of bucks towards you getting an OS 5 device. I don't need it yet, but eventually I'd like to have Quartus available for future Palms.

(Also, I wonder if the emulator and/or simulator replicate Ingo's issue.)



By [Neil](#) on Sunday, January 5, 2003 - 10:41 pm: [Edit](#)

I'll be willing to donate too eventhough I won't be using OS 5 for a while.



By [Mark Browne \(Markbrowne\)](#) on Monday, January 6, 2003 - 05:18 am: [Edit](#)

I would stick in \$5 too. I am not a registered user, but I have had fun with Quartus, and like to contribute something.



By [Neal Bridges \(Nbridges\)](#) on Monday, January 6, 2003 - 11:31 am: [Edit](#)

Kind offers, all. I'll see what I can arrange.

Neal



By [Wade](#) on Monday, January 6, 2003 - 07:14 pm: [Edit](#)

I'd donate too! Keep posting everybody!



By [Ron Doerfler](#) on Tuesday, January 7, 2003 - 05:11 pm: [Edit](#)

Me, too!

Ron Doerfler



By [Ingo Mathyl](#) on Wednesday, January 8, 2003 - 06:12 am: [Edit](#)

Of course me too!

Ingo



By [Neal Bridges \(Nbridges\)](#) on Sunday, January 12, 2003 - 08:51 pm:

[Edit](#)

Further to your kind offers, I've set up a PayPal account at sales@quartus.net. It had been dormant for awhile, as I've only ever had one customer request PayPal as a payment option, but I've re-awakened it.

Neal



By [Wade Carlson](#) on Sunday, January 12, 2003 - 10:54 pm: [Edit](#)

Okay, I've just sent you \$50.00! I've made much more than that from your program, so no big deal to me. I just hope you plan to continue supporting us! I've grown dependent on Quartus Forth. I just hope you can let us know where you plan to go with Quartus Forth. Some people's livelihood depends on it, so if we need to start planning to develop with another programming language, the sooner we can start planning the better. Please let us know!



By [Neal Bridges \(Nbridges\)](#) on Sunday, January 12, 2003 - 10:57 pm:

[Edit](#)

Thank you, Wade. My immediate plans involve bringing the compiler & its generated apps up to full OS5.0 compatibility.

Neal



By [Mark Browne \(Markbrowne\)](#) on Monday, January 13, 2003 - 06:40 am: [Edit](#)

I have just been to the SpamPal website, and I find that I can only sign up if I live in North America. Is there a way around this, or will Neal have to forgo my massive \$5 donation 😊



By [Neal Bridges \(Nbridges\)](#) on Monday, January 13, 2003 - 10:01 am:

[Edit](#)

I'm far from a PayPal expert, but there's an International Sign-Up page here: [International Sign-Up](#)

Neal

 By [Mark Browne \(Markbrowne\)](#) on Monday, January 13, 2003 - 10:52 am: [Edit](#)

Thanks for that reference. Perhaps not surprisingly, there is lots to fill in, so I will deal with it tonight at home. One question - it says that to receive non-dollar payments, you must pay a fee. How much is this (I didn't look too closely, as time was tight), so that I can add it to the donation.

 By [Neal Bridges \(Nbridges\)](#) on Monday, January 13, 2003 - 11:10 am: [Edit](#)

At a glance, I cannot see the fee structure for receiving international payments. I'd expect another dollar or so on an international transaction.

Kind of you to consider it!

Neal

 By [Neal Bridges \(Nbridges\)](#) on Monday, January 13, 2003 - 11:15 am: [Edit](#)

By the way, if you're a new signer-upper at PayPal, using this sign-up link makes me the referrer, and increments my account by some small amount.

<https://www.paypal.com/affil/pal=U8HUEX4HNPDNG>

Neal

 By [Neal Bridges \(Nbridges\)](#) on Monday, January 13, 2003 - 11:16 am: [Edit](#)

Hmm. In fact that link is more useful than I'd anticipated; it gives you a 'Send Money' button specific to Quartus. 😊

Neal

 By [Mike Will](#) on Monday, January 13, 2003 - 07:56 pm: [Edit](#)

Wade inspired me. Here's \$50 more.

Mike

 By [Neal Bridges \(Nbridges\)](#) on Monday, January 13, 2003 - 09:41 pm: [Edit](#)

Many thanks, Mike!

Neal



By [Ron Doerfler](#) on Tuesday, January 14, 2003 - 02:39 am: [Edit](#)

And \$25 more. Thanks for your support of Quartus, Neal. I'm having some users email me about OS5 crashes, so I may need an update sooner than I thought 8^).

Ron



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 14, 2003 - 06:12 am:

[Edit](#)

Much appreciated, Ron!

Neal



By [Andrew Johnson](#) on Sunday, January 19, 2003 - 01:13 am: [Edit](#)

Here's US\$20 from me too.

Thank you for support, Neal.

Andrew



By [Neal Bridges \(Nbridges\)](#) on Sunday, January 19, 2003 - 02:54 am:

[Edit](#)

Thank you, sir!

Neal



By [Christopher J. Smith \(Missilemax\)](#) on Tuesday, March 4, 2003 - 06:08 pm: [Edit](#)

Is there any word on Quartus fixes for OS5. The only problem I am having is with CopyRsrc. The Exception I receive is 18754.

I created a few words to append resources with out using CopyRsrc and still receive an Exception when running in Quartus...When my resource appender is compiled into a stand alone app it works fine on the T|T (except a lot faster!)

So the work around is to append all your needed resources using a separate standalone app (which can be compiled using Quartus under OS5 because it does not use any resources.

Also as an interesting note, the basic Quartus forms do all get added with out problems.

-Chris

 By [Christopher J. Smith \(Missilemax\)](#) on Tuesday, March 4, 2003 - 06:14 pm: [Edit](#)

I almost forgot; If anyone needs any testing done on a Tungsten|T please let me know...

-chris

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, March 4, 2003 - 08:29 pm: [Edit](#)

Working on it, Chris -- you'll see it here first. 😊

Neal

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

ResourceDB

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): ResourceDB](#)



By [Neil](#) on Thursday, January 2, 2003 - 02:47 am: [Edit](#)

Hi Everyone,

I tried to run Neal's input dialog but received the error 'needs resourcedb'. I have searched the Wiki but can't seem to find anything.

Thanks for your help



By [Neal Bridges \(Nbridges\)](#) on Thursday, January 2, 2003 - 02:08 pm:

[Edit](#)

You need to install the Qrsrc.prc resource database that comes with the input.txt module; that's what it's not finding.

Neal



By [Neil](#) on Thursday, January 2, 2003 - 07:13 pm: [Edit](#)

Thanks Neal

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Quartus general soft-reset

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Quartus general soft-reset



By [Frank](#) on Tuesday, December 31, 2002 - 11:11 am: [Edit](#)

A friend of mine was playing around with a game I wrote in Quartus Forth and he found out that when he taps the keyboard-button (The one in the lower-left corner of the graffiti area) during game-play, it generates a soft-reset.

I found out that this happens with all the programs that I wrote in Quartus. What is wrong? Is there a solution?



By [Joe Nasal \(Jsnn\)](#) on Tuesday, December 31, 2002 - 11:41 am: [Edit](#)

Frank:

In general, I'd say that you probably have got an event to pop-up the keyboard dialog on the stack but you're not handling it properly. Do you drop any event for which you don't have an explicit handler?

Joe



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 31, 2002 - 11:54 am: [Edit](#)

Frank, the only thing I can think is that you're not putting up a form at the beginning of your app -- no MainForm, for instance, or a customized form of your own.

Neal



By [Frank](#) on Tuesday, December 31, 2002 - 01:22 pm: [Edit](#)

Neal, Joe,

I'm not doing anything with forms at all...

I've just written a game...

As you know, I am only a beginner, and I have never heard anything about forms etc... I just do graphics and calculations... And that is all.

Also, I have got all my info from this forum. I do not own books or any other info, I have never used an emulator, or all the fancy stuff you guys play around with.

But at the same time, I have thousands of users at this moment. This feels kinda awkward. I feel my game and my skills are misinterpreted because I

am still a newbie. 😞



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 31, 2002 - 02:05

pm: [Edit](#)

Frank -- we all start somewhere. Put

MainForm

at the top of your entry-level word, and all should be well.

Neal



By [Frank](#) on Tuesday, December 31, 2002 - 03:27 pm: [Edit](#)

Thanks Neal,

I'll try 😊

Frank



By [Frank](#) on Tuesday, December 31, 2002 - 03:34 pm: [Edit](#)

It works indeed !



By [Frank](#) on Tuesday, December 31, 2002 - 03:34 pm: [Edit](#)

It works indeed!



By [Frank](#) on Tuesday, December 31, 2002 - 03:58 pm: [Edit](#)

Happy New Year, people !

It's nice to have some friends out there.

Frank



By [Neville A. Joseph](#) on Tuesday, December 31, 2002 - 06:23 pm: [Edit](#)

For the benefit of the other newbies among us, can someone explain what MainForm does.



By [Frank](#) on Tuesday, December 31, 2002 - 06:47 pm: [Edit](#)

Yes that would indeed be nice. But I guess it is just a system-thing, telling the chip not to do anything but listen to the program-part(applicationpart) of the PRC or something.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 31, 2002 - 10:58

pm: [Edit](#)

MainForm displays a blank form for you to draw on. It's a canvas; the system expects it. If you don't put one up, you're drawing on the PalmOS equivalent of the wall itself, which bugs the landlord.

Neal

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Serial Example using SRM.txt

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Serial Example using SRM.txt



By [Henrik Thurfjell](#) on Sunday, December 29, 2002 - 06:25 pm: [Edit](#)

Below is the code that operates the serial port on a Treo 180.

It all works except that IROpen does not open the the IRport. It opens the same serial port as Open does. Someone knows how to open the IR port?

Henrik

=====

\ portbasics HCT Dec 02

needs srm

(HEX) 8000 0 2CONSTANT cradleport

(HEX) 8001 0 2CONSTANT IRport \ This number ?????

500 0 2CONSTANT timeout \ 5 secs

1200 0 2CONSTANT baud

2VARIABLE nbytes

1 0 nbytes 2!

VARIABLE ID

VARIABLE err

VARIABLE buf 10 ALLOT

buf 10 char X FILL

: open (-- err) ID >ABS baud cradleport srmopen ;

: IROpen (-- err) ID >ABS baud IRport srmopen ;

: close (-- err) ID @ srmclose ;

: send (a len -- # err) 2>r err >abs r> 0 r> >abs id @ srmsend ;

: rec (-- # err) err >abs timeout nbytes 2@ buf >abs id @ srmreceive ;

\S

Examples

Open, receive one character and print.

```
open DROP
rec 2DROP buf C@ .
```

Send 10 bytes and close.

```
buf 10 send 2DROP
close DROP
```



By [Ronny Svensson](#) on Tuesday, December 31, 2002 - 04:07 pm: [Edit](#)

This works for me:

```
SrmPort >Abs 9600. 32769. SrmOpen Throw
```

but I also set `srmCtlIrDAEnable` with `SrmControl`.
I don't know if this really is needed (it works on an m505 anyway...).

Ronny



By [Henrik Thurfjell](#) on Tuesday, December 31, 2002 - 10:17 pm: [Edit](#)

Thanks Ronny

Seems we are doing the same thing, you in decimal 32769 and I in hex 8001.

Left to try is the `SmrControl`. Could you please show the Forth code for that to happen?

Henrik

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Speeding up -- Assembler?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Speeding up -- Assembler?



By [Frank](#) on Thursday, December 26, 2002 - 05:24 am: [Edit](#)

Hello, merry christmas to you all.

I picked up a project again which I was working on a couple of months ago (The Drawing a point to the screen-discussion) I want to make a 3D engine. I managed to speed it up and at the moment it takes half a second (50 ticks) to draw a simple 3D-scenery of 120 by 160 pixels (On a IIIc). I wish to speed things further up. At the moment the 50 ticks consist of:

5 ticks 3D calculations

30 ticks Wall-painting calculations

15 ticks Drawing a BitmapScanline to the screen.

As you can see I need to speed up the Wall-painting calculations. These calculations are very simple, but need to be repeated a lot of times. Here is the word for Wall-painting:

```
: PaintCeiling (BMPRecpointer Ceilingheight from to -- )
do
dup i / dup
sin1 @ * 7 rshift yp @ + 15 and swap
cos1 @ * 7 rshift xp @ + 15 and
4 lshift or 2 pick + c@
dup 8 lshift or dup
scanpointer i 2 lshift + 2!
loop ;
```

That's it. BMPRecpointer is a pointer to an address where a 16 by 16 bmp is stored, ceilingheight is the height of the ceiling, sin1 and cos1 are previously calculated vars, xp and yp are the player coordinates, scanlinepointer is a constant pointing to the beginning of a 120 by 4 bitmap which acts as a vertical scanline and is drawn to the screen when the looping is finished.

I think with this I have more or less reached the limits of quartus. (If not, please tell me!)

There are a few things I can now do:

- Try to get the i / part and other parts from a table
- Translate parts into assembler.

I do not know assembler at this moment. I've looked up some discussions and stuff in the wiki, but I can not find enough examples.

So my questions are:

- Could anyone help me translate this into assembler?
- Could anyone provide some assembler-examples ???
- Does anyone see a place where the word can be made faster? (For example the 'ceilingheight i / ' part)

Thanks a lot.

Frank

 By [Neal Bridges \(Nbridges\)](#) on Thursday, December 26, 2002 - 12:52 pm: [Edit](#)

There are some minor optimizations of the Quartus Forth code possible, but I'm not sure they'd make a huge dent in performance. I'm guessing conversion to assembler would speed this routine up by perhaps a factor of three; is that sufficient for your needs?

I think the very fastest solution would be to pre-calculate all the possible output bitmaps, and just select the right one to draw based on the seven input variables. Not knowing the range of those variables, I can't comment on the amount of space such pre-calculated bitmaps would require.

Neal

 By [Frank](#) on Thursday, December 26, 2002 - 04:24 pm: [Edit](#)

Hey Neal. I was thinking the same thing about precalculation. I will look at it. In the mean time, do you have any assembler examples around? I would like to learn it anyway.

 By [Frank](#) on Friday, December 27, 2002 - 05:55 am: [Edit](#)

I'm thinking about the precalculating of the bitmaps, but I think it is not a good idea. I might try using tables for the 'ceilingheight i / ' calculation but otherwise, precalculation would shrink freedom of movement and 3D-scenery-design, (For example, you could only use standard ceilingheights defined in the table whereas now ceilingheight can range from 0 to 10000 or so).

I know it is possible because there is a 3D-shooting-game around for Palm. They get to 10 fps (10 ticks per screen) on my IIIc) I asked them and they said they use assembler. So I guess I know which task is waiting for me...





By [Frank](#) on Friday, December 27, 2002 - 01:30 pm: [Edit](#)

Sorry to keep nagging you guys, (If you want me to do something back for you, please ask)

I've been thinking it over once more and I am using an offscreenwindow (from the blit-module) now to draw the vertical scanline to.

This scanline is a bitmap. So I draw a bitmap to an offscreenwindow, which is just some memory-space.

Now wouldn't it be the same thing if I use a memmove command to move the contents of the bitmapscanline to the offscreenwindow?

I guess this would work something like this:

WinCreateOffscreenWindow returns a double value called ofs .

Next I do this:

```
: bmp> OffscreenWindow ( -- )
bmpsize s>d bmp. \ size of and pointer to sourcebitmap
ofs 2@ >abs \ pointer to the OffscreenWindow (Is this true?)
memmove drop ;
```

This doesn't work, I get a Reset. Where am I wrong here? Or am I completely wrong in this thought?



By [Neal Bridges \(Nbridges\)](#) on Friday, December 27, 2002 - 03:23 pm:

[Edit](#)

The pointer you're getting back is not to the data area of the offscreen window, but rather to a memory structure describing the window itself -- size, depth, etc. While it is possible to ferret out the memory location of the actual window data, the Palm OS documentation warns against so doing; the accepted method is to use the appropriate systrap calls to draw the data to the offscreen window.

Neal



By [Frank](#) on Saturday, December 28, 2002 - 04:30 am: [Edit](#)

Hmmm... So I have new problems to battle against. 😊 I am stuck to 47 ticks per screen now. Maybe I should make this an OpenSource project.

Anyone interested in the source of a slow 3D engine(Raycaster)?



By [Steve Bohrer \(Skb\)](#) on Monday, December 30, 2002 - 12:29 am: [Edit](#)

At least on the old 68000/68020 chips, multiply was kinda pokey. Maybe it is better on the dragonball, but if there is any clever way to pre-compute the sin and cos multiplies it could be a big win. (You should check the dragonball instruction timing docs to see if this is worth the effort.)

Depending on the resolution of results you need (e.g. resolving to a pixel out of 160) it may be that a sin result in a range -63 to +63 or -127 to +127 will suffice, and that may allow you to cut corners on the table size or range of the inputs.

Perhaps rather than solving each stage of the computation with full generality, you can come up with a condensed table that does not deal with values that will be out of the display range at the end. Code that could work on a 24-bit mega-pixel display is keen, but perhaps you can special case at a high level for the low resolution of the palm.

Also (probably a minor effect, and one that depends on the palm screen memory layout) it may be that drawing or copying a vertical stripe is slower than a horizontal one. In one case, it is probably just a simple inc to get from pixel to pixel, and in the other it requires adding a rowwidth. But, the OS traps are likely to special case and optimize both the horizontal and vertical cases, so it may not be much difference. I guess you could test this by repeatedly blitting a horizontal strip vs a vertical strip. Of course, the results may vary by OS version...



By [Frank](#) on Tuesday, December 31, 2002 - 10:45 am: [Edit](#)

Hey Steve, great tip about the vertical stripe. Never thought about that.

I have now got a table with
 $\sin 1 @ i /$

in it for every pixel of the screen. I use byte-sized values.

This means that I only have to fetch this value multiply it by the height of the ceiling and add x and y values to it, to get the value of the bitmap. (I get the cos-value from the same table of course)

Strange thing is, that it doesn't seem to be faster. 😞



By [John Newell](#) on Friday, January 3, 2003 - 07:37 am: [Edit](#)

I haven't done it myself and I don't know how many API calls you are making, but the manual says that you can speed up access to the SysTraps. See the description of SysGetTrapAddress in the Palm OS Reference manual.

Regards

John

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Merry Christmas Everyone

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Merry Christmas Everyone



By [Neil](#) on Wednesday, December 25, 2002 - 03:56 am: [Edit](#)

I'm a Newbie, never done any serious programming in my life. I have been browsing this Forum for the past couple of weeks. I think it is great the way you guys help each other out with programming problems and tips. It is the most helpful forum that I have ever seen.

Just like to wish you all a Merry Christmas and a Great New Year.

Neil



By [Neal Bridges \(Nbridges\)](#) on Wednesday, December 25, 2002 - 12:50 pm: [Edit](#)

Thanks, Neil -- best of the season to all!

Neal



By [Frank](#) on Thursday, December 26, 2002 - 05:32 am: [Edit](#)

I agree Neil,

This place is really great! 10 months ago I did not know what Quartus was. Now I have my first game online, I have thousands of users and am selling (a little) through PalmGear.

Thanks guys, Happy New Year.

Frank

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Holding Down Button Pauses Program

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Holding Down Button Pauses Program



By [Barak Shilo \(Barak\)](#) on Wednesday, December 25, 2002 - 02:27

am: [Edit](#)

Hi,
I have the following code in a program. It handles a button in a form. The word calling hit-but performs other tasks while the form is open. Selecting the button causes the form to close. However, if you hold down the button with your stylus, this word does not return until you remove your stylus from the screen (regardless of whether you release it over the button or not). The problem is that this pauses the execution of the calling word (longer than the value "ticks," passed to it). Any other tapping/dragging on the screen causes hit-but to return early (as it should). So, why does this happen, and is it fixable?

```
\ true if button is selected
: hit-but ( ticks buttID -- flag )
  swap 0 (ekey) ctlSelectEvent = swap
  event >abs itemid = and ;
```

Thanks,
Barak



By [Neal Bridges \(Nbridges\)](#) on Wednesday, December 25, 2002 -

12:53 pm: [Edit](#)

Barak, UI elements such as buttons have their own internal event handling loops. Once you've pressed and highlighted a button, the OS loops until you either release the button (generating the ctlSelectEvent) or you've moved the stylus off before lifting it from the screen.

For your specific purpose, to prevent the OS from taking control when a button is held down, it might be better to draw a fake button, and then watch for pen-down events in that rectangle on the screen.

Neal



By [Barak Shilo \(Barak\)](#) on Wednesday, December 25, 2002 - 01:55

pm: [Edit](#)

Ah, I see. Just out of curiosity, couldn't the OS (nearly as easily) return a ctlEnterEvent when you press the button, and then just return

penMoveEvents or nilEvents until it detects a ctlExitEvent or ctlSelectEvent?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, December 25, 2002 - 10:36 pm: [Edit](#)

Depending on the type of UI gadget, it does indeed do that.

Neal



By [Steve Bohrer \(Skb\)](#) on Monday, December 30, 2002 - 12:08 am: [Edit](#)

After the system returns a control enter event, I think (ekey)'s event handlers will pass it to the default button handler, which does the internal loop Neal described above. To avoid this, you could use EvtGetEvent directly, and not call handleEvents for the control enter events of buttons that you do not want the system to track. (But, if you don't let the system handle the control, it might not highlight and unhighlight, so you may need to do it yourself, as Neal suggested.

A possible workaround is to set the control to be a repeating button, because then the OS will return repeat events to you while the pen is held down in the button. That gives you a chance to do stuff while the button is held. But, if the user presses in the button, and then drags outside of the button, you don't get any repeats while the pen is down outside the button. So, if you need to handle this case, you may need to do the entire button yourself.

The only way I could find to set the repeat rate of the button is a bit obscure; see the wiki at [RepeatingButtonRate](#)

Add a Message

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Password:

the "Password" box empty. Your e-mail address is optional.

E-mail:

Bitmap problem

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Bitmap problem



By [Dave Bennett \(Dbennett\)](#) on Monday, December 23, 2002 - 12:09

pm: [Edit](#)

I've used bitmap several times on applications with no problem. This week I tried to start up an app I started last year before my surgery and it crashed the system (had to press the little button on the back). I traced the problem to bitmap. If I start quartus and then enter include bitmap OR needs bitmap it crashes instantly. I've looked at the bitmap file on my palm and the one in the file area and they are the same. Any thoughts?



By [Neal Bridges \(Nbridges\)](#) on Monday, December 23, 2002 - 12:51

pm: [Edit](#)

That is a curiosity. 'bitmap' is a small and unassuming library file. Could there be something in your startup.quartus that's causing a problem? Try temporarily removing your startup memo, and see what happens.

Failing that, try to ascertain exactly where the bitmap memo falls down -- which line.

Neal



By [Neal Bridges \(Nbridges\)](#) on Monday, December 23, 2002 - 01:00

pm: [Edit](#)

Another possibility -- do you have more than one 'bitmap' memo?

Neal



By [Dave Bennett \(Dbennett\)](#) on Friday, December 27, 2002 - 11:09

am: [Edit](#)

Sorry to take so long getting back. I checked and I did have two. Actually, one named

\ bitmap example ...

and another named

\ bitmap

It was getting the first one and that was causing the problem.

I guess I thought that all of the text up to the first cr was the title.



By [Neal Bridges \(Nbridges\)](#) on Friday, December 27, 2002 - 03:19 pm:

[Edit](#)

Up to the first whitespace, be it a space, tab, or CR.

Neal



By [Steve Bohrer \(Skb\)](#) on Sunday, December 29, 2002 - 11:55 pm: [Edit](#)

After trapping myself a few times with duplicate memos, I wrote a test to show me any dups. It runs and then removes its self with a marker, so you can use it without cluttering up the code space.

It is on the wiki at [QdupModule](#)

Add a Message

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E-mail:

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Inifini problem

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Inifini problem](#)



By [Neville A. Joseph](#) on Sunday, December 22, 2002 - 07:43 pm: [Edit](#)

Having found all the files which inifin needs, I find it crashes my Treo 90 (PalmOS 4.1) which then goes into a soft reset.

Has anyone else found this, or knows what I have to amend?



By [Gary Wiese \(Garyjwiese\)](#) on Monday, December 23, 2002 - 06:35 pm: [Edit](#)

I found it here.

<http://kristopherjohnson.net/cgi-bin/twiki/rdiff/Main/InitializationAndFinalization>

Its by Chapman Flack

Gary



By [Neville A. Joseph](#) on Monday, December 23, 2002 - 07:22 pm: [Edit](#)

Thank you. But I already have that page - it merely suggests that it may not work on other versions of QF. My problem is not that it does not work - it crashes when I try to load it.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Serial example

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Serial example](#)



By [Ronny Svensson](#) on Tuesday, December 17, 2002 - 08:30 am: [Edit](#)

There has been some threads about serial communication and this led me to make this simple example:

```
\ TE 17 Dec 2002
\ Simple terminal emulator to get started with serial communications

needs serial
\ fix - should be removed if your seropen is ok
: serOpen ( baud. -- err )
  43009 serSysTrap 3drop d0 drop ;
needs events
needs double

9 constant serCtlIrDAEnable
10 constant serCtlIrDADisable

: SerControl ( &valueLenP. &valueP. op -- err )
  43030 serSysTrap4n nip ;

: IrEnable ( -- err )
  0. 0. serCtlIrDAEnable SerControl ;

: IrDisable ( -- err )
  0. 0. serCtlIrDADisable SerControl ;

\ note that newer Palms (like 505) needs srm.txt for IR to work!
Variable IrMode 0 IrMode !

SerSettings: SerialSettings

9600. SerialSettings SerSet.Baud 2!
0. ( initial flags )
SerSetFlagBitsPerChar8 2Or
SerSetFlagStopBits1 2Or
SerialSettings SerSet.Flags 2!
0. SerialSettings SerSet.CtsTO 2!

: OpenSerial ( -- )
  InitSerLib SerialSettings SerSet.Baud 2@ SerOpen Throw
  SerialSettings SerSetSettings ?Dup
```

```

If SerClose Drop Throw Then
IrMode @
If IrEnable ?Dup
    If SerClose Drop Throw Then Then ;

: CloseSerial ( -- )
IrMode @
If IrDisable Else 0 Then
SerClose Over 0=
If Nip Else Drop Then
Throw ;

Create TxRxBuf 1 Allot

: Rx? ( -- flag )
Begin SerRecvCheck Dup SerErrLineErr = While
    Drop 2Drop SerClearErr Repeat
Throw Or 0= 0= ;

: Rx ( -- c )
Begin TxRxBuf 1 SerRecv Dup SerErrLineErr = While
    Drop 2Drop SerClearErr Repeat
Throw Swap 1 <> Or
If -33 Throw Then
TxRxBuf C@ ;

: Tx ( c -- )
TxRxBuf C! TxRxBuf 1 SerSend Throw Swap 1 <> Or
If -34 Throw Then ;

```

Variable Done

```

: ((TE)) ( -- )
0 Done !
Begin Rx?
    If Rx Dup Bl U<
        If 13 =
            If Cr Then
            Else Emit Then
            EvtResetAutoOffTimer Drop 0. (Ekey)
        Else EKey Then
        EKey>Char
        If Dup 10 =
            If Drop 13 Then
            Tx
        Else penDownEvent =
            If 1 Done ! Then Then
        Done @ Until ;

```

```

: (TE) ( -- )
  OpenSerial ['] ((TE)) Catch ?Dup
  If >R ['] CloseSerial Catch Drop R> Throw
  Else CloseSerial Then ;

: TE ( -- )
  Page ." tap to exit..." Cr
  ['] (TE) Catch Cr ?Dup
  If Dup -257 =
    If Throw Then
      ." Exception: " 0 D. Then ;

```

It has only been tested on a IIIc with Hyperterminal and Ir with an embedded system.

Ronny

 By [Frank](#) on Tuesday, December 17, 2002 - 06:25 pm: [Edit](#)

Thanks Ronny I 'll try it asap! I hope this will do it! Frank

 By [Frank](#) on Monday, March 17, 2003 - 05:41 am: [Edit](#)

Ronny, I hope you are reading this...

I finally found time and rest to try out your serial example above, and I was very amazed to see it work!!!

However....

I am using a IIIc and a m100...

Sending from the IIIc to the m100 works fine. But sending from the m100 gives me a sort of echo.

When I send 'a' from the m100, both devices say they receive 'a'.

When I try sending larger packets with the m100, for example '1 2 3 4', the IIIc receives '1 2 3 4' and the m100 says it receives '4 3 2 1'. This happens even when there is no receiving device around (so the IIIc is not sending the echo).

It is just as if there is a little mirror in my m100 IR-port.

It seems to me, that I have to reset the receivebuffer or something. I have tried a lot of things, but nothing seems to work.

This problem seems of non-importance but it really isn't.

Could someone help me please? If nobody knows an answer, could someone tell me what is the difference between the IR-ports? How many different devices are

there?



By [Frank](#) on Thursday, March 20, 2003 - 04:59 am: [Edit](#)

Nevermind... I found a way around the problem..
I've now got both Palms working together quite smoothly, but man! It's hard to get it right!

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Serial comm. on a Treo

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Serial comm. on a Treo



By [Henrik Thurfjell](#) on Tuesday, December 10, 2002 - 08:59 pm: [Edit](#)

When I try to open the serial port with "9600 0 SEROPEN" it comes back with an error 28673, which is not even in the error list.
This is on a Handspring Treo and after loading serial.txt and doing a INITSERLIB.
SERCLOSE gives me error 777, which I suspect is normal, trying to close an already closed port.
What might be wrong?



By [Ronny Svensson](#) on Wednesday, December 11, 2002 - 05:24 am: [Edit](#)

Maybe they only imlemented the NewSerialManager - srm.txt?

Why don't you try some old tried and tested freeware terminal emulator for the palm (before the NewSerialManager). If it works you are doing something wrong - if not...

Ronny



By [henrik thurfjell](#) on Wednesday, December 11, 2002 - 11:29 am: [Edit](#)

Thanks Ronny

Hot sync via serial works, so the hardware is definitely there.
I now have found SRM.TXT, but I am not sure how to use it. Do know of any example forth code or documentation with stack comments?
You mention NewSerialManager. Is there yet another one?

Henrik



By [Steve Bohrer \(Skb\)](#) on Wednesday, December 11, 2002 - 03:11 pm:

[Edit](#)

Chapter 5 of [volume II of Palm OS Programmer's Companion](#) talks about serial communication, and what Palm calls the "new serial manager". I think Ronny is suggesting that perhaps Handspring does not implement the original (old?) version of the serial manager.

Wether or not they support the old version, they would probably do serial hotsync using the "new" (current) serial API.



By [Ronny Svensson](#) on Wednesday, December 11, 2002 - 03:30 pm: [Edit](#)

I think the "old" SerialManager is emulated in newer Palms using the NewSerialManager. I got some problem with IR and a M505 - and was forced to use the NewSerialManager as the hardware has one normal serial port and one for Ir. In the older Palms it seems to be one serial port that is redirected. This is only based on tidbits I have picked up - it could be completely wrong.

As for examples it sometimes works searching for some function (like smropen) - the c-code that is found often gives a better understanding.

Ronny



By [Chris Bucsko](#) on Wednesday, December 11, 2002 - 05:11 pm: [Edit](#)

I'd also like to see some examples of using SRM.txt - Does anyone have any good examples of opening and closing ports, etc? I can follow the Palm OS manual, but sometimes I get confused as to how to implement the protocols in Forth.

Add a Message

Username:

Password:

E-mail:

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InfraRed sending and receiving

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): InfraRed sending and receiving



By [Frank](#) on Monday, December 9, 2002 - 12:08 pm: [Edit](#)

Hi I'm struggling around with the IR-port and I found some code from Neal in the archives. It doesn't seem to work. Could someone help me? I already cleared the bugs in the serial.txt file. What am I doing wrong?

What I try to do is just send 'Hello' to the receiver and display it on the screen when a character is entered on the sender-side (got this from Neal's Terminal-example). It sends something but not the 'Hello'. Both receiver and sender are running the program below.

I hope there are no typos, I manually typed this from my Palm. Here's what I'm doing:

```
\ IR_transfer  
needs serial
```

```
9 constant serCtlIrDAenable  
10 constant serCtlIrDADisable  
-257 constant byeThrow
```

```
: Sercontrol ( &valueLenP. &ValueP. op - err )  
43030 SerSysTrap4n nip ;
```

```
: IrEnable ( -- err )  
0. 0. serCtlIrDAenable SerControl ;
```

```
: IrDisable ( -- err )  
0. 0. serCtlIrDADisable SerControl ;
```

```
create buf 128 allot
```

```
: terminal  
0. set-timeout  
buf 128 SerSetRecvBuff  
begin  
SerRecvCheck drop 2dup or if  
buf nip swap type  
serrecvflush  
else 2drop then
```

```
serClearErr
```

```
0. (ekey) ?dup if ekey>char
if drop s" Hello" SerSend drop
else drop
then then
again :
```

```
sersettings: mysettings
```

```
: (go) ( -- )
initserlib .s
38400. seropen .s
irenable
mysettings sergetsettings
38400. mysettings serset.baud 2!
mysettings sersetsettings .s
.( Starting terminal now) cr
terminal ;
```

```
: go ( -- )
['] (go) catch
byethrow = if
irdisable .s
serclose .s
." IR-port closed"
(bye) then ;
```



By [Ronny Svensson](#) on Monday, December 9, 2002 - 12:36 pm: [Edit](#)

I think you should use SerSetRecvBuff when you need a bigger than default (512) receive buffer. As I understand it the receive buffer is used internally by the OS to save incoming characters. You must use SerRecv to read out characters from this buffer. Download the Palm SDK Doc and read Palm OS® Programmer's Companion (it covers the serial manager).

Ronny



By [Frank](#) on Monday, December 9, 2002 - 01:46 pm: [Edit](#)

Ron I am already doing the sersetreceivebuf. When i use Serrecv I get the same results as before.



By [Frank](#) on Tuesday, December 10, 2002 - 04:09 am: [Edit](#)

Help! Does anyone have a solution for me? I know I am almost there. It is receiving something like 'Hello' but it seems to be in reversed order and with different characters. What I see on the screen is something like #>>@\$ (just an impression).

When I try to send 'Hello', I see #>>>@\$. So I think I am close.

I still feel like a newbie on quartus so please be gentle with me....

Thanks



By [Wade Carlson](#) on Tuesday, December 10, 2002 - 12:52 pm: [Edit](#)

Frank, I'm thinking your treading on uncharted waters (that's why nobody is really chiming in). Even worse, I'm finding out my BeamManager applet that I've shared with others is not compatible with OS 5.0. Argghhh....



By [Ronny Svensson](#) on Wednesday, December 11, 2002 - 05:20 am: [Edit](#)

Try taking away the SerSetRecvBuff. If you use it you must set up a separate buffer for it and not the same you use for receive. The SerSetRecvBuff is set up by the OS as 512 bytes and is used by the interrupt receive routines to save the characters before you read them out so you won't lose characters. You only need to increase the size if there can be more than that coming in before you read it out. So for testing leave it out. I have used it to receive large data packets where I only check that everything is received (with ReceiveCheck) before I actually read out the data all at once. Also if I were you I would leave out the IR bit and try sending thru the cradle to Hyperterminal or something until you get the serial routines right. Then try adding Ir. It's always best to try one thing at a time...

Ronny



By [Frank](#) on Thursday, December 12, 2002 - 10:01 am: [Edit](#)

Hmmm... still no luck.

When Neal's program sets buf as the receivebuffer it doesn't need to do a serReceive. That's why it was set up like that.

I think it might be something with the serlibrary. I've got one IIIc and one m100. They appear to have different serlibraries. I think I might need to do some sort of handshake before sending. I've got the feeling that both Palms interpret the sent and received bits differently. Anyone got experience with this?

I promise to put the code here for future newbies when I succeed.



By [John Newell](#) on Friday, December 13, 2002 - 05:05 am: [Edit](#)

I don't know if it will help but have you looked here.

<http://www.palmos.com/dev/support/docs/recipes/sermgrreceivewakeup.html>

Or tried the Communications Developers Forum .

<http://www.palmos.com/dev/support/forums/>

Regards

John



By [Ronny Svensson](#) on Friday, December 13, 2002 - 03:18 pm: [Edit](#)

I have never looked at Neal's example but I dont think taking the data from RecvBuf is a good idea. While you are displaying some text new text arrives and is lost. Have you tried connecting your palm to Hyperterminal and just using seropen and sersend as a start. When the text arrives ok in hyperterminal try pressing some keys in Hyperterminal and test recvcheck and receive. I always start with the most basic thing and work from there a step at a time. The last thing to test is IR. There is no handshake for sending IR it is just straight modulated with som duty cycle and bit stretching to save power. I am using IR between a Palm and an embedded system where all code is visible - it is only hardware setup at that end...

Ronny

Add a Message

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Password:

E-mail:

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Hi I need help running getting of the ground

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Hi I need help running getting of the ground



By [Neil](#) on Thursday, December 5, 2002 - 12:55 am: [Edit](#)

Hi,

I need help getting Quartus Forth up and running. I have gone through both demos. When I enter 53+ all I receive is 53+ ok

As for the include hello all I receive is include? undefined word.

I am new to programming. I did some playing around in Turbo Pascal a few years ago.

The reason I would like to try Forth is that you can code directly on the Palm. I also think that this forum is very helpful.



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, December 5, 2002 - 04:13 am: [Edit](#)

I think you mean 5 3 + . 8 ok

If you enter 53+ you should get 53+? undefined word

You need the spaces between 5, 3 and +, plus you need a period to print the answer to the screen.

Glad to see someone who doesn't have any programming experience. I thought I was the only one.



By [Neil](#) on Thursday, December 5, 2002 - 07:14 pm: [Edit](#)

Hi Gary,

I still get the same output.

5 3 + . ok

I enter the spaces and the full stop correctly. I cannot get the second tutorial to work either. I type include hello

I get

include undefined word

Thanks,

Neil



By [Neal Bridges \(Nbridges\)](#) on Thursday, December 5, 2002 - 07:34 pm: [Edit](#)

Those are strange results, Neil. Are you running any system enhancements in the background?

Neal



By [Neal](#) on Thursday, December 5, 2002 - 11:54 pm: [Edit](#)

Hi Neal,

I am running X-Master for use with Thai language. I will disable it and see how it goes. I disabled it as I was posting this reply. You are a genius! It worked Cheers Neal. By the way did you receive my e-mail?

Regards,

Neil



By [Neal Bridges \(Nbridges\)](#) on Friday, December 6, 2002 - 09:15 am: [Edit](#)

Neil, I don't believe so. What address did you send it under?

Neal



By [Neal](#) on Sunday, December 8, 2002 - 12:35 am: [Edit](#)

Hi Neal,

Sorry for the delay in answering. The office system has been down. I am posting this from a friend's notebook. I sent the mail to info@quartus.net about a week ago. It just contained some general beginner questions about Quartus Forth. I really would like to register and play around with this program, but all I have been able to do so far is the two demos mentioned above. Thanks Neal.

Regards,

Neil



By [Steve Bohrer \(Skb\)](#) on Sunday, December 8, 2002 - 02:36 am: [Edit](#)

This forum is possibly a better spot for such questions than direct email to Neal. Occasionally someone else can provide an answer, which eases the load on him.

Also see the Quartus Forth Wiki. There are two links to it in the bar at the left of the forum screen.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

EzGui get/set and Double values

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): EzGui get/set and Double values



By [Amr Malik](#) on Monday, December 2, 2002 - 09:09 pm: [Edit](#)

Hi,
Stupid question prolly, but I seem to be stuck on this one. Playing around with EZgui, I created a simple currency converter which works fine as long as the values are within the signed 16 bit range, but when it goes over the limit, I start getting -ve values in my output intfield. I tried converting the value to double using S>D and tried using the DM* from DblMath , but still, no go. I think I'm missing something painfully simple. could someone point me in the right direction please?

here is the code:

```
\ CurConv 2002.12.01 AEAM
```

```
needs safe
```

```
needs case
```

```
needs resources
```

```
needs Events
```

```
needs ezUI
```

```
needs dblmath
```

```
(ID) aea9 2constant AmrID
```

```
AmrID (ID) rsrc use-resources
```

```
1000 constant MainForm
```

```
3000 intfield DollarAmt
```

```
3010 intfield ConvRate
```

```
3020 intfield RupeeAmt
```

```
4000 button ConvertBtn
```

```
4010 button ResetBtn
```

```
: show-panel
```

```
  MainForm ShowForm ;
```

```
: do-event
```

```
  case
```

```
    ctlSelectEvent of
```

```
      event >abs itemid
```

```

CASE
[ getid ConvertBtn ] literal OF
    get DollarAmt
    get ConvRate
*
\ s>d
set RupeeAmt
ENDOF
[ getid ResetBtn ] literal OF
0 0 0
set DollarAmt
set ConvRate
set RupeeAmt
ENDOF
ENDCASE
endif
endcase

```

```
; \ End do-event
```

```

: go-conv
  show-panel
  begin
ekey
do-event
  again ;

```



By [Amr Malik](#) on Tuesday, December 3, 2002 - 04:52 pm: [Edit](#)

Sorry, I meant ezUI, I should read filenames before posting. Still no luck, I'm having a major mind block methinks..



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 3, 2002 - 04:59 pm: [Edit](#)

If you're putting the result of the calculation in one of ezUI's intfields, you're limited to a 16-bit signed result, no matter what you do to the value during the calculation.

I suggest using the ezUI dblfield instead; that'll hold a 32-bit value.

Neal



By [Amr Malik](#) on Tuesday, December 3, 2002 - 10:00 pm: [Edit](#)

Thanks Neal!

Shoulda looked at the source 😊 hehe. I'll give that a try.

Amr



By [Amr Malik](#) on Tuesday, December 3, 2002 - 11:52 pm: [Edit](#)

Okay, so the following did the trick:
(DollarAmt and ConvRate are "intField", RupeeAmt is DbField)

Quote:

```
[ getid ConvertBtn ] literal OF
  get DollarAmt
  get ConvRate
  M*
  set RupeeAmt
ENDOF
```

EndQuote

Thanks again for the pointer!

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Pausing Quartus

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Pausing Quartus](#)



By [Neville A. Joseph](#) on Friday, November 29, 2002 - 06:49 pm: [Edit](#)

Although PalmOS does not provide multitasking, usually I can leave an application to do something else and then come back with everything as it was before.

With Quartus, I get a cold boot and have lost the stack and any included memos.

Is there a way round that problem?



By [Neal Bridges \(Nbridges\)](#) on Friday, November 29, 2002 - 06:52 pm:

[Edit](#)

That's the first question in the FAQ, Neville -- have a look.

<http://quartus.net/products/forth/manual/faq.htm>

Neal



By [Neville A. Joseph](#) on Sunday, December 1, 2002 - 04:25 pm: [Edit](#)

Thank you.

My apologies for not looking there first.



By [Neal Bridges \(Nbridges\)](#) on Sunday, December 1, 2002 - 06:13 pm:

[Edit](#)

No need to apologize -- the questions that I've already answered are the easy ones. 😊

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Simple Input - Newbie's Q

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Simple Input - Newbie's Q



By [Peter Jenik, DSP](#) on Wednesday, November 27, 2002 - 01:55 am:

[Edit](#)

Good mornig @ all,

being quite new to Q4th I still wonder how to do a simple input to my prog. I'm ISO something similar to the INPUT / INPUT\$ / INKEY\$ as found in most BASICS.

Yes, I did my FORTH lessons some 20 years ago on a sinclair ZX-81 (the very last "computer" I really understood) but with Q4th the learning curve apparently is a bit too steep for me. Might as well be, that I'm just too dumb for it. Besides I did RTFM...

So any pointers to where to get the information would be highly appreciated and thankfully accepted. Just as an afterthought: Is there a _complete_ documentation of _all_ Q4th words, e.g. what parameters they expect stackwise, what they "do"? Is there some _recommended reading_?

TNX for your time
Peter Jenik, Vienna, Austria



By [Kris Johnson \(Kdj\)](#) on Wednesday, November 27, 2002 - 10:04 am:

[Edit](#)

The standard Forth words for getting console input are KEY (which reads a single character) and ACCEPT (which reads a string).

For a more Palm OS-ish way of doing it, check out the INPUT module included with Quartus. It pops up a dialog box into which the user can enter a message.

The Quartus Forth manual includes a list of all of the built-in QF-specific words and arguments. For ANS Forth words, a good resource is the "List of Words" appendix of the DPANS Forth draft, available at <http://kristopherjohnson.net/dpans/dpansf.htm>.

-- Kris

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

MathLib trouble

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): MathLib trouble](#)



By [Neville A. Joseph](#) on Tuesday, November 26, 2002 - 06:16 pm: [Edit](#)

I have tried to include MathLib but it requires (2>r) and (4>r). Where do they come from?

I cannot find them anywhere in the files I have downloaded.



By [Neal Bridges \(Nbridges\)](#) on Friday, November 29, 2002 - 02:05 pm: [Edit](#)

Hi, Neville. Sorry for the delay. 2>R is a core-ext word; though I don't remember off-the-cuff which user-created memo has 4>r in it. Can anybody help?

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Friday, November 29, 2002 - 06:40 pm: [Edit](#)

I found it here.

\ sfd 2001.4.4 JCF

I sure its on the wiki. Its defined at the bottom of the file.

Gary



By [Gary Wiese \(Garyjwiese\)](#) on Friday, November 29, 2002 - 06:45 pm: [Edit](#)

Try this

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/FloatLib>

Gary



By [Neville A. Joseph](#) on Friday, November 29, 2002 - 07:00 pm: [Edit](#)

Thank you for your help but I am looking for (2>r), not 2>r. Is Quartus core-ext wider than ANSI?



By [Neal Bridges \(Nbridges\)](#) on Friday, November 29, 2002 - 07:05 pm: [Edit](#)

Ah, right. That's in a user-enhanced core-ext, here:

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/CoreExtModule>

Neal

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SysAppLaunch

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): SysAppLaunch](#)



By [Frank](#) on Monday, November 25, 2002 - 08:25 am: [Edit](#)

Could someone tell me what exactly should be on stack when using SysAppLaunch? I have got some code that launches one program but i can't get it to launch another program. i have seen the description in the quartus help file but i don't understand the abbreviations in the stack diagram. thanks..



By [Frank](#) on Tuesday, November 26, 2002 - 09:44 am: [Edit](#)

Is there somebody here?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 26, 2002 - 11:16 am: [Edit](#)

Lots of us, Frank 😊 Sorry -- I was hoping somebody would jump in with a SysAppLaunch sample. I'll know there's one in the forum archives; I'll try and find it for you.

Neal



By [John Newell](#) on Tuesday, November 26, 2002 - 01:23 pm: [Edit](#)

I was waiting too 😊

If you use Keyword Search (in the left hand navigation frame) and search for SysAppLaunch you'll get quite a few hits. One I put in which does a SysUIAppSwitch is at:

<http://www.quartus.net/discus/messages/63/1776.html?>

To do a launch (which treats the called app as a subroutine) and returns to the caller do:

```
: AppLaunch ( param. lc creator. type. -- )
\ ." s1" .s key drop
GetDatabase throw >r 2>r >r
CAresult >abs 2swap
r> 0 2r> r>
SysAppLaunch throw
\ ." s2" .s key drop
;
```

Regards

John



By [John Newell](#) on Wednesday, November 27, 2002 - 04:36 am: [Edit](#)

Hi Frank,

I have replied to your e-mail but have also posted that reply here.

You asked: "Thank you for your reply. Could you tell me what you mean by Param. and lc in the stack diagram of your AppLaunch example?"

Param. is a pointer to the Launch parameter block which is passed to the called application. See \ LaunchPB in the referenced discussion. When using SysAppLaunch to call an app as a subroutine, it contains parameters required by the launched app. You can pass values to another app of yours which can itself return other values to the calling app. When using SysUIAppSwitch (which does not return to the calling app.) the memory block containing the parameter block must be given to the system so that it can be released when finished with.

lc is the launch code which is passed to the called app. so that it knows which function it is to perform.

Have a look at the Palm OS Companion. It contains all this information on Application Startup and Stop.

To find out what goes in the fields of the parameter block and the actual values of the launch codes you will have to look in the SDK .h files.

Regards

John

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Small popup window to display 2 words

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Small popup window to display 2 words



By [Andrew Johnson](#) on Tuesday, November 12, 2002 - 07:28 pm: [Edit](#)

I want to pick an object on a graphics screen and have a tiny window pop up displaying the objects name. Typically two words of information is all I want to display and the length would be variable - say 8 to 18 characters.

I don't want to use the RsrcEdit because I don't know where I want the window to display or its length.

Can I use an API call or something to do this?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 13, 2002 - 12:17 am: [Edit](#)

Well, you could roll-your-own. Copy away the bit of screen you'll be overwriting, draw a box, put the text in it, and then when you're ready, put back the bit of the screen you saved.

Neal



By [Andrew Johnson](#) on Wednesday, November 13, 2002 - 01:37 am: [Edit](#)

Yes, I can do that. Great idea.

To be really slick, it would be nice to calculate the length of the window required from the text. "I"s and "L"s use less than "O"s and "P"s - any clues on calculating the length of a string for a font, or do I have to work that out for myself?

Thank you, Neal



By [John Newell](#) on Wednesday, November 13, 2002 - 07:41 am: [Edit](#)

Andrew,
FntCharsWidth gives the width of a string in pixels.

It's not difficult to position a RsrcEdit generated window at a particular position on the screen.

FrmInitForm

FrmSetActiveForm

WinGetWindowBounds

...change the bounds rectangle to position the window.

WinSetWindowBounds

FrmDrawForm

I haven't tried altering the size of the window, just its position.

(Note that that's just the basic calling sequence. You have to fill in the body to set up the required parameters for each call.)

That's for OS 3.5. I believe things may have changed a bit for OS 4.0.

Regards

John



By [Kris Johnson \(Kdj\)](#) on Thursday, November 14, 2002 - 02:09 am:

[Edit](#)

Andrew, you might find the TextModule useful for doing the string size calculations and drawing (unless you've already done it all with system traps).

See <http://kristopherjohnson.net/wiki/TextModule>

-- Kris

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Bluetooth system calls

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Bluetooth system calls



By [Mike Adams](#) on Wednesday, November 6, 2002 - 06:52 am: [Edit](#)

Can anyone offer help with Bluetooth library calls.

I am using the Palm Bluetooth SDK library and Palm Bluetooth card in an M130

Inquiry with its callback successfully finds the remote bluetooth device. It also fails to find remote device if it turned off so not relying on a cache. GetRemoteDeviceName will only fetch name from cache, not directly. DiscoverSingleDevice hangs and cannot be canceled. LinkConnect crashes.

```
\ define trap names
```

```
hex 0A800 dup
constant sysLibTrapName
1+ dup constant sysLibTrapOpen
1+ dup constant sysLibTrapClose
1+ dup constant sysLibTrapSleep
1+ dup constant sysLibTrapWake
1+ dup constant sysLibTrapCustom
dup constant bltHandleEvent
dup 1+ constant bltRMnotification
dup 2 + constant bltunRMnotification
dup 3 + constant bltStartInquiry
dup 4 + constant bltCancelInquiry
dup 5 + constant bltDiscoverSingleDevice
dup 6 + constant bltDiscoverMultipleDevices
dup 7 + constant bltGetSelectedDevices
dup 8 + constant bltGetRemoteDeviceName
dup 9 + constant bltLinkConnect
dup 0A + constant bltLinkDisconnect
drop decimal
```

```
\ friendlyName ***** succeeds *****
```

```
0 enum friendType
friendType btlibCachedThenRemote
friendType btlibCachedOnly
friendType btlibRemoteOnly
```

```
variable friend 256 allot
\ abs pointer to string
\ length byte
\ string chars

: @friend ( -f)
friend 5 + >abs friend 2!
200 friend 4 + c!
btlibCachedThenRemote >byte
friend >abs
remBD 1+ >abs
libRefNum @
bltGetRemoteDeviceName
sysTrap
drop 2drop 2drop drop d0 nip ;

: .friend ( -)
@friend .s 0= if friend 4 + count type then cr ;

\ linkConnect ***** crashes *****

: makeACL ( -f)
remBD 1+ >abs
libRefNum @
bltLinkConnect
sysTrap
drop 2drop d0 nip ;

\ discover ***** hangs *****
needs zstrings
: discover ( -f)
0 ( not last list)
0 ( not address as name)
remBD 1+ >abs ( location for selected address)
0 ( filter len)
0. ( no filter)
z" choose one" drop >abs ( text)
libRefNum @
bltDiscoverSingleDevice
.s key drop
sysTrap
drop 2drop 2drop drop 2drop drop drop d0 nip ;
```

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Here's a question...

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Here's a question...



By [Joe Nasal \(Jsn\)](#) on Tuesday, October 29, 2002 - 01:31 pm: [Edit](#)

...anyone else notice how (relatively) quiet Neal and Kris have been lately...?

They must be working on something big...



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 29, 2002 - 02:16 pm:
[Edit](#)

I'm working away, but still here, Joe; not to worry 😊

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 29, 2002 - 06:24 pm: [Edit](#)

I took six months off from work, and played around with a lot of stuff during that time. Now, I am working as an independent consultant.

I'm spending most of my free time playing with .NET rather than Palm OS. Nobody wants to pay me to write Palm apps, so I have to go where the money is. But I still look at the Quartus forum every day, and the occasional wiki changes.

Whatever happened to Chapman Flack?

-- Kris



By [Gary Wiese \(Garyjwiese\)](#) on Tuesday, October 29, 2002 - 06:49 pm: [Edit](#)

Neal, have you noticed that Palm has come out with a new handheld that uses the ARM processor?

I hope your keeping busy with that 😊

By the way, will our programs that are written with the latest Quartus run on that processor?

Gary



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 30, 2002 - 02:05

pm: [Edit](#)

That's what I'm working on, Gary. I'll keep you posted.

Neal

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Forth questions/thoughts

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Forth questions/thoughts



By [Eric Marsh](#) on Monday, October 28, 2002 - 10:42 pm: [Edit](#)

Hello all,

I've been a professional software developer since the mid '80s. I've decided to take a shot at writing a Palm app that will plug into my motorcycle's fi/ignition computer so that I can tweak the injection map at run(ride)time.

The app is going to have to take a stream of data from the computer and index into the map. Then I can hit the palm's buttons to make the map richer or leaner. So it will have to manage the serial port and button input. It will also have to keep the map in memory (9x18 matrix of words). Finally I'm going to need to have it display throttle position and engine speed in letters large enough so that I can at least make some sense of them while riding a 200+ horsepower machine down a low nine second 150mph quarter mile.

That's a preliminary description of the job at hand. Initially I was thinking of writing in java but when I stumbled on this site I realized that forth deserves my serious consideration. I've done most of my professional work in C, C++, and Java so those languages would be natural candidates too. Of them C seems like the most viable alternative but CodeWarrior is \$500 which is more than I care to spend. I see that there are a couple of other low cost C compilers out there too, but I don't know how good they are. I'm also concerned about investing a bunch of time into a cheap tool and finding that it doesn't have the features I need to do the job at hand.

The one big plus I see to using Quartus Forth is that it seems like a very "together" product. The modest price is a plus too. The biggest minus that I can see is the learning curve involved.

I've spent several evenings and part of a day or two looking over this site and other material on Forth. I went through one of the tutorials and it was helpful. However I've found that I've had to do a lot of jumping around reading source code and the like to try to pull the pieces together to understand enough of the big picture to be able to really move forward using this tool for development.

For example, I saw that to use the Palm API a lot of calls require structs. I found the source for struts and an example of how one is defined but I apparently have to look elsewhere to find how to assign values to the

elements of the struct and clean it up after I'm done using it.

I think that I'll also have to figure out how to display and quickly swap bitmaps for the very large numbers I need to display (though I have plenty of documentation to go through and may find that I can use very large fonts).

I don't know if I'll get any "how to" answers from this message but anything that will help me to get where I'm going as quickly as possible will be appreciated. I'm considering spending the money for the supported version just for the support, though I don't want to go wasting too much of anyone's time on my learning curve. I would be interested too in hearing what people have to say about the other Palm development tools out there.

Thanks,

Eric Marsh



By [Jim Hendricks \(Jimh\)](#) on Tuesday, October 29, 2002 - 07:59 am:

[Edit](#)

Eric,

I think if you start posting some of your learning curve questions here, you will be quite suprised at how helpful this community is.

Your real big learning curve is not learning the Forth language, not even learning the Palm API, it's learning to think Forth.

I too have been a developer since the early/mid 80's, first as hobby, then as augmentation to my job, then as a professional. My language experience spans Basic, 6502 ASM, Z80 ASM, 80xxx ASM, C, C++, Java, PowerBuilder, VB, Logo, dBase/FoxPro, ASP, & PHP. Forth I found gives me the ability to be as intimate as I want with the platform, or as distant as I want. Forth proves to produce the best runtimes both in size and performance, beaten only by ASM/ML. This of course depends on the ability of the programmer. I also found though that getting an understanding of what Forth does under the covers, ie. what it does when it compiles, what it does when sitting at the console waiting for input, how it executes words etc. All this broadened my understanding of how words work.

I would say, give this forum a shot, ask away, you have nothing to lose, you can play to your hearts content without spending a dime in money until you are confident (which I'm sure you will become) that Quartus is the right tool for Palm development.

Jim



Eric:

I am a professional software engineer myself. Versed in all that's been named & more (I'm also a perl nut and some stuff I've done will be published in book form by O'Reilly in March of next year).

If you love to do software, then you've got to give FORTH a try. As Jim said, thinking in FORTH is the key -- but the revelation comes (at least it did for me) in kind of a bubble burst: you struggle (just a bit) and then everything starts to make sense. Oh yeah... it's a stack; it's about maintaining equilibrium, and it's very much about having direct control of my environment (memory) in much the same way that C is, though the techniques are surely different.

I've never been able to factor code as well in any language as I have been able to do in FORTH. I read somewhere that programming in FORTH teaches you to be a better programmer in ways that other languages cannot -- I believe this is true.

Now Quartus, that's a whole new ballgame in and of itself. How would you like to be out on the road with your cycle and decide that you want to tweak something in your app & re-compile? No one else is going to offer you that flexibility. Loads of fun. I spent a year with my head buried in my Palm learning FORTH via Quartus & was able to produce a nice application which I sell commercially, recouping (many times) my investment in Quartus, my Palm, etc.

Don't hesitate, jump in! The water's fine...

The Wiki is a bit scattered at times, but there's *lots* of good stuff in here. Keep digging... Speaking of "Thinking FORTH", search the Net for some FORTH documentation with that title. Leo Wong is the author. His Web site is choc full of good material.

To answer the rest of your question -- I have also used the GNU PRC-Tools, which I find to be an excellent development environment. You're tied to your desktop, though, and it's not FORTH... 😊

One more thing -- all serial ports are not equal in the Palm universe. If you've got a Handspring (as I do) then you've potentially got some unique challenges there. Do some research.

Joe



By [Joe Nasal \(Jsn\)](#) on Tuesday, October 29, 2002 - 10:32 am: [Edit](#)

Just thinking about this a bit more...

Learning both FORTH and PalmOS programming at the same time, I might tackle some global issues in this order:

- Quartus Interpreter
- Stack / RPN
- Dictionary / concept of 'word'
- Cells
- Variables
- Simple Arithmetic
- Pictured Numeric Output
- Strings
- GUI programming concepts in general
- Palm OS Event Loop
- Systraps (PalmOS API)
- Forms
- Quartus Resource Edit
- Simple form interaction (string2anyfield, etc.)

I wouldn't even think about things like the Palm DB manager, standalone apps, Xt's, etc., until I understood these concepts.

You just can't beat source code when you're starting out. I think that once I got through the (very) simple 'Hello World' tutorials in the Wiki, CRJ's PhoneDecode source was probably what pushed me into full Aha! mode...

Joe



By [Steve Bohrer \(Skb\)](#) on Tuesday, October 29, 2002 - 10:52 am: [Edit](#)

A minor low-level point: Don't get too hung up on the idea of structs. They are a "natural" C-language way to represent memory layouts, and thus are used in lots of the PalmOS API docs. But, from the Quartus programming I've done, I find I use chunks of memory as structs to pass arguments to the OS, but I don't need to consider them as structs within my Forth code. I've not yet found the Quartus struct words necessary for applications that make heavy use of the OS GUI; typically you just need one or two offsets into the OS's structure.



By [Eric Marsh](#) on Tuesday, October 29, 2002 - 11:06 am: [Edit](#)

Thanks guys, for the feedback.

To respond to a few responses, at this point I've got what I feel is a basic

understanding of the following:

Quartus Interpreter
Stack / RPN
Dictionary / concept of 'word'
Cells
Variables
Simple Arithmetic
Palm OS Event Loop
Forms
Quartus Resource Edit

That means I need to work more on:

Pictured Numeric Output
Systraps (PalmOS API)
Strings
GUI programming concepts in general (specific to the Palm)
Simple form interaction (string2anyfield, etc.)
Structs
And of course the serial port.

The fact that there are two ways to approach strings (nul terminated, leading size) is rather unpleasant. Just one more thing to complicate matters.

On the structs I can see how a chunk of memory can be passed but that means I need to have a handle on the specifics of how that memory is organized. The whole idea of a struct is to have a mechanism to isolate the developer from that level of knowledge/effort by abstracting it. As my goal is to move on to development as quickly as I can that seems like a good thing to me.

Right now it seems to me that the pictured numeric output and some more specific info on creations and use of data structures would be a good think to look at. Are there any specific articles/links that I would do well to examine?

Thanks,

Eric



By [Joe Nasal \(Jsn\)](#) on Tuesday, October 29, 2002 - 11:24 am: [Edit](#)

Search the Wiki for the Pictured Numeric Output Tutorial. Also, I remember a good look at structs in the Database Tutorial (I think).

Regarding abstraction -- it may just be me, but I don't think a primary motivation for getting into FORTH programming (initially) would be to look for soft interfaces. This (can be) largely about bit (and byte) twiddling... 😊

Interfaces exist, and the tools are certainly there to roll-yer-own, but to me the appeal here is smaller=better, which is why this environment has been suited for embedded-type of work for so long.

Joe



By [Eric Marsh](#) on Tuesday, October 29, 2002 - 12:53 pm: [Edit](#)

Joe, I hear what your saying about the abstraction thing. It can be fun twiddling bits but these days I've got more projects than I have time for so I need to be goal oriented on this thing. But I will say that there is a very real "fun" element to forth.

Eric



By [Joe Nasal \(Jsn\)](#) on Tuesday, October 29, 2002 - 01:07 pm: [Edit](#)

More projects than you have time for...? You must be an Engineer...!

Seriously, my only point is that this isn't C and it certainly isn't C++ or Java. It is what it is, and it is a very cool way of looking at old problems in a new (well, old, but new to you) light. You may find it a refreshing perspective. And, in my experience, it's a valid way to get stuff done.

Prima Facie language comparisons sometimes fail to capture the spirit of the technology vs. a narrow focus on syntax or single-dimension feature comparisons -- the perl vs. Java wars spring to mind.

Joe



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 29, 2002 - 06:14 pm: [Edit](#)

It took me a while to let go of the C/C++/Java ideas of abstraction and start doing things the Forth way. On the surface, Forth doesn't seem to provide much, but the magic is that once you get used to it, you can create better abstractions. You start to see concepts like "struct" and "class" being very limited rather than helpful.

But I will say that if you need to get something done in a hurry, learning Forth isn't going to help in the short run.

My first couple of projects, I probably spent 95% of my time chasing down crashes. Use of languages with strong type-checking made me a bit lazy,

counting on the compiler to find my mistakes for me. Forth is not forgiving, and it takes a while to develop the needed discipline. But now, I write complicated programs that run correctly the first time, without ever crashing--I never would have thought that possible when I started.

-- Kris



By [Mike Will](#) on Tuesday, October 29, 2002 - 10:52 pm: [Edit](#)

Occasionally I get stuck in a room where heated C/C++/C# vs Java vs Perl debates are raging. Eventually they all turn to me (since I'm the teacher) and ask what my favorite language is. They await my answer with keen anticipation of forming an alliance with the prof.

I reply, "Forth".

The blank, deer-in-the-headlights look I get at that point keeps me young. There are so few truths that one can hang onto as the decades roll by. The beauty of this language is one of them.

Mike



By [Eric Marsh](#) on Wednesday, October 30, 2002 - 11:41 am: [Edit](#)

Well I must say that I don't really participate in "language wars." A language is simply a tool to do a job. For any given job one of the tasks of a professional is to select the right hammer.

I will admit to a strong bias against Microsoft, but that's a different matter. (ethics) :-)

Rather than just jumping I spent some time last night exploring my options. I downloaded and installed the Onboard C development environment and the gnu tools. Onboard C is pretty neat but projects do not appear to migrate easily between desktop and palm. The palm is just too tiny a workspace to develop significant amounts of code so I nixed it for now.

As an aside, while there is a natural tendency to view the Palm as "not really a computer" because of its limited resources, in reality exception for the constrained I/O its a more powerful device than the 640k PCs that I was working on in the mid-80s. Realizing that brought a bit of a perception change.

The GNU Palm development tools integrated pretty nicely with the Project Builder that comes with Mac OS X. The only thing that is missing is a project builder target type but by using the GNU makefile that is solved. Using it with the Palm emulator provides a pretty decent development

environment except that an important part is missing for me, that's the serial port.

I think that the single thing that offers the greatest appeal to Forth development on the Palm is that it can be done in such tiny increments. No large source files to move through, just the development and testing of individual words. Being close to the hardware can be kind of fun but fun is not the goal in project development. :-(Assembly language is fun too, but 15 years ago I realized that a well optimized C compiler produced code almost as good as my assembly language code and that's the last time I wrote in assembler.

So at this point I'm still gathering information so that I can made an informed decision. I'll continue to look around here and play with the applicable example code. That should help me to gain the understanding necessary to make the right decision.

Thanks for the comments,

Eric



By [John Newell](#) on Thursday, October 31, 2002 - 12:52 pm: [Edit](#)

Now look what you've started. (sigh).

Since you know Java and if you want your apps. to run both on Pocket PC and Palm OS perhaps you should consider using Java. Sun have a Java engine for the Palm OS - it's a bit big (1/2MB) and slow but it does run Java apps.

Don't misunderstand me - I enjoy Forth. However, I now have a large app. written in Forth for the Palm OS but it is extremely unlikely that it will be converted to run on Pocket PC, even though I would like it to.

Getting back to Forth, if you look in the Forth standard DPANS94.doc, you will find a number of obsolete words and discouraged practices. For example, things like #TIB and counted strings. The document is good for reference but not for learning Forth.

Regards
John



By [Joe Nasal \(JsN\)](#) on Thursday, October 31, 2002 - 01:06 pm: [Edit](#)

Hi John:

Dunno anything about this except it purports to be ANS Forth capable of building Win CE executables:

<http://sourceforge.net/projects/spf/>

Joe



By [Eric Marsh](#) on Thursday, October 31, 2002 - 01:12 pm: [Edit](#)

John,

Didn't mean to start a debate. Actually I'm not sure that I have.

Actually I don't really think that Java is an appropriate language for what I'm doing for exactly the reasons you have cited: its big and slow.

At this point I've decided to pursue forth further and consider C to be a fallback. The reason for this is that in forth I can break the task into tiny pieces and test each of them at a time. The constrained interface of the Palm as a development platform is as responsible for making this ability highly desirable as much as anything else.

As an aside, last night I pulled a bunch of modules in so that I could play with flipping bitmaps and see if there are performance concerns there. Almost immediately I ran into an undefined word even though I had brought all the needed files in. The word is 2dup>r. This might be a typo ("2dup >r" which as I understand it would dup TOS and NOS and move one of the values to the return stack) or it might just be a missing word that I need to pick up from somewhere. Can anyone help me on this?

Thanks,

Eric



By [Joe Nasal \(Jsnn\)](#) on Thursday, October 31, 2002 - 01:25 pm: [Edit](#)

A thread on Forth at slashdot today. Quartus is mentioned:

<http://slashdot.org/article.pl?sid=02/10/27/211220>



By [Samuel Tardieu](#) on Thursday, October 31, 2002 - 02:18 pm: [Edit](#)

Eric, could you give a pointer on what module you found 2dup>r in?

Sam



By [Eric Marsh](#) on Thursday, October 31, 2002 - 02:36 pm: [Edit](#)

I found `2dup>r` in `bmpUtil`. As an experiment I split it into two words and it seems to be doing the right thing.



By [Kris Johnson \(Kdj\)](#) on Thursday, October 31, 2002 - 07:16 pm: [Edit](#)

`2dup>r` and similar words are defined in the `ReturnstackModule` in the wiki. It copies the two top-of-stack cells to the return stack, equivalent to "`2dup 2>r`".

I think a previous incarnation of the `JuggleModule` may have included it.

-- Kris



By [Steve Bohrer \(Skb\)](#) on Friday, November 1, 2002 - 08:44 am: [Edit](#)

Source code version control seems a challenge with `Quartus Forth`. I've sometimes wished for automatic memo timestamps, similar to the modified timestamp on disk files.

Also, due to the accumulative nature of the Forth dictionary, it is not easy to track which memos a module really needs, since (unlike C headers, that cause compiler errors when absent from a file that refers to them) all that Forth can require is that the necessary words are defined somewhere before they are used. In a project, it is handy to not have to specifically "need" every fundamental memo in every module, but it is hard to pull out a module for standalone use.

Usually, the web helps, as it is easy to track missing source. Unhappily, the wiki "search" tool does not find "`2dup>r`", even though it is listed plainly on the [ReturnstackModule](#) page. It apparently barfs on the "`>`". Searching with regular expressions turned on finds it using the wildcard "`2dup.r`", but I can't find a way to quote the "`>`" so you can search for it directly.



By [Eric Marsh](#) on Friday, November 1, 2002 - 09:21 am: [Edit](#)

I had spent a considerable amount of time trying to find `2dup>r` and ran into that same problem with not knowing how to quote "`>`".

Last night I wanted to put some code that writes a bitmap in a do loop. It took me an hour to find a really good description of the do--loop. I've got PDFs of forth docs and there is this web site. I found what I was looking for after looking at several sites from a google search.

This is probably an oversight because experienced programmers probably figure that sort of thing is so obvious that we just ought to know it. But us newbies need a good resource that documents "the basics" in detail. If its out there then I apologise but searches for "do" and "loop" didn't direct me

to what I was looking for.

Referring to pulling in modules and words, I imagine that the compiler pulls in every word in ever referenced module. I wonder how expensive this is. If this assumption is correct would it be worthwhile writing a module that only pulls in words that are actually used?

Eric



By [Kris Johnson \(Kdj\)](#) on Friday, November 1, 2002 - 04:53 pm: [Edit](#)

When compiling modules, Quartus does compile every single definition. It is equivalent to just including the contents of each module. This can lead to filling up Quartus's codespace.

I often just copy the one or two word definitions I need from a module to my application code, rather than including the module. I know some will consider this to be sacrilege against the holy commandment "Thou shalt not duplicate code", but the words I copy are very small and unlikely to ever require any changes or fixes.

When Quartus compiles a standalone application, it only copies used definitions to the executable. So the executables are small, even if the modules you use are big.

-- Kris



By [Eric Marsh](#) on Saturday, November 2, 2002 - 09:13 pm: [Edit](#)

I thought that a good starting point would be to write a little code that would display large a number with large, easy to see digits. My code is below.

There is one major flaw with this code, that is its use of globals. As written it really only permits one large number. What I need is code that will have a constructor for a struct that will maintain the state of a large number. Then multiple nums can be used with, for example, different fonts, sizes and locations. That might be a little tricky to do because the more items on the stack the harder it is to get to them.

Eventually I'll optimize this function so that it will only write a digit when its value has changed. I'll also provide a mechanism so that digits can be locked (such as as zeros in the last two places for a tachometer).

Next, on to the serial port.

Oh yes, for get-digits, how do I represent the fact that it will produce a

stack with a varied number of elements on it?

```
\ bmpNum 10/31/02 3:05 pm EM
\ Displays large numbers from
\ resource bitmaps
```

needs ids
needs resources
needs Bmputil

(ID) eric (ID) rsrc use-resources

5000 constant bmpBase

```
variable bmpWidth 24 bmpWidth !
Variable bmpHeight 32 bmpHeight !
variable bmpNumChars 5 bmpNumChars !
Variable posX 1 posX !
Variable posY 120 posY !
```

```
: draw-bmp-digit ( y x n -- )
bmpBase + draw-bmp-rsrc ;
```

```
: erase-rectangle ( y x -- )
bmpHeight @ bmpWidth @
2swap 0 >r sp@ r> rot rot
WinEraseRectangle
2drop 2drop ;
```

```
: draw-bmp-blank ( y x -- )
10 draw-bmp-digit ;
```

```
\ push digits on to stack
: get-digits ( n -- c .. )
0 swap
begin
dup while \ n != 0
dup 10 mod swap 10 / rot 1+ swap
repeat drop ;
```

```
: get-pos ( p -- y x )
bmpNumChars @ swap - bmpWidth @ * posX @ +
posY @ swap ;
```

```
: draw-num ( n -- )
get-digits
1 bmpNumChars @ do
```

```
dup i < 0= if
swap i get-pos rot draw-bmp-digit 1-
else
i get-pos \ draw-bmp-blank erase-rectangle
then
-1 +loop drop ;
```



By [Kris Johnson \(Kdj\)](#) on Sunday, November 3, 2002 - 12:03 am: [Edit](#)

I wouldn't worry too much about optimizing the drawing. PDAs are easily capable of updating the screen dozens of times per second, especially when bitmaps are being used to do the drawing.

Double-buffered drawing is the generally the key to getting nice-looking displays, not optimization of drawing.

-- Kris



By [John McKeon \(Jmckeon\)](#) on Sunday, November 3, 2002 - 01:40 am: [Edit](#)

Ah, but what he's talking about optimizing is not the screen redrawing but the updating of the bitmaps themselves. He doesn't want to *refetch* the bitmap if the digit is already displayed.

Eric, I would suggest you reconsider using resource bitmaps at all for what you're doing. Take a look at the tinynums module in the Quartus library that ships with Quartus. It uses bitmaps stored in the dataspace and simply types them to the screen at the desired coordinates. It would not take much to modify it to make them "bignumms" (I did it in about a half hour, I'll send the code if you like). This module uses some of the more esoteric forth words like ' >body and things that might be harder to grok at first but could prove alot faster for the application.

Also, the commonly used stack diagram for a variable number of stack elements is $i*x$, $j*x$ etc

Good luck
John



By [John Newell](#) on Sunday, November 3, 2002 - 11:43 am: [Edit](#)

My suggestion also (i.e. the bitmaps used by tinynums etc.).

Limited compile time space in Quartus Forth is one of my hobby horses. Neal is working to improve the problem. One of the major drawbacks of Quartus Forth is the limited space available at compile time - about 40K. Once I (you) have loaded the Forth Library words and included my own

standard words this is probably down to 20K.

From experience, I create apps:

1) with one very "busy" and one not so "busy" windows;
or 2) two medium "busy" windows;
otherwise I run out of space when I start tweeking the app.

If I want to have more "busy" windows I create two (or more) apps which switch between or call each other. (That's my way you understand. I find it helps with the factoring of the overall application. The main problem is that the total size of the package ends up larger than necessary because I have to duplicate routines in each of the apps. Have a look on the Wiki for alternatives.)

As Kris says, the run time app is a lot smaller the the space required at compile time because Quartus only copies referenced (used) words into the .PRC file.

Regards
John Newell

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New code snippet: SDA

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New code snippet: SDA



By [Samuel Tardieu](#) on Monday, October 28, 2002 - 09:41 am: [Edit](#)

I have put a new tiny program SDA (for SMS Delete All) on [my Palm page](#). This lets you remove all the short messages (SMS) arriving on your cell phone, when too many of them are queued. Quartus Forth source is available.

Sam

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Trouble opening file streams

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Trouble opening file streams



By [Andrew Johnson](#) on Thursday, October 24, 2002 - 01:05 pm: [Edit](#)

I am having trouble opening files I have created on a PC once they get to the Palm. All the bytes for the record segmenting seem correct. I have checked this by creating files of the same number of bytes on the Palm and then moving them back to the PC before examining them.

I would like to get my forth program on the Palm to compile a list of files based on creator ID & type and then allow me to pick one for opening. At the moment, the name I think the file is called may not be correct. I have noticed the files I have created on the Palm have sometimes got extra characters on the end of the filename. I have seen this by checking with RsrcEdit. Since I have passed a pointer to a null terminated string to the FileOpen routine, I don't understand this. Also, the space not used after the null terminated name string seems to have characters in it. Is that garbage?



By [Neal Bridges \(Nbridges\)](#) on Thursday, October 24, 2002 - 01:46 pm: [Edit](#)

Any extra characters past the null in the name of a Palm database are in fact garbage.

Neal



By [Andrew Johnson](#) on Sunday, October 27, 2002 - 07:20 am: [Edit](#)

Reading your email made me check that my string input routine was putting a null character at the end. I found that it was not!

Problem solved. Thank you.

Andrew

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Reset using color

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Reset using color



By [Frank](#) on Tuesday, October 22, 2002 - 05:26 am: [Edit](#)

I made a color app on a palm IIIc with colorized bmp's and the word : foreground (u --) >byte (hex) a399 systrap drop ; it works perfect on my (8 bit) palm but i got a reset on a (16 bit) clie. anyone knows what might be the problem?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 23, 2002 - 03:20 pm: [Edit](#)

Frank, I can't think what might be the issue. Does it respond that way for every foreground color?

What does the Emulator have to say about the error?

Neal



By [Frank](#) on Thursday, October 24, 2002 - 02:16 pm: [Edit](#)

neal i am sorry. i tested in a store over here. i was thinking about it this morning in the shower and i think the clie must have had no hotsync name. i think this caused the reset.color is realy cool btw.



By [John Newell](#) on Friday, October 25, 2002 - 06:00 am: [Edit](#)

Frank,

To give a device a HotSync name see this discussion:

<http://www.quartus.net/discus/messages/63/1827.html?1034005902>

Reagrds

John

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Registering with Handango

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Registering with Handango



By [Garry Lancaster](#) on Friday, October 18, 2002 - 02:29 pm: [Edit](#)

Has anyone tried registering Quartus Forth (or indeed anything else) with Handango recently? I did this on 14/10, and they've now charged my credit card *twice* (on 15/10) but still no sign of the registered version, and they don't seem keen to even admit the double-charging...

I stuck to what I knew with RsrcEdit, and got it immediately with no probs from PalmGear. I would've used them for Quartus Forth in the first place if there hadn't been a direct link from the QF site to Handango. Serves me right for taking the lazy option, I suppose.



By [Neal Bridges \(Nbridges\)](#) on Friday, October 18, 2002 - 04:23 pm:

[Edit](#)

Hi, Garry. You certainly shouldn't have been billed twice; complain to Handango directly and have that resolved.

It's possible your registration was sent out but didn't arrive; I'll check. In the meantime, if you'd be so kind as to send me your order confirmation from Handango, that would help.

Sorry for the delay, and thanks again for your registration!

Neal



By [Neal Bridges \(Nbridges\)](#) on Friday, October 18, 2002 - 09:34 pm:

[Edit](#)

Garry, I've re-sent yours, along with a few other recent ones just to be safe. If anyone's missing anything they're expecting, please drop me a note at support@quartus.net, and I'll set it straight.

Thanks!

Neal

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Trouble CATCHing the byeThrow for proper exit

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Trouble CATCHing the byeThrow for proper exit



By [Andrew Johnson](#) on Sunday, October 13, 2002 - 06:52 pm: [Edit](#)

I want to catch an exit that occurs from my program when a user presses a button or the Home icon in the silk screen area. I can get the example in the event handling section of Quartus Forth manual to work, but this routine stops and waits for a key press. I want to put the check for the byeThrow in my program's main loop so that I can properly close the serial port on the way out.

Any suggestions?



By [Joe Nasal \(Jsn\)](#) on Monday, October 14, 2002 - 08:33 am: [Edit](#)

Andrew:

I catch byeThrow like this:

```
\ Prog mainloop

: main
begin
-1. event >abs EvtGetEvent
handleEvent
again
;

\ main entry point

: go ( -- )
  ['] main CATCH
  DUP byeThrow = IF
    \ do something....
  then
throw
;
```

Is this what you're thinking of? This will catch them all, I think...

Joe



By [Steve Bohrer \(Skb\)](#) on Monday, October 14, 2002 - 06:45 pm: [Edit](#)

The above example should work with EKey or (EKey) just as well as it does with EvtGetEvent/HandleEvent. In either case, the AppStopEvent generated when you tap a hardware button or the home or calculator silk buttons is trapped by Quartus' handler, and thrown as an exception. If you catch the exception, you can do what you want.

For debugging, it is handy to drop the quit event rather than exiting, as you can exit your app and return to the console.



By [Andrew Johnson](#) on Sunday, October 27, 2002 - 08:43 am: [Edit](#)

Joe,

I can see that if I write my code to close the serial port where you have "\do something..." that will clean up on the way out.

Where do I start the code that does the rest of my program?



By [Joe Nasal \(Jsn\)](#) on Monday, October 28, 2002 - 08:25 am: [Edit](#)

Within "go":

```
[ ' ] main
```

places the xt for "main" on the stack. Main is your program's usual main loop.

Joe



By [Andrew Johnson](#) on Monday, October 28, 2002 - 08:40 pm: [Edit](#)

Joe,

It works beautifully. I am struggling to understand how it works because I have not tackled vectoring yet. Can you recommend a reference for me to read?

Thank you so much for sorting me out.



By [Joe Nasal \(Jsn\)](#) on Tuesday, October 29, 2002 - 08:49 am: [Edit](#)

Search the Wiki for xt and [']. A while back I posted something I'd found on the Net when I first started looking...

There are some good FORTH references available from some of the professional FORTH shops on the Net; just poke around a bit & see what you can find. As I've mentioned I like Leo Wong's stuff, too -- he talks a bit about xt's as well.

Joe



By [Andrew Johnson](#) on Tuesday, October 29, 2002 - 04:41 pm: [Edit](#)

Steve & Joe,

Thank you for your help.

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My POSE won't run COOP sample code

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): My POSE won't run COOP sample code



By [Andrew Johnson](#) on Friday, October 11, 2002 - 05:03 pm: [Edit](#)

I have run the multi-tasking sample code written by Kris Johnson on the POSE before, but for some reason, the POSE locks up now.

The debug message is:

Quartus (1.2.5R) has overflowed the stack. The functions currently using the stack are: .

Anybody else had problems?



By [Steve Bohrer \(Skb\)](#) on Monday, October 14, 2002 - 06:39 pm: [Edit](#)

Does POSE work for everything else, or do you get a stack overflow always? What POSE are you using? I had troubles with Palm's versions before 3.5 where eventually POSE would get in an infinite loop: after a reset it would show a stack full error box with the option to reset. The only way out was to kill POSE, and then start from the last saved version, and hot sync to save my stuff if possible.

I spent some time starting with new POSE images and restoring my databases bit by bit, but I could never find the culprit. Then, when I upgraded to POSE version 3.5, the problem stopped happening, and I was willing to believe that it was a POSE bug. Maybe my code was trashing some system global in a way that caused the stack to be wrong after a reset, but I don't know why such a change would survive a full reset and restore.

However, Palm's POSE 3.5 is pretty slow, so right now I'm using Handspring's version of 3.x POSE, and I've not had this problem recur.



By [Kris Johnson \(Kdj\)](#) on Sunday, October 27, 2002 - 01:16 pm: [Edit](#)

Andrew, did you ever figure this out?

-- Kris



By [Andrew Johnson](#) on Sunday, October 27, 2002 - 09:17 pm: [Edit](#)

Kris & Steve,

I just couldn't see what I was doing wrong. Snowflakes will run on my IIIc Palm but I can't get it to work in the POSE 3.3 and my code for alternating print statements won't work either.

The POSE is running OK for everything else.

Here is the code I used for the alternating print statements:

```
\ Mtask
\ an exercise in multitasking
```

```
.( Loading libraries... )
```

```
needs coop
```

```
.( Loading tasks 1 & 2 ... )
```

```
: task1-loop ( -- )
begin
." This is task 1 " cr
pause
again ;
```

```
: task2-loop ( -- )
begin
." This is task 2 " cr
pause
again ;
```

```
\ TASKS
```

```
\ Sizes for tasks
16 cells constant #user
256 cells constant #ds
256 cells constant #rs
```

```
\ Task declarations
#user #ds #rs task task1
#user #ds #rs task task2
```

```
: start-task1 ( -- )
task1 build
task1 activate task1-loop ;
```

```
: start-task2 ( -- )
```

```
task2 build
task2 activate task2-loop ;

\ MAIN

: start-tasks ( -- )
start-task1 start-task2 ;

\ Main loop services the
\ Palm OS event loop
: main-loop ( -- )
begin
20. (ekey) drop
pause
again ;

: go ( -- )
init-coop start-tasks main-loop ;
```

The error is as described in my opening posting.

Andrew



By [Kris Johnson \(Kdj\)](#) on Sunday, October 27, 2002 - 10:40 pm: [Edit](#)

Does the error happen only when running the multitasked app inside Quartus, or does it also happen with a standalone app?

-- Kris



By [Andrew Johnson](#) on Monday, October 28, 2002 - 12:20 am: [Edit](#)

Kris,

The sample program above can be made into a stand alone app on the Palm IIIc. It will then run. It locks up on exit but I guess thats due to an untidy exit.

The POSE reports warnings during the generation of the stand alone app. Warnings about the application writing to unused parts of the stack. If I press continue about 10 times, the make continues a little further before halting on an unrecoverable error.

POSE message:

mtask (1) has overflowed the stack. The functions currently using the stack are: (3508), Unknown @ 0x0011a91A> (28)

The make file I used was:

```
\ MakeMT
```

```
needs Mtask  
needs ids
```

```
(ID) mtask  
' go (ID) mtask MakePRC mtask
```

How is all that?



By [Andrew_J](#) on Monday, October 28, 2002 - 07:41 am: [Edit](#)

Steve,

I have just loaded POSE 3.5 and found that I am getting fewer pop up warnings when running apps.

I still can't run the Mtask example without getting a stack overflow error.

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Infrared

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Infrared



By [Frank](#) on Friday, October 11, 2002 - 05:37 am: [Edit](#)

I'm planning on making a multiplayer-option for my game using the infrared-port. I'm trying to find it in the wiki and the forum. Without succes. Does anyone have a link for me?



By [Chris Bucsko](#) on Thursday, October 17, 2002 - 05:48 pm: [Edit](#)

The IRDA port is just another serial port. Search the WIKI, PalmOS dev site and QF archives for serial port stuff. Get the SRM ST memo from the QF archives site to start.

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Newbie Install question

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie Install question



By [José L. Marcos](#) on Monday, October 7, 2002 - 04:56 am: [Edit](#)

Hi group,

sorry for this *real* newbie question...

I recently bought a palmos 3.5 box to replace a defunct palm 3.

I'm planning to install from scratch Q4th app and development environment instead of restoring it through Desktop, as I think it may a good idea to update any Q4th component.

My question is, after installing libraries from 1.2.1e package and Q4th 1.2.5R, is there any patch, or library modification, or new version of Q4th that I should consider install ?

Thanx in advance,



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 8, 2002 - 04:17 pm:

[Edit](#)

Hi, José. At present you should be fine with the existing libraries, modulo a few bugs as documented in the Wiki. I'm due to re-release the libraries, but would like to do so in conjunction with a new kernel version.

Neal

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New Quartus App - (any beta testers out there?)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Quartus App - (any beta testers out there?)



By [John McKeon \(Jmckeon\)](#) on Sunday, October 6, 2002 - 08:41 am:

[Edit](#)

Hello Quartus community,

I took the big plunge yesterday and released my application on Handango.com. Chalculator - the Chaldean calculator is a numerology calculator which generates a report of some 22 numerological aspects based on birth name and date. You can download it here:

<http://www.handango.com/PlatformProductDetail.jsp?siteId=1&productId=44838>

I'd like to get some feedback from users out there. It's already had 38 downloads in the first 24 hours and, even though it has been tested to a million gremlins ith OS 3.0, 3.1, 3.3 and 3.5 emulator ROMs, it would be nice to hear from real users that it's not crashing their machines 😊

Free registration code to any Quartus Forther who provides some feed back. Of particular interest: Sony Clie, Handera and TRGPro users as I have no emulator ROMs for those. Any Palm IIIc (color) since the 3.5 debug ROM throws some pretty ugly exceptions. The non-debug ROM works fine but it'd still be nice to know it runs OK on the real thing.

Thanks for your help

John McKeon



By [Richard Chamberlain \(Rac\)](#) on Monday, October 7, 2002 - 05:28

am: [Edit](#)

Hi John,

I've just downloaded it and tried it on my IIIc and it works perfectly - I don't know what it all means, but it doesn't crash or generate any errors.

Richard



By [John McKeon \(Jmckeon\)](#) on Monday, October 7, 2002 - 08:41 am:

[Edit](#)

Richard,

Thank you, I am much relieved!

It is a fairly useless bit of code if you're not into Numerology which I am not. I

stumbled on a book in the library and thought this would be a good project to reacquaint myself with Quartus and the Palm OS. After looking at the apps out there I knew there would be a market for it so I turned it into a real app. It sure is exciting!

Thanks again Richard.

John

PS I realize this is not really a Quartus Forth related topic. Any others who might do me the favor of testing the app should probably email me directly, thanks.



By [Mike Adams](#) on Wednesday, November 6, 2002 - 11:03 am: [Edit](#)

I have tried your app. on an M130.

Runs ok.

The custom date selector however allows one to select 31 Feb 1947, which is unusual.

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Any news on QF for Palm OS5??

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Any news on QF for Palm OS5??



By [Chris Bucsko](#) on Thursday, October 3, 2002 - 01:07 pm: [Edit](#)

Sony's just announced the first Palm OS5 ARM based PDA is due out in November. Will there be an upgrade of Quartus Forth any time in the near future? Is there a chance that QF 1.2.5r will run in the OS5 environment, even with restrictions (such as don't use the assembler/disassembler)? I'd seriously consider getting one of these new PDAs, as long as I didn't lose my ability to use Quartus Forth and rsrcredit.



By [Neal Bridges \(Nbridges\)](#) on Thursday, October 3, 2002 - 02:30 pm:

[Edit](#)

Right now, there are issues; I'm working on them. I'll keep you posted!

Neal



By [Chris Bucsko](#) on Thursday, October 3, 2002 - 05:21 pm: [Edit](#)

That's good news. I think having QF available in a 200MHz processor opens up a whole new world of possibilities for Palm programs. We'll be waiting!



By [Dave Ruske](#) on Tuesday, October 29, 2002 - 10:19 am: [Edit](#)

Quick question about the "issues" with QF on OS5... does this also mean that applications built with QF for previous OS versions will have problems on OS5? With the Tungsten now released, I'd like to know what to expect. Can you elaborate a little on where the problems lie?

Thanks,
Dave



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 29, 2002 - 02:18 pm:

[Edit](#)

Hi, Dave. I'm working with OS5 now, determining what I need to do to bring things in line with it.

The new ARM-based gadgets run in 68000-emulation mode, so existing software more-or-less works; anything system-specific, especially accessing memory directly, may fail. Quartus Forth does some of that, so I'm working through it.

I'll keep you posted!

Neal



By [Alex Alava](#) on Friday, November 1, 2002 - 07:54 pm: [Edit](#)

Hi Neal. Will your hacks (Shift and Clear) work with the new OS5 and which hack handler will run on the OS5



By [Neal Bridges \(Nbridges\)](#) on Friday, November 1, 2002 - 10:39 pm:

[Edit](#)

Alex, it's my understanding that hacks, such as they currently exist, are unsupported on the OS5. Each must be re-written as its own application to function.

Whether this is worked-around by the developer community remains to be seen.

Neal



By [Brian Chirgwin \(Bchirgwin\)](#) on Friday, November 1, 2002 - 11:25 pm: [Edit](#)

They might with TealMaster from www.tealpoint.com. New version says it supports OS5.



By [Ron Doerfler](#) on Tuesday, November 12, 2002 - 01:45 am: [Edit](#)

Hi All,

Just had a registered user ask me if one of my apps will run if he buys a Tungsten, so I told him that the issue is being worked--there may be a problem, it sounds like. I've been out of this loop--I see that Palm has a Windows Simulator released for OS5, and maybe an Emulator ROM (still trying to login to the the Provider Pavilion). Any feedback on these--is testing against the Simulator sufficient at all, particularly since the problems may be related to directly writing memory or registers? Also, Neal, do you have any "odds" at all on how likely it would be to fail? I have 1.2.5r that I've been using to compile, and I have a callback in my event handler.

Thanks for any info.

Ron



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 13, 2002 - 12:16 am: [Edit](#)

I don't have an OS5 device yet myself, just the Simulator. I'll know more when I have a device in-hand. Presently, I'm relying on feedback from people who do have them, while I work with the Simulator.

Neal

 By [Ron Doerfler](#) on Wednesday, November 13, 2002 - 06:08 pm: [Edit](#)

Thanks, Neal, for your feedback. I'll run some tests using the Simulator--think that's a sufficient test? I still don't know if there's an Emulator ROM out there--still trying to get my password.

Ron

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 13, 2002 - 06:19 pm: [Edit](#)

No ROM image yet; just the Simulator. I can't speak for its sufficiency -- I think it's likely overly harsh.

Neal

 By [Ron Doerfler](#) on Wednesday, November 13, 2002 - 10:30 pm: [Edit](#)

Ah, thanks, Neal! I'll run my app through some paces with the Simulator.

Ron

 By [Christopher J. Smith \(Missilemax\)](#) on Saturday, November 16, 2002 - 12:09 pm: [Edit](#)

For what it's worth..

I have been running my apps through the simulator, and found they run fine if I uncheck the 'Storage is write-protected' option in the 'memory' settings.

I believe this is just a check the simulator does...and not an artifact of an actual handheld.

-Chris

 By [Steve Bohrer \(Skb\)](#) on Saturday, November 16, 2002 - 02:53 pm: [Edit](#)

Hmm, I think that current 68000-class Palm's have hardware write protection on the storage heaps. Hard to know how the simulator relates to what real hardware might do.



By [Christopher J. Smith \(Missilemax\)](#) on Sunday, November 17, 2002
- 03:54 pm: [Edit](#)

Current palm's do require a call to DmWrite to write to the storage heap. But, my quartus apps (using DmWrite) still crash on the simulator when 'Storage is write-protected' is enabled.

I wish I could get an OS 5 device to do some playing around....

Have any readers tested Quartus Apps on OS 5 devices?

-Chris



By [Neal Bridges \(Nbridges\)](#) on Monday, November 18, 2002 - 03:18 pm: [Edit](#)

Chris, I've had some reports of apps running, such as Benchmark -- it reports 255% on the Tungsten T.

Neal



By [Mutsuhiko Sugaki \(Mutsu\)](#) on Tuesday, November 19, 2002 - 08:20 am: [Edit](#)

I'm an owner of New Sony CLIE NX70V (Japanese Version) and sending this message from Singapore. Benchmark reports 271% on my CLIE but I don't know whether this result is correct or not. Can anybody verify this number?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 19, 2002 - 09:20 pm: [Edit](#)

If that's what it returns, it's correct. Benchmark is too simple an app to give an inaccurate result. It simply measures the amount of time it takes to execute a CPU- and memory-intensive routine, and calculates a percentage from that.

It should be a reasonable indicator of relative performance for apps running under OS5.

Neal



By [Richard Chamberlain \(Rac\)](#) on Friday, December 6, 2002 - 02:32 pm: [Edit](#)

Hello folks,

I've had someone contact me who has Tungsten. Out of the three applications of mine he has tried (Metronome, Static Chicken, Guitar Tuner

Lt.). Fortunately Static Chicken and Guitar Tuner both appear to work fine. Unfortunately Metronome doesn't work properly. There is no sound at all (which is odd because Guitar Tuner uses the same calls) and the screen doesn't repaint properly.

As I don't have a windows machine, testing on the simulator is out of the question.

Any suggestions on how to proceed?

Richard

 By [Gary Wiese \(Garyjwiese\)](#) on Friday, December 6, 2002 - 10:38 pm: [Edit](#)

I just learned today that both my app. work on a new Sony.

Gary W.

 By [Steve Bohrer \(Skb\)](#) on Monday, December 9, 2002 - 12:46 pm: [Edit](#)

Is there any correlation between how apps behave on the 68000 debug ROMS vs how they do on new OS 5 hardware? For instance, on OS3.5 DEBUG ROMs with POSE, Benchmark runs and gives a performance number, but it crashes when it returns from a popup window, such as the Help or About dialogs.

Can anyone who's run Benchmark on an OS5 device confirm that returning from Help and About works?

(I keep wondering if these apparantly bogus problems with the DEBUG ROMs maybe point to real issues, perhaps with future OS compatability.)

 By [Richard Chamberlain \(Rac\)](#) on Monday, December 9, 2002 - 01:06 pm: [Edit](#)

My apologies I was a bit premature in my problems report.. I got back to the user and most of the problems were simply not using the application properly :- (

One of them was an actual bug but it was in 3.5 as well :-/

Apologies again - but I guess that's kind of good news.

Richard

 By [Neal Bridges \(Nbridges\)](#) on Monday, December 9, 2002 - 03:05 pm: [Edit](#)

Steve, the debug ROMs are extraordinarily sensitive; some of what they report is not particularly relevant.

Benchmark may generate errors with some POSE debug ROMs simply because it disables interrupts for the duration of the test, or perhaps because it copies and executes the benchmarking routine from dynamic RAM; I haven't investigated. Certainly it causes no problems on real devices.

Neal



By [Steve Bohrer \(Skb\)](#) on Tuesday, December 10, 2002 - 07:22 pm:

[Edit](#)

The OS 3.5 DEBUG ROM crash when returning from ANY popup form is one we've discussed here before, and it is certainly only on POSE. As you say, the apps on real devices are fine.

Benchmark (and Swatch and any other Quartus apps I've tried) all run on POSE with OS 3.5 debug, until you try to popup any form, including the system Tips window, or alerts. Then, the apps crash when you close the popped-up window. So, with Benchmark, it runs fine on POSE unless you choose Help or About from the menu. These dialogs display properly, but then crash on exit.

I wondered if OS 5 devices might show this same effect.



By [Joe Nasal \(Jsn\)](#) on Tuesday, December 17, 2002 - 08:36 am: [Edit](#)

My application (N.E.T.) has been tested and runs without a problem on OS 5.

Joe



By [Steve Bohrer \(Skb\)](#) on Saturday, December 21, 2002 - 10:57 pm:

[Edit](#)

Palm has a "[Top Ten List](#)" of tips for porting apps to OS 5. Here are a few quotes:

Quote:

#1: Use the latest Palm OS Emulator and the Debug ROMs. Nearly every developer commented on the value of this combination. They stated that they either used Palm OS Emulator and the debug ROMs regularly and therefore had little if anything to change for Palm OS 5, or that once they began using them and

fixing what Emulator revealed, the transition was smooth. Even if your application doesn't use any of the features of newer versions of the Palm OS, always test against the latest available debug version- each new version of the operating system checks for more and more potential pitfalls in your code. One comment from a developer summed up nicely the feelings of these Palm OS 5 pioneers: "We would not recommend even bothering to run under [the Simulator] until you can run cleanly under Emulator."

Quote:

#4: Turn on all the debug checks in the Emulator. A few developers reported turning off some of the checks because "they made use of Emulator pretty annoying." Turn them all on- they are there to save you time and trouble. Nearly every check in the Emulator that causes a warning under Palm OS 4.1 or earlier will result in a fatal alert under Palm OS 5.

Quote:

#7: Watch for frmUpdateEvent events. Some developers noticed that portions of their forms, especially custom drawing or gadget drawing, weren't redrawn by the OS after the form was obscured temporarily by a dialog. This behavior is caused by failure to handle custom drawing in the form's event handler when a frmUdateEvent is sent by the system. The system normally tries to save and restore the obscured bits using an offscreen buffer, unless there isn't enough dynamic heap to allocate the buffer. The reason that Palm OS 5 reveals the problem is because no attempt is ever made to allocate and use the buffer: update events are used to tell your application to refresh the form instead. The problem isn't specific to Palm OS 5 only, however: any device that is low on dynamic memory will exhibit the same behavior. Use of the Emulator and a Palm OS 3.5 or later version of the debug ROMs will also reveal these sort of problems.

We can't currently follow the first two bits of advice with Quartus, due to problems under POSE with debug ROMs. But, the point that most annoying POSE warnings for OS \leq 4.1 become fatals on OS 5 sounds tricky.

As for #7, I've not been coding my Quartus apps this way, but I suppose I can start. In the old 68000 Mac days, standard practice was to do most all drawing in response to update events; perhaps this is the way the Palm OS

is trending.

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Invalid Registration Code

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Invalid Registration Code



By [Steve Graham \(Steve\)](#) on Wednesday, September 25, 2002 - 02:50

pm: [Edit](#)

Neal,

Sent you an e-mail about a problem I'm having with this.

Thanks.

Steve



By [Steve Graham \(Steve\)](#) on Wednesday, September 25, 2002 - 10:30

pm: [Edit](#)

Neal,

I found a thread about a year ago, where I had had a similar problem. Had to do with the Hot Synch name again. All fixed.

Steve



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 26, 2002 - 12:46

am: [Edit](#)

Steve, yes, the registration code matches the HotSync name. Glad you found the answer!

Neal

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Newbie questions

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie questions



By [Amir Yasin](#) on Wednesday, September 25, 2002 - 01:44 am: [Edit](#)

Hi all,

I'm very new to forth, I have typically programmed in C/C++ etc. It seems like a very cool and powerful language, but I have a few questions that are specific to quartus. I apologize in advance if they have been answered before, but I was unable to find a search on the forums.

1. I noticed that there is no support(?) for see. How can I view the source of a word that is being executed to ensure that the right word is being used (as I understand a word will override another word of the same name and everything is late bound).
2. How do I step through the words that are being executed as part of my word on the palm for debugging on-board?
3. The docs indicate that Quartus generates 68k asm code. What is the future plan to target other processors (i.e. xscale)?

I have more questions of course, but these are the ones that are most burning right now 😊.

Thanks,
Amir Yasin



By [Kris Johnson \(Kdj\)](#) on Wednesday, September 25, 2002 - 08:41 am:

[Edit](#)

1. To use SEE, you have to load the disassembler with "needs disasm". You won't see the source, but you will see disassembled word definitions, with some of the instructions converted to Forth equivalents.
2. There is little support for onboard debugging. People generally do low-level debugging using the Palm Emulator. See the following topics in the wiki for some suggestions:
 - <http://kristopherjohnson.net/wiki/QuartusForthDebugging>
 - <http://kristopherjohnson.net/wiki/DeBuffer>

3. Neal Bridges has indicated some intention to support PalmOS-on-ARM development. He has not indicated any intention to port Quartus to non-PalmOS platforms, although the subject does come up once in a while.

-- Kris



By [Amir Yasin](#) on Wednesday, September 25, 2002 - 01:21 pm: [Edit](#)

Kris,

Thanks for the great info. I'll also check out the rest of your site, looks like a lot more great information there.

Thanks,
Amir Yasin



By [Mikael](#) on Monday, September 30, 2002 - 06:52 am: [Edit](#)

Hello,

I recognize my self, and agree, with Amir. Also I like to bridge over to building GUI applications. I'd like to see a simple tutorial using Quartus Forth and Palm PilRC to build an application. I like to see the focus on the "linking" together the Forth/Quartus code with the PilRC GUI resource definition.

Please provide links to suitable material.

Thanks /Mike



By [Steve Bohrer \(Skb\)](#) on Wednesday, October 2, 2002 - 03:34 pm: [Edit](#)

In Quartus, during development, you use an external resource database, from which you can get resources by type and ID. To use a resource file, you use the "use-resources" word to open it within Quartus. This word is documented on <http://www.quartus.net/products/forth/manual/libdocs.htm>

It is certainly possible to create your resource database with PilRC. Once you have created it, hotsync it into your handheld, and then you can use "use-resources" to open it.

Instead of using PilRC, you can also create resource files on-board on the handheld using [Quartus RsrcEdit](#). Again, after creating the file, you need to call "use-resources" to use it.

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Pieces of code in the PRC-file

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Pieces of code in the PRC-file



By [Frank](#) on Tuesday, September 24, 2002 - 12:11 pm: [Edit](#)

Hi Neal,

I've seen that there are pieces of programming-code in the PRC-file that I compile using quartus. I found it in the record named DATA using rsrcedit. It were exactly the pieces that I didn't want to show to anybody. What is this used for?

Frank



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 24, 2002 - 01:57 pm: [Edit](#)

The DATA record is an image of dataspace at the time of compilation. What would be in it that you wanted to hide?

Neal



By [frank](#) on Tuesday, September 24, 2002 - 04:15 pm: [Edit](#)

Some security code, neal. it seems to exactly copy my security scheme. (against piracy)



By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 25, 2002 - 02:48 pm: [Edit](#)

Frank, aside from perhaps the last line of compiled code, there'll be nothing in dataspace that you didn't expressly put there. I'm not sure how you're implementing your security scheme, but if it relies on cleartext that's in dataspace, then that will be visible in the resulting PRC.

Neal



By [Frank](#) on Wednesday, September 25, 2002 - 03:28 pm: [Edit](#)

Neal,

I don't really know what's wrong, but it shows some pieces of code after the message 'Last error'

But the piece it displays is not the last error.

It is not really a big problem, I was just curious. (I typed something else over it)

I released the full version of my game yesterday. I am very glad with my purchase of Quartus.

Thanks for everything Neal.



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 26, 2002 - 12:53 am: [Edit](#)

Frank -- glad to hear that! Is it up at PalmGear, or elsewhere?

Neal



By [Christopher](#) on Sunday, September 29, 2002 - 10:30 pm: [Edit](#)

If you don't clear out the data space with nulls or something else, it'll have in it, whatever was there when you compiled your program, and often you won't put anything into these variables until your program is ran.

example:

variable whatwashere

now whatwashere is still whatever was there....

if you use lots of variables and buffers, sometimes complete pieces of data from other applications or database may be left in that memory.

Try using:

variable whatwashere 0 whatwashere !

now all they'll see is zeros.



By [John Newell](#) on Monday, September 30, 2002 - 06:33 am: [Edit](#)

To initialise data space (to zeroes):

here

<user defined variables>

.

.

here over - 0 fill

Regards

John



By [Frank](#) on Monday, October 7, 2002 - 01:43 pm: [Edit](#)

Neal,

sorry, I was not on quartus.net for a while.

You can find the App at
home.wanadoo.nl/ph21/frenk/

I think I have some 2000 users now. It is indeed on PalmGear.

Good luck with the ARM-work. I think, with an ARM-processor, I might finally get my 3D program to work at proper speed 😊 (If you remeber the loooong 'drawing a point to the screen' discussion)

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Color bitmap

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Color bitmap



By [Frank](#) on Saturday, September 21, 2002 - 08:03 am: [Edit](#)

Does someone know how i can colorize my bitmaps? i have a palm IIIc i think it has 256 colors. the standard bitmap word provides only black and white. thanks frank



By [Kris Johnson \(Kdj\)](#) on Saturday, September 21, 2002 - 10:09 am:

[Edit](#)

I haven't tried this stuff out with color, but it might work:

<http://kristopherjohnson.net/kj/BmputilModule>

Please let me know if it does work.

-- Kris



By [Frank](#) on Saturday, September 21, 2002 - 11:37 am: [Edit](#)

Kris,

the link doesn't work. Frank.

I've been reading your bitmapmgr notes in the wiki, but i couldn't really understand it.



By [Frank](#) on Saturday, September 21, 2002 - 01:23 pm: [Edit](#)

I found Jim Hendricks' addaption to the standard BitMap library word. I think that is what I was looking for. But I don't understand how to define the bitmap itself now (all I get are some seemingly random coloured points).

Could someone give an example of a coloured bitmap?

BTW There was a small error in his description of the word. depth can be 1 2 4 or 8
and not 0 2 4 or 8.

So the standard-bitmap word he defines won't work.



By [Kris Johnson \(Kdj\)](#) on Saturday, September 21, 2002 - 03:00 pm:

[Edit](#)

Sorry, the link should be <http://kristopherjohnson.net/wiki/BmputilModule>.

I think that the draw-bmp-rsrc word can be used to draw a colored bitmap resource. I think creating bitmaps as resources (using RsrcEdit) is a lot easier than trying to define the pixels in code.

-- Kris



By [Jim Hendricks \(Jimh\)](#) on Saturday, September 21, 2002 - 08:35

pm: [Edit](#)

Frank,

The error you point out is just in the comment associated with the bitmap word, I seem to recall testing it at each mode without problems.

As to how to use:

\ include the lib

\ renamed from module posted on Wiki
needs BIZBitmap.lib

\ module provided from Quartus.net library
needs color

\ a defining work to build 8x8x8 bitmaps
: cimage ("name" --)
decimal 1 8 8 8 cbitmap hex ;

\ create a bitmap with the following bit data

cimage brickwall

0d77d, 07d7d, 0d77d, 07d7d,
0d7d7, 0d7d7, 0d7d7, 0d7d7,
07d7d, 0d77d, 07d7d, 0d77d,
0d7d7, 0d7d7, 0d7d7, 0d7d7,
0d77d, 07d7d, 0d77d, 07d7d,
0d7d7, 0d7d7, 0d7d7, 0d7d7,
07d7d, 0d77d, 07d7d, 0d77d,
0d7d7, 0d7d7, 0d7d7, 0d7d7,

\ set 256 color mode

\ would be wise to check if

\ 256 color mode is supported

8 color-depth

```
\ display bitmap @ 40,20  
20 40 brickwall
```

One thing to note: This module does not change the standard pallet. If I recall correctly, you have to swap out the pallet with your own pallet if you want your bitmap to display colors not in the standard pallet. The bitmap data itself is nothing more than 8 bit indexes into the pallet table to determine the color at each pixel.

Hope this helps.

Jim



By [Jim Hendricks \(Jimh\)](#) on Saturday, September 21, 2002 - 08:39

pm: [Edit](#)

BTW, I would agree with Kris that using bitmap resources are a lot simpler than defining the bitmap in code. I wrote the mods to the bitmap module before either rsrcEdit or pilrc supported color. By using rsrcEdit you gain the advantage of drawing your bitmap rather than plotting it on graph paper & converting it into the necessary bit patterns. Additionally, rsrcEdit gives you the advantage of using bitmap families and compressed bitmaps, both of which would be much more complicated to replicate in code everytime you need a bitmap.

Jim



By [Frank](#) on Monday, September 23, 2002 - 03:30 am: [Edit](#)

Thanks Jim and Kris,

My strategy is as follows:

I am writing my own bitmap-design program. After that I let the program write a memo with the bitmap-code in it. This code I then copy-paste into the program that needs the bitmap.

I am doing this because I intend someone else to design nice bitmaps for me. If anyone would be interested in the program I would be happy to post it here.

Frank



By [Frank](#) on Monday, September 23, 2002 - 02:32 pm: [Edit](#)

I've got it working Jim, Thanks.

I don;t understand what the zero's in front of the hex-numbers in the

bitmap-definition are for, but I guess there is a reason for it. Is there?



By [Andrew Johnson](#) on Monday, October 28, 2002 - 07:52 am: [Edit](#)

Kris,

I tried your coded example to load and display a bitmap resource on RsrcutilModule WIKI page.

I get an "Exception 528 raised" report. which just threw me back to the console.

Code used was:

```
\ RsrcTest by Kris Johnson  
\ exercise in plotting resource files  
\ from running code
```

```
needs rsrcutil  
needs ids
```

```
: draw-bitmap ( y x BitmapPtr. -- )  
WinDrawBitmap ;
```

```
\ Draw the bitmap with res. ID 1000 at (10, 20)  
20 10 1000 (id) Tbmp ' draw-bitmap with-rsrc
```

```
: go ( -- )
```

```
20 10 1000 (id) Tbmp ' draw-bitmap with-rsrc ;
```

Have I missed something? How does the program know which database to pull the resource from?



By [Steve Bohrer \(Skb\)](#) on Monday, October 28, 2002 - 11:33 am: [Edit](#)

At the console, you need a "use-resources" line to open the resource file you need. The system resource routines look in all open resource files, starting with the most recently opened; thus, opening the file tells the program "which database to pull the resources from."

Typically, when you make a stand-alone executable, you copy all the necessary resources to the application file, which the system opens for you when it launches the application. Thus, in the actual application, use-resources is not necessary.

Do you have the C language SDK header files? These define the error codes

that you see when errors are thrown.

"ErrorBase.h" tells that codes starting at 512 are the data manager's "dmErrorClass". Then, "DataMgr.h" tells us that dmErrResourceNotFound is (dmErrorClass | 16), or 528.

So, you are correct that the problem is your program can't find its resource.



By [Andrew Johnson](#) on Monday, October 28, 2002 - 07:57 pm: [Edit](#)

Steve,

I got it working! I put the resource line in with an ID to a unique resource database and it worked. As soon as I put the code inside a definition however, I got stumped on the syntax of vectored? execution. The Tbmp word after the ' is not recognised and so it stops loading.

I can't quite work it out. Can I have some more help please?



By [Andrew_J](#) on Monday, October 28, 2002 - 10:19 pm: [Edit](#)

Steve:

I got it working. Just couldn't give up until I had those little icons all over the screen.

I'm still interested in reading about vectoring if you know a good reference.

Thanks again.



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 29, 2002 - 12:17 am: [Edit](#)

It might be helpful to others if you update the RsrcutilModule wiki page to describe anything that wasn't clear.

There are some words in the BmputilModule that are easier to use if you just need to draw some bitmap resources. Rsrcutil is a pretty low-level module.

I suspect that you may be the first person other than me to use these modules, so you are in uncharted territory. Good luck, and let me know if you find any bugs.

Glad to hear you got it working,

-- Kris

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Pop-up windows displaying scrollable text

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Pop-up windows displaying scrollable text



By [Andrew Johnson](#) on Thursday, September 19, 2002 - 09:51 am: [Edit](#)

I want to write some code to pop-up a window and display some text. I would like to have a scroll bar if there is more than one screen of information. I have RsrcEdit to create the forms etc.

Does anybody know of any Quartus Forth example code I can read to work out how to do this?



By [Joe Nasal \(Jsn\)](#) on Thursday, September 19, 2002 - 09:56 am: [Edit](#)

Andrew:

Here's a recent thread on using a scroll bar resource:

<http://www.quartus.net/cgi-bin/discus/show.cgi?23/1819>

Joe



By [Andrew Johnson](#) on Thursday, September 19, 2002 - 10:18 am: [Edit](#)

Joe:

Your link seems to bring me back to this same screen. Did you give me the correct link?

Thank you, Joe.

Andrew



By [Joe Nasal \(Jsn\)](#) on Thursday, September 19, 2002 - 10:21 am: [Edit](#)

Oops, sorry. Search the Wiki for "Scrolling & synching text fields" from April of this year.

Joe



By [Andrew Johnson](#) on Thursday, September 19, 2002 - 10:31 am: [Edit](#)

Joe:

I got it this time. Thanks

Andrew

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PopupForm and FrmReturnToForm problem

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): PopupForm and FrmReturnToForm problem



By [BarryFernelius](#) on Wednesday, September 18, 2002 - 06:11 pm: [Edit](#)

I'm having trouble using PopupForm and FrmReturnToForm. Here's a snippet of my code:

```
: HandleModalBtns ( itemid -- )
  cond
    dup BtnA = if DoBtnA
  else dup BtnB = if DoBtnB
  else dup ModalOK = if -1 MClosed !
  thens drop ;

: do-modal-event ( ekey -- )
  ctlSelectEvent =
  if event >abs itemid HandleModalBtns then ;

: ModalEventLoop ( -- )
  begin ekey do-modal-event MClosed @ until ;

: DoModalDialog
  0 MClosed !
  ModalForm PopupForm
  InitializeModalForm
  ModalEventLoop
  MyForm FrmReturnToForm
  Re-drawMyForm ;

: HandleCtrls ( -- )
  event >abs itemid
  item>button do-button-main ;

: HandleMenu ( -- )
  event >abs itemid ModalDMenu =
  if DoModalDialog
  then ;

: initialize-main ( -- )
  get-preferences
  MyForm ShowForm
  ['] simple-handler eventhandler !
  Re-drawMyForm ;
```

```
: do-main-event ( ekey -- )
  cond
    dup   ctlSelectEvent = if HandleCtrls
  else   dup   menuEvent   = if HandleMenu
  thens drop ;
```

\ Main entry point:

```
: go
  initialize-main
  begin ekey do-main-event again ;
```

The program initializes correctly, and displays MyForm correctly. The controls within MyForm all perform correctly. When I select the menuItem called ModalIDMenu, the modal form appears. The controls for the modal form also work correctly. Right after I hit the OK button on the modal form, the modal form vanishes, but there's a RESET button in the middle of the bottom of the original form. (Probably there's a fatal error of some kind requiring a reset.) The original form does not re-draw. The only way to get out is to press the RESET button or perform a soft reset.

I've searched for PopupForm and FrmReturnToForm on the discussion forum and the Wiki site, but I can't see what I'm doing wrong.

Help!

-Barry R. Fernelius



By [jmckeon](#) on Wednesday, September 18, 2002 - 10:32 pm: [Edit](#)

Barry,

Look at your modal form in RsrcEdit. Make sure the SaveBehind checkbox is checked. This tells the OS to save the bits behind it to redraw when FrmReturnToForm is called.

HTH

John



By [BarryFernelius](#) on Wednesday, September 18, 2002 - 11:03 pm: [Edit](#)

John,

The SaveBehind checkbox was checked on the main form, but it was not checked on the modal form. I modified it as you suggested. I also wrote a

parallel word to PopupForm as follows:

```
: ReturnToForm ( formID -- )  
  dup FrmReturnToForm until-drawn ;
```

I added this word to the Forms memo in the Library. And now, everything works!

Thanks John!

-Barry R. Fernelius



By [Steve Bohrer \(Skb\)](#) on Wednesday, September 18, 2002 - 11:05

pm: [Edit](#)

Barry, what does your simple-handler do? In general, as far as I know, this usage is obsolete, although it used to be necessary for menu handling, so it is shown in some of Neal's examples.

A possibly related case: I had a crash after returning to the main form from a popup when my main form was calling EvtGetEvent directly and then calling handleEvent.

The problem was that my popup handler called ekey, so it filled in the global event structure with the data about events relative to the popup, and these events were fully processed by ekey.

But, when I returned to the main form, at the bottom of my main form event loop I called handleevent on the leftover event from the popup form, and this led to errors and crashes.

There may be a similar situation when you return to the main form if your simple-handler gets called for an event that was specific to the popup. Perhaps not; maybe the handler is called only within ekey.

Also possible is trouble with the callback if the OS code that calls simple-handler uses A4.



By [BarryFernelius](#) on Thursday, September 19, 2002 - 10:57 am: [Edit](#)

Steve,

I'm using the version of simple-handler from the library:

```
\ simple-handler  
\ 99.3.4 7:53 pm NAB
```

```
3000 constant AboutBox
3001 constant HelpString

2001 constant AboutMenuItem
2002 constant HelpMenuItem
```

```
\ Event handler:
needs Events
```

```
: simple-handler
( &event. -- &event. )
callback
2over @a menuEvent = if
  2over itemid
  dup AboutMenuItem = if
    AboutBox FrmAlert drop
    true handled
  else
    dup HelpMenuItem = if
      HelpString FrmHelp true handled
    then
  then drop
else false handled then
end-callback ;
```

It handles the standard AboutBox menu item, and the HelpMenuItem. It seems to let other events, including menu events, pass through.

I'm using it because that's how my application framework (based on a number of examples on this website and the Wiki) was built.

Is the current 'best practice' to use ekey for all events, including the menu events for the AboutBox and HelpMenuItem? If so, how would I, a newbie, know that this is the case?

-Barry



By [Steve Bohrer \(Skb\)](#) on Friday, September 20, 2002 - 09:28 am: [Edit](#)

I can't say for sure what is a widely held "best practice". When I started, I looked at the Swatch source, which handles menus directly via Ekey rather than with simple-handler. The Swatch source is available in the files area, but is not listed directly on the sample source page.

The Library Files page of the manual says

Quote:

simple-handler: A menu handler used in the sample sources. No longer necessary, as menu events are now passed directly to the application via EKEY. The sample sources will soon be updated.

I suspect this is what led me to the Ekey approach, but I can't say for sure. Your point that is hard to discover this information is a good one. You might add a note about this to the wiki.

As for how to do the menus with Ekey, the basic idea is to just add a check for MenuEvents to your event handler. Here's an excerpt from Swatch.txt that shows the scheme:

```
2001 constant AboutMenuItem
2002 constant HelpMenuItem
2003 constant ConvertMenuItem

: help/about ( -- itemid )
  event >abs itemid cond
  dup AboutMenuItem = if
    AboutBox FrmAlert drop
  else dup HelpMenuItem = if
    HelpString FrmHelp
  thens ;

: do-menu ( -- )
  help/about cond
  dup ConvertMenuItem = if
    call-converter
  thens drop ;

: handle-event ( eventType -- )
  dup nilEvent = if show-time then
  dup menuEvent = if do-menu then
  ctlSelectEvent = if do-control then ;
```



By [Neal Bridges \(Nbridges\)](#) on Friday, September 20, 2002 - 01:17

pm: [Edit](#)

The sample sources will soon be updated, eh? I'd better do that -- unless someone would like to undertake it as an exercise.

Neal



By [BarryFernelius](#) on Friday, September 20, 2002 - 02:28 pm: [Edit](#)

Steve and Neal,

Thanks so much for the information. I'll update all of my apps so that the

simple-handler is no longer used. This should also make my code cleaner and easier to read.

This list is a gold mine of Quartus Forth information!

-Barry Fernelius

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Quartus has stopped working

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Quartus has stopped working



By [David Major](#) on Wednesday, September 18, 2002 - 05:44 am: [Edit](#)

Hi folks. First, got to say that Quartus is a cool app, that I've been enjoying playing with on my Vx. I've done the tutorials, enough to realise that Forth is a pretty interesting language, well worth learning. Right up there with Smalltalk. I was just about to embark on my first project. However, it's gone and busted on me :-0 After performing perfectly until now. When I enter anything at all into the workspace, e.g. 2 3 +, and then hit enter, there are a few words ... something about "evaluation version" that appear in the top right hand corner of the otherwise blank screen, and the unit is frozen, and needs a pin reset. I've reinstalled Quartus, and deleted and reinstalled all the libraries in the Memopad Forth category. What else can I do? Has some bit been set somewhere that I can undo? I can give a more detailed rundown if necessary, but that's the guts of it.



By [David Major](#) on Friday, September 20, 2002 - 05:42 am: [Edit](#)

OK guys, you can stop clamouring for the microphone. I solved it by reinstalling mathlib.prc. Something must have garbled its synapses. Everything works fine now. OK, back to forthing...



By [Neal Bridges \(Nbridges\)](#) on Friday, September 20, 2002 - 01:17 pm: [Edit](#)

David, sorry for the silence on your question; I'd made a note to follow it up and it got past me.

Glad you sorted it out!

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

How can I get form and object information from a .prc file

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): How can I get form and object information from a .prc file



By [ccst](#) on Tuesday, September 17, 2002 - 01:00 pm: [Edit](#)

I want to write a program can checking information on user difined forms, but I don't know how to get object id's for user difined forms and how to get form id's in prc file. I found on board resource editier can do it very well, can anyone tell me how? I can't find enough information from Palm Developer Page



By [John Newell](#) on Friday, September 20, 2002 - 08:16 am: [Edit](#)

ccst,
The SDK defines a number of Dm functions to access resources in a resource database. e.g. DmFindResourceType, DmNumResources, DmGetResourceIndex.

Regards
John

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

GRAPHIC HOTSPOTS WITHOUT USING RESOURCES

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): GRAPHIC HOTSPOTS WITHOUT USING RESOURCES



By [Andrew Johnson](#) on Monday, September 16, 2002 - 12:20 am: [Edit](#)

I have been studying the LINES141 game written in Qforth. I want to generate graphics and attach hotspots to places on a vector map.

I can't see how this program catches the penDownEvent when a square is touched.

Can anybody help me?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 17, 2002 - 08:14 pm: [Edit](#)

Andrew, I haven't looked at the Lines source for some time. Rather than dig it out --

To trap the penDownEvent, you use EKEY, and watch for the right event. The Lines source may be using the numerical value of the penDownEvent instead of the name, and that may be why you're confused.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, September 18, 2002 - 08:48 am: [Edit](#)

In the wiki, there is a simple example of checking for pen taps within rectangles:

<http://kristopherjohnson.net/wiki/RegionTappingAndSimpleInvert>

-- Kris



By [Andrew Johnson](#) on Thursday, September 19, 2002 - 09:54 am: [Edit](#)

Kris and Neal,

Thank you for your replies. I now have what I need.

Your support is fanastic.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Fatal Exception

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Fatal Exception



By [Ronny Svensson](#) on Saturday, September 14, 2002 - 08:14 am: [Edit](#)

This is very common when programming on the Palm. I wonder if someone have made some code to catch exceptions and show what forth code that was executing. On other Forth systems I have used in the past there often was some word called Unravel that displayed what words were on the return stack. I suspect that a common exception is address-error as the 68000 doesn't like word accesses on odd addresses. It would be nice to be able to do a 1 @ and get a printout of the stack and the nested words on the return stack instead of a Fatal Exception...

Ronny

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Silk screen button list

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Silk screen button list



By [mike miller](#) on Tuesday, September 10, 2002 - 07:46 pm: [Edit](#)

Help!!!!

Please... Could someone enlighten a newbie how to access the pen button list? The Palm API reference has a command "EvtGetPenBtnList" that says it gets a pointer to the silk-screen button array, and shows the basic structure. Quartus also has this command as a Palm SysTrap. Could someone describe how to use this command, how to read the button list and how to modify it? Now I confess... I am using a Handera 330 which has it's own defined Silk API's but I suspect that they are similar in use. The most immediate problem I'm stymied over is that neither "EvtGetPenBtnList" or the handera "SilkGetButtonList" appear to put anything on the stack. A0 and D0 don't seem to be changed either. Btw I'm using the following code of Neil's to access the handera API, and the "visible stack" to watch the results.

needs asm68k

```
code >d2
prefix
move .w TOS d2
] drop [
end-code inline
```

```
\ SilkGetButtonList
: Sgbl
(hex) 0707 >d2
(hex) a349 systrap ;
```

Thanks
Mike Miller



By [mike miller](#) on Thursday, September 12, 2002 - 11:28 pm: [Edit](#)

I guess if I keep working on this i'll wind up answering my own questions. Well, I found the solution to getting the size of the pen button list, it was in the wiki explanation of how systraps work. The code I had just needed a couple of additions: added "true" to send a flag for maximized, the "drop" which clears the stack, "D0" which moves the data the API places on the D0 register to the stack, and "drop" that clears the top cell of the 16 bit data.

Whew! So now I'm getting some data. At this point I don't if it is valid. That raises the next question; the palm and handera literature says the "evtgetpenbtnlist" or "Silkgetbuttonlist" returns a pointer to the button array. If I use the same logic as the button list size API, the system crashes.

Does anyone have any experience with silk button lists or offer any suggestions?

Thanks

Mike Miller

```
\ gbls  
\ get buttons list size
```

needs asm68k

```
code >d2  
prefix  
move .w TOS d2  
] drop [  
end-code inline
```

```
: gbls ( -- )  
true  
(hex) 070C >d2  
(hex) a349 systrap  
drop  
d0 drop ;
```



By [John Newell](#) on Friday, September 13, 2002 - 08:02 am: [Edit](#)

Mike,

If you are just trying to find out if the user selects one of the soft keys you could use `KeySetMask` to set the `commandKeyMask` (hex 8) [See `SysEvent.h`]. Then when you receive a `PenDownEvent` in your event loop, generated when the silk screen button is selected, it would return a `virtualKeyCode` [See `Chars.h`] which would identify which silk screen button had been selected.

I HAVEN'T tried this myself but that's how I read the SDK documentation.

(Don't forget to reset the mask before leaving the program.)

Regard

John



By [mike miller](#) on Friday, September 13, 2002 - 08:55 pm: [Edit](#)

I might be able to use some of this but what I'm really trying to do is to write my own user defineable virtual keyboard for the handera. There is a qwerty one which works pretty well but never being satisfied with the norm I have to try this. Their SDK shows how, sort of, if you understand "C" which I don't. Their documentation is very lacking, and they don't have any other literature that explains more; I asked. So a little at a time.

Thanks all the same though

And for what it's worth I'll share what I learn with anyone who may be interested or trying to do the same thing.

Thanks Again

Mike Miller

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Hardkeys

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Hardkeys](#)



By [Frank](#) on Tuesday, September 10, 2002 - 07:39 am: [Edit](#)

Is it possible to get control over the hardkeys? keydownevent does not discriminate between different keys. i would like to use up- down- phonebook- and todo-key seperately.



By [Kris Johnson \(Kdj\)](#) on Tuesday, September 10, 2002 - 10:22 am:

[Edit](#)

See <http://www.palmos.com/dev/support/docs/palmos/KeyManager.html>

and

<http://kristopherjohnson.net/wiki/KeysModule>

-- Kris

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Constant

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Constant



By [Frank](#) on Monday, September 9, 2002 - 03:26 am: [Edit](#)

When i make use of a constant, will quartus INLINE the value or will it only INLINE a pointer to the value?

Might seem trivial but it realy isn't.



By [Kris Johnson](#) on Monday, September 9, 2002 - 03:50 am: [Edit](#)

Quartus inlines constants.

In other words, this:

```
5 constant five
```

```
6 constant six
```

```
: 5+6 five six + ;
```

is equivalent to this:

```
: 5+6 5 6 + ;
```

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, September 9, 2002 - 03:57 am: [Edit](#)

By "equivalent" above, I mean it compiles the same code for the definition of 5+6.

Use of a constant takes no data space, but it does use code space for the definition. If you SEE the definition of a constant, it appears that this:

```
5 constant five
```

is compiled exactly as if you had written this:

```
: five 5 ; inline
```

-- Kris



By [Frank](#) on Monday, September 9, 2002 - 05:12 am: [Edit](#)

thanks kris. i got it. i want to use it for software protection. i thought it would be like this but wasn't sure.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Software protection.

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Software protection.



By [Frank](#) on Thursday, September 5, 2002 - 01:22 am: [Edit](#)

Could someone give some hints on software protection? are there any DO's and DONT's ? i am thinking about asking the hotsync name and doing something with it. i already saw that one can read and change a string in a prc using rsrcedit. so just comparing the hotsync name with a simple string is a DONT.



By [Joe Nasal \(Jsn\)](#) on Thursday, September 5, 2002 - 09:22 am: [Edit](#)

Frank:

There is some good discussion on this in the archives. I think you'll want to do a cost / benefit analysis with any scheme that you think about implementing -- cost being things like dictionary space and complexity to your user, benefit being "hackability" or lack thereof.

As you've stated, a simple string compare is fairly hackable for a sophisticated user. In my application "N.E.T." I've taken the hotsync user ID and converted it into a hash value using a fairly simple formula -- not quite $A=1, B=2$, etc., but you get the idea. Be creative here.

To register, I ask the user to then input this value. My typical registration key is 7-9 digits in length, which gives me a reasonable bit of security although nothing stops a potential cracker from trying to "brute force" the key except time to enter each of the million or so combinations... Additionally, if someone wants to take the time to reverse engineer my hashing algorithm once they've registered I can't stop them. NSA-proof security this is not... 😊

I have annoying popups which remind the user to register if they have not already done so. I also provide the user with a license file in the N.E.T. distribution which states that the software is free to evaluate for 30 days, after which they must register.

Here's another thought I'd had as well: it may make sense to put your authentication scheme (request for user authentication) INLINE in several places throughout your application. If you implement as a single word a hacker need only track down this bit of code and change your compare of user input-to-hash value to "success if not equal" from "success if equal". If you spread this out a bit throughout your app, though, each one of these

routines would need to be tracked-down and changed.

Joe



By [Frank](#) on Thursday, September 5, 2002 - 05:28 pm: [Edit](#)

Thanks joe ill think this over a little....



By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, September 6, 2002 - 05:58 pm: [Edit](#)

Just a couple more cents worth on the topic...

I tried a registration code scheme along the way but found it to be a lot more of a hassle than I planned - mostly due to incorrect Hotsync names being given by users (far more often than I would have guessed). In the end, I went to an evaluation timer based on the 30-day timer that Erwin Schomberg posted a couple of years ago. That way I could allow a fully-functional evaluation period, no nag popups, and the software simply exits if it is expired. I found it to be a lot easier to use.

Barry Ekstrand



By [Kris Johnson \(Kdj\)](#) on Saturday, September 7, 2002 - 10:39 am: [Edit](#)

Barry, does that mean you send a non-expiring non-crippled version of the application to registered users? If so, do you do anything to discourage copying of it?

-- Kris



By [Jim Purdy](#) on Saturday, September 7, 2002 - 04:03 pm: [Edit](#)

No, do not send a non-crip version. It will end up on a warez site in a minute. I have had a bit of trouble with syncnames too and found that users really don't know what a sync name is.

ProStats uses a code calculated from the sync name. Either no one is interested, or it is tough, but I haven't seen it cracked.

my2C

Jim



By [Kris Johnson \(Kdj\)](#) on Saturday, September 7, 2002 - 07:35 pm: [Edit](#)

One way around the "users don't know their names" problem is to have the application itself generate a hash code of the name, and then users send

that code in when they register and then get a full registration code in return.

-- Kris



By [Frank](#) on Monday, September 9, 2002 - 03:24 am: [Edit](#)

Good Idea Kris, might do something like that...



By [Hans Nordstrom](#) on Monday, September 9, 2002 - 04:33 pm: [Edit](#)

Users Hotsync name is an eternal question for developers. Some people has given it a thought and made utilities. Here are some of them:

[Bad Code Generator](#)

[HotSync Name verifier](#)

[RegAid](#)

[Hot Sync name](#)

[UserName](#)

Maybe it's asking to much of a user to load an extra program for just digging out the real Hotsync name?



By [Joe Nasal \(Jsn\)](#) on Monday, September 9, 2002 - 04:45 pm: [Edit](#)

Both PalmGear and Handango supply the user's HotSync Name with the payment verification message -- they require the user to submit this with an order.

When I generate my "thank you for purchasing" message I state:

Your license key is: 12345

For Hotsync User ID: John Smith

...

So, if the key doesn't work the user has been informed that the generated key is associated with a *particular* User ID, which gives them a place to troubleshoot before they ask me to re-gen a key.

I have had approx 1% of my users send me a bad UserID. Then again, my application is of a technical nature... Maybe ignorance with respect to Hotsync User ID is more prevalent amongst non-technical users...?

It would be *really* easy to pop the HotSync user ID into a field in the "please register" dialogue within an app.



By [Wade Carlson](#) on Monday, September 9, 2002 - 06:22 pm: [Edit](#)

My application lists the HotSync username right next to the space where they enter the registration code. AND, when I send out the registration code via email, I state that it is based on the username that they submitted (i.e. John Smith). I still get lots of mistakes, though. I guess some people just don't get it.

Even more frustrating, is when I get users that have 'upgraded' to a new palm and their registration code doesn't work anymore (because the new palm has a different username). I get these emails all the time. Do most of you honor this 'upgrade'?



By [Mark Browne \(Markbrowne\)](#) on Tuesday, September 10, 2002 - 04:41 am: [Edit](#)

I think that the thing to do on upgrades is to check that the user name is similar to the old one - I changed mine from Mark to MarkBrowne, and CESD updated my DateBk3 registration without a murmur. However, if I had changed it to something less related, then I would not have asked him to change it.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, September 10, 2002 - 05:26 pm: [Edit](#)

Kris,

My evaluation versions are fully functional, non-crippled in any way. They use Erwin's timer routine, which checks the system time at startup and, if it is the first time, remembers it as a variable. After that, it compares the current startup time to the first one, and determines if less time than the evaluation period has elapsed. If so, the program continues; if more time has elapsed, a message alert informs the user and the program exits cleanly. It is a simple way to give users a set period to use the program with all functions intact. I found it to be much simpler and made people much happier than messing with registration codes.

Barry



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, September 10, 2002 - 05:32 pm: [Edit](#)

A couple other comments on timer vs. registration codes: when I used registration codes I felt obligated (obviously) to send codes out each day for those that registered...only fair since they paid! However, with the timer routine I could let the site fulfill the order directly, so the only thing I needed to send was a thank-you note, and no one was bothered if I chose

to do that weekly instead. So the maintenance effort was much less without even considering the bad HotSync names (which probably ran closer to 5% for me).

I also saw cases where Palmgear wrote the HotSync name down wrong - it was obvious when comparing to the user's name and e-mail address - so the timer effectively negated that potential lack of quality control.

Barry

 By [Gary Wiese \(Garyjwiese\)](#) on Tuesday, September 10, 2002 - 07:11 pm: [Edit](#)

Barry, was your software copy protected in some way? Could someone buy a registered copy and send it or beam it to all his friends? Just curious.

Gary

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, September 12, 2002 - 03:47 pm: [Edit](#)

Gary,

I used a special copy protection scheme called the conscience. 😊 After trying registration codes and the time demands to deal with them, I just went with the honor system. I sent a note of thanks to registered users and asked them not to copy / give away. I suspect the amount of cheating isn't real high, probably even less on the charitable shareware stuff since it is seen by many as a donation to JDRF. I may be naive, but it seemed to work okay.

Barry

 By [Joe Nasal \(Jsn\)](#) on Friday, September 20, 2002 - 03:12 pm: [Edit](#)

There is some discussion on this here:

<http://groups.yahoo.com/group/palm-dev-forum/messages/63043>

Including a pointer to a paper by PalmOS programming giant Aaron Ardiri:

<http://oasis.palm.com/dev/kb/papers/2169.cfm>

Ther paper is **very** good -- anyone interested in this topic should read it. Aaron even discusses the concept of putting registration code `INLINE` so as to force more code changes by a hacker. Nice guess on my part... 😊

Aaron has commented that excellent copy protection under PalmOS takes an average hacker hours to break, while run-of-the-mill stuff takes minutes.

As the old saying goes, "A lock only keeps honest people honest..."

Joe

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Looking for beta-testers -- almost a new quartus-app....

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Looking for beta-testers -- almost a new quartus-app....



By [Frank](#) on Monday, September 2, 2002 - 06:54 pm: [Edit](#)

If you like strategy-games, or you know somebody that does, please visit:

<http://home.wanadoo.nl/ph21/frenk/>

I know this is not a very original game. But I enjoyed programming it so much... I hope you like playing it,

Have fun playing PalmWars !

Please mail me any comments. Please mail any complaints. If you dont understand the game, if you have problems receiving it, if you get a reset... if anything odd happens... mail me.



By [Frank](#) on Tuesday, September 3, 2002 - 02:25 am: [Edit](#)

Oh yes, and something else,

could someone who knows how to work with PalmOS emulator please, please obtain some nice screenshots for me? I looked at it but it seemed pretty complicated to me.

Thank you very much.



By [Steve Bohrer \(Skb\)](#) on Tuesday, September 3, 2002 - 01:13 pm: [Edit](#)

Frank, I tried out your game in POSE, so I would be willing to do the screen shots for you. BUT, so far, after a brief trial, I couldn't figure out how to play the game! You say it is not an original game, but I guess I haven't seen whatever it is derived from, so I didn't have a clue. The help gave me some specific details, but I didn't get the big picture.

Also, I found it annoying that the help sub-screens would dump me back to the main form when I press "ok" rather than taking me back to the help parent form. Thus, when I choose help from the main page, I get a list of help topics. When I read a topic and press ok, I'd like to be back at the list of help topics rather than back at the main page.

Did you consider using FrmHelp rather than rolling you own help text display?



By [Frank](#) on Tuesday, September 3, 2002 - 01:32 pm: [Edit](#)

Thanks steve for your feedback. i was thinking about the same thing for the help, just didn't implement it yet. (help was added last) i would be very grateful if you could obtain some screenshots for me once you find out how to play the game. could you please send your questions to frank27@imail.nl ? you would help me by telling what you don't understand. thanks frank



By [Kris Johnson \(Kdj\)](#) on Tuesday, September 3, 2002 - 03:55 pm: [Edit](#)

It appears to be a "real-time strategy" game in the Dune II/Command & Conquer/Warcraft/Starcraft vein. I agree with Steve that a high-level overview of how to play the game would be helpful.

I've put a screenshot at

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/PalmWars>

You are likely to get a nasty letter from Palm, Inc.'s lawyers if you don't change the name to something that doesn't have "Palm" in it. Using Palm's logo in the icon and on your web site is likely to get you into trouble too.

I haven't really played it yet, but it looks interesting. I'll pass along suggestions when I get time to try it out.

-- Kris

Add a Message

Username:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail

Password:

address is optional.

E-mail:

Q: How do you install the library.mpa file using a Mac?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Q: How do you install the library.mpa file using a Mac?



By [Gerald Mori](#) on Monday, September 2, 2002 - 09:49 am: [Edit](#)

I'm sure there's a simple solution to this problem but I sure can't see it.

I've downloaded the Quartus Forth package and am having zero success getting the library file installed on my handheld. I'm running Palm Desktop 4.0 for the Mac under OS X 10.1.5. I'm fairly new to the Palm world so I'm sure that this is part of the problem. I've looked time and again and see no way to import an archived memo file to the desktop software.

Any ideas? Thanks.

Jerry



By [barryFernelius](#) on Tuesday, September 3, 2002 - 11:51 pm: [Edit](#)

It is fairly simple. First, in the Palm Desktop software, create a new category in the Memo section called Library.

Second, while in the Memo part of the Palm Desktop, open up the archive that contains the library files.

Third, select all of the memos in the Library archive and COPY them.

Fourth, open the current Memos (or are they called Notes on the Mac?), and select the library category.

Fifth, PASTE the notes.

With any luck, that should work.

-Barry



By [Gerald Mori](#) on Wednesday, September 4, 2002 - 01:52 am: [Edit](#)

But how do I open up the archive that contains the library files? Whenever I try to access the file from within the Palm Desktop software files with the .mpa extension are greyed out.

Can someone who has successfully installed the software on a Mac provide some input? I'm lost here. Thanks.

Jerry

 By [John McKeon \(Jmckeon\)](#) on Wednesday, September 4, 2002 - 08:41 am: [Edit](#)

I just did a search using MAC as the key word.

Macintosh's don't recognize the .mpa format. Neal has sent Mac readable versions of the library to other Mac users in the past so you'll probably need that. Don't know why he hasn't responded to your post yet, you might try to email him directly.

See <http://www.quartus.net/discus/messages/29/1391.html?> for the posts I'm talking about.

John

 By [Gerald Mori](#) on Saturday, September 7, 2002 - 08:45 pm: [Edit](#)

OK, I've managed to get all of the library files into my Palm but it seems that Quartus Forth can't quite find them when it needs them. There must be a fairly simple solution at this point, no?

What am I doing wrong?

Jerry

 By [Neal Bridges \(Nbridges\)](#) on Saturday, September 7, 2002 - 08:47 pm: [Edit](#)

Jerry, I sent you an email about this -- did you not get it?

Check that the very first character in each Quartus Forth memo is a backslash... there can't be any carriage-returns or space in front of it.

Neal

 By [Gerald Mori](#) on Sunday, September 8, 2002 - 08:10 am: [Edit](#)

No, Neal, I never received your email. Could you try to send it again please? Thanks so much.

Jerry

 By [Gerald Mori](#) on Monday, September 9, 2002 - 11:36 pm: [Edit](#)

Well, I'm still no closer to getting Quartus Forth to work on my Visor. You'd think that perhaps being a Mac user was something to be looked down upon. If owning a PC is a requirement for using the package it would be nice if that was listed in the description. So do I need to buy a PC to get this to work? Just curious.

Jerry



By [Neal Bridges \(Nbridges\)](#) on Monday, September 9, 2002 - 11:41

pm: [Edit](#)

Certainly I don't disparage Mac users, Jerry.

I'm sorry I didn't notice your request just above -- the email I sent asked you the same question as in the above posting. Can you tell me, is the backslash the first character in your memos?

Create a simple memo on your Visor:

```
\ jerry  
.( Hello, Jerry!) cr
```

Make sure the backslash is the very first character at the top, followed by one character, followed by jerry, with a carriage-return at the end of the line.

Then from Quartus Forth, do

```
include jerry
```

and you should see

```
Hello, Jerry!
```

on the screen.

Let me know!

Neal



By [Gerald Mori](#) on Tuesday, September 10, 2002 - 10:41 am: [Edit](#)

Actually Neal, the email you sent me just showed up today. It's dated Sept. 6 but I only received it today. Strange.

As it turns out I got things sorted out. Seems I had no space between the backslash and the first character in the memo name. Things seem happy

now.

Thanks for your patience. Off to try see how much damage I can do that I'm sufficiently armed. 😊

Jerry

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Crashing on M515

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Crashing on M515](#)



By [Jim Purdy](#) on Saturday, August 31, 2002 - 08:50 am: [Edit](#)

I just installed 1.26R on my M515 and it crashes when I exit the Forth console. All hacks are disabled. The program seems to run fine except for that.

Please help, I wish to start some color development.

Best Regards,

Jim



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 31, 2002 - 09:23 am:

[Edit](#)

Jim, are you running any text enhancement utilities, akin to MagicText? That's the only thing I've ever seen cause a conflict.

Neal



By [Jim Purdy](#) on Saturday, August 31, 2002 - 11:05 am: [Edit](#)

No, I am running Text+, but it is turned off completely.



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 31, 2002 - 11:29 am:

[Edit](#)

I think you may find it is not totally inactive, despite being turned off. Remove it temporarily and see if the problem goes away.

Neal



By [jim purdy](#) on Saturday, September 7, 2002 - 03:58 pm: [Edit](#)

I am at my wit end, I have uninstalled everything and still it crashes on exit. Could you send me the latest version, so that I could try it?

Regards,

Jim



By [Neal Bridges \(Nbridges\)](#) on Saturday, September 7, 2002 - 08:26

pm: [Edit](#)

Very odd, Jim. I shall send along the latest.

Are you able to replicate this in the emulator?

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Database in .prc?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Database in .prc?



By [Michael Park \(Mpark\)](#) on Thursday, August 29, 2002 - 02:39 pm:

[Edit](#)

An unanswered question from the "beaming a database" thread: Is it possible to embed a database in a prc?



By [Frank](#) on Friday, August 30, 2002 - 01:18 pm: [Edit](#)

Nobody seems to know michael. cool i can send this from my mobile phone. these webpages are not optimal for mobile viewing though, Neal. 😊



By [Neal Bridges \(Nbridges\)](#) on Friday, August 30, 2002 - 02:08 pm:

[Edit](#)

It is possible to do this; the MemoPad does it, for instance, using a built-in empty memo database to originally initialize itself. It's not particularly simple to do, but it can be done. You need to make a flat copy of your database into a resource in your PRC. (I see an opportunity for an enterprising Quartus Forther to write a utility to do this).

Neal



By [Michael Park \(Mpark\)](#) on Saturday, August 31, 2002 - 01:24 pm:

[Edit](#)

Hmmm. So, pursuing this without doing any actual research or anything... If my database contains 200 records of 150 bytes, would I

- a) convert it into a single 30k resource (say type 'data', id 0) or
- b) convert it into 200 resources (type 'data', ids 0..199)

I guess the latter; record #s would map directly to ids so I'd only have to change a few definitions in my well-factored code (ha!)

A potential issue is speed. Does anyone have any ideas about resource access speed? Looking things up by type and id must be slower than just going to a record, but how much slower?

And does CopyRsrc work inside a word; i.e., can I do the 200 CopyRsrc calls inside a loop, or do I have to do them all at the console?

Or have I totally misunderstood what Neal wrote?



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 31, 2002 - 01:58 pm:

[Edit](#)

I may not have made it clear. The flat image of the database -- stored in a single resource -- is used to generate an initial database in memory; that created database is then what the application accesses.

Neal



By [Chapman Flack](#) on Friday, September 6, 2002 - 06:15 pm: [Edit](#)

There's been some discussion of this on the wiki under [QuartusForthProjectIdeas](#), covering some of the design issues, and just waiting for some enterprising person to come along and write it.

-Chap



By [Jim Hendricks \(Jimh\)](#) on Saturday, September 7, 2002 - 10:39 am:

[Edit](#)

Michael,

If you are looking for an actual database style, then 200 recs of 150k in size would be better. With 1 30k rec, you would have to have a 30k buffer to work with the rec. If I'm correct, PalmOS doesn't allow inplace record reading.

Jim



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 8, 2002 - 12:27

am: [Edit](#)

It does allow in-place reading.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Clearing the stack

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Clearing the stack

 By [Charles Starrett \(Cstarrett\)](#) on Wednesday, August 28, 2002 - 02:43 pm: [Edit](#)

I was reading Phil Burke's Forth tutorial and he mentions Osp (zero-s-p) for clearing the stack. I couldn't find Osp in the ANS draft, the QF docs, or in the Wiki, so I assume it is a pForth-specific word. Is there an equivalent word in QF for clearing the stack? If not, does this seem like a good definition?

```
: Osp ( -- )
  depth 0 do
    drop
  loop
;
```

(I know it's an easy problem, but I'm a VERY green newbie at Forth and programming in general and would love critique from the masters...)

Thanks for you help!

--Charles

 By [Charles Starrett \(Cstarrett\)](#) on Wednesday, August 28, 2002 - 05:38 pm: [Edit](#)

Ummm... I didn't consider the possibility that the stack might already be empty. How about this:

```
: Osp ( -- )
  depth ?dup 0<> if
    0 do
      drop
    loop
  then
;
```

I see now that I need a dedicated reset pin. Taking apart the stylus after each test cycle gets old real quick! :-)

--Charles



By [Kris Johnson \(Kdj\)](#) on Thursday, August 29, 2002 - 11:06 am: [Edit](#)

This is the simplest way I know:

```
: 0sp ( -- )  
  begin depth while drop repeat ;
```

I'll offer some advice: you should never ever need to use this word. If you have unwanted stuff on the stack, it is because you have a bug in the program or a poor design. Fix that problem; don't use this as a band-aid.

The word DEPTH has few good uses, other than for testing and debugging. It should never be used by a program at run-time to determine how many things are on the stack.

-- Kris



By [Charles Starrett \(Cstarrett\)](#) on Thursday, August 29, 2002 - 12:49 pm: [Edit](#)

Thank you for the advise. I believe Burke used this word for clearing the stack while experimenting in the interpreter. I can see some use for it there. Thank you also for your advise regarding DEPTH. I'll keep that in mind! I'm happy for any other advise from "a not-quite-newbie." As of yet I have no ego to bruise! :-)

I appreciate your patience with my trivial questions.

~~ Charles



By [Charles Starrett \(Cstarrett\)](#) on Thursday, August 29, 2002 - 02:24 pm: [Edit](#)

Sorry, I meant, "while experimenting in the console," not "the interpreter." I'm still learning the vocabulary... (And my editing privileges timed out...)

~~ Charles



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 29, 2002 - 02:32 pm: [Edit](#)

ABORT will also clear the stack from the console -- and it's available as a hotkey from the menu.

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, August 29, 2002 - 08:19

pm: [Edit](#)

Here is how I do it. When I want to clear the stack while in the console I just enter the letter "a", because its easy. The console returns undefined word and clears what ever was on the stack. The only time I use it is while I am testing a word in the console.

Can this cause any problems?

Gary



By [Mark Browne \(Markbrowne\)](#) on Friday, August 30, 2002 - 12:40

pm: [Edit](#)

The problem with using abort (or entering an unknown word) is that it changes all sorts of other stuff, not least reverting BASE to decimal.

Add a Message

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Utilizing hi-res on a clie

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Utilizing hi-res on a clie



By [Eric Idema \(Eki\)](#) on Tuesday, August 27, 2002 - 09:10 am: [Edit](#)

Hi,

I just bought a high resolution clie a few days back. I'm looking to modify my existing games to take advantage of the higher resolution screen. Does anybody have any experience doing this? I don't mind doing a little research myself but I was hoping someone here might have some general pointers to get me started. TIA



By [Jim Hendricks \(Jimh\)](#) on Tuesday, August 27, 2002 - 01:09 pm: [Edit](#)

I've messed a little with it. I've produced untested words for verifying/loading the hires libs and closing them if necessary. I just haven't had the time to go the next step and actually attempt to draw to the screen.

Jim



By [Eric Idema \(Eki\)](#) on Thursday, August 29, 2002 - 08:42 am: [Edit](#)

Well, I guess this will require a bit of trailblazing then. Hopefully, I'll get a chance to really dig into this sometime in the next couple weeks. I'm sure I'll have plenty of questions as I try to get my brain to think in forth again.

And, of course, I'd appreciate some pointers if you get to the point where you're drawing to the screen, Jim.

Thanks.



By [Jim Hendricks \(Jimh\)](#) on Thursday, August 29, 2002 - 10:11 am:

[Edit](#)

Yup, trailblazing it will be, I bought my 615 in April & posted then to see if anyone had done this and received no responses. See below for the work I've done so far:

\ bizHR
needs zStrings
needs bizLogic.lib
needs ids

```
variable refNum
variable _size 320 _size !

: _libName _libName drop >abs ;
1290 constant sysErrLibNotFound
```

```
: LoadLib ( -- flag )
refNum >abs
libName
SysLibFind ?dup
0= not if
sysErrLibNotFound = if
refNum >abs
[ID] SIHr
[ID] libr
SysLibLoad
0= not
then
else
true
then
;
```

```
: goHR ( -- error )
refNum @ (hex) A801 systrap
drop ?dup
0= if
0 0 _size >abs 2dup 3 refNum @ (hex)
```

*** don't know what's suppose to be here since I didn't finish this word

```
then
;
```

```
: leaveHR ( -- error )
refNum @ (hex) A802 systrap drop
;
```

```
loadLib if
goHR leaveHR .s
then
```

Hope this helps



By [A.Schönfeld](#) on Sunday, September 15, 2002 - 04:14 pm: [Edit](#)

That's all you have to do. From there on you can use HRlib functions.

Here are some def's

\ HRconstants 08/09/02

\ 19:30 A.S.

needs toolkit

needs color

variable cp

2variable x

2variable y

2variable depth

create enablecolor 1 chars allot

1290 constant sysErrLibNotFound

variable refNum

43009 enum HRCtraps

HRCtraps HRTrapOpen

HRCtraps HRTrapClose

HRCtraps HRTrapSleep

HRCtraps HRTrapWake

HRCtraps HRTrapGetAPIVersion

HRCtraps HRTrapWinClipRectangle

HRCtraps HRTrapWinCopyRectangle

HRCtraps HRTrapWinCreateBitmapWindow

HRCtraps HRTrapWinCreateOffscreenWindow

HRCtraps HRTrapWinCreateWindow

HRCtraps HRTrapWinDisplayToWindowPt

HRCtraps HRTrapWinDrawBitmap

HRCtraps HRTrapWinDrawChar

HRCtraps HRTrapWinDrawChars

HRCtraps HRTrapWinDrawGrayLine

HRCtraps HRTrapWinDrawGrayRectangleFrame

HRCtraps HRTrapWinDrawInvertedChars

HRCtraps HRTrapWinDrawLine

HRCtraps HRTrapWinDrawPixel

HRCtraps HRTrapWinDrawRectangle

HRCtraps HRTrapWinDrawRectangleFrame

HRCtraps HRTrapWinDrawTruncChars

HRCtraps HRTrapWinEraseChars

HRCtraps HRTrapWinEraseLine

HRCtraps HRTrapWinErasePixel

HRCtraps HRTrapWinEraseRectangle

HRCtraps HRTrapWinEraseRectangleFrame

HRCtraps HRTrapWinFillLine

HRCtraps HRTrapWinFillRectangle

HRCtraps HRTrapWinGetClip

HRCtraps HRTrapWinGetDisplayExtent

HRCtraps HRTrapWinGetFramesRectangle
HRCtraps HRTrapWinGetPixel
HRCtraps HRTrapWinGetWindowBounds
HRCtraps HRTrapWinGetWindowExtent
HRCtraps HRTrapWinGetWindowFrameRect
HRCtraps HRTrapWinInvertChars
HRCtraps HRTrapWinInvertLine
HRCtraps HRTrapWinInvertPixel
HRCtraps HRTrapWinInvertRectangle
HRCtraps HRTrapWinInvertRectangleFrame
HRCtraps HRTrapWinPaintBitmap
HRCtraps HRTrapWinPaintChar
HRCtraps HRTrapWinPaintChars
HRCtraps HRTrapWinPaintLine
HRCtraps HRTrapWinPaintLines
HRCtraps HRTrapWinPaintPixel
HRCtraps HRTrapWinPaintPixels
HRCtraps HRTrapWinPaintRectangle
HRCtraps HRTrapWinPaintRectangleFrame
HRCtraps HRTrapWinRestoreBits
HRCtraps HRTrapWinSaveBits
HRCtraps HRTrapWinScreenMode
HRCtraps HRTrapWinScrollRectangle
HRCtraps HRTrapWinSetClip
HRCtraps HRTrapWinSetWindowBounds
HRCtraps HRTrapWinWindowToDisplayPt
HRCtraps HRTrapBmpBitsSize
HRCtraps HRTrapBmpSize
HRCtraps HRTrapBmpCreate
HRCtraps HRTrapFntGetFont
HRCtraps HRTrapFntSetFont
HRCtraps HRTrapFontSelect
HRCtraps HRTrapSystem
HRCtraps HRTrapWinGetPixelRGB
HRCtraps HRTrapGetInfo

Followed by some unfinished work :

\ HRgraphics

.(Loading HRgraphics . . .) cr
needs HRconstants
needs ids
needs double
needs zstrings

2variable apiversion

variable xysize
0. apiversion 2!

```
: HRLoadLib ( -- flag )  
refNum >abs  
[ID] SIHr [ID] libr  
SysLibLoad throw \ drop  
dup sysErrLibNotFound = if  
false  
else  
true  
then ;
```

```
: HRrounded-rectangle  
( height width y x corner-radius -- )  
>r sp@ r> rot rot  
refNum @  
HRTrapWinDrawRectangle systrap  
drop \ refNum  
drop \ corner-radius  
2drop \ &tos  
2drop \ x y  
2drop ; \ w h
```

```
: HRrectangle ( height width y x -- )  
0 HRrounded-rectangle ;
```

```
: HRline ( y2 x2 y x -- )  
refNum @  
HRTrapWinDrawLine systrap  
drop \ refNum  
2drop \ x y  
2drop ; \ x2 y2
```

```
: HRinvertline ( y2 x2 y x -- )  
refNum @  
HRTrapWinInvertLine systrap  
drop \ refNum  
2drop \ x y  
2drop ; \ x2 y2
```

```
: HRSetPixel ( y x -- )  
refNum @  
HRTrapWinPaintPixel systrap  
drop \ refNum
```

```

2drop \ x y
;
: HRChar ( y x char -- )
refNum @
HRTrapWinDrawChar systrap
2drop \ refNum & char
2drop \ x y
;

: msg s" highres test" ;

: HRDrawChars ( y x c-addr u. -- )
swap >abs refNum @
HRTrapWinDrawChars systrap
2drop \ refNum & len.
2drop \ &msg
2drop \ x y
;

: HRPaintChars ( y x c-addr u. -- )
swap >abs refNum @
HRTrapWinPaintChars systrap
2drop \ refNum & len.
2drop \ &msg
2drop \ x y
;

: HRinitlib ( --)
refNum @
HRTrapOpen systrap drop ;

: HRcloselib ( --)
refNum @
HRTrapClose systrap drop ;

```

And some highres font work :

```

\ HRFonts 04/09/02
\ 19:30 A.S.
.( Loading HRFonts . . . ) cr
needs HRconstants
needs HRgraphics
needs toolkit
0 enum HRFontID
HRFontID hrTinyFont
HRFontID hrTinyBoldFont
HRFontID hrSmallFont

```

HRFontID hrSmallSymbolFont
HRFontID hrSmallSymbol11Font
HRFontID hrSmallSymbol7Font
HRFontID hrSmallLedFont
HRFontID hrSmallBoldFont
HRFontID hrStdFont
HRFontID hrBoldFont
HRFontID hrLargeFont
HRFontID hrSymbolFont
HRFontID hrSymbol11Font
HRFontID hrSymbol7Font
HRFontID hrLedFont
HRFontID hrLargeBoldFont

\ to be continued
\ : hrgetfont (-- fontID)
\ refNum @
\ HRTrapFntGetFont systrap
\ a0 ? d0 ? -> fontID
\ drop ;

: hrsetfont (fontID --)
>byte refNum @
HRTrapFntSetFont systrap
drop ;



By [Jim Hendricks \(Jimh\)](#) on Thursday, January 30, 2003 - 11:34 am:

[Edit](#)

Yeha, I have hi-res!

Thanks A.Schönfeld. I finally had the time to get back to the hi-res stuff, I loaded up your work, threw together a test word & had hi-res. It was then time to figure out what was wrong with my work.

First thing was I am expecting a return from sysLibOpen (HRTRapOpen passes to sysLibOpen) which the palm api's prototype a return, but the sysLibOpen routine itself is not referenced in the Palm 4.0 reference material. This routine does not return anything as your code assumes.

The second problem is based on following Sony's documentation (which is horrible with poor use of English). They indicate that you need to HRWinScreenMode before using the HR functions. As your code demonstrates, that is not necessary. It was HRWinScreenMode that had me hung up because I was getting an undocumented error back from the function.

I have since gone back and cleaned up my hi-res code to work, I'm now displaying bitmaps in hi-res!

Thanks



By [Jim Hendricks \(Jimh\)](#) on Thursday, January 30, 2003 - 11:43 am:

[Edit](#)

And here's my cleaned up code to go HiRes:

```
\ bizHR.lib 1/28/2003 - biz
\ i;½ 2003 Biz Computing, Inc.
\ Uses governed by seperate licence
```

```
needs zStrings
needs ids
```

```
variable BizHRRefNum
```

```
:noname z" Sony HR Library" ;
execute drop
>abs 2constant $BizLibName
```

```
1290 constant sysErrLibNotFound
(hex) A801 constant SysLibOpen
(hex) A802 constant SysLibClose
```

```
: loadLib ( -- flag )
  BizHRRefNum >abs
  $BizLibName
  SysLibFind ?dup
  0= 0= if
    sysErrLibNotFound = if
      BizHRRefNum >abs
      [ID] SlHr
      [ID] libr
      SysLibLoad
      0= 0=
    then
  else
    true
  then
;
;
```

```
: goHR ( -- )
  BizHRRefNum @
```

```

SysLibOpen systrap
drop
;

: leaveHR ( -- )
  BizHRRefNum @
  SysLibClose systrap
  drop
;

```

to use, call load lib, if return true then hires is available. call goHR prior to any hi-res work, then leaveHR before leaving the app.

Enjoy!

 By [Neal Bridges \(Nbridges\)](#) on Thursday, January 30, 2003 - 01:05 pm: [Edit](#)

Great stuff, Jim!

Neal

 By [Jim Hendricks \(Jimh\)](#) on Thursday, January 30, 2003 - 01:32 pm: [Edit](#)

Thanks Neal.

And Oops, small error in a word, here's the replacement (had an extra 0=)

```

: loadLib ( -- flag )
  BizHRRefNum >abs
  $BizLibName
  SysLibFind ?dup
  0= not if
    sysErrLibNotFound = if
      BizHRRefNum >abs
      [ID] SlHr
      [ID] libr
      SysLibLoad
      0=
    then
  else
    true
  then
;

```

**And my display bitmap resource word:
must have bizHR loaded first to get the def for bizHRRefNum**

(hex) A80C constant HRWinDrawBitmap

```
: HRdrawBitmap ( rsrc# y x -- )
2>r [id] Tbmp DmGetResource
2dup MemHandleLock
2r> 2swap bizHRRefNum @
HRWinDrawBitmap systrap
drop 2drop 2drop
2dup MemHandleUnlock throw
DmReleaseResource throw ;
```

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Beaming a database

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Beaming a database



By [Frank](#) on Saturday, August 24, 2002 - 04:14 am: [Edit](#)

Hello,

I've made a program that uses a database. When I want to beam the prc from a palm m100 to a visor, it works fine. But when I try to beam the database, it says: 'No application associated with database' It doesn't accept the database.

Does somebody know what's wrong?

Frank



By [Wade Carlson](#) on Saturday, August 24, 2002 - 08:17 am: [Edit](#)

How are you trying to beam the database? From within your application, or with some other utility?



By [Frank](#) on Saturday, August 24, 2002 - 10:12 am: [Edit](#)

From ResourceEdit. I can not see the database in the beam-option of the application-launcher. That's why i try it like this.

But I am trying something else now... maybe I can include the database in the PRC. If you have any ideas, please tell me.



By [Ronny Svensson](#) on Saturday, August 24, 2002 - 10:18 am: [Edit](#)

Has the database the same creator id as the prc?

Ronny



By [Frank](#) on Saturday, August 24, 2002 - 01:42 pm: [Edit](#)

At first it didn't, but when I changed that, it still wouldn't accept the database.

strange?

I want to be able to beam this program (which is a game) including the database from the application launcher. (So that customers easily can spread it among their friends). But i am affraid the database doesn't

hitchhike on the beam together with the prc. It is another file.

Problem is, the program needs the filled database in order to work.
(Database contains the levels of the game)

Now, I thought of adding the database records to the prc. Does anybody know how i can do that?

I already tried copysrc but that doesn't work.

thanks,

Frank



By [Wade Carlson](#) on Saturday, August 24, 2002 - 01:51 pm: [Edit](#)

The reason you are getting the error with your original method is simple. The receiving palm doesn't have RsrcEdit installed. If they did, you could beam them from within RsrcEdit.



By [Frank](#) on Sunday, August 25, 2002 - 08:50 am: [Edit](#)

Ok, i understand.

Is there a simple way to beam the content of a database then? (Not everybody has rsrcedit and i don't want to be dependend upon that.)



By [Wade Carlson](#) on Sunday, August 25, 2002 - 10:46 pm: [Edit](#)

test



By [Wade Carlson](#) on Sunday, August 25, 2002 - 10:48 pm: [Edit](#)

Okay, I have dug up some old stuff I had posted previously in Archive9 of the Quartus forum. I have made a lot of changes, so I thought I would repost.

This may not do entirely what you are looking to do (as it appears you may be better off keeping ALL your data within the prc file, and hence it would get beamed with it), but it serves as a good example, and will probably be helpful to others that are trying to beam data.

The whole package can be located here:

[BeamMgr.zip](#)

Basically, this allows you to beam any database (not application) to another palm device that is running your program. It uses a small helper applet written in CodeWarrior since currently Quartus can't handle launchcodes

(which are required to receive beaming). It is all transparent to the end user, who will never know your app has called a non Quartus app. My PregTrak program has been using this for years without any trouble.

Here's some of the code for those who wish to peruse here, but you will probably need to download the full instructions if you plan to use it.



By [Wade Carlson](#) on Sunday, August 25, 2002 - 10:54 pm: [Edit](#)

Sorry, I can't seem to post it here (maybe too long or maybe a bug with the message board). It keeps saying I need to enter my Username to post, but my username is already in there. Well, download from my website for an example.



By [Wade Carlson](#) on Sunday, August 25, 2002 - 10:55 pm: [Edit](#)

Hopefully somebody with the time and knowledge will post this on the Wiki board as well (I've never taken the time to figure out that whole Wiki thing.....)



By [Frank](#) on Monday, August 26, 2002 - 04:36 am: [Edit](#)

He Wade, thanks, You might be my angel.

I will try it.

As you say: " as it appears you may be better off keeping ALL your data within the prc file, and hence it would get beamed with it "

That is indeed what I want. But rsrcedit doesn't allow me to add the database files to the app. What am I doing wrong? And can this be done anyway?

All I want is the database to be transported easily with the PRC for easy spreading and sharing of my program.

I will try your program now first. Thanks.

If you have any other tips, could you please send them to frank27@imail.nl

since i am not able to be on the normal internet and this page is too big to load on my telephone.

thanks.



By [Frank](#) on Monday, August 26, 2002 - 04:08 pm: [Edit](#)

Wade,

I think i've got it working now. I just don't have another palm to test right now. (Did you get my e-mails?)

When I give the do-beam assignment, I don't get a screen or anything that tells me that it;s trying to beam. It doesn;t seem to be doing anything. It hust returns to the program.

Is that right?

Frank



By [Wade Carlson](#) on Tuesday, August 27, 2002 - 06:56 am: [Edit](#)

It sounds like you got it working from the email you sent me, but in general, I would test it out as a standalone thing before adding it to your application (make sure you get it to work first before compounding the confusion by adding it to your app)



By [Frank](#) on Tuesday, August 27, 2002 - 12:40 pm: [Edit](#)

New troubles Wade:

It does beam now and it does receive. But it does not receive in the right way. It accepts it in the Beammanager file instead of in my file.

I set the 'crid'-value (before the do-beam) to null (0.) as you told in the example.

Can this be the problem?

Or should i answer 'No' when it askes if i want to receive in beammanager?

I did not check what the received database looked like because i was in a store and they didn't let me play for a long time.

I tried to make a standalone before even trying all this, but it gave me a soft-reset all the time that i wanted to 'makeprc'.

I don't know why.

sorry to bother you again and again but this is just my final bump to world-succes 😊



By [Wade Carlson](#) on Tuesday, August 27, 2002 - 11:20 pm: [Edit](#)

If you enter a crid that is the same for your application, the BeamManager applet will launch your application (your application has to be on the receiving device already). Your application should check for the presence of the newly received file on startup.



By [Frank](#) on Wednesday, August 28, 2002 - 01:49 am: [Edit](#)

Hmm... might try that checking-thing.

I get a reset when i try to read the database, not when i try to open it.

strange? might be something else.



By [Wade Carlson](#) on Wednesday, August 28, 2002 - 06:59 am: [Edit](#)

You can use RsrcEdit on the following device to see if indeed the database did get beamed over to the second device. It sounds like you probably need to borrow somebody's device for a few days to really get it working. You could probably buy an old 2 mb device on ebay or something that would work for you.

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Assembler BSET workaround

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Assembler BSET workaround



By [Martin](#) on Thursday, August 22, 2002 - 05:11 pm: [Edit](#)

Hello,

I miss the assembler tutorial so hard :- (could not sleep at night :-)

I've got a problem.
(and a 'solution' too)
So here it is:

in D7 is number x
in A0 is a adress

```
code fooo
  D7 A0 ) bset
end-code
```

doesn't work as I presumed.
(Do'nt try to use this code - it is only a short example).

I tried all notations that looks reasonable but was not able to find a well running code. Is there a trick?

According to the Motorola references
D7 A0) bset should compile to

```
0000|111|111|010|000
```

.

' bset cs@ delivers

```
0000|100|011|000|111
```

that looks quite different in the source-registerfield, the instruction-field in the mode-field and in the adressregister-field.

The disassembler (see fooo) shows more lines than the palmscreen could bare. :0

This works:

```
code foou2
  FD0 cs, \ FD0 equlv.0000|111|111|010|000
end code
```

even see says so :-))
but it took me more than a half sleepless night! :-)

The field are structured in this way

0000DDD111MMMAAA

where DDD is the data register (000=D0 and 111=D7). The same is for AAA. It is the address register. MMM is for the addressing mode. Where 010 is) 011 is)+ 100 is -) and 000 means that the field AAA is a data-register. There are more adressing modes but I did'nt use them.

I find it convenient to write down the instruction (on my Palm) with base 2 and let forth type it out in hex

```
2 base ! 0000111111010000 hex .
```

and than use it with cs, _without any brakets!_

This workaround may even fit to the directions BCHG BCLR BTST with their coresponding bitmasks but I did'nt prove it.

Maybe this helps someone.

BTW 1

Can someone tell me where to look for assembler code examples or snippets for MC68K-quartus?

BTW 2

Am I allowed to use all registers (except the Forth register A2 A4 A5 A7 and D7) ore are there some cave-ats?

(english is not my native language. I like to be polite. If it does'nt sound so let me know.)

regards Martin



By [Kris Johnson \(Kdj\)](#) on Thursday, August 22, 2002 - 11:46 pm: [Edit](#)

I don't know why, but the Quartus assembler seems to reverse the order of the parameters. Try this:

```
code foo
  a0 ) d7 bset
end-code
```

```
see foo \ prints "bset d7,(a0)"
2 base !
' foo cs@ . \ prints 111111010000
```

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, August 23, 2002 - 11:36 am: [Edit](#)

BTW, the parameter ordering is documented at
<http://www.quartus.net/products/forth/manual/asm68k.htm>

-- Kris



By [Martin](#) on Friday, August 23, 2002 - 03:42 pm: [Edit](#)

Kris, (and all other readers)

please take my apologie!
I also must apologize by Laxen,Perry and Neal!
I was so stupied (hope overtired).
I thought so strong that I'd tested
a0) d7 bset

could'nt understand today what happend yesterday to me.
tock *tock* *tock* (sound of Martins head bumping again a thick
oakwooden plate).

Something good - I learned a little bit about MC68K assembler.

Regards Martin

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Username:

not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

Preferences and beaming apps

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Preferences and beaming apps



By [BarryFernelius](#) on Thursday, August 22, 2002 - 12:13 am: [Edit](#)

I'm using Kris Johnson's excellent AppPrefsModule to create a few state variables for my latest Palm app. When I use the app on my Palm, everything works fine. I can save and restore my prefs, and all is right with the world.

When I beam my app to another Palm, the state variables are reset to their initial values.

How can I create state variables that will persist even when I beam an application to another Palm?



By [Kris Johnson \(Kdj\)](#) on Thursday, August 22, 2002 - 02:18 am: [Edit](#)

I think you'd have to save your data to a database, and beam it along with your application.

Maybe it is possible to write data to a resource in the application itself while it is running--I'm not sure.

-- Kris

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail

Password:

address is optional.

E-mail:

Form redraw?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Form redraw?



[Edit](#)

By [Michael Park \(Mpark\)](#) on Wednesday, August 21, 2002 - 04:28 pm:

My app puts up a form with ShowForm, then it sets radio-button states and selects an item in a list (based on saved preferences; I can't bake them in with RsrcEdit). This works, but when the form comes up you can see the buttons turning on and off and the list redrawing. It's kind of like the curtain came up before the actors were quite ready.

I'd like to avoid that if possible. Is it possible, and if so, how? Is there some way to get everything set before calling ShowForm, or some other approach?



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 21, 2002 - 04:57 pm: [Edit](#)

One simple approach would be to disable or hide all the controls in RsrcEdit. Then, at startup, it seems more like the app is coming to life, rather than rearranging its clothing.

-- Kris



[Edit](#)

By [Michael Park \(Mpark\)](#) on Wednesday, August 21, 2002 - 05:32 pm:

Hey, it works! Thanks Kris!

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave

Password:

the "Password" box empty. Your e-mail address is optional.

E-mail:

Allot bug or PalmOS feature?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Allot bug or PalmOS feature?



By [Martin](#) on Wednesday, August 21, 2002 - 05:27 am: [Edit](#)

Hello all!

(If this is the rong place - please let me know.)

I defined a definig word using allocate.

It looked like this:

```
decimal
```

```
Variable actMem
```

```
: newMem ( <name> -- )  
  Create  
  here 3200 0 fill  
  3200 allot  
  does> actMem ! ;
```

Then I used it:

```
newMem Mem1
```

and I got a 'fatal error - Object not in Form' and had to reset my palm.

A lot of thinking - always said: there isn't an error in the code!

I tried a lot and found that this Error depended on the size of 3200. Using less sizes dind't raise this Error.

After changing the code to

```
: newMem ( <name> -- )  
  Create  
  here      \ TOS = addr  
  3200 allot \ first allocate  
  3200 0 fill \ than fill the memory!  
  does> actMem ! ;
```

all runs well.

Later I took a look to Neals code (search '0 fill') and found his word 'array' which works the same way (including reset the palm) as my first Version. So my not urgend but only curios question: Depends this behavior to special palms, PalmOses? And why does it occur?

Regards Martin

--



By [John McKeon \(Jmckeon\)](#) on Wednesday, August 21, 2002 - 08:43

am: [Edit](#)

Martin,

I think the error in the first version was that you tried to fill before allotting.

Using a smaller size probably worked because you didn't overrun the dataspace that Quartus had "pre" fetched from the OS (a Quartus internal thing). If I understand correctly Quartus fetches a certain amount of memory from the OS for its dataspace. When you request more than it has available (using allot and create, etc) it resizes its allocated memory to accomodate your request.

I learned all this great stuff on the SleeplessNight wiki, check it out at

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/WebHome>

Indeed, the library's version of array appears to suffer the same oversight.

John



By [Martin](#) on Wednesday, August 21, 2002 - 10:59 am: [Edit](#)

Thank you, John

(in someway I thought so but did'nt know where to get the information)

Add a Message

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Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Read-only field?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Read-only field?



By [Michael Park \(Mpark\)](#) on Tuesday, August 20, 2002 - 07:31 pm: [Edit](#)

I'm trying to add a read-only field to my form, but if I clear the Editable checkbox, the field doesn't show up on the form. (If I set Editable, the field shows up, but of course it's not read-only.) What am I doing wrong?

(fwiw, I'm using RsrcEdit v1.014 and string>field to set the field's contents.)



By [John McKeon \(Jmckeon\)](#) on Wednesday, August 21, 2002 - 08:26 am: [Edit](#)

Hey Michael,

You need to check usable and leave editable unchecked.

John



By [Michael Park \(Mpark\)](#) on Wednesday, August 21, 2002 - 10:20 am: [Edit](#)

Hi John,

Usable is checked. (Otherwise the field wouldn't show up even when Editable is checked.) Sorry that wasn't clear.



By [John McKeon \(Jmckeon\)](#) on Wednesday, August 21, 2002 - 11:29 am: [Edit](#)

Michael,

What about overlapping fields, is that a possibility?

Non editable fields will have a darker underline (when underline is checked). I just did a couple of things to check and it appears that non editable fields get put behind editable fields when there is overlap and if the underline falls in the editable portion of a field that is on top of it it gets hidden.

I have a slew of read-only fields on several forms of the app I'm working on. And I did lots of rearranging to get them positioned right. I always kept underlined checked (otherwise in preview and adjust you can't see where they are).

I found that when you use adjust to move a field up, as it approaches another field you will notice the other field's underline disappears.

Maybe that's the problem you experiencing.

John

 By [Michael Park \(Mpark\)](#) on Wednesday, August 21, 2002 - 02:27 pm:
[Edit](#)

Thanks for the suggestion, but nothing's overlapping the field. The underlining is visible (not that I want it underlined in the finished product...) but string>field has no effect.

 By [Michael Park \(Mpark\)](#) on Wednesday, August 21, 2002 - 02:30 pm:
[Edit](#)

Btw, John, how are you putting text into your read-only fields?

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 21, 2002 - 02:44 pm: [Edit](#)

Michael, try string>anyfield:

<http://www.quartus.net/files/PalmOS/Forth/Contrib/string2anyfield.txt>

string>field will indeed only put text in an editable field.

Neal

 By [John McKeon \(Jmckeon\)](#) on Wednesday, August 21, 2002 - 03:21 pm: [Edit](#)

I just did a search thru my code and I am not using string>Field anywhere. Wow, I sure took that far afield.

I am using string>anyfield for all read-only fields and some easyfields code for editable fields, which also uses string>anyfield.

Thanks Neal, that tip is definitely noted for future reference. I had wondered how the two differed. Now I know!

John

 By [Michael Park \(Mpark\)](#) on Thursday, August 22, 2002 - 12:44 pm:
[Edit](#)

Thanks Neal!

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Adding an Address DB record (magic trick)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Adding an Address DB record (magic trick)



By [BarryFernelius](#) on Monday, August 19, 2002 - 08:43 pm: [Edit](#)

I have come up with a different idea for my magic trick app. I still beam the app to spectator's Palm. Instead of it disappearing, it is transformed into my business card the second time that it is run . (When the app is run for the first time, it modifies prefs that are checked during initialization. The second time that the app is run, it recognizes the modified prefs and displays a business card instead of doing the trick.)

Whew! Now the more important point: what is the proper way to add a record into the Address database? It seems to me that this would be a cool thing to do, and it would remain after the app has been removed from the spectator's Palm.

Thanks in advance for any pointers that you may have.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Sony Clie Menu RSRC Problems

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Sony Clie Menu RSRC Problems



By [Joe Nasal \(Jsn\)](#) on Monday, August 19, 2002 - 01:53 pm: [Edit](#)

Hi All:

I've had a couple of users of my application N.E.T. complain about a mangled menubar resource -- menu items are not or only partially displayed. These users have the Sony Clie running OS 4.1. My app is pure QF & I built resources with RsrcEdit. No other platforms have problems.

Any clues?

Thanks,

Joe



By [Neal Bridges \(Nbridges\)](#) on Monday, August 19, 2002 - 01:58 pm:

[Edit](#)

I've received no such previous reports, Joe. Are you able to reproduce the effect in an emulator?

Neal



By [Joe Nasal \(Jsn\)](#) on Monday, August 19, 2002 - 02:16 pm: [Edit](#)

Neal:

I need to get a 4.1 ROM and test this. I have had over 1000 downloads(!) since releasing the app 6 weeks ago and 3 complaints like this -- two in The States and one in France. *All* users have reported on a Sony Clie SL10 running Palm OS 4.1. Tragically, each of these folks has registered...

I haven't played with the Clie so I don't know if this is a device problem, an OS problem, or a user problem. I'll try to reproduce in the emulator & report back. Each user complains about mangled menu resources.

BTW, your copy is still waiting here... 😊 Download from handango & send me your hotsync ID -- I'll send you a key (note my new email address). I have had a great response to this, sold a bunch so far. My credits screen says "Built entirely on-board with Quartus Forth...".

Also -- I'm finally (just about) out of dictionary space, but I was able to

cram an enormous amount of functionality into this app. Factoring like mad and liberal use of data space did the trick. Those who run out of dictionary space need to go back and factor, factor, factor...

Joe



By [Mike Will](#) on Tuesday, August 20, 2002 - 08:28 am: [Edit](#)

"Those who run out of dictionary space need to go back and factor, factor, factor... "

That's good advice, but I'm one of those whose still needs more codespace (without chewing up vital dataspace). Neal: please don't give up on your separate header space project.

Mike



By [Joe Nasal \(Jsn\)](#) on Tuesday, August 20, 2002 - 08:38 am: [Edit](#)

Mike:

No doubt. However, I was amazed about how many times I was able to go back to the well within my own project and SQUEEZE out another couple of K when I needed it. I'm still not sure that there isn't some more lurking in the shadows in there...

Now if I can only figure out what the deal is with the Clie. I have noticed that some people release multiple versions of a single application, one of which is to support the "hi-res" capabilities of the Clie. I'm assuming, though, that in low-res mode the Clie should run standard apps as delivered. Anyone have experience with this?

Joe



By [Jim Hendricks \(Jimh\)](#) on Tuesday, August 20, 2002 - 09:13 am: [Edit](#)

Joe,

I'm a Clie owner as well as Quartus developer, if you need another person testing & looking things over, just give me a holler.

Jim

PS Clie should run standard apps with no problem. The problems come when Turning off Hi-Res assist & using a Hi-Res replacement font. Hi-Res assist is for standard apps that don't know didly about hi-res. It doubles the pixels to get the standard res. Some standard programs will run fine

without hi-res assist even though they are standard res. Using utils like fonthack123, Clie users can force hi-res onto apps that don't normally support it. Depending on how the display is drawn etc. You may actually get away with it! When you don't get away with it, it shows up as a messed up display.



By [Mike Will](#) on Tuesday, August 20, 2002 - 09:40 am: [Edit](#)

The interesting thing about factoring is that your program actually gets **more** readable as a result, as opposed to extensive subroutines in C which makes things **less** readable.

FWIW I haven't noticed any Clie problems with Quartus (or other) apps other than occasional, unrepeatable weirdness when the screen on my NR70V is swivelled. That behaviour is definitely OS and/or hardware related.

Mike



By [Joe Nasal \(Jsn\)](#) on Tuesday, August 20, 2002 - 11:50 am: [Edit](#)

Jim:

Can you give the app a try for me? It is called N.E.T. -- you can pick it up at handango or palmgear. Send me your hotsync user id and I'll send you a key. Most appreciated.

Mike:

True about factoring in terms of readability. That is, though, as long as you keep good stack diagrams... 😊

If you can give N.E.T. a run for me on your Clie I'll send you a key as well.

Thanks,

Joe



By [Jim Hendricks \(Jimh\)](#) on Tuesday, August 20, 2002 - 12:42 pm: [Edit](#)

Joe, I think I may have found your problem.

I messed with the hi-res & font substitution stuff to no avail. BTW, your app handles fine both with and without hi-res assist.

I looked at your Menu resource ID 5000 & looked at the attributes for the info menu item. Its left property was set to 111. By setting this to 0 I

received a proper menu. I no longer have my Palm IIIc to check your app out on a OS 3.5, but I must assume that prior to OS4 the left property of a menu item must have been ignored. I see that the diagrams menu item has a left of 50, but that doesn't seem to change anything, so I assume it's the left property of just the first menu item. I see you also have a menu bar ID'd 5100 with the same problem, in this case the left setting is 118. Since I don't know what part of your app uses the 5100 menu over the 5000 menu, I can't see what it does, but I would assume it would display the menu even further displaced to the right and cut off even more of the menu.

Hope this helps!

Jim

 By [Jim Hendricks \(Jimh\)](#) on Tuesday, August 20, 2002 - 12:51 pm: [Edit](#)

Yup, as I suspected the menu 5100 displays even further to the right. The 5000 menu resource I can see "Info App" with the "p" partial, with the 5100 menu resource I see "Info A" with a line which I know to be the first "p". Adjusting the left for "Info" on both menus to zero fixes the problem. Isn't resedit magical! I didn't even need to look at your code!

Jim

 By [Joe Nasal \(Jsn\)](#) on Tuesday, August 20, 2002 - 01:16 pm: [Edit](#)

Jim:

I'm confused... I believe that I do need to supply a "left" property within menu resources. On my 3.5 box if I set the "left" property for any of these menus to 0 they are displayed all the way over to the left (at position 0) as one would suspect. "left" indicates where the menu is to be displayed on the menubar, by my read.

Are you saying that setting the "left" property to 0 places the menus in their proper place (the menubar resource should contain 3 items from left to right: Applets, Diagrams, Info) or does it place them at position 0?

Thanks,

Joe

 By [Jim Hendricks \(Jimh\)](#) on Tuesday, August 20, 2002 - 01:42 pm: [Edit](#)

It's been a while since I've messed with menus, but from what I'm seeing here with OS4.1 is that the left property for the 1st menu item determines

how many pixels from the left the menu will be offset. The left attributes of the remaining menu items don't seem to matter.

Looking at the menu in RsrcEdit I see the menu listed as Info, Applets, Diagrams. This is the order in which it displays from left to right in the application, not in the order your stating. I thought this was always the way it was, the top most listed menu item in rsrcedit is the leftmost item in the displayed menu.

Well, before sending this e-mail I ran POSE with 3.5 color ROM & I saw the menu as you stated it. I must assume then that OS4+ has changed how the left property is interpreted.

I just set my menu left to:

info 40

applets 0

diagrams 100

In OS4 I see 40 pixels from the left "Info Applets Diagram" So I have to assume the behaviour in OS4 is to display the menu in the order it is entered in the resource & only honor the left setting of the first item.

Jim



By [Jim Hendricks \(Jimh\)](#) on Tuesday, August 20, 2002 - 01:52 pm: [Edit](#)

As an addendum to my last, Joe, all the lefts set to 0 with the order of the items in the resource set to the left to right order you want to display in should work.

I checked that out on OS3.5c in POSE & that caused the menu items to display on top of one another. So instead I moved the order of your items into the left to right order so the menu 5000 is:

Applets 0

Diagrams 50

Info 111

This seems to work in both OS3.5c & OS4.1.



By [Joe Nasal \(Jsn\)](#) on Tuesday, August 20, 2002 - 01:53 pm: [Edit](#)

Jim:

Thanks. If I understand you, then what I should do to remain consistent with my current distribution is re-order the menu items as "Applets Diagrams Info" and then supply an offset to Applets if appropriate. If I want Applets to remain at the left-most position I suppose I should supply a "0"

here.

I'm curious about the "left" attribute within the menu selections themselves, though (for example, the selections under "Applets"). There is a "left" attribute for these as well. Are these "left" attributes ignored (when you reset the menu positions in your experiment did the menu items display in the proper places)?

Neal:

Do you have any thoughts on this? If this is so you might want to include this information with the RsrcEdit distribution.



By [Jim Hendricks \(Jimh\)](#) on Tuesday, August 20, 2002 - 02:00 pm: [Edit](#)

Yes, that's the order you should put them in the menu resource. The left numbers you have should work since your applets left is already zero. For OS4.x the left attribute of the remaining menu items appears to be ignored, but these left attributes are still needed by pre OS4.x to keep the menu items from landing all on top of one another. This should allow you to have the same PRC for both OS's.



By [Joe Nasal \(Jsn\)](#) on Tuesday, August 20, 2002 - 02:05 pm: [Edit](#)

Jim:

Best \$15 I've spent in a while... 😊

I owe you one.

Thanks,

Joe



By [Jim Hendricks \(Jimh\)](#) on Tuesday, August 20, 2002 - 02:10 pm: [Edit](#)

Your Welcome, that's what a developer community is for.

Add a Message

Username:

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Self deleting application?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Self deleting application?



By [BarryFernelius](#) on Sunday, August 18, 2002 - 07:52 pm: [Edit](#)

I'm a magician, and I'm working on a magic trick in which a Palm Pilot apparently reads someone else's mind. (I won't bore you with the details of the trick and presentation here.)

At the beginning of the trick, I beam the application to an audience member's Palm. At the end of the trick, when the audience member goes to Applications, I would like to have the application vanish.

How could I accomplish such a thing?



By [Mike Will](#) on Sunday, August 18, 2002 - 11:40 pm: [Edit](#)

You could get Microsoft to write it 😊

Mike



By [Neal Bridges \(Nbridges\)](#) on Monday, August 19, 2002 - 02:00 pm:

[Edit](#)

Barry, I don't believe an app can delete itself while it's running.

The only way I can think to do it would be to have the app create a tiny sub-app, the whole purpose of which is to delete the first app; you'd then catch the application exit event and launch your sub-app instead. The sub-app would delete the main app, and then be left behind in memory, unfortunately.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, August 19, 2002 - 06:42 pm: [Edit](#)

Could an application change its database's type from 'appl' to something else while it is running? That would remove it from Applications, although you still have the problem of it staying behind in memory.

-- Kris



By [Tony Duran](#) on Monday, November 11, 2002 - 02:03 pm: [Edit](#)

Not to imply anything, but this whole thing strikes me as a way to beam a virus to someone's Palm, cause damage, and then have it disappear without a trace. And judging from Forth's power, that can get scary...



By [BarryFernelius](#) on Monday, November 11, 2002 - 06:18 pm: [Edit](#)

Tony,

Nothing could be further from the truth! I have been using Quartus Forth to write some magic trick applications. In its current incarnation, the trick runs correctly the first time, but on the second (and third and fourth and so on...) time it is launched, it has become my business card.

I wanted to be able to make the application disappear because that's logical; if I'm a magician I SHOULD be able to do such things. However, it's very important that the program be able to vanish while doing no damage.

If you think about it, using a beamable application as a virus is not very smart. First, the person receiving the application has to give his/her consent. If anything fishy happens to the machine after this, that person, provided that he/she is intelligent, will know who and what was the cause of their trouble. It seems to me that anyone trying to spread a virus would want to retain a bit of anonymity.



By [Jim Hendricks \(Jimh\)](#) on Monday, November 11, 2002 - 07:04 pm:

[Edit](#)

I can see Tony's point, because a virus is not distributed on it's own, it maintains it's anonymity by attaching itself to a legit file, and when you go after the author of the file, you find they had no clue that they had been hit by the virus. For max impact, the virus would deploy before deleting it's original host.

I also see how there is benefit in a program being able to self-delete for the purposes of installation/configuration. To keep a database small, the delivered database could be an installation proggy which decompresses/builds/compiles etc. the real programs and dataspace needed by an app once it has been run. After running, it is no longer needed.

I think the danger of such a feature is such that it is better to eliminate the original prc another way.

You could perform your "magic" by having both parts of the app in the prc. When the app runs the first time, it places some info into the prefs. Next time it's run, you detect the prefs and display the business card instead. The advantage of this is that it can also be beamed and the one receiving

the beam will still get the trick the first run even though it was already run on the beaming machine.

Jim



By [BarryFernelius](#) on Tuesday, November 12, 2002 - 05:54 pm: [Edit](#)

Jim,

Earlier, I wrote:

I have been using Quartus Forth to write some magic trick applications. In its current incarnation, the trick runs correctly the first time, but on the second (and third and fourth and so on...) time it is launched, it has become my business card.

Then, you (Jim) wrote:

You could perform your "magic" by having both parts of the app in the prc. When the app runs the first time, it places some info into the prefs. Next time it's run, you detect the prefs and display the business card instead.

Precisely! These sound similar because using the prefs info is the technique that I use for the current version of my magic trick application.

Best Magical Wishes,

Barry R. Fernelius

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name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

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Type

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Type](#)



By [Frank](#) on Saturday, August 17, 2002 - 02:49 am: [Edit](#)

Could anyone show me how a word like 'type' works>?

I want to put text into a database and later retrieve it (so i need two words: PutTextIntoDatabase and GetTextFromDatabase).

I can't seem to figure out how to do it.

thanks,

Frank



By [Kris Johnson \(Kdj\)](#) on Saturday, August 17, 2002 - 03:18 am: [Edit](#)

You can start here: <http://kristopherjohnson.net/wiki/StringsTutorial>. It doesn't specifically discuss databases, but does cover the basics of how text is represented.

-- Kris



By [Frank](#) on Sunday, August 18, 2002 - 02:42 am: [Edit](#)

Thanks Kris, i will try that. I already know how databases work.

Frank

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Highlight text in console

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Highlight text in console



By [Martin Bitter](#) on Friday, August 16, 2002 - 02:59 pm: [Edit](#)

I want to highlight a simple message text in the console (like the word more... you see after typing 'words').

I looked in the API docs but only? found highlighting test possible with tables. Is that that right or is there an other way?

How did Neal made in in 'words'?

Regards Martin



By [Neal Bridges \(Nbridges\)](#) on Friday, August 16, 2002 - 03:23 pm:

[Edit](#)

The function you want is WinDrawInvertedChars (y x len &chars. --); it draws text with the foreground/background colours reversed.

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, August 16, 2002 - 05:16 pm: [Edit](#)

You may also want to look at <http://kristopherjohnson.net/wiki/TextModule>, and use the invert-text mode.

-- Kris



By [Martin](#) on Saturday, August 17, 2002 - 12:52 pm: [Edit](#)

Thank you, Neal and Kristopher.

It helps and works :-)

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Diamond as button label?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Diamond as button label?



By [BarryFernelius](#) on Monday, August 12, 2002 - 06:20 pm: [Edit](#)

Is it possible to create a button label that is one of the playing card suit symbols (spade, heart, club, diamond)?

And if so, how?



By [Kris Johnson \(Kdj\)](#) on Monday, August 12, 2002 - 08:12 pm: [Edit](#)

The character codes for the suit characters are

141 diamond
142 club
143 heart
144 spade

I don't know if there is any easy way to set the label to one of those characters using RsrcEdit, but you can use CtlSetLabel to set the label for a button programmatically.

It is possible to type the suit characters using the Fitaly keyboard. I don't know if there is any way to type them using Grafitti or the built-in keyboard.

-- Kris



By [BarryFernelius](#) on Monday, August 12, 2002 - 10:09 pm: [Edit](#)

OK, I'm starting to feel weird answering my own questions! I'll try to think a bit more before I ask any other questions.

This is what I came up with. I created the following memo:

```
\ suits
```

```
needs memo
```

```
create suits 8 chars allot
```

```
141 suits c!
```

```
142 suits 1+ c!
```

143 suits 2+ c!

144 suits 3+ c!

0 suits 4+ c!

```
: stest ( - )  
  OpenMemoDB  
    suits 4 WriteNewMemo  
  CloseMemoDB ;
```

I included suits in my startup.quartus memo. I ran stest, and created a memo that had the four card suit symbols. (No, I wasn't able to figure out any Grafitti that would work for them.) I copied one of the suit characters, and started Quartus RsrcEdit. I renamed a button that I had created previously with the suit symbol by pasting it in RsrcEdit. It worked!

Because I don't want to change the label programmatically, this worked well for me.

 By [Neal Bridges \(Nbridges\)](#) on Monday, August 12, 2002 - 10:11 pm:
[Edit](#)

A creative solution, Barry!

Neal

 By [Gary Wiese \(Garyjwiese\)](#) on Monday, August 12, 2002 - 11:18 pm:
[Edit](#)

Kris,

Where did you find the character codes for these characters, I did a search and came up empty. Found the standard codes but nothing on graphical characters.

Gary

 By [BarryFernelius](#) on Tuesday, August 13, 2002 - 12:25 am: [Edit](#)

Gary,

Look on this page: <http://www.palmpilotarchives.com/utilities.html>

There is a utility called ASCII chart that is helpful for this sort of thing.

-Barry

 By [Kris Johnson \(Kdj\)](#) on Tuesday, August 13, 2002 - 06:13 am: [Edit](#)

Back when I was writing JacksOrBetter, I found them by trial and error. I started by writing a little program that essentially did this:

```
: draw-chars
  256 20 do
    i emit
  loop ;
```

I looked at the output to see where the suit characters showed up. Then I narrowed down the range until I found the exact codes.

Not pretty, and certainly not as useful as ASCII Chart. But it only took a few minutes.

-- Kris



By [Wade Carlson](#) on Tuesday, August 13, 2002 - 06:58 am: [Edit](#)

AsciiChart is excellent, and it's freeware. To give credit to the author, the actual link to the program is here:

<http://astro.uchicago.edu/home/web/valdes/pilot/AsciiChart/>



By [John Newell](#) on Tuesday, August 13, 2002 - 07:29 am: [Edit](#)

I use AsciiChart also. One of the first utilities I downloaded. You can copy characters into the clipboard and then paste them where ever you want - including into button labels defined in RsrcEdit.

P.S. You might want to look at SymbolHack if you often use special symbols.

Regards
John

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General PRC Questions

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): General PRC Questions



By [Frank](#) on Sunday, August 11, 2002 - 07:01 pm: [Edit](#)

Neal,

to start with some questions I have had for quite a while:

- What is a resources-file? Is it just a PRC that I can open using 'USE-RESOURCES' and then it will act as an extension to my dictionary? Or am I completely wrong here? Could you link me to some info about this? I want to be able to make a helpfile that i can call from my program but i don;t have a lot of dictionary-space (i think). I've been looking around but couldn't realy understand all the things that have been said about it. I just want to know how to make such a resource file.

- How are Small-icon and Large-icon defined and used? I want to be able to have my own Icon for my app.

- Is checking the HotSync name a good way to protect against unwanted copying? (I saw your Get-HotSyncName-word somewhere).

These questions are only meant for the future, but I wanted to ask them anyway.



By [Neal Bridges \(Nbridges\)](#) on Monday, August 12, 2002 - 02:42 pm:

[Edit](#)

Hi, Frank.

1. A resource file is used primarily to store GUI objects during development -- forms, graphics, etc. These are copied into your target PRC using CopyRsrc.

Resource files can be made on-board easily using Quartus RsrcEdit.

2. Small and large icons can also be defined using RsrcEdit, and again copied into your target PRC with CopyRsrc; there are a number of sample apps that show this.

3. Checking the HotSync name is a common part of registration-key schemes, yes.

Neal



By [Frank](#) on Tuesday, August 13, 2002 - 07:18 am: [Edit](#)

Rsrc-edit works great Neal!

I made my Icon now...

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Newbie - ASSERT behavior

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie - ASSERT behavior



By [Joris](#) on Saturday, August 10, 2002 - 05:12 am: [Edit](#)

I'm trying to get ASSERT to work, but can't seem to understand it's logic (I am new to Forth).

I wrote some very simple code in startup.quartus :

```
needs assert
1 assert-level !
: go 1 assert( noop ) .s ;
go
```

I would expect to see '1' on the stack, but the stack is empty (as if assert 'consumes' the TOS). If I set assert-level to 0, the program behaves as expected.

What gives ?

Thanks for any insights anyone can provide ...

Joris.



By [Joris](#) on Saturday, August 10, 2002 - 07:17 am: [Edit](#)

Please don't bother, I've found the answer on the wiki in the meantime ...

Joris.

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Dana and Quartus - a match made in heaven?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Dana and Quartus - a match made in heaven?](#)



By [Barry Fernelius \(Barryfernelius\)](#) on Thursday, August 8, 2002 - 06:36 pm: [Edit](#)

Take a look at the following Palm OS device:

http://www.alphasmart.com/products/dana_overview.html

This could be quite a nice environment for developing Palm apps.

Neal, how hard would it be to adapt Quartus to work with the larger screen available on the Dana?



By [Mike Will](#) on Thursday, August 8, 2002 - 09:14 pm: [Edit](#)

Bundled with PrintBoy and QuickOffice for \$400 seems like a pretty good deal. The wide screen and full keyboard are tempting for developers, not sure about mainstream users. Very interesting machine.

I think Palm is getting hammered (worth 80 cents today) largely because others are shipping higher tech hardware (Sony, Handspring, maybe now Alphasmart).

Mike



By [Jamie Cairns \(Jamie\)](#) on Friday, August 9, 2002 - 08:02 am: [Edit](#)

Not sure how the wide screen will fly - Finally, after a year or so, applications are starting to come out with the High-res functionality of the Handera & the Sony - The Dana will be kind of a niche market, don't you think ? (although I would like to play with one for a while, just to see...)



By [BarryFernelius](#) on Friday, August 9, 2002 - 11:03 am: [Edit](#)

My brother has both an Alphasmart and a desktop computer. This combination is cheaper than owning a laptop, and offers the best of both worlds. (His primary laptop use is taking notes and writing.)

The Dana, with all of the capabilities of the Alphasmart and all of those wonderful Palm apps, could be a viable laptop replacement for many people, not just Alphasmart's educational market.

Imagine that you have a Dana, and after looking at the Palm apps that are already out there, you find that you're missing something that you really want. If you have Quartus Forth, you can make your dream application for the Dana. Perhaps it will become so essential for Dana users that Alphasmart will want to offer it to their user base...



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, August 14, 2002 - 09:01 am: [Edit](#)

I suppose this is taking the thread down a side path, but it seems to me the biggest thing missing from all Palm OS devices is the ability to connect directly to a MS Exchange server and get e-mail. Not syncing, but with a dial-up or wireless connection. Until there is a Palm OS Outlook-compatible program, business users can't really consider any Palm OS device as a laptop replacement. Unfortunately for all of us, Outlook / Exchange is the standard in business - I carry a laptop when travelling solely for connectivity to my business e-mail.

Anyone want to write a new Quartus program???

Barry Ekstrand



By [Samuel Tardieu](#) on Wednesday, August 14, 2002 - 09:16 am: [Edit](#)

The subset of companies which chose to lock themselves down into a proprietary closed solution such as Microsoft Exchange should switch to standard protocols (SMTP, POP/IMAP, all using SSL) instead. Or they should push their decisions even further and use Microsoft PocketPC handhelds to get "compatible" products.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, August 15, 2002 - 12:40 pm: [Edit](#)

I agree, but it doesn't look like either will happen - hence the need / opportunity for a 3rd party to create a direct MS Exchange interface for Palm OS.

Barry



By [Brian Chirgwin \(Bchirgwin\)](#) on Thursday, August 15, 2002 - 04:08 pm: [Edit](#)

Are talking about an Outlook for the PalmOS? I don't think this is possible as the API isn't available for the PalmOS and, as far as I know, MS hasn't made the details to connect to Exchange public. Software can be written for the Windows OS because the API is there.

Blackberry handles it the following way:

http://www.blackberry.com/products/software/server/exchange/how_it_works.shtml

The server software isn't cheap.



By [Kris Johnson \(Kdj\)](#) on Thursday, August 15, 2002 - 04:52 pm: [Edit](#)

Exchange Server will support SMTP/POP/IMAP/etc. if it is configured to do so. You may want to ask your IT department if it is, and if not, why.

-- Kris

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Using ACCEPT in a stand-alone application

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Using ACCEPT in a stand-alone application](#)



By [BarryFernelius](#) on Thursday, August 8, 2002 - 11:42 am: [Edit](#)

I have not written anything in Forth since the old days of MacForth (for the Macintosh, naturally) back in the mid 1980s. I recently discovered Quartus for the Palm, and I've written a very nice Forth program that uses "`<Question>`" to display questions and `ACCEPT` to read the answers. A modified version of `SEARCH` is used to check the answers.

Now, I want to make this program into a stand-alone application, and I'm ready to buy the supported version of Quartus. Can anyone help me estimate how much extra work will be required to make this work? Is it as simple as adding some kind of simple event handler? Will `ACCEPT` work under these circumstances? Here's the code:

```
\ joyal 2002.08.06 BRF
\ Provides a practice session for the
\ SHoCkeD version of Martin Joyal's
\ stacked deck from his book
\ entitled
\ The Six Hour Memorized Deck
```

```
needs toolkit
needs random
```

```
create iPad 4 cells allot
create oPad 128 cells allot
variable thisCard
```

```

variable thisNum
variable prevNum
variable nextNum
variable adr1
variable len1
variable adr2
variable len2
variable c2
variable stayed

: newsearch ( c-addr1 u1 c-addr2 u2 -- c-addr3 u3 flag )
-1 stayed !
len2 ! adr2 ! 2dup len1 ! adr1 !
adr2 @ c@ c2 ! bounds
?do i c@
    c2 @ =
        if i len2 @ adr2 @ len2 @ compare 0 =
            if i len1 @ adr1 @ + i - -1 0 stayed ! leave
            then
        then
loop
stayed @ if adr1 @ len1 @ 0 then ;

: deck$
s" jh6s6h4stdad7s4h9s5dqhackc7htc4cjs9hkd5c7c2sqcahth6c9c7dqd5hkh4d3s3hts9dqs3c3d2h8s2cjc2d8h8cksasjd5s
; 104 allot

: getChars ( -- ipadaddr, n )
iPad dup 4 accept ;

: stackNum ( caddr, n, caddr, m -- stacknum )
newsearch
if 2 / 53 swap - swap drop
else drop drop 0
then ;

: randCardNum ( -- n )
rand 642 / 1+ ;

```

```

: nthCard ( n1 -- caddr, 2 )
  1 - 2 * deck$ drop + 2 ;

: makePrevNext ( -- )
  thisNum @ 1 - dup 0 = if drop 52 then prevNum !
  thisNum @ 1+ dup 53 = if drop 1 then nextNum ! ;

: makeRandCard ( -- )
  randCardNum dup thisNum ! nthCard drop thisCard ! makePrevNext ;

: askNumQuest ( -- )
  cr ." Card at this number: " thisNum @ . ;

: askCardQuest ( -- )
  cr ." Stack number of this card: " thisCard @ 2 type ;

: askPrevQuest ( -- )
  cr ." Before this card: " thisCard @ 2 type ;

: askNextQuest ( -- )
  cr ." After this card: " thisCard @ 2 type ;

: answerToNum ( -- thatnum )
  space deck$ getChars stackNum ;

: answerToCard ( -- thatnum )
  space 0 0 getChars >number drop drop d>s ;

: answerCorrect ( -- )
  cr ." That is correct!" ;

: correctCardIs ( -- )
  cr ." The correct card is: " thisNum @ nthCard type ;

: correctNumIs ( -- )
  cr ." The correct number is: " thisNum @ . ;

: correctPrevIs ( -- )
  cr ." The correct previous card is: " prevNum @ nthCard type ;

```

```
: correctNextIs ( -- )
  cr ." The correct next card is: " nextNum @ nthCard type ;

: cardQuery ( -- )
  makeRandCard askNumQuest answerToNum
  thisNum @ =
  if      answerCorrect
  else    correctCardIs
  then
  cr ;

: numQuery ( -- )
  makeRandCard askCardQuest answerToCard
  thisNum @ =
  if      answerCorrect
  else    correctNumIs
  then
  cr ;

: prevQuery ( -- )
  makeRandCard askPrevQuest answerToNum
  prevNum @ =
  if      answerCorrect
  else    correctPrevIs
  then
  cr ;

: nextQuery ( -- )
  makeRandCard askNextQuest answerToNum
  nextNum @ =
  if      answerCorrect
  else    correctNextIs
  then
  cr ;

: coinFlip ( -- flag )
  rand 16384 > ;
```

```
: displayBanner ( -- )
  page ."      ***** JOYAL STACK DRILL *****" cr ;

: prevNext ( -- )
  coinFlip
  if      prevQuery
  else nextQuery
  then ;

: numCard ( -- )
  coinFlip
  if      numQuery
  else cardQuery
  then ;

: go ( -- )
  displayBanner
  begin
  coinFlip
  if      prevNext
  else numCard
  then
  again ;
```

 By [Neal Bridges \(Nbridges\)](#) on Thursday, August 8, 2002 - 02:41 pm: [Edit](#)

Barry, while you can use ACCEPT in a stand-alone app, it's not recommended, as it would present a somewhat foreign user interface to Palm users familiar with standard Palm GUI objects.

Extending your app to use Palm OS GUI elements is fairly simple. For an example, I suggest the PhoneDecode app available at PalmGear; it comes with complete sources.

<http://palmgear.com/software/showsoftware.cfm?&prodID=3195>

Have a look at that, and come back here with any questions it generates.

Neal

 By [Michael Park \(Mpark\)](#) on Thursday, August 8, 2002 - 02:49 pm: [Edit](#)

Barry, if you want to stick with ye olde console i/o, your program needs only one change to become stand-alone-able: in your go word, call mainform before displayBanner.

I just got the registered version (thanks again Neal!) and this is the first stand-alone program I've managed to build.

 By [BarryFernelius](#) on Thursday, August 8, 2002 - 06:00 pm: [Edit](#)

Neal,

Thanks for the information and the pointer to some examples of using the Palm GUI. I'm working on a fancier version of my program that will have quite a few additional features and a slick Palm interface. I just wanted to be able to have a working app to share with a few friends before I make the fancier version.

Michael,

I'm glad to hear that it is possible to make the program stand-alone without much effort. So far my work with Quartus has produced very encouraging results with the investment of just a few hours of my time.

 By [Samuel Tardieu](#) on Friday, August 9, 2002 - 08:10 am: [Edit](#)

Barry, as a side-note, I prefer the following version of coinFlip, which does not depend on the range, takes less code space and executes faster:

```
: coinFlip ( -- flag )  
  rand 1 and ;
```

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Sockets, tcp/ip, network access

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Sockets, tcp/ip, network access



By [Robert Gorenc](#) on Tuesday, August 6, 2002 - 07:09 am: [Edit](#)

Hi to all!

Does anyone work on wrap or module for tcp/ip communication?

I would like to write a simple telnet client in QF, but I'm not so experienced in palm OS to wrap network functions in QF.

bye,
Robert



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 8, 2002 - 02:35 pm:

[Edit](#)

Hi Robert. I don't know that anyone is actively working on wrapping the TCP/IP functions at the present time.

Neal

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Still not out of the woods with SEARCH

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Still not out of the woods with SEARCH



By [BarryFernelius](#) on Monday, August 5, 2002 - 11:14 am: [Edit](#)

I've used Eli's NEWSEARCH from 12/13 (after adding NEEDS TOOLKIT to ensure that BOUNDS works correctly), and my application almost works. NEWSEARCH returns the correct values when the search string is found. However, when the search string is not found, I'm getting a fatal error!

Does anyone have any further suggestions? How do you work around this problem?

-Barry R. Fernelius



By [BarryFernelius](#) on Monday, August 5, 2002 - 05:56 pm: [Edit](#)

Now it's getting weird. I'm here answering my own question! After a bit of thought, I decided that Eli's NEWSEARCH didn't put anything on the stack unless the search was successful. To work around this, I came up with the following ugly (but functional) code:

```
variable adr1
variable len1
variable adr2
variable len2
variable c2
variable stayed

: newsearch ( c-adr1 u1 c-adr2 u2 -- c-adr3 u3 flg )
-1 stayed !
len2 ! adr2 ! 2dup len1 ! adr1 !
adr2 @ c@ c2 ! bounds
?do i c@
    c2 @ =
    if i len2 @ adr2 @ len2 @ compare 0 =
        if i len1 @ adr1 @ + i - -1 0 stayed ! leave
        then
    then
loop
stayed @ if adr1 @ len1 @ 0 then ;
```

Let me know if this workaround functions in your Forth code as well.

-Barry R. Fernelius

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E-mail:

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More trouble with SEARCH

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): More trouble with SEARCH



By [BarryFernelius](#) on Friday, August 2, 2002 - 05:15 pm: [Edit](#)

I'm using the evaluation version (1.2.1?) of Quartus, and I've had some trouble with bugs in the SEARCH keyword.

I tried Eli's workaround (from 12/13), but I get an error stating that BOUNDS is not a defined word.

What do I try next?

-Barry R. Fernelius
barry_fernelius@agilent.com



By [Neal Bridges \(Nbridges\)](#) on Friday, August 2, 2002 - 08:46 pm: [Edit](#)

Barry, BOUNDS is defined in toolkit.txt. Let me know if that helps!

Neal



By [BarryFernelius](#) on Saturday, August 3, 2002 - 09:28 pm: [Edit](#)

Neal,

Thanks so much for taking a moment to help a newbie. That doesn't just help -- it solved my problem!

-Barry



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 8, 2002 - 02:35 pm:

[Edit](#)

My pleasure, Barry.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Fatal alert

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Fatal alert



By [Eli](#) on Sunday, July 28, 2002 - 12:12 pm: [Edit](#)

I made small application, and sometimes i get this error
Fatal Alert
Memory Mgr C Line: 3036
Chunk over-locked

does someone know the reason?
Eli



By [John Newell](#) on Wednesday, July 31, 2002 - 08:15 am: [Edit](#)

That's rather an open question Eli.

When MemHandleLock is issued, the memory chunk counter is incremented. This can be done a maximum of 14 times without issuing a MemHandleUnlock.

In my case it is usually as a result of locking a database record to read or manipulate the data and then failing to unlock it. The program appears to work for a while until you have run it a number of times and then the problem shows up. (Leaving the program does not unlock memory chunks automatically.) The SDK recommends that memory chunks are unlocked as soon as possible after being locked and manipulated.

The Wiki may have more information.

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/HandlesAndPointers>

Regards
John



By [Eli](#) on Wednesday, July 31, 2002 - 05:34 pm: [Edit](#)

John, Thank you very much.
Eli

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Another Quartus Forth App ProStats(tm)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Another Quartus Forth App ProStats(tm)



By [Jim Purdy](#) on Saturday, July 27, 2002 - 09:23 pm: [Edit](#)

Please check out the link: <http://home1.gte.net/res0rb2y/index.html>

this is total Quartus Forth.



By [Neal Bridges \(Nbridges\)](#) on Saturday, July 27, 2002 - 11:12 pm:

[Edit](#)

An impressive app. I daresay it's sold more units than Quartus Forth itself.



Neal

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List control: scroll arrows?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): List control: scroll arrows?](#)



By [Michael Park \(Mpark\)](#) on Friday, July 26, 2002 - 01:36 pm: [Edit](#)

I've got a list control with callback function working except for one thing: the scroll arrows aren't showing up properly. Sometimes they're not visible, but tapping where they should be causes them to flash, and scrolling does occur; other times a scroll arrow will appear at the rhs of a line that is not at the top or bottom of the box (and tapping it has no effect).
Anyone run into this? Any help?



By [Michael Park \(Mpark\)](#) on Monday, July 29, 2002 - 10:22 am: [Edit](#)

Well, I narrowed down the problem to `< # #s # >` in my callback. I replaced that sequence with a simple number formatter of my own and all is now copacetic. Weird.



By [John Newell](#) on Wednesday, July 31, 2002 - 08:18 am: [Edit](#)

Michael,

Callbacks can have problems under Quartus Forth. See the Wiki:

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/CallbackEndCallbackIssues>

Regards
John



By [Steve Bohrer \(Skb\)](#) on Thursday, August 1, 2002 - 08:51 am: [Edit](#)

I also had troubles with in a list draw callback, but did not make any progress resolving it.



By [Steve Bohrer \(Skb\)](#) on Thursday, August 1, 2002 - 03:53 pm: [Edit](#)

Looks like I had trouble with formatting "`< # # # >`" earlier this morning, but I meant to say I've had trouble with them in callbacks as well, and the problem went away when I used my own number formatting.

[This post](#) has a recent mention of the issue, but the original posts on the topic are long archived.

Since you've had the same trouble, perhaps it is a real issue, and not just random strangeness. As a work-around, I've used only direct OS drawing calls within callbacks, rather than any of the Quartus string or number words.

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Modem

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Modem](#)



By [Ronny Svensson](#) on Thursday, July 25, 2002 - 01:05 pm: [Edit](#)

I need to use a modem for a communication program.
Has anyone seen som examples on mdmDial?
How to fill in the Modem structure?
Or is it just trial and error as usual...

Ronny



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 25, 2002 - 01:29 pm:

[Edit](#)

Not knowing exactly what you're attempting, I'd guess that it'd be simplest to open the serial port and communicate directly with the modem.

Neal



By [Ronny Svensson](#) on Thursday, July 25, 2002 - 02:03 pm: [Edit](#)

I had been planning to do it the simple way:
Turn on DTR, send init-string, dial string and wait for DCD. But when I started to look a little closer it seems tha the DCD can't be read on the Palm. That means that I either have to dial blind or handle the response codes (textually) from the modem. Seeing the mdmDial function it just seemed to be a simpler solution (if it works). I don't know how modems are normally handled on the Palm. Connection manager and Modem manager. I searched a little but didn't find much. On a PC you would install a driver for the modem. If you use the Palm for surfing connected to your mobile is there some special .prc to handle the communication for the specific phone or is there only a new entry added in the Connection manager?

Ronny



By [Chris Bucsko](#) on Thursday, July 25, 2002 - 05:46 pm: [Edit](#)

To talk to a modem, you'll need to address the serial port. Here's a link to some serial port code from the Forth Contrib area:

<http://www.quartus.net/files/PalmOS/Forth/Contrib/srm.txt>

Details on the PalmOS serial port interface can be found at:

<http://oasis.palm.com/dev/kb/manuals/1770.cfm>

I've not actually used the serial port code yet, but I'd like to when I get some time...



By [Ronny Svensson](#) on Friday, July 26, 2002 - 09:02 am: [Edit](#)

Thanks - but I have used the serial port quite a lot. The problem is the modem bit. I thought that there was some support for modems in the system software so that you just could install your modem and that there was some function to dial the modem (like modem drivers in Windows). Now I just open the serial port and send the dial-sting and wait for the string "CONNECT" (displaying the string as it is received for debugging). But I have no modem to test with. The program is to be used with a GSM-phone in another country so it will probably be a lot of fun getting it to work...

Ronny

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Jot Incompatibility With Quartus Apps

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Jot Incompatibility With Quartus Apps



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, July 23, 2002 - 06:56

pm: [Edit](#)

Neal, et. al.,

Its been awhile since I've had anything to say here due to a new job I took at the beginning of the year, but I just learned from a user of my software that Jot (the graffiti replacement) caused a fatal reset when 2 of my calculator apps attempt to calculate. He removed all other 3rd party software to determine where the incompatibility was, and Jot was the culprit. Disabling Jot allows my apps to run properly. This may already be known to others, but I didn't remember seeing it before - the only other incompatibility that I've seen has been with MSMount.

Hope all is well with the QF community!

Regards,

Barry Ekstrand



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 23, 2002 - 06:58 pm: [Edit](#)

Good to see you, Barry!

Thanks for the heads-up about Jot. I'd guess it's taking inappropriate liberties with one of the CPU registers.

Neal



By [Dave Bennett \(Dbennett\)](#) on Wednesday, August 21, 2002 - 06:25

pm: [Edit](#)

Hey Barry,

I've been out most of this year myself with an injury. And unfortunately, things are going downhill healthwise again.

However, my wife uses jot and loves it. She has all of the Q4th apps I've written on her Palm V and doesn't have any problem with any of them when using jot. I'm not convinced that jot is the culprit.

Dave



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, August 21, 2002 - 06:59 pm: [Edit](#)

Dave,

I'm sorry to hear about the status of the injury, I know all of us want you to have a full and quick recovery.

I appreciate the comments about Jot. My user was adamant that turning Jot on and off caused or fixed the incompatibility, but as I recall the fatal reset only occurred when he hit the Calculate button on my apps. These apps do financial calculations and use loops to test accuracy, maybe Jot zaps something specific in there (?) Hearing that your wife has no problem certainly clouds the picture. I don't remember what hardware or OS he was using, so no way to correlate that. I guess the bottom line is that it is something to watch for in case someone reports fatal resets out of the blue when no one else does.

Again, all the best with the recovery!

Barry



By [Dave Bennett \(Dbennett\)](#) on Wednesday, August 28, 2002 - 06:43 pm: [Edit](#)

Don't you just love those "one off" problems? I had one person tell me that setting the kerf value in my InchCalc app caused his device to reset. I couldn't get anyone else to duplicate it. I even got a duplicate device and couldn't duplicate it, but he insisted it still happened on his. One unhappy user, one confused developer.

Dave



By [Mike Will](#) on Wednesday, August 28, 2002 - 07:34 pm: [Edit](#)

Did your "one off" problem happen on a Palm IIIxe?

Mike

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Potential bug with assembly code? (doubleasm.txt doesn't work on OS 3.5+)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Potential bug with assembly code? (doubleasm.txt doesn't work on OS 3.5+)



By [Ken](#) on Monday, July 22, 2002 - 11:48 pm: [Edit](#)

I've got a strange thing happening here.

I've probably done something bone-headed, but there's a slight chance that it points to a problem with the assembly words on newer OSes.

Basically, I'm suspicious of their behavior when used with code that I've uploaded (doubleasm.txt at <http://www.quartus.net/files/PalmOS/Forth/Contrib/doubleasm.txt>).

I'd upgraded to the latest emulator (3.5) running the 3.5 debug en ez roms. In addition to the slowness, the code I'd written simply didn't work., and would crash the machine. I assumed I'd done something drastically wrong (usually a fairly safe assumption *smile*).

Steve Bohrer suggested that I go back to a previous version of the emulator, where the code worked perfectly. Perplexing...it *seemed* to be the same code top to bottom. (imagine lots of visual diffing...yuck.)

I tried it on my real device, and Handspring Visor prism, OS 3.5.2H, where again, it crashed (and in the same way, too). turns out that the doubleasm words I'd written were not working correctly on the newer devices.

John Newell had provided a new definition for NEEDS that told me what the csused was as the words were compiled.

I noticed that the numbers were different after the doubeleasm.txt code was compiled on the old emulator and the visor.

Indeed, when the code is compiled on the old emulator (emu 3.0a5, OS3.1 E24, emulating a palm IIIx with 8192K RAM) it works like a charm.

The resulting prc can be moved onto my Visor where it works perfectly. (<http://213.165.155.8/kcorey/Tennis.PRC> if you're interested).

So, I'm thinking that the asm words have a problem under either a newer rom device machine, or a newer version of the OS.

Anyone else have any problems like this?

-Ken



By [Neal Bridges \(Nbridges\)](#) on Monday, July 22, 2002 - 11:51 pm: [Edit](#)

The assembler vocabulary does not depend on the OS, and should produce identical code in both cases. Try disassembling your code on both platforms to confirm.

Neal



By [ken](#) on Tuesday, July 23, 2002 - 05:54 pm: [Edit](#)

I was right in the first instance...I did do something bone-headed.

sigh

Note to self: *never* modify distributed modules!!! Bad boy! No biscuit!

There's still something wrong. Neal, could you remove the file doubleasm.txt temporarily? I'll send it to you again once it's fixed.

I'd added the lines
6400 constant CS
6500 constant CC
6200 constant LO
to asm68k.part2.

This is okay as far as it went, but doubleasm.txt depended on CS CC being defined. (it was defined correctly on my development virtual machine, but not on my real machine. Go figure).

In trying to be correct when releasing code, I'd added the first two lines(CC and CS) at the top of doubleasm.txt, forgetting to use 'hex' and 'decimal' before and after the constants. It's no wonder things went awry, as the constants that were used were completely wrong.

Doh!

-Ken



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 23, 2002 - 05:56 pm: [Edit](#)

Removed.

Neal

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(4th newbie alert) How to redefine 'include'?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): (4th newbie alert) How to redefine 'include'?



By [Ken](#) on Sunday, July 21, 2002 - 05:38 pm: [Edit](#)

Hi All,

It's taking a *long* time (2-3 minutes) to 'include' my application under quartus. PII 400, emulator 3.5, palm os 3.5-en-ezdbg.rom (with all debugging turned off).

So, my first assumption is that I'm including far too much stuff. Single definitions happen in the blink of an eye, so including a single memo shouldn't take that long.

To investigate this, my instinct would be to redefine 'include' so that it would print out the name of the memo that it's going to load...that way all loads can be logged, and I can see what it's really doing without having to modify every single memo.

The problem is that I'm not sure how to handle the word that comes after the 'include' command. How do I read it and yet leave it so that the regular include functionality can be called?

I tried this:

```
: inc 32 word count type ; ok  
inc testing testing ok
```

So, I'm reading the word correctly and can print it out...however, how do I 'unread' it so that I can call the original include?

RTFM suggestions cheerfully received...just give me a pointer where to start...

Ta.

-Ken



By [Ken](#) on Sunday, July 21, 2002 - 05:57 pm: [Edit](#)

Okay, after more searching, I found docinc, which leads me to believe that the solution has to do with the 'evaluate' command...

That sound about right?

-Ken



By [Mike Will](#) on Sunday, July 21, 2002 - 06:00 pm: [Edit](#)

Actually, Ken, you were almost there to begin with. The word INCLUDED takes a string and includes that file. So try:

```
: inc 32 word count 2dup type included ;
```

Mike



By [Ken](#) on Sunday, July 21, 2002 - 10:03 pm: [Edit](#)

Ha! Brilliant.

Thanks, Mike!



By [John Newell](#) on Monday, July 22, 2002 - 11:20 am: [Edit](#)

Mike,

Previously posted. Try this at the start of your startup.quartus file.

```
: NEEDS ( -- )  
>IN @ >R PARSE-WORD TYPE  
SPACE csunused . R> >IN ! NEEDS  
;
```

(or : INCLUDE). You can do whatever you want instead of the "SPACE csunused .".

Regards

John



By [John Newell](#) on Monday, July 22, 2002 - 11:21 am: [Edit](#)

Sorry,

I meant Ken.



By [Steve Bohrer \(Skb\)](#) on Monday, July 22, 2002 - 11:34 am: [Edit](#)

Quartus UI apps crash when returning from a pop-ed up form or dialog with the 3.5 debug ROMs. (This is a past issue, not resolved as far as I know.) The apps run okay with the non-debug ROM.

This is not your issue with include speed, but something to be aware of when you test the application if you use a xxxDBG.rom .

As an example, with POSE ver 3.5, and the "palmos35-dr4-en-colordbg.rom" ROM, Neal's Swatch example app crashes when you view the "Help" or "About" screen, and then press the button to return to the main form. This crash does not happen with "palmos35-dr4-en-color.rom"

The crash does not seem to be Quartus code: From the "About" dialog, press the "i" button to get the tips, and the crash happens when you press "Done" from the tips screen. No program code should be running at this point, as the OS dialog routine handles the help screen internally before returning.

(However, it may be that the main form's event handler is called at this point?)

But, the problem seems to be only with pop-up dialogs, as you can go to the convert screen and back to the main without a crash.

(On the Convert screen, POSE generates some warnings about the location of the insertion point, but these do not seem to cause a crash.)



By [Steve Bohrer \(Skb\)](#) on Monday, July 22, 2002 - 12:27 pm: [Edit](#)

POSE 3.5 is much slower than the previous version I was using, which I think was about 3.0.4.

I am also running a slow old PII, and the older POSE was about as fast as my actual Palm, while the 3.5 version is at least 4x slower. Time to upgrade to a multi-gigahz PC, I suppose.

(On a current machine, does POSE run at least as fast as a current handheld?)

So, the slow speed you see is probably due to the slowness of the newest emulator. It obviously expects to be on a fast PC.



By [Ken](#) on Monday, July 22, 2002 - 11:07 pm: [Edit](#)

Ah, double goodness.

When I went back to my previous version of the emulator, not only did I get back the speed I was looking for, I had also found some source code I thought I'd lost!

Also, John, thanks for the definition of needs that you provided. It looks like it's flagged a problem with the assembly mode (or my use of it at any rate).

-Ken

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New Quartus app

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Quartus app



By [A.Schönfeld](#) on Thursday, July 18, 2002 - 12:13 pm: [Edit](#)

I have finally finished my first Quartus app with your help. I've past hours in the discussion forum.

THANK'S TO ALL OF YOU !

Année 1.0.0 is an AddressDB independant yearplanner. Check it out at <http://www.palmgear.com/software/showsoftware.cfm?prodID=43063>

Comments / suggestions to : andreas.schonfeld@free.fr



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 18, 2002 - 06:52 pm:

[Edit](#)

Congratulations, Andreas! Tell the world you used Quartus Forth! 😊

Neal

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Launch codes

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Launch codes



By [John Newell](#) on Wednesday, July 17, 2002 - 03:19 am: [Edit](#)

Hi Neal,

I have been trying to use launch codes in 1.2.7R. I have an app which issues a SysAppLaunch on a second app with a custom launch code of x'8000'. The second app has been compiled with:

(hex) 8000 activate-launchcode
before the MakePRC.

The SysAppLaunch returns with a zero and the result (6th parameter) is zero. However, my code in the called app doesn't (appear to be) run. Either the called app isn't started or does not respond to the launchcode.

Can you confirm that what I am attempting to do should work OK.

(I don't see why it should but does it make a difference that I change the Creator and type of the called app after the MakePRC.)

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 17, 2002 - 02:38 pm:

[Edit](#)

Hi John. There's a problem using the custom launch code range with that beta; presently it only supports the non-custom codes.

Neal



By [John Newell](#) on Thursday, July 18, 2002 - 04:10 am: [Edit](#)

Neal,

Thanks. I discovered that. It seems to accept launchcodes < 256.

256 activate-launchcode crashes the compiler.

(hex) 8000 activate-launchcode compiles OK but is ignored at run time.

Anyway, I have it working with a launchcode of 255. I am calling a second app as a subroutine of the main app. It reads a number of databases, sets up a memory array and passes its address back to the calling app. for display. That all seems to work OK.

=====

Is there any way of returning a result to the caller of the launched app. i.e. to be placed in the "result" variable of the SysAppLaunch call? I know I can place something in the cmdPB but was just wondering.

```
SysAppLaunch ( &resultP. &cmdPBP. cmd launchFlags dbID. cardNo -- Err )
```

Regards
John



By [Kris Johnson \(Kdj\)](#) on Thursday, July 18, 2002 - 05:35 pm: [Edit](#)

A simple way to share data between applications is to save it in a preferences record.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 18, 2002 - 06:54 pm:

[Edit](#)

Kris is right, but in your case, John, placing data in the cmdPB might be simplest.

Neal



By [John Newell](#) on Friday, July 19, 2002 - 04:51 am: [Edit](#)

Neal,

I guess then that the answer to my last question is no.

Kris - Neal,

It's all one app. really (and it does have preferences). It is just split into two parts (so far) to overcome the compile time dictionary space problem. The second part is called as a subroutine of the main part to perform non-UI functions.

Any data variables I want to share are all defined in a NEEDS file. When compiled into the main part the values reside in its data-space. The same NEEDS file is also compiled into the second part. I just pass the data-space start address in the main part as the cmdPB pointer. The second part copies the cmdPB to its data-space. The same variable names can be used in both parts and you don't have to resort to preferences for the sharing of what are ephemeral variables.

===

Query:

Any idea what would happen if I did UI processing in the second part (which has been called as a subroutine of the first part) and hit the Main icon?

Would both parts receive an appStopEvent? or would the second part have

to signal the first part to shut down?

Regards

John



By [PenreeSoft](#) on Thursday, August 1, 2002 - 07:52 am: [Edit](#)

Pressing the Home icon in when you are running a program through SysAppLaunch returns to the previous app that called it, so you would be back to the app you started from.

Nicholas J. Penreee

PenreeSoft



By [John Newell](#) on Friday, August 2, 2002 - 12:51 pm: [Edit](#)

Thank you Nicholas. I'll get round to trying it one day I expect.

Regards

John

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Trouble with 'Double'

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Trouble with 'Double'



By [Chris Bucsko](#) on Saturday, July 13, 2002 - 11:52 pm: [Edit](#)

I hope someone can help me with this problem, as it's quite unusual. I was cleaning up my memo pad, and moving memos from one category to another. When I went to use QF, I got a message " exception in file doc used by docinc, d=? undefined word". (I keep the directive "include docinc" into my startup.quartus memo so I can compile from docs). Sure enough, I loaded the double memo (where d= is defined) by hand, and QF won't recognize ANY word in double other than the first, M+. I never touched anything in my Forth library category, so I have no idea how this happened. I'm running 1.2.5r in a Sony Clie under OS 4.0. Any ideas??/



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 14, 2002 - 02:54 am: [Edit](#)

You may have two memos of the same name, Chris. Quartus Forth loads the first one it finds by any given name. Have a look at the whole list, sorted by name.

Neal



By [Chris Bucsko](#) on Monday, July 15, 2002 - 09:24 am: [Edit](#)

Thanks, that's exactly what happened. I renamed a memo and put a '\' as the first character, so QF saw it and loaded it first. Interesting that M+ works without the double memo being loaded. Isn't it a core word?



By [Brian Chirgwin \(Bchirgwin\)](#) on Tuesday, July 16, 2002 - 08:04 am: [Edit](#)

M+ is defined in Quartus itself. M+ defined in core is a duplicate and can be removed.

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File Streaming - data chunking over 4096 bytes

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): File Streaming - data chunking over 4096 bytes



By [Andrew Johnson](#) on Tuesday, July 9, 2002 - 07:44 pm: [Edit](#)

When I write more than 4096 bytes out to a file stream, the Palm chunks the data and creates a record list. I have read the Palm Docs on Palm file format, but I can't work out the format for the record header. Typically there are 8 bytes that go something like this:

```
00 E0 40 58 A0 01 00
```

These particular bytes start at offset 50h and the first two bytes are the offset to the start of the first data chunk. The last two are the record number.

Does anybody know what the 4 bytes in the middle are?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 10, 2002 - 04:45 pm:

[Edit](#)

Andrew -- removing two from the front and two from the end of what you provided leaves only three bytes.

There's a document kicking around someplace with more detail on the record format; I'll see if I can turn it up.

Neal



By [Steve Bohrer \(Skb\)](#) on Wednesday, July 10, 2002 - 05:17 pm: [Edit](#)

If I understand your question, you are talking about the format of a palm database file once it has been backed-up to a host computer, rather than when it is on the Palm. If that is not the case, then, ignore this answer.

The following is based on Palm's "File_Format_Specs.pdf", available at <http://www.palmos.com/dev/support/docs/>. (This file is marked as revised on 5/1/02. From a quick glance, it seems they added clearer explanations of some confusing issues, so it may be worth a new download.)

The on-disk palm database format begins with a PDBHeader, followed, at offset 48h, by the record list header and then the list of record headers. Each record header has the offset to the data for one record.

So, beginning at offset 48h, the first four bytes of the record-list-header are

the offset to the next record list entry, if any. Due to fragmentation on the palm, it may (rarely) be necessary for the records in a database to be split between two record lists. However, when the database is transferred to disk, the lists would typically be merged into one, so on disk the next list offset should always be zero. (Since a palm database can have 64k records max, one list header is always sufficient.) Thus, Palm now says

Quote:

Palm, Inc. recommends against building databases with chained headers, and that your parsing code reject databases that have a non-zero value in the nextRecordListID field, to avoid potentially truncating such a database if your code encounters one.

Next, at offset 4Ch comes the two byte record count. This is followed by the first 8-byte record entry, at offset 4Eh. (Note that the record entries are not aligned on 8-byte boundaries. Thus, on a standard hex dump display, the records are wrapped around the lines, starting at offsets 6h and Eh on each row.)

Each record entry is a four-byte offset to the chunk's data, followed by one byte of attributes, and a three byte unique ID. The offsets are from the start of the file header, or, on disk, are seeks from the start of file.

So, in your specific example, starting at offset 50h, you are missing the first two bytes of the record. Thus, the "00 E0" is the low two bytes of the 4-byte record offset. The "40" is the record attributes (Dirty), and then the "58 A0 01" is the unique ID. The final "00" is the top byte of the next record's offset. If you look at a hex dump, you will probably see a whole column of 40s as the attributes, and the unique IDs will be ascending, so the next record likely has "58A002".

I'm not sure how unique ids should be generated. When I've written Palm DB files from Excel VBA code, I've just used consecutive numbers starting at 1, and these work fine; but, my app does not use the unique ids for anything. If you had a conduit that was trying to sync records, you might need to be more careful.

If you are reading the files on a PC, you also have to be careful of the 68000 byte order. You can't read the long record offset as a long without swapping bytes. I read byte-by-byte and shifted and ORed them to build words and longs.



By [Andrew Johnson](#) on Sunday, July 21, 2002 - 11:34 pm: [Edit](#)

To Neal:

Sorry, that should have read

00 E0 40 58 A0 01 00 00

To Steve:

Thank you for giving me all that information. It is terrific and I am working my way through it now.



By [Andrew Johnson](#) on Monday, August 5, 2002 - 09:32 am: [Edit](#)

To Steve:

I have digested all your information and worked up my PC application to generate very large files that successfully moved to the Palm. The biggest file I made and transferred was 490K. My PC file generator made a Palm.pdb file with about 100 4096K chunks. Not a bad file size.

I had to add two bytes to the end of the record list to bring the body of the data back in line with 8 byte boundaries. I just used 00 00 and it seemed to work.

Thanks again Steve, you are a champion.

Add a Message

Username:

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

VFS dos

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): VFS dos](#)



By [Mike Will](#) on Tuesday, July 9, 2002 - 03:35 pm: [Edit](#)

Has anyone attempted to use VFSdos yet? It is a DOS-like OS for VFS equipped Palms. It appears to present DOS calls to the developer via an stdio.prc library. Just thought I'd ask before I tackled it.

Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 9, 2002 - 04:22 pm: [Edit](#)

I haven't heard of any such efforts to date.

Neal



By [Wade Carlson](#) on Tuesday, July 9, 2002 - 04:45 pm: [Edit](#)

I heard of a similar program, but I thought it was a stand alone program and didn't integrate with other developers. Where is this program you are talking about available at?



By [Mike Will](#) on Tuesday, July 9, 2002 - 05:14 pm: [Edit](#)

It's an actual DOS for Palm, intended for developers. I got it from PalmGear under VFSDOS (freeware). Being old, I'd like to be able to apply all my DOS Forth knowledge to the Palm, especially for document management and such.

Mike

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

File Streaming - trouble with FileSeek

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): File Streaming - trouble with FileSeek



By [Andrew Johnson](#) on Sunday, July 7, 2002 - 10:32 am: [Edit](#)

I've got my file creation and file reading working OK with File Streaming. I am having trouble jumping around the file with the FileSeek API. Can anybody see whats wrong with:

```
2VARIABLE filehandle
```

```
.  
.
```

```
code here to store file handle in filehandle
```

```
.  
.
```

```
1 0. filehandle 2@ FileSeek
```

I get some weird number left on the stack like 5634 Is the problem because the 1 needs to be converted to a single byte number before the API can use it? The [>byte] in the stack diagram has me confused.



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 7, 2002 - 11:06 am: [Edit](#)

Simple:

```
1 >byte 0. filehandle 2@ FileSeek
```

Neal



By [Andrew Johnson](#) on Sunday, July 7, 2002 - 05:53 pm: [Edit](#)

Thanks, Neal. That has fixed it. FileSeek is working beautifully now.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

New Quartus App -- N.E.T.

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Quartus App -- N.E.T.



By [Joe Nasal \(Jsn\)](#) on Friday, July 5, 2002 - 03:16 pm: [Edit](#)

A comprehensive toolkit for Network Engineers.

The initial release contains the following features:

Fully automated IPv4 subnet calculator.

Bit rate calculator, with support for over 60+ transport technologies. Theoretical maximum bit rate is displayed in units the operator specifies. Provide a data size to compute time-to-transfer as a function of the theoretical maximum bit rate. Time to transfer is displayed to milliseconds.

Erlang-B calculator, which provides a variety of statistics for message-based communications, including: Traffic Load, Number of Lines, Grade of Service, Average Queue Length, Average Throughput. Very useful for VOIP projects.

A graphical IP packet reference model. Each field within the IP packet is fully described and source RFCs are referenced.

All screens come with context sensitive help, and the trial download is fully-functional (although it pesters you with a "please register" popup until you do.)

All of this, including the registration function, and I have about 13K of codespace to spare! I'll be able to get a few more functions in over the coming months without any trouble. Lessons learned: factor, factor, factor. Use data space whenever possible.

The application is available for download from [palmgear.com](#).

I have received extensive help from this community in development of this app. If you are an active member of this community and would like a license key, just email me and I'll send you one.

Thanks all,

Joe Nasal



By [Neal Bridges \(Nbridges\)](#) on Friday, July 5, 2002 - 04:22 pm: [Edit](#)

Impressive, Joe!

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Memhandle

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Memhandle](#)



By [mike miller](#) on Tuesday, July 2, 2002 - 08:51 pm: [Edit](#)

Dear Sirs:

As a total newbe I am befuddled with the word "memhandle" that is scattered throughout the Palm literature. It is used a lot through the HandEra "c" examples as well. The problem is that I have yet to find a definition for "memhandle". There are numerous definitions for "memhandlenew, lock, unlock etc." but not "memhandle" by itself. Is this just a name for a variable?

Is there a Quartus equivalent?

I've searched the wiki and cannot find any direct reference to the word or it's use either.

It would be most helpful if someone could explain what this is all about.

Thanks for helping out

Mike Miller



By [Steve Bohrer](#) on Tuesday, July 2, 2002 - 10:31 pm: [Edit](#)

Chapman Flack wrote a useful introduction to Palm memory which is available on the wiki as [HandlesAndPointers](#)

At the bottom of that page are links to some of Palm's documentation on this topic.



By [mike miller](#) on Tuesday, July 2, 2002 - 11:59 pm: [Edit](#)

Dear Sir

Thanks for your response:

I read Chapman's intro to memory and still don't get it. His article was really good and helps, but unless I'm really blind, does not show what the word "memhandle" by itself does, and I haven't been able to find it in the references either. Is it a palm API? I haven't found it in the Palm API reference. It doesn't appear in the quartus reference manual either. Maybe what I'm asking is this, does quartus recognize the word "memhandle"? Or is it going to see it as a undefined word or variable? Or is it even used in

quartus programming?

I've spent hours reading and searching on this one and just don't get it.

Thanks

Mike Miller



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 3, 2002 - 12:08 am:

[Edit](#)

That's a C thing. In C you have to deliberately specify all your data types, and frequently override those types in your source.

MemHandle is defined as pointer to a struct.

Neal



By [mike miller](#) on Wednesday, July 3, 2002 - 08:21 am: [Edit](#)

Thanks, Neal.

Mike

Add a Message

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Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

ExpansionMgr help

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): ExpansionMgr help



By [Julian Fondren](#) on Tuesday, July 2, 2002 - 11:43 am: [Edit](#)

I'm trying to write an ExpansionMgr memo, and it's going somewhat like

```
(hex) 2900 1+ enum expErrorClass
\ about twenty errors

\ many other constants

(hex) a348 constant sysTrapExpansionDispatch
0 enum expSel
  expSel selExpInit
  expSel selSlotDriverInstall
\ etc, for all Expansion Manager functions
```

but I'm getting stuck in actually using the result:

```
: ExpSlotEnumerate ( &lastp. &next. - Err )
  selExpSlotEnumerate sysTrapExpansionDispatch
  systrap [ 5 ]drops d0 drop ;
```

am I doing this correctly? the SystemTrap page on the Wiki doesn't seem to cover the special case of the ExpansionMgr functions (and others) (which have a single 'dispatch' systrap and numerous selectors, as defined above, which are basically indexes into a jump table.) Also, I can't find any documentation, and the header in the SDK is confusing -- I *think* the above is how it works...

Also, does anyone know what ExpInit does? No documentation on that, either.

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

QUIT-related crash on 1.2.7R

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): QUIT-related crash on 1.2.7R



By [Julian Fondren](#) on Sunday, June 30, 2002 - 04:12 pm: [Edit](#)

```
{QUIT}
{hardware key -- say, the Phone-key} .ok
{enter} CRASH
```

Is about it. If you enter some input { 111 } after the { hardware key } it'll crash (not too) later and then actually bring up a respond-able RESET form. The example above doesn't display the RESET form.

(for the curious, I discovered this after entering { PAGE QUIT }, and then trying to use the Phone-key, which I have bound to the memo pad. When the RESET form wasn't displayed, I thought that this was a *hard* crash. shiver.)



By [Kris Johnson \(Kdj\)](#) on Sunday, June 30, 2002 - 05:26 pm: [Edit](#)

Why are you using QUIT? One normally uses BYE to exit, or a loop with EKEY to run an application.

If you have a legitimate reason to use QUIT, then this is probably a question for Neal.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, June 30, 2002 - 05:30 pm: [Edit](#)

BTW, if the thought of a hard crash makes you shiver, you probably want to stay away from onboard Palm OS development. It *will* happen. Keep backups. 😊

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 30, 2002 - 09:35 pm: [Edit](#)

Quartus Forth's QUIT has never been properly re-entrant; it's never been enough of an issue to pursue, as there's no practical reason to use it.

Neal



By [Julian Fondren](#) on Monday, July 1, 2002 - 10:26 am: [Edit](#)

Kris, QUIT and BYE are AFAIK non-related (well, related in a symmetrical across-the-room way)-- but I used QUIT in this case to prevent the post-execution interpreter from giving me an OK. Also, when I was playing with Dragon Forth I had three hard crashes in almost as many days -- I have good backup strategies, now, but I still shiver =)

Neal: oh, OK.

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Problems with ROLL at OS 4.1

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problems with ROLL at OS 4.1



By [John Newell](#) on Sunday, June 30, 2002 - 10:25 am: [Edit](#)

Neal,

My application, The Archery Suite, consists of 7 sub-apps called from the main app and each other. One of them, the print module, was giving Fatal Error aborts on PDA's at OS 4.1 (although sometimes it did work) but working fine at OS 3.5. I was having trouble reproducing the problem because the print module work OK on my Clie OS4.1. However, it finally started crashing and I tracked the problem down to the execution of the ROLL word. I didn't believe it at first but, after I wrote a custom version of ROLL and compiled with it, the print module worked OK on my Clie.

Have you seen anything like this before or have a suggestion as to why it is occuring?

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 30, 2002 - 10:35 am: [Edit](#)

Yes, a bug in ROLL in 1.2.5 --

<http://www.kristopherjohnson.net/cgi-bin/twiki/view/Main/RollCausesFatalException>

Sorry about that.

Neal



By [John Newell](#) on Sunday, June 30, 2002 - 11:26 am: [Edit](#)

Thanks Neal. I must have missed that problem when it was discussed on the forum. Generally I do avoid ROLL but I had a word which handled a variable number of stack items, the number being on top of the stack, and ROLL seemed the right choice in that case.

I still need to do the ROLL thing and came up with this. Can anyone think of a quicker version:

```
: roll ( xu xu-1 ... x0 u -- xu-1 ... x0 xu )
dup begin dup 0> while
rot >r 1- repeat drop
begin dup 0> while
swap r> swap rot 1- repeat drop
;
```

Regards
John



By [Kris Johnson \(Kdj\)](#) on Monday, July 1, 2002 - 05:04 am: [Edit](#)

This might be a little faster, especially for large values of U:

```
\ roll-fix 2002/7/1 KDJ

: squash ( xu xu-1 ... x0 u -- xu-1 ... x0 )
  >r sp@
  r> cells 0
  2swap 2dup [ 1 cells ] literal m+
  MemMove
  2drop ;

: roll ( xu xu-1 ... x0 u -- xu-1 ... x0 xu )
  1+ dup pick swap squash ;
```

needs tester
decimal

Testing ROLL...

```
{ 44 33 22 11 0 roll -> 44 33 22 11 }
{ 44 33 22 11 1 roll -> 44 33 11 22 }
{ 44 33 22 11 2 roll -> 44 22 11 33 }
{ 44 33 22 11 3 roll -> 33 22 11 44 }
```

I haven't tested it in a standalone application.

Use at your own risk. 😊

-- Kris



By [John Newell](#) on Monday, July 1, 2002 - 08:52 am: [Edit](#)

Looks interesting Kris,

However, I don't use it a great deal and generally u would be small. If I was more worried about the speed, then it might even be worth checking for the smaller values of u first.

```
: 3roll
>r rot r> swap
;
: 4roll
2>r rot 2r> rot
;
: roll ( xu xu-1 ... x0 u -- xu-1 ... x0 xu )
dup 5 < if
select
xt noop
xt swap
```

```
xt rot
xt 3roll
xt 4roll
end-select execute
else
\ looping version
then
;
```

P.S. Not tested!!!

Regards
John



By [John Newell](#) on Monday, July 1, 2002 - 09:09 am: [Edit](#)

Neal,
Can you say under what conditions ROLL fails. I ask because I need to know if I should re-compile all the app. of The Archery Suite (and I don't want to).

Regards
John



By [John Newell](#) on Tuesday, July 2, 2002 - 07:20 am: [Edit](#)

Neal,
I just re-read your original reply. You say the problem occurred in 1.2.5. However, my version of Quartus Forth is 1.2.6R. Build 2000.07.22, and it still occurs.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 3, 2002 - 12:11 am:

[Edit](#)

I killed that bug in 1.2.7b; 1.2.6r still has it. I'll post a fixed definition for 1.2.5 and 1.2.6.

Neal

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New Quartus app - Mañana

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Quartus app - Mañana



By [John Newell](#) on Sunday, June 30, 2002 - 10:16 am: [Edit](#)

From the ReadMe file:

"Why do today that which can be put off till tomorrow"

Allows the user to move Date Book events and/or To Do List items from one day to another, simply by touching them on the screen. Events and items for one week before and one week after the current day can be viewed with a single touch to the screen. With one more touch, an event or item can be rescheduled to the next week day or another selected day. If required, with one more touch, an event or item can be reverted back to its original day.

Tested extensively on a Palm® Vx at Palm OS® 3.5.2, a Palm® V at Palm OS® 3.3, and a Sony® Clié PEG-N770C/U at Palm OS® 4.1. It is being used by the programmer for the rescheduling of events that keep getting put off (which is why he wrote it in the first place).

Written in Quartus Forth using Quartus RsrcEdit and pedit.

Available on PalmGear and Handango (once the adding of a new application stops crashing with a 500 error).

Tell me what you think if you manage to have a look at it. Thank you.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Sunday, June 30, 2002 - 03:48 pm: [Edit](#)

Quote:

It is being used by the programmer for the rescheduling of events that keep getting put off (which is why he wrote it in the first place).

How many more events did you have to reschedule because you were writing it? 😊

Congratulations on completing another app.



By [John Newell](#) on Monday, July 1, 2002 - 09:18 am: [Edit](#)

You're quite right of course. And I'm updating it already.

Regards
John

Add a Message

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Freeware app to manage source code memos

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Freeware app to manage source code memos



By [Olaf Köster](#) on Saturday, June 29, 2002 - 08:26 pm: [Edit](#)

I recently released an app that lets you manage all your Memos in folders and subfolders. It is written in PocketC using PToolbox. There are still some improvements to be done, but it may already be useful for you. Check it out (<http://www.palmgear.com/software/showsoftware.cfm?sid=53219020020530133247&prodID=42303>) and send me a note!
Olaf



By [Julian Fondren](#) on Sunday, June 30, 2002 - 04:17 pm: [Edit](#)

Looks neat! Is the source available?

Add a Message

Username: This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave Password: the "Password" box empty. Your e-mail address is optional.
E-mail:

Good references on intermediate Forth

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Good references on intermediate Forth



By [Bryan A. Zimmer \(Bzimmer\)](#) on Friday, June 28, 2002 - 10:27 am:

[Edit](#)

Hello,

I am not exactly a newbie, but have reached a stage where I find it difficult to advance. I have read the Leo Brodie "Starting Forth" book, with all its archaisms, and browsed several others, but they are for Forths from eons ago...Forth-79, Forth-83, fig, etc.

I have tried gforth on Linux and found it interesting but confusing. I would like to learn how to program better in Forth but I feel like I need a good reference.

To give you an idea, I know what the word "IMMEDIATE" does, but have never had occasion to use it. I have heard of COMPILE, and SLITERAL but wouldn't know what to do with them. I am clueless as far as RsrcEdit goes.

I understand conceptually CREATE...DOES>, but would have a hard time implementing them.

I would like to create system-y apps, but don't understand the Palm OS interface, or whatever would be the in gforth.

I love things like ['] and xt>name, but long for words such as cfa>pfa, etc., so I could step through the body of a word (the PFA) and "decompile" it by printing out the words.

Can anyone recommend a good book, or have other recommendations?

Thanks,

Bryan Zimmer



By [Joe Nasal \(Jsn\)](#) on Friday, June 28, 2002 - 11:27 am: [Edit](#)

Bryan:

Read the docs (Wiki), try things out for your self, post questions when something is obscure or doesn't make sense. Be specific when you post.

If you want to write Palm apps with QF you'll most definitely need to learn how to use Quartus Resource Edit.

For an experienced software engineer the fun usually starts after the "honeymoon" is over in terms of learning new technologies.

You're potentially at a bit of a disadvantage with FORTH because of the lack of material in the trade press on the subject. There's lots of good stuff in the Wiki, though. Do a google search for material on the Net -- look for Leo Wong's stuff (Hello FORTH). I found this to be helpful when starting out.

I think that one of the wonerful things about software engineering is that as engineers we are perpetually "at a stage where it is difficult to advance."

Joe



By [Kris Johnson \(Kdj\)](#) on Friday, June 28, 2002 - 01:09 pm: [Edit](#)

I think the Forth Programmer's Handbook is useful. It's mostly just a reference for ANS Forth, but there are some useful examples and advice in it.

Neil Bawd's page is another good source of examples for those past the beginner stage.

I found Win32Forth to be fun to play with. Any Forth that has its source code available and is written mostly in Forth is useful for trying to understand how everything fits together.

Don't spend too much time trying to figure out CREATE..DOES>, COMPILE, SLITERAL, etc. I think every new Forth programmer goes through a stage where they overuse stuff like that. You'll understand them better if you only use them when you really need them (and you'll know when you need them).

To truly grok how Quartus works, I think it is very useful to know M68K assembly language and to disassemble the words. I'm lucky in that I learned it a long time ago (back in the early Macintosh days). I'm not so sure it makes sense to spend time learning it now unless you are a die-hard low-level hacker, as that architecture is dying off.

The best thing to do is to just keep on writing Forth code and improving it. Keep definitions short and simple. Whenever you see something repeated, factor it out. My programs got a lot better when I started focusing on keeping each definition to eight words or less.

-- Kris



By [Julian Fondren](#) on Sunday, June 30, 2002 - 04:31 pm: [Edit](#)

You might also want to keep the Forth Lexicon (in the "files" section of www.quartus.net, I think) handy. It's a set of memos that define ANS Forth and some (but not all) Quartus Forth words.

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E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Reading a memo file.

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Reading a memo file.



By [Bryan A. Zimmer \(Bzimmer\)](#) on Friday, June 28, 2002 - 10:15 am:

[Edit](#)

I have wondered for a long time (forgive me if I asked this before).

Can someone demonstrate how to read from a MemoPad memo? I am interested in parsing and programatically analyzing some of my Quartus source code.

Thanks,

Bryan Zimmer



By [Julian Fondren](#) on Sunday, June 30, 2002 - 04:36 pm: [Edit](#)

Look at the "memo" library, supplied with Quartus Forth -- the DIR word, particularly. Also you might want to keep a copy of PPAR (linked to from the Wiki (at the top of the page)) handy, as it explains what all these API functions do.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Troubles with Doubles

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Troubles with Doubles



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 26, 2002 - 09:36 am: [Edit](#)

Good morning all:

A couple of weeks ago I *thought* I was having some trouble storing doubles in an array. Then, I blamed my strange results on pictured numeric output operators... I thought I had the problem licked, but it's back. Here's what I've found: I'm now suspicious of D*, from Ron Doerfler's dblmath-ext module.

From the console, if I include dblmath-ext (nothing else) and do:

```
80. 40000. D*
```

I'd expect to see a result of 3200000. Instead I get (the very large) 4292924416. I use pno operators and 'type' to view the result.

D* doesn't always produce an unpredictable result, though. In fact, sometimes I multiply two numbers whose product is larger than the one above and I seem to get the right result...

Any ideas?

Thanks,

Joe



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 26, 2002 - 11:11 am:

[Edit](#)

D* certainly shouldn't be indeterminate. Do you get variable results when using

```
0 d.r
```

to display the result?

Neal



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 26, 2002 - 11:16 am: [Edit](#)

Neal:

You're a wizard. That shows the proper result.

So what are we back to, a pno problem?

Thanks,

Joe



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 26, 2002 - 11:36 am:

[Edit](#)

Yes -- I'd like to see what you're doing, I suspect there's a flaw. D.R itself is built on the pictured numeric output words, so we can count those sound.

Neal



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 26, 2002 - 11:44 am: [Edit](#)

Neal:

I'm pulling my hair out on this one. Here's what I'm doing, quite literally (not sure if the pno operators will come through in the mail, but they should be in the post):

from the console:

```
include dblmath-ext
```

```
80. 40000. d* type  
3200000
```

```
40. 80000. d* type  
4292924416
```



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 26, 2002 - 11:48 am: [Edit](#)

Looks like the pno operators didn't make it into the post, but I'm doing the standard "lessthan-pound pound-S pound-greaterthan" before type to turn the double into a caddr-u...



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 26, 2002 - 12:44 pm: [Edit](#)

Neal:

With respect to using 0 d.r to display the result, I misspoke earlier -- I got the test cases mixed up. Like tthe pno operators, d.r fails when displaying the results of this operation:

80. 40000. d* 0 d.r

It produces: -2042880

40. 8000. d* 0 d.r produces the correct result, 3200000.

Here's some additional information:

40. 80000. d* leaves -11264 48 on the stack

80. 40000. d* leaves -11264 -32 on the stack

I'm back to thinking that something is going on with my d* ???

FWIW, 3200000. 0 d.r produces 3200000



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 26, 2002 - 12:55 pm: [Edit](#)

FWIW, I see the same results in my tests (I was about to post something very similar to what Joe just did.) It seems that D* is the problem.

-- Kris



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 26, 2002 - 01:09 pm: [Edit](#)

Kris:

Thanks for the reinforcement. At least we now know where to look...

Joe



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 26, 2002 - 01:16 pm: [Edit](#)

I think it's because D* uses signed multiplications internally when it should be using unsigned multiplications. I'm messing around with it.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 26, 2002 - 01:50 pm: [Edit](#)

I believe this can be fixed by replacing the definition of D* in dblmath-ext with this:

```
: UDM* ( ud1. u -- ud. )  
  SWAP >R UM* R> 0 SWAP D+ ;
```

```
: D* ( D1. D2. -- D1.*D2. )
```

```
EXTRACT-SIGNS >R
>R >R 2DUP
R> UDM* 2SWAP
R> UDM* DROP 0 SWAP D+
R> IF DNEGATE THEN ;
```

I'll update the wiki module, unless someone finds a flaw.

-- Kris



By [Joe Nasal \(Jsnn\)](#) on Wednesday, June 26, 2002 - 02:18 pm: [Edit](#)

Kris:

Thanks for your help.

Joe



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 26, 2002 - 03:00 pm: [Edit](#)

Found a flaw already. The definition of UDM* should be

```
: UDM* ( ud1. u -- ud. )
  DUP >R SWAP >R
  UM*
R> R> UM* DROP 0 SWAP
D+ ;
```

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 26, 2002 - 03:01 pm: [Edit](#)

Nice work, Kris.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 26, 2002 - 05:34 pm: [Edit](#)

A more efficient definition of UDM* and some further notes are available at <http://kristopherjohnson.net/cgi-bin/twiki/view/Main/Db1MathExt>

-- Kris

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OS 3.5, 4.1, etc support

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): OS 3.5, 4.1, etc support



By [John Newell](#) on Wednesday, June 26, 2002 - 07:50 am: [Edit](#)

Neal,

My version of Quartus Forth is 1.2.6R. Build 2000.07.22.

I believe there is a later version that supports launch codes but no significant changes.

This version is coming up for 2 year old and I was wondering if you where going to release a version that supported OS 3.5 and OS 4.1 and included the features added for those releases. Also, one which included missed events and improved the way that the compile time stack was used so that I didn't keep getting dictionary overflow for a compile.

If such a release is due or being concidered, could you give me some idea as to when it is likely to be.

Thank you.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 26, 2002 - 10:52 am:

[Edit](#)

John, if you're referring to the overall available dictionary space, that is and has been my primary focus. Working on it now!

That build will also contain the latest OS traps. I hate to set deadlines, but I am in progress and will release the build as soon as it's satisfactory.

Let me know if you'd like the 1.2.7r beta in the interval!

Neal



By [Paul](#) on Wednesday, June 26, 2002 - 10:09 pm: [Edit](#)

Hello?

Since I purchased Quartus in Sept. 2001 how is it I have version 1.2.5R
Build 1999?

Where did 1.2.6R build 2000 come from and why isn't that what I have

given the date of my purchase?

And what would be the difference, practically speaking?

Regards, Paul



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 26, 2002 - 10:52 pm:

[Edit](#)

Hi Paul. 1.2.6r fixes one minor event-handling issue; I haven't sent it out as a mass-mailing. Drop me a note and I'll send it to you.

Neal



By [Paul Randall](#) on Sunday, June 30, 2002 - 05:36 am: [Edit](#)

Neal

uh... if it's not broke...

I'm just a bit confused by your release numbers and release dates. I use EKEY for events without problems so...

Thanks, Paul



By [John Newell](#) on Tuesday, July 2, 2002 - 01:39 pm: [Edit](#)

Paul,

As I remember it, I think you'll find that 1.2.5 was not handing certain events onto EKEY so that they could never be detected in an event loop. 1.2.6 fixed (some) of them. There are still outstanding ones in 1.2.6 however. (e.g. sclRepeatEvent, etc.) Have a look on the Wiki pages for ways of getting these events.

Regards

John



By [John Newell](#) on Friday, July 5, 2002 - 11:46 am: [Edit](#)

Neal,

I have sent you an e-mail accepting your offer of the 1.2.7r beta (I need/want launch codes).

Now, I really don't mean to push, but the new release you are working on - are we talking days, weeks, months, or years? Just for information to help in a current development you understand (i.e. do I do it one way or another).

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Friday, July 5, 2002 - 12:05 pm: [Edit](#)

Hiya John -- I sent that out. It must not have made it; I'll send it again today.

I'm hoping for 'months' -- what new capability are you specifically looking to take advantage of? (I'm guessing expanded code size.)

Neal



By [John Newell](#) on Monday, July 8, 2002 - 05:35 am: [Edit](#)

Neal,

Still not arrived. Perhaps it's being bounced by the mail server - how big is the download?

I've never run out of code space yet - dictionary space is the real problem. I can't write an app. without hitting that limit.

To get round that limit I have, in the past, split the app into sub-apps and called them with SysUIAppSwitch, passing parameters via Preferences. The sub-app has to know where it's coming from and where to go back to. The main app needs to know if it's to do it's initial processing or has been returned to by the sub-app.

To begin with, I want to use 1.2.7R to call an app as a subroutine with SysAppLaunch, passing parameters in the code parameter block e.g. to do database I/O, and return to the main app to the point after the call to subroutine. Does the subroutine uses the same stack as the calling app.? Could I pass parameters on the stack?

Even so, Im still going to run out of dictionary space - I can feel it in my bones.

Regards
John



By [John Newell](#) on Monday, July 8, 2002 - 01:17 pm: [Edit](#)

Neal,

1. I have updated my profile with a new e-mail address.

2. I notice that my Wiki e-mail address is

John.Newell@euopeNOSPAM.com

. Would that ever work?

3. Could you please reply to my post about when the problems with ROLL can occur? Thank you.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Monday, July 8, 2002 - 01:38 pm: [Edit](#)

The wiki software inserts "NOSPAM" into all displayed e-mail addresses. The real address (without NOSPAM) is what is stored in the wiki page, and is used by the e-mail notification system.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 9, 2002 - 04:20 pm: [Edit](#)

Hi John. ROLL fails unpredictably, as the bug related to a calculation done using one of the CPU flags without first confirming the state of that flag. So, ROLL would work fine following certain operations, and not fine following certain others, depending on the result of the last operation.

Neal



By [Mike Adams](#) on Tuesday, July 23, 2002 - 09:39 am: [Edit](#)

Neal,

I am also looking forward to the OS4 support as I would like to get going with Bluetooth.

My deadline for finishing is October. Is your update likely to be ready by then or do I have use some other solution?

Regards
--Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 23, 2002 - 06:06 pm: [Edit](#)

I hope so, Mike. You can, however, add any required OS4 systraps to the current version of Quartus Forth, though it requires ferreting out the systrap # and writing a small routine for each one you need.

Neal



By [Ken Corey](#) on Wednesday, July 24, 2002 - 01:24 am: [Edit](#)

Neal, while you're at it...could you ship 1.2.7R to me as well? I'm still on 1.2.1R.

Thanks!

-Ken

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Calling Shared Library Functions ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Calling Shared Library Functions ?



By [Ogi](#) on Tuesday, June 25, 2002 - 12:09 pm: [Edit](#)

I am very new to Palm programming so please bear with me. I would like to write some apps for Eyemodule Springboard. Eyemodule has an on-board PalmOS shared library and provides the SDK as a C API. I would like to use Quartus Forth to access Eyemodules shared library. I have found the systems calls for searching and loading library:

SysLibFind
SysLibInstall
SysLibLoad
SysLibRemove
SysLibTblEntry

I have a library name, library type id, and library creator id. Also I have found in one of the header files definitions like this:

```
#ifdef __GNUC__  
...  
#define CapLibTrapOpenImage 0xA80B;  
#define CapLibTrapCloseImage 0xA80C;  
#define CapLibTrapCaptureImage 0xA80E;  
...  
#else  
...  
#endif
```

Well there are a lot more definitions for various image types and Error messages.

How do I make calls to lib functions ?
Where do I go from here?

Thanks,

Ogi

Eyemodule SDK docs are at:



[Edit](#)

By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 25, 2002 - 01:49 pm:

One place to start is the serial functions library -- it opens and calls routines from the shared serial library.

Neal

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Delimiters

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Delimiters](#)



By [Kris Johnson \(Kdj\)](#) on Monday, June 24, 2002 - 01:33 pm: [Edit](#)

In the DPANS document, it has this

Quote:

3.4.1.1 Delimiters

If the delimiter is the space character, hex 20 (BL), control characters may be treated as delimiters. The set of conditions, if any, under which a space delimiter matches control characters is implementation defined.

What is the behavior of Quartus in regard to use of control characters as delimiters? I can't find this in the Quartus manual.

Thanks,
-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, June 24, 2002 - 01:39 pm: [Edit](#)

It's here: <http://www.quartus.net/products/forth/manual/ansdocs.htm>

Quote:

Conditions under which control characters match a space delimiter (3.4.1.1 Delimiters):

When parsing, all control characters match the space delimiter.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, June 24, 2002 - 02:45 pm: [Edit](#)

I thought I looked there. I'll look more carefully next time.

Thanks,
-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, June 24, 2002 - 03:25 pm: [Edit](#)

No problem, Kris -- glad to help.

Neal

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Standalones on Pilot 1000?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Standalones on Pilot 1000?



By [Charles Starrett \(Cstarrett\)](#) on Friday, June 21, 2002 - 10:52 am:

[Edit](#)

I am a relative newcomer to Forth and Quartus (I muddled through Starting Forth with a pre-Quartus FORTH by Neal a few years back...). I am looking to write some "baby banger" programs for my twin toddlers to run on a pair of old USR Pilot 1000s but I don't know if those machines will support .prc files generated by Quartus. (I would develop them on my 8meg Palm IIIxe.) They would be simple display programs (showing shapes, letters, & numbers) so I don't think RAM space should be a problem, but I don't know if there might be other limitations of the old hardware. Does anyone have any idea???

Thank you in advance for your help. I really want to do this for them and frankly, Quartus is my last hope! :-)

[Okay, okay, so I'm also being stubborn and refuse to learn C or develop on a desktop for this purpose...]



By [Neal Bridges \(Nbridges\)](#) on Friday, June 21, 2002 - 03:21 pm: [Edit](#)

Hi, Charles. I haven't regression-tested all the way back to the 1000 for some time now; I am reasonably certain that 1.2.1r at least was fully-operable on the 1000, and I can certainly make that available to you. The applications you describe sound entirely reasonable for the Pilot 1000.

Neal



By [Neal Bridges \(Nbridges\)](#) on Friday, June 21, 2002 - 03:24 pm: [Edit](#)

...in truth I'm surprised to hear any 1000s are still in operation!

Neal



By [Charles Starrett \(Cstarrett\)](#) on Saturday, June 22, 2002 - 08:07 am: [Edit](#)

Thanks for your replies! Yeah, I didn't really expect that the Pilot 1000 was on your list of supported platforms. I checked the memory app...a whopping 128k! No wonder LispMe cuts off at the PalmPilot Pro... The 1000 works fine, though. With new batteries and a throttled-down serial port on my laptop, the HotSync and everything worked fine.

One last request: if someone could post/send me a compiled "hello world" .prc from QF that I could try on the Pilot 1000, then that would test whether there's any fundamental incompatibility.

Thanks again!



By [Kris Johnson \(Kdj\)](#) on Saturday, June 22, 2002 - 12:46 pm: [Edit](#)

It's not quite Hello, World, but the Mirror program (which just turns the screen black) may serve as an adequate test.

It can be downloaded from

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/MirrorTutorial>

FWIW, a friend of mine with an old IBM WorkPad (not sure of model) has run several of my standalone apps on it. The only ones that don't work are those that require features from OS 3.0 and above.

-- Kris



By [Charles Starrett \(Cstarrett\)](#) on Monday, June 24, 2002 - 12:11 pm:

[Edit](#)

Thank you both for your help. The Mirror program did what it was supposed to with no complaining, so I suppose I should go ahead with re-learning Forth!

Thanks again!

~ ~ Charles

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Integer trig functions

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Integer trig functions



By [ronald b. kopelman](#) on Wednesday, June 19, 2002 - 03:06 pm: [Edit](#)

I wish to impliment a 32 bit integer algorithm to compute sin & cos. I am thinking that this would give me good resolution in both domain & range. I thought I would try a series expansion but this is formidable in integer arithmetic. Has anyone been down this path before? If so, what should I consider & how should I start?

ronald b. kopelman
ronald.kopelman@verizon.net



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 20, 2002 - 11:04 am:

[Edit](#)

My first thought was to point you at the various interpolation routines Forth Scientific Library: <http://www.taygeta.com/fsl/scilib.html>

However, nothing there directly relates to what you want to do -- it's all floating-point. You might find some interesting ideas, though.

Neal



By [ronald b. kopelman](#) on Thursday, June 20, 2002 - 11:46 am: [Edit](#)

Been there! My 1st thought is to choose a series of values, compute the sin, convert both to double integers, & do a polynomial fit. Seems like a lot of work, though.

ronald b. kopelman
ronald.kopelman@verizon.net



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 20, 2002 - 11:58 am:

[Edit](#)

It does indeed seem a lot of work. If I might ask -- what do you need the high-precision SIN and COS for, such that the DF routines wouldn't cover your needs?

Neal



By [ronald b. kopelman](#) on Thursday, June 20, 2002 - 03:12 pm: [Edit](#)

I am trying to calculate sunrise/sundown times which involve a bunch of trig calculations. I know they work (hp calculator program) with 12 place accuracy. I think they will work with 10 place accuracy but I am not sure about the 7-8 place accuracy of floats. What is the accuracy of the DF routines? I am not sure that I looked at these.

ronald b. kopelman
ronald.kopelman@verizon.net



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 20, 2002 - 03:40 pm:

[Edit](#)

Here they are:

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/MathLibFunctions>

Based on a 64-bit float, I believe they provide something better than 15 digits of precision.

Neal



By [ronald b. kopelman](#) on Thursday, June 20, 2002 - 04:09 pm: [Edit](#)

Thanks! I'll give it a try.

ronald b. kopelman
ronald.kopelman@verizon.net

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Compile Problems

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Compile Problems



By [Richard Chamberlain \(Rac\)](#) on Monday, June 17, 2002 - 06:10 am:

[Edit](#)

Hi Folks,

I've had an occasional problem with compilation recently as the my Metronome application steadily increases in size.

It's an odd problem because I can compile it once and the application will run but behave oddly, I can compile it again and it'll work perfectly.

For instance this morning I did a compile and a bitmapped arrow which moves across the screen while running didn't appear at all - apart from that it worked perfectly. I compiled again and this time the timing was all screwed up and still no arrow. Again and the arrow appeared, but the timing was screwed still. Finally both appeared to be correct.

Anyone seen anything like this?

Thanks as always,

Richard



By [Paul Randall \(Paul\)](#) on Monday, June 17, 2002 - 06:26 pm: [Edit](#)

I don't know if this relates or not but occasionally when I compile, Quartus stops and reports "such-and-such file doesn't exist" when I know certainly that it does.

I exit QF, re-enter QF, and compile again and no problems.

I reported this a while back and Neal and I sort of concluded I might have a buggy Palm m500. The thing is it still does this occasionally on my new m130 as well.

It's not the same as what you are describing, but it IS strange and intermitant...

- Paul



By [Neal Bridges \(Nbridges\)](#) on Monday, June 17, 2002 - 06:28 pm: [Edit](#)

Paul, the only circumstance under which I know that happens is if you write in the graffiti area -- kind of a 'type-ahead' -- while a file is being included. Then you'll see it occasionally fail to find the file. It's on my list to remedy.

Neal



By [Paul](#) on Tuesday, June 18, 2002 - 06:04 am: [Edit](#)

Neal - I recall you telling me that when I brought this up before. I actually *never* graffiti during loading so it's not that I'm sure. I should specify that I'm including a memo with a list of 'needs' in it. It's no biggie really - happens maybe once in 50 times and it always clears up by restarting QF.

Somewhere somehow the state of some item in the system or QF is changing and causing this.

"The truth is out there somewhere"



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 18, 2002 - 09:20 am:

[Edit](#)

Well I've occasionally seen the problem your talking about - I include the docinc file in my startup.quartus.

However I can well believe Neal's scenario for that because I'm always graffitiing ahead.

The two seem to be unrelated though - I can get the error and it compiles correctly and I can not get the error and it fails.

However I'll see if it makes a difference if I don't start to type until Quartus is ready.

Thanks for the idea,

Richard



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 18, 2002 - 09:25 am:

[Edit](#)

Nope, still does it :-/

Anyone any other ideas?

Thanks,

Richard



By [Wade Carlson](#) on Tuesday, June 18, 2002 - 01:23 pm: [Edit](#)

Are you writing your app using a doc file, or the memo pad? I had some errors with docinc reading correctly, so I just gave up and went back to memos and all my problems went away.



By [Richard Chamberlain \(Rac\)](#) on Wednesday, June 19, 2002 - 06:30 am: [Edit](#)

Thanks for the suggestion Wade.

No I'm just using memo pad.

It's beginning to drive me crazy - I'm having to recompile three or four times before it works.

Richard



By [Paul](#) on Wednesday, June 19, 2002 - 08:55 am: [Edit](#)

All I can think of is to look very carefully at the most recent changes to your code - when the problem started. Are you allotting any data memory without initializing it? This could be a source of changing circumstances between compiles...

- Paul



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 19, 2002 - 02:11 pm: [Edit](#)

Richard, are you running any overclockers or other speedup utilities? When testing with AfterBurner, I found Quartus Forth to be a very sensitive barometer of problems with memory corruption due to the overclocking.

More definitively -- are you able to reproduce these problems under the Palm OS Emulator?

Neal



By [Richard Chamberlain \(Rac\)](#) on Thursday, June 20, 2002 - 06:26 am: [Edit](#)

I switched everything like that off - I had Cruise Control and a couple of hacks on. Made no difference however.

I never really use the emulator so I had to get that going - I think I've really opened a can of worms!

During compile I get lots of writing to memory errors (0x3CF66 if that means anything to anyone).

And then during running each time it draws a bitmap (which is every beat) I get another memory error (0x5246) and no bitmap appears.

I'll take a good hard look at my bitmap code.

Thanks,

Richard



By [Julian Fondren](#) on Thursday, June 20, 2002 - 07:31 am: [Edit](#)

I've seen Richard's problem with NEEDS failing to find an extant memo. Usually you can NEEDS something else and it'll be included just fine, and if you restart Quartus and NEEDS the first memo it'll be included just fine. There doesn't seem to be rhyme or reason to the failure. --Oh, on an m125.



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 20, 2002 - 10:58 am:

[Edit](#)

Richard, if you're using POSE out of the box -- go in and switch off all of the debug settings, and then see if you can reproduce the same issue without all the messages.

If you can, then I'll want you to switch back on some of the debug settings and see what's what.

Neal



By [Richard Chamberlain \(Rac\)](#) on Thursday, June 20, 2002 - 02:27

pm: [Edit](#)

Hi Neal,

Thanks for the reply.

Ok it compiled OK with pose but exhibited the same issue once compiled.

fwiw if I just type include mn2 on pose and then type go the application runs as expected with everything working correctly.

I'm a bit stumped.

Richard



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 20, 2002 - 02:32 pm:

[Edit](#)

Try compiling, exporting the compiled app, starting a new clean POSE session, and trying again. It's possible either the process of compilation, or the initial run of the program, is corrupting something; we need to consider both possibilities.

Neal



By [Richard Chamberlain \(Rac\)](#) on Friday, June 21, 2002 - 05:09 am:

[Edit](#)

Hi Neal,

Well we have a winner - if I reset between compiling and running it seems to work on both POSE and my IIIc.

I ran about 10 times now and its work ok everytime.

So any ideas what that's all about?

As long as I can get round it I'm not that bothered - but does do you know any way that I can force it to reset at the end of make?

Cheers,

Richard



By [Neal Bridges \(Nbridges\)](#) on Friday, June 21, 2002 - 03:21 pm: [Edit](#)

A simple

SysReset

will manage it. I am curious to know why it happens.

Neal

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Dictionary overflow

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Dictionary overflow



By [Paul](#) on Sunday, June 16, 2002 - 09:27 am: [Edit](#)

I've been adding features to my cryptogram puzzle game and I just got a dictionary overflow error.

What can I do to conserve space in the dictionary? Do long definition names take up more space?

Help!

Thanks, Paul



By [Paul](#) on Sunday, June 16, 2002 - 11:56 am: [Edit](#)

Ok. I've weeded out some unnecessary library code and made the error go away.

My questions still stand. I did some wiki searching to no avail. It seems I've read some stuff about this in the forum...



By [Kris Johnson \(Kdj\)](#) on Sunday, June 16, 2002 - 01:38 pm: [Edit](#)

This wiki page has some suggestions:

<http://kristopherjohnson.net/wiki/DictionaryOverflow>

Also see <http://www.quartus.net/discus/messages/23/1278.html>

There are also some discussions in the archives about this issue.

-- Kris



By [Paul](#) on Sunday, June 16, 2002 - 03:00 pm: [Edit](#)

Much obliged Kris. csunused reports 962 bytes after I compile the app now. I assume you get the error when that figure drops to zero...

The code needs some cleaning up anyhow. I have to get busy factoring and compacting.

Thanks - Paul



By [John Newell](#) on Monday, June 17, 2002 - 05:13 am: [Edit](#)

Paul,

I find that Dictionary overflow is a common experience when using Quartus Forth. As Kris says, there is quite a bit of archive discussion about it.

As a rule of thumb, you should restrict yourself to a single "busy" form per application. If you need more you can launch child applications to handle each "busy" form. This works fairly well. The loading is reasonably quick and you can communicate through Preferences settings.

Hopefully Neal is doing something about the Dictionary overflow for future releases.

Regards
John



By [Paul](#) on Monday, June 17, 2002 - 08:53 am: [Edit](#)

John - well, my game app has the one main activity form. I'm not eager to go the sub-app route but I've been reading some of the discussions and may have to do that eventually.

Cryptos features multiple puzzle databases that can be loaded on the device *one at a time* and I'm wanting to come up with a scheme to allow the app to accumulate these dbs into an 'internal' master DB and then provide access to them via the standard catagory mechanism.

The proper way to do this would be a desktop conduit, something akin to docs-to-go but I'm no Windows programer so that's out.

Anyway adding this functionality will put me over the dictionary line so I'll need to be breaking it up into sub-apps if I do that.

- Paul



By [Jim Hendricks \(Jimh\)](#) on Monday, June 17, 2002 - 10:34 am: [Edit](#)

Paul,

I don't think you need a desktop conduit. I own a CLIE and one thing I noticed is that the Sound Converter desktop app does exactly what you are suggesting (less the categories). When you convert a MIDI or WAV file, it creates a PDB for sync to the handheld. On sync it merges the PDB with the internal system MIDI database. If I'm correct, the way they do this is to set a flag in the header of the PDB that indicates that the PDB is to execute apou transfer. If this is correct, my assumption would be that the PDB

contains a small program that copies the records in itself to the master db, then deletes itself. This would mean that the functionality would not have to be added to your main app.

Jim



By [Paul Randall \(Paul\)](#) on Monday, June 17, 2002 - 03:20 pm: [Edit](#)

That's interesting. I wonder how one would go about making an executable PDB?

Still, the managing of multiple game packs will require additional functionality *somewhere* within the game or a sub-app. Perhaps a sub-app could work as a manage-your-puzzle-packs screen and let you choose the active package or delete completed puzzles etc. That seems like a nice division of labor.

I'd had several users suggest this capability and I've been thinking about how to approach. Frankly, it seems a bit of over-kill for a simple little game app. As it is you can load up a puzzle pack and have over 100 cryptograms to work until you need to sync another package.

- Paul



By [Jim Hendricks \(Jimh\)](#) on Monday, June 17, 2002 - 05:37 pm: [Edit](#)

Ah, my memory serves me correctly, at least sort of. It's not a status bit in the PRC file which informs the app to execute on installation without a conduit, rather there is a launch code which informs all PRC's that a hot sync was just completed. This allows you to write into your PRC the code which will copy the records to your master, then delete itself.

If I'm correct, the current version of Quartus(1.2.5) cannot respond to launch codes, you need the beta version(1.2.?).

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ExpCardPresent?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): ExpCardPresent?](#)



By [Julian Fondren](#) on Saturday, June 15, 2002 - 08:44 pm: [Edit](#)

This word, and the others of the Expansion Manager, don't exist in Quartus -- possibly because the Expansion Manager is optional. How can I access it (via the feature manager)?

My goal here is to be able to write simple memory-card-accessing programs, like Copy-MemoDB-to-Card etc. I'm aware that programs to facilitate such exist.



By [Kris Johnson \(Kdj\)](#) on Sunday, June 16, 2002 - 01:59 pm: [Edit](#)

If a system trap is not predefined by Quartus, you can define it yourself. See <http://kristopherjohnson.net/wiki/SystemTrap>.

Before calling the trap, you should use the Feature Manager to determine whether the Expansion Manager is present on the handheld where the application is running. Otherwise, the program will just crash if the trap is invoked and the Expansion Manager is not present.

-- Kris

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Help strings attached to forms

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Help strings attached to forms



By [Paul](#) on Thursday, June 13, 2002 - 03:01 pm: [Edit](#)

I find that when I attach a string resource to my form via the 'help string' field in RsrcEdit, that when I display the form using showform the little 'i' icon does not show up initially, but will when you tap on that hot-spot.

I wonder if I may be doing something wrong. In the past I have cludged it by printing the icon manually after showing the form.

Also, while we're at it, is there any other way to invoke the standard tips screen? I'd like to use it instead of coding my own help screens, but I'd like to invoke it via other means (ie. a button control or menu item.)

Anyone out there familiar with this?

Thanks, Paul



By [Kris Johnson \(Kdj\)](#) on Thursday, June 13, 2002 - 09:19 pm: [Edit](#)

Alerts displayed with FrmShowAlert() will display the 'i' properly when there is an associated help string.

I don't know about normal forms. I've noticed that the icon is not displayed, so I just don't use help strings for non-alert windows.

-- Kris



By [Paul](#) on Friday, June 14, 2002 - 06:34 am: [Edit](#)

It's interesting though that the mechanism does work on non-alert forms... and the icon will show up *after* the first time you tap on where it's supposed to be.



By [Matthew Burke \(Mmb\)](#) on Friday, June 14, 2002 - 09:10 am: [Edit](#)

If you just want to show the standard tips screen, try

```
FrmHelp ( n -- )
```

where the stack parameter is the ID of a string resource to display.



By [Paul Randall \(Paul\)](#) on Saturday, June 15, 2002 - 03:13 pm: [Edit](#)

Matthew, that looks like what I was looking for. Thanks.

- Paul



By [Steve Bohrer \(Skb\)](#) on Sunday, June 16, 2002 - 09:39 pm: [Edit](#)

If a form has a Frame type set to Dialog (set with RsrcEdit, I don't know the underlying field and constant) then the i for a help menu shows up automagically whenever the form is shown. Thus, it works from a regular showForm or popupForm, not just from FrmShowAlert.



By [Dave Bennett \(Dbennett\)](#) on Monday, June 17, 2002 - 08:55 am:

[Edit](#)

I use this on most of my programs. My main form has a help string attached and the i icon shows up where it is supposed to be on startup.



By [Paul Randall \(Paul\)](#) on Monday, June 17, 2002 - 01:25 pm: [Edit](#)

My specific issue is that my title tab cannot run the full width of the screen as it does when you choose the dialog frame type. I need that space for some gadgets. So with a normal title tab the i icon doesn't initially show up.

But the frmHelp call solves my problem anyhow. I made a button control with the font set to symbol and pasted in the special 'i' character as the control's title. I then call frmHelp when I get a hit on it. This simulates that behavior.

Cheers...

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Array of doubles

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Array of doubles



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 12, 2002 - 04:46 pm: [Edit](#)

Hi all:

I thought of keeping track of an array of doubles like this, derived from Leo Wong's tutorial:

```
: array
create
  2 * cells allot
does>
  swap 2 * cells + ;
```

Build an array like this:

```
10 array somearray
```

and store values in the array like this:

```
1000. 0 somearray 2!
999. 1 somearray 2!
etc...
```

Which works for a large portion of the values that I store. Occasionally, though, I'll index the array to retrieve a value I'd stored and I'm returned some garbage.

Is the above technique flawed with respect to storing double-cell values?

Thanks,

Joe



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 12, 2002 - 04:50 pm:

[Edit](#)

The technique is fine; the error must be elsewhere. See if you can generate a test-case that shows the error.

Neal



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 12, 2002 - 05:01 pm: [Edit](#)

Neal:

It's pretty straightforward. In my test case, I build an array to store three doubles. I store the following values in succession:

10000.
100000.
1000000.

When I go to fetch them, the second one is always garbled -- comes back as some huge number. If I back the value down to something like 500. and then fetch it, it comes back OK.

In my app I have approx 60 doubles in this array. Approx 5 (I don't have my palm handy) of them exhibit this behavior. Could it be some kind of alignment problem?

Next thing I thought I'd try is to make the array 2-D, store "half" of the double per column for a given row, and then re-assemble when I fetch.

Joe



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 12, 2002 - 05:03 pm:

[Edit](#)

Are you using `2@` to retrieve the values?

Neal



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 12, 2002 - 05:04 pm: [Edit](#)

Yes, `2@`.

Joe



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 12, 2002 - 05:06 pm:

[Edit](#)

You shouldn't be seeing any problems. It would be useful if you could write a short bit of code that reproduced the difficulty you're having.

Neal



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 12, 2002 - 05:09 pm: [Edit](#)

Neal:

OK, will do. I'm converting the resultant double to pictured output (per my other post today), so it is possible that something is going wrong there. I wanted to confirm, however, that this is a sound way to store doubles, which you've done for me. Thanks & I'll post what I find.

Joe



By [Joe Nasal \(Jsn\)](#) on Thursday, June 13, 2002 - 10:27 am: [Edit](#)

Neal:

Stupid user error. A couple of beers and everything became clear... 😊

Thanks for the help.

Joe

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Pictured Numeric Output Question

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Pictured Numeric Output Question



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 12, 2002 - 10:56 am: [Edit](#)

Hi Forthers:

I want to convert a double into a string via standard PNO techniques. I'm going to insert a decimal using:

```
[char] . hold
```

The rub is that I'll have some variable amount of digits to the right of the decimal point, which I'll know before hand.

After I start things off with < #, is it possible to go into a loop where I'll execute # some number of times before I do my [char] . hold ? do..loop plays on the return stack, so I shouldn't interfere with the PNO operators which are looking for stuff on the data stack, right?

Thanks,

Joe



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 12, 2002 - 04:20 pm:

[Edit](#)

Right, Joe. Should work fine.

Neal



By [Joe Nasal \(Jsn\)](#) on Wednesday, June 12, 2002 - 04:49 pm: [Edit](#)

Thank you Neal.

Joe



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 12, 2002 - 08:10 pm: [Edit](#)

One thing to watch out for is that you cannot nest the pictured numeric operators. In other words, after using < #, you can't use another < # or a word that uses < #.

None of the built-in words use the PNO (or at least they aren't supposed to, according to the ANS standard). But if the code is complicated, you might

want to check all the definitions.

-- Kris



By [Joe Nasal \(Jsn\)](#) on Thursday, June 13, 2002 - 08:35 am: [Edit](#)

First try at this last night bombed. I was doing something like:

```
lessthan#  
somevariable @ 0 do # loop  
#s #greaterthan
```

(replace lessthan and greaterthan with the appropriate symbols -- I can't get these characters to show up in this post, even with pre /pre tags...)

Which crashed my box hard. I'm wondering if # and do..loop are stepping on each other on the return stack? I'll check the PNO definitions.

Joe



By [Kris Johnson \(Kdj\)](#) on Thursday, June 13, 2002 - 10:20 am: [Edit](#)

The following works fine for me:

```
\ pno
```

```
variable leading  
3 leading !
```

```
: >leading ( u. -- cadr u )  
  <#  
  leading @ 0 do # loop  
  #s #> ;
```

```
: .leading ( u. -- )  
  >leading type ;
```

```
20. .leading \ prints "0020"  
0. .leading \ prints "0000"  
10000. .leading \ prints "10000"
```

-- Kris



By [Joe Nasal \(Jsn\)](#) on Thursday, June 13, 2002 - 10:25 am: [Edit](#)

Thanks Kris.

My issue, though, is that I'm trying to insert a [char] . and also represent some variable amount of numerals to the right of the decimal point (see original post). I thought of looping over # based upon the number of digits I needed to the right of the decimal point before doing a HOLD, but this seems to croak.

What I need to end up with on the stack is a cadr u

Joe



By [Kris Johnson \(Kdj\)](#) on Thursday, June 13, 2002 - 10:39 am: [Edit](#)

OK, but whatever the issue is, it seems that do..loop and PNO don't interact in a bad way. Maybe if you can post some code, we can see what the problem is.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Thursday, June 13, 2002 - 10:57 am: [Edit](#)

FWIW,

```
\ double-to-string

\ Convert double to string
\ uNum. is number to be converted.
\ uExp is number of digits to
\ be displayed right of decimal point.
: ud>string ( uNum. uExp -- cadr u )
  <#
  0 do # loop
  [char] . hold
  #s #> ;

: .ud# ( uNum. uExp -- )
  ud>string type ;

20000. 3 .ud# \ prints "20.000"
20000. 4 .ud# \ prints "2.0000"
```

-- Kris



By [Joe Nasal \(Jsn\)](#) on Thursday, June 13, 2002 - 11:06 am: [Edit](#)

Kris:

That's the ticket, thanks.

I had the loop counter inside of < # -- that must of been the error.

Thanks for your help.

Joe



By [Julian Fondren](#) on Monday, June 17, 2002 - 12:40 pm: [Edit](#)

Joe, could you show your code? What you said doesn't make sense to me -- Kris's has the "loop counter" inside of the as well.



By [Joe Nasal \(Jsn\)](#) on Monday, June 17, 2002 - 12:45 pm: [Edit](#)

Kris's does what I want, and maybe it doesn't matter (I had other issues with the code I was working with), but is my dyslexia kicking in or do I see that you place uExp onto the stack before lessthan# -- that's what I was referring to.

Much ado about nothing, I think. Kris's code works.



By [Julian Fondren](#) on Tuesday, June 18, 2002 - 05:18 pm: [Edit](#)

Yes, but that's irrelevant... sigh. Nevermind, as you wish.

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NewRsrc Question...

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): NewRsrc Question...](#)



By [Brette Blatchley \(Brettrix\)](#) on Saturday, June 8, 2002 - 10:52 pm:

[Edit](#)

Hi Folks,

I'm able to use NewRsrc to create a new resource in my standalone apps at compile-time(after calling MakePRC), but I'm wondering if I can populate the contents of this new resource before it gets written.

Of the many uses this has, I would like to change the version text of the resulting standalone app from within its source (or even make a word to automatically increment the version number).

Other uses include writing out strings or bitmaps at compile time.

Neal? What did you intend NewRsrc to be used for in the context of producing standalone apps?

Any thoughts Anyone?

Thanks & Take Care



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 9, 2002 - 10:42 am: [Edit](#)

Brette, NewRsrc is an internal factor of the standalone-generating code. All the uses you suggest are possible-- but you'd need to first create the resource, and then modify its contents.

Neal



By [Brette Blatchley \(Brettrix\)](#) on Monday, June 10, 2002 - 10:12 am:

[Edit](#)

Hmmm, when you say "create the resource" are you talking about creating it in say the resource database where you would build your forms and things?

Or are you thinking that I should build an image of the resource in memory, then (somehow) point NewRsrc to it and let it write the resource out to the new standalone app? (This is more of what I had in mind.)

Thanks!



By [Neal Bridges \(Nbridges\)](#) on Monday, June 10, 2002 - 11:53 am: [Edit](#)

NewRsrc does just one thing -- creates an uninitialized resource in your target stand-alone app. You'd need to DmWrite to that to fill it with data.

If you want to do something fancier in another resource database, you'd need to use the appropriate PalmOS calls for creating new resources.

Neal



By [Brette Blatchley \(Brettrix\)](#) on Monday, June 10, 2002 - 12:55 pm:

[Edit](#)

Where do I find the open DB reference to the PRC addressed by NewRsrc?

DmWrite needs a record pointer; is that available and what/where would it be?

Sorry to seem obtuse...



By [Neal Bridges \(Nbridges\)](#) on Monday, June 10, 2002 - 01:04 pm: [Edit](#)

You don't need the handle -- just search for your new resource with DmGet1Resource.

Neal



By [Brette Blatchley \(Brettrix\)](#) on Monday, June 10, 2002 - 05:57 pm:

[Edit](#)

OK Folks, Here's some working code to do what I was suggesting:

```
\ CompileRsrc 6/10/02 BLB
\  
needs core-ext
needs ids
\  
\ Copy source text to the PAD
\  
: parse2PAD \ delimiter "text..." --
            \ c-add u
  postpone parse
  >r pad r@ move pad r> ;
```

```
\ Copy string to the current resource.
```

```

\ This word extends NewRsrc to let you
\ initialize the contents of the resource
\
\ id = resource id
\ type = resource type
\ see SetVersion for example usage.

: AddRsrc ( c-addr u id type. -- )

    \ save id & type on r-stack
    3 pick 2dup 2>r
    2swap 2dup 2>r 2swap

postpone NewRsrc drop

2r> 2r> drop \ drop c-count
DmGet1Resource 2>r
    2r@ MemHandleLock 2>r
    \ c-addr u
    swap >r s>d r> >abs 0.
    2r> DmWrite drop
    2r> MemHandleUnlock drop
2r> DmReleaseResource drop
;

\ Writes the space-delimited text
\ into the version resource of your
\ standalone app. Use *After*
\ MakePRC.
\
\ usage: SetVersion 1.2beta
\
\ writes "1.2beta" (with a trailing null) into
\ the standalone app's tver/1 resource.

: SetVersion ( "v-text" -- )
    1 [id] tver delrsrc drop
    32 postpone parse2PAD
    1 [id] tver postpone AddRsrc ;

```

Thanks for your help Neal! :-)

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Drawing a point to the screen

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\):](#)

Drawing a point to the screen



By [Frank](#) on Friday, May 31, 2002 - 01:13 pm: [Edit](#)

Does anyone now what is the fastest way to draw a point to the screen? I see that the Point procedure in the quartus graphics library file uses WinDrawLine and i think there should exist a better way to do it.

I have already tried to put a 1 by 1 bitmap to the screen but this just slows things down.

Thanks,

Frank



By [Neal Bridges \(Nbridges\)](#) on Friday, May 31, 2002 - 01:22 pm: [Edit](#)

Note that WinDrawLine is optimized to only draw one point if both the start and endpoints are the same, so you're not losing anything measurable in terms of efficiency.

However, the 3.5 API has routines for drawing and clearing individual pixels. These are not in the release build of the Quartus Forth kernel, but can easily be added in your own source.

From Window.h in the Palm SDK:

```
IndexedColorType WinGetPixel (Coord x, Coord y);  
void WinPaintPixel (Coord x, Coord y); // uses drawing mode  
void WinDrawPixel (Coord x, Coord y);  
void WinErasePixel (Coord x, Coord y);  
void WinInvertPixel (Coord x, Coord y);  
void WinPaintPixels (UInt16 numPoints, PointType pts[]);
```

For Palm OS versions earlier than 3.5, use WinDrawLine to draw, and WinEraseLine to erase.

Neal



By [Frank](#) on Friday, May 31, 2002 - 01:58 pm: [Edit](#)

Thanks Neal,

I will try it. What I'm doing is writing a little ray-caster to create a Palm-3D-environment. I don't know if it will ever be fast enough but I do what I can. I now draw a screen consisting of 10000 pixels in 750 ticks approximately.

I now that's slow, and I need to optimize, but it's a beginning.

Thanks again,

Frank



By [Frank](#) on Friday, May 31, 2002 - 02:32 pm: [Edit](#)

Uh... ahum... please don't get angry with me, since I am only a stupid newbie but... What exactly do i have to do?

I do use Palm v. 3.5.1.



By [Neal Bridges \(Nbridges\)](#) on Friday, May 31, 2002 - 02:42 pm: [Edit](#)

From CoreTraps.h, we see that WinDrawPixel has a systrap number of 0xA383.

Thus:

```
: WinDrawPixel ( y x -- )  
  (hex) a383 systrap 2drop ;
```

Neal

 By [Kris Johnson \(Kdj\)](#) on Friday, May 31, 2002 - 02:51 pm: [Edit](#)

Please let us know if 10,000 calls to WinDrawPixel is any faster than 10,000 calls to WinDrawLine. I suspect that it won't be.

-- Kris

 By [Frank](#) on Friday, May 31, 2002 - 03:39 pm: [Edit](#)

It works!

If I paint all walls of my 3D environment black It draws the screen in 488 ticks ! Now I will have to speed up the rest of the code.

So what's the systrap number for WinErasePixel?

Frank

 By [Neal Bridges \(Nbridges\)](#) on Friday, May 31, 2002 - 04:58 pm: [Edit](#)

0xA384.

Neal

 By [Neal Bridges \(Nbridges\)](#) on Friday, May 31, 2002 - 04:59 pm: [Edit](#)

You might find a slight increase in speed by placing INLINE after the ; in the WinDrawPixel routine.

Neal

 By [Frank](#) on Saturday, June 1, 2002 - 10:11 am: [Edit](#)

Thanks Neal,

I didn't know where to get that information. But it works, so thanks a lot.

Inline doesn't really seem to help. I now get 485 Ticks for a screen, But well, it's something.

Maybe, soon I will bother you again with some questions. I'm thinking of faster division routines by shifting bits. The way I understand it, A quartus cell on the stack consists of 2 bytes. So if I want to divide by 256 (which I want in one of the core-routines) is it possible to set the low-byte to the high-byte value and set the highbyte value to zero? Is this faster than simply dividing by 256 using, say ' x @ 256 / ' ?

Do you have any suggestions for this particular problem?

Maybe I should learn to write assembler and re-write the core-routines in assembler?

Thanks, and sorry that i understand so little of programming.

Frank



By [Frank](#) on Saturday, June 1, 2002 - 12:39 pm: [Edit](#)

Hey it's me again.

I've been checking out program-timing and I've discovered that it uses 164 ticks for calculations and the rest (= about 300 ticks) for the 10.000 WinDrawPixel's, so 1 WinDrawPixel takes about 1/3th of a tick.

Is there ANY way left to speed the WinDrawPixel-proces up, or is this the limit?

If so, I'll have to wait untill I get a faster palm... ☹



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 1, 2002 - 01:35 pm: [Edit](#)

With a lot of work, you could write a custom pixel-draw routine; you might find you save a bit of time if you weren't calling such a routine as a systrap. This, however, would not be portable between Palm devices, different screen colour depths, etc.

Neal



By [Frank](#) on Saturday, June 1, 2002 - 02:12 pm: [Edit](#)

Hmmm... I see. Well, I guess I met a real problem here, than. I'll see what I can do.

Thanks for your help.

Frank



By [Frank](#) on Saturday, June 1, 2002 - 02:54 pm: [Edit](#)

I've been thinking... It shouldn't be too hard...

Shouldn't it just be something like:

```
color @  
ScreenMemoryAdress @  
x @ y @ 160 * +  
colordepth @ *  
+  
setmemory
```

Where setmemory sets the adress to the desired value ?

Or am I completely wrong here?



By [Kris Johnson \(Kdj\)](#) on Saturday, June 1, 2002 - 06:08 pm: [Edit](#)

I haven't looked, but I think the ScreenMemoryAdress thing is the problem. Different Palm OS devices handle their screen memory in different ways.

There is a device-independent bitmap format, so maybe the portable way to do it is to create a bitmap using custom routines, and then blit that to the screen with WinDrawBitmap, WinPaintBitmap, etc.

BTW, the source code to FlipHack demonstrates how to do this sort of thing. It is in C.

You also might try using SysGetTrapAddress to get the address of the WinDrawPixel routine, and

call it directly rather than going through the systrap mechanism. But I have no idea how much faster that would be.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 1, 2002 - 07:41 pm: [Edit](#)

Another possibility is to use

```
void WinPaintPixels (UInt16 numPoints, PointType pts[]);
```

which allows you to pass an array of points and have the Palm OS draw them all at once before returning from the systrap.

Neal



By [Frank](#) on Sunday, June 2, 2002 - 11:26 am: [Edit](#)

Ok, ok,

I'm trying really hard to keep up with you guys, but I just don't have enough Quartus-experience. Please be patient with me...

Kriss, I couldn't find the source-code of the flip-hack program.

I thought trying WinDrawBitmap would be a good idea because since I can see an example of it in the Bitmap memo coming with Quartus, it would be the easiest thing to do... but, now I'm really lost...

I've written a bmp-test program as follows:

```
\ bmpstest
```

```
needs toolkit
needs struct
needs random
```

```
variable dsize
```

```
struct
100 field pix
end-struct drec:
```

```
sizeof drec: dsize !
drec> rec>
```

```
: FillStructure ( -- )
100 0 do rand 2 abs mod rec> pix i + c! loop ;
```

```
: drawbitmap ( -- )
20 20
10 10
0 , \ flags
0, 0, 0, , \ reserved
rec> pix >abs WinDrawBitmap ;
```

```
: go ( -- )
FillStructure
drawbitmap ;
```

So what I would expect it to do is fill the structure with random 1's and zero's and then draw a 10 by 10 random-bitmap at point (20 , 20).

But all I see is a thing like a bitmap-line.

I think it has something to do with the comma (,) normally in the bitmap-definition. But I don't know how to get this comma into the structure that I want to use.

Thanks for being so kind with me.

-- Frank



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 2, 2002 - 12:23 pm: [Edit](#)

Frank, as posted, your code won't run; however, even with the typographical errors out of it, there are still issues.

From your code, I'm guessing that you think a bitmap is an array of cells such that each cell contains either a zero, or a one, thus defining the image. Have a look at the structure of a bitmap itself. In fact it is an array of cells with a special header; however, each bit of each cell in the array is one pixel.

Looking at your code, I'm confused as to how `rec>` and `drec>` are defined, and what they do. Also, your `drawbitmap` function looks like it's trying to create a bitmap header in dataspace, which given that you defined an array for the bitmap earlier, is putting the horse after the cart -- and you would want to create the header at compile-time in any case, rather than at run-time.

I sympathize with your difficulties; as a newcomer it can be a challenge to get all the ducks in a row. My suggestion is to start small, with a piece of code that works, and extend and test as you build toward what you want. That way you'll progress more surely, without finding yourself with a page full of code that doesn't work properly.

I hope you don't mistake any of this as discouragement -- it isn't meant as such, and I'm pleased that you're here asking questions. I think, though, that you'll find it less frustrating to take it one small piece at a time, instead of in large chunks.

Neal



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 2, 2002 - 12:39 pm: [Edit](#)

Let's look at `bitmap.txt`:

```
\ bitmap 98.10.7 8:45 pm NAB

: bitmap ( height width "name" -- )
  create
  tuck , , \ width height
\ bytes/line (must be even)
  7 + 8 / dup 1 and + ,
  0 , \ flags
  0 , 0 , 0 , 0 , \ reserved
does> >abs WinDrawBitmap ;
```

This is a fairly complex-looking definition that sets up a header for a black & white bitmap. An example of its use:

```
\ telephone 98.10.7 8:53 pm NAB
needs bitmap
```

```

decimal
12 16 bitmap telephone
2 base ! \ switch to binary
00001111111110000 ,
0111111111111110 ,
1110110000110111 ,
1110110000110111 ,
1110011111100111 ,
0000110000110000 ,
0001101111011000 ,
0011101111011100 ,
0111101111011110 ,
1111110000111111 ,
1111111111111111 ,
1111111111111111 ,
decimal

```

The example sets up a bitmap in memory, at compile-time, bound to a new word named 'telephone' -- just pass a pair of coordinates to it and it'll draw itself on-screen. Handy, and simple. But it's not what you want.

You can put the above code to use, however, to create a random bitmap, like this:

```

needs bitmap
\ Here we use 'bitmap' to set up the header for us:
12 16 bitmap mybitmap
here
12 cells allot \ allocate space for the bitmap image
constant mybitmaparray
\ mybitmaparray now holds the address of the start of the bitmap image array itself

: randomizebitmap
  12 0 do rand mybitmaparray i cells + ! loop ;

randomizebitmap
20 20 mybitmap \ this draws the random bitmap

```

That should give you something to work from; let me know what you think!

Neal

 By [Frank](#) on Sunday, June 2, 2002 - 12:49 pm: [Edit](#)

Wow !

Thanks Neal, and thanks for your kind words. I am indeed trying small things and then using them in larger programs. I just didn't understand at all the bitmap thing.

I will try your examples right away and tell you how I progress. (The 3D-environment-calculations already do their work quite good)

I guess a cell is 2 bytes. Can I replace this with field (which is, i believe, 1 byte) ?

 By [Frank](#) on Sunday, June 2, 2002 - 01:01 pm: [Edit](#)

Ok, I see what you're doing. Never thought it would be this simple. I think I cannot replace the cell by field since in the bitmap routine it says that a bitmap must have an even number of bytes per line.

Do I understand if in the right way if i think that 'here' provides the value for 'mybitmaparray' ?



By [Kris Johnson \(Kdj\)](#) on Sunday, June 2, 2002 - 01:04 pm: [Edit](#)

I don't know if you still need it, but FlipHack source is available from <http://www.byteswapped.com/palm/>

-- Kris



By [Frank](#) on Sunday, June 2, 2002 - 01:49 pm: [Edit](#)

It works! Oh, this is really cool !

Now it draws a screen consisting of 10.000 pixels of my 3D-environment in just 177 ticks ! (as in 460 ticks before this enhancement.)

I use a 100 by 1 bitmap as a scanline that I fill with the 1's and zero's that I get from my calculations.

Thanks Neal, I would kiss you if you were here !



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 2, 2002 - 02:31 pm: [Edit](#)

Please send any such affections in the form of legal tender! 😊

I'm glad it's working. I don't know if the WinPaintPixels routine would be any faster -- might be worth experimenting.

Neal



By [Frank](#) on Sunday, June 2, 2002 - 03:59 pm: [Edit](#)

I think I'll work on my calculation-routines first now. They take up about 165 of the 177 ticks per screen. I'll try to make them faster but don't have a lot of idea's yet.

Thanks again, and see you soon.

Frank



By [Frank](#) on Monday, June 3, 2002 - 03:51 pm: [Edit](#)

Hey Neal and Kriss, it's me again.

I'm trying to speed up the code for my raytracer but I seem to get stuck on some barrier below which i can not come. It is on 164 ticks per screen approximately.

All depends on a few simple lines of code that are repeated continuously (a piece of 3 lines and one of 4 lines). I might be able to size them down still a little bit, but not much and every size down means a speed up of approximately 1 tick only.

Would you recommend trying to translate these lines into assembler-language? Would this speed up things? Is this a hard thing to do?

Thanks in advance.

Frank



By [Kris Johnson \(Kdj\)](#) on Monday, June 3, 2002 - 04:21 pm: [Edit](#)

I think we'd have to see the code to determine whether re-coding in assembly would have an appreciable effect.

You might want to use the disasm module to disassemble your existing code, and see whether it looks inefficient. You might also want to try using `INLINE` on the words to see if it makes a

difference.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, June 3, 2002 - 04:27 pm: [Edit](#)

You might also want to take a look at some of the modules in the wiki that have optimized M68000 words. A good place to start would be here:

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/M68kSpecificWords>

-- Kris



By [Frank](#) on Thursday, June 6, 2002 - 09:41 am: [Edit](#)

Thanks Kriss, I'll try that.

To give you an impression of the code (this is not the final version) I will type one chunk down here.

```
: drawwall ( a b c d e -- a b c )
do
2dup i * 25 / zp @ + 16 mod abs 16 * +
3 pick + c@
-1 * bmpp i cells + !
loop ;
```

So this is what it does a lot of times (thousands of times) per screen.

a b c d e are integers

bmpp is a constant

zp is a variable

Would it help anything to translate this to assembler?

Thanks



By [Kris Johnson \(Kdj\)](#) on Thursday, June 6, 2002 - 10:07 am: [Edit](#)

Arithmetic operations are pretty efficient. There wouldn't be much point in rewriting those.

"@" and "c@" can be improved upon, especially when used in a loop. An assembly routine that put an absolute address into a register and used that might be significantly faster. Using a register as a loop index might make things faster too.

Complicated stack manipulations can make things slow. "3 pick" is the only phrase in your example that could benefit from assembly optimization, but you might want to check your other code for uses of "pick", "rot", "swap", and "roll".

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 6, 2002 - 11:45 am: [Edit](#)

PICK is indeed a warning flag -- actually it's a beacon-fire on a hilltop. Find a way to avoid using PICK and ROLL, and you'll make your algorithm more efficient in the process.

One large-scale optimization that is sometimes possible is replacing mathematical calculations with table-lookups -- that is, pre-calculating the answers for whatever range of input values you're using, and keeping them on-hand in a table. The calculation is then replaced with a simple fetch from that table.

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, June 6, 2002 - 03:20 pm: [Edit](#)

You can eliminate some of the multiplication and division operations (which are dreadfully slow):

- "4 lshift" instead of "16 *"
- "abs 15 and" instead of "16 mod abs"
- "negate" instead of "i *"

-- Kris



By [Kris Johnson \(Kdj\)](#) on Thursday, June 6, 2002 - 03:21 pm: [Edit](#)

I meant "negate" instead of "-1 *".

-- Kris



By [Frank](#) on Tuesday, June 25, 2002 - 03:50 pm: [Edit](#)

Hey Kris and Neal,

I've not had time to work on my program for a while... Thanks for your suggestions. I'll try all these new things...

I don't really understand what you mean when you tell me to replace @ and c@, but I'll try for a while..

The counter is now around 164 ticks per screen.

More news to come.



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 25, 2002 - 11:19 pm: [Edit](#)

@ and c@ use relative addressing, which is slower than absolute addressing, and c@ does some extra stuff. If you rewrite your loop in assembly language, you can optimize the memory accesses. This is especially true in a loop where you are accessing lots of memory locations in sequence.

But I would definitely put this off until you try some of the easier optimizations that don't require assembly language.

-- Kris



By [Frank](#) on Wednesday, June 26, 2002 - 03:37 am: [Edit](#)

Down to 139 ticks now... and speeding up.

Especially the '4 lshift' thing saves a lot of time.

Have to go now... I really enjoy doing this stuff.

See you soon.



By [Frank](#) on Tuesday, July 9, 2002 - 10:17 am: [Edit](#)

Hello Neal,

I'm still working on the game and I almost have a beta-version ready to be launched.

I want to buy the full version of Quartus to build a stand-alon but i don't own a credit-card, so I can't buy it at Palm-gear. Is there any other way I can get it?

Thanks

Frank



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 9, 2002 - 04:22 pm: [Edit](#)

Frank -- yes, certainly. You can mail a cheque for \$69.95 in US dollars to

Neal Bridges
65 Scadding Ave. #809
Toronto, Ontario
CANADA M5A 4L1

Include your HotSync name, and I'll get the registered version out to you directly.

Thanks for your interest!

Neal



By [Frank](#) on Thursday, July 11, 2002 - 01:31 pm: [Edit](#)

Thanks Neal,
I will. I live in Europe, I hope that's no problem for shipping.

I think I am a quartus addict. Can't stop playing... 😊

Frank



By [Frank](#) on Wednesday, July 24, 2002 - 11:16 am: [Edit](#)

Neal,

The cheque is on its way. It should be there within 10 days.

Looking forward to launching my first program to the public!

Frank



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 24, 2002 - 01:43 pm:

[Edit](#)

Thanks, Frank! Looking forward to seeing your app.

N.



By [Frank](#) on Tuesday, August 6, 2002 - 08:59 am: [Edit](#)

Neal,

haven't you received my cheque yet? I can't wait to get the full version.

Will you send it by e-mail?

Frank Aalbers



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 6, 2002 - 01:37 pm:

[Edit](#)

Frank, your cheque has not in fact arrived, as at today's mail.

You're right; registered version delivery is via email.

Neal

 By [Frank](#) on Friday, August 9, 2002 - 11:26 am: [Edit](#)

Hello Neal,

I think something went wrong yesterday, or you're not there at the moment. I replied to your mail from quartus support and was waiting but nothing happened.



anyway,

the HotSync name is

Aalbers

so that's one capital at the beginning.

thanks

Frank

 By [Neal Bridges \(Nbridges\)](#) on Friday, August 9, 2002 - 03:17 pm: [Edit](#)

Frank; I will check and re-send. Thanks for letting me know.

Neal

 By [Frank](#) on Friday, August 9, 2002 - 03:31 pm: [Edit](#)

I still haven't received anything, Neal.
Even not an e-mail. Are you sending to the right adress?

it's

fraalbers@hotmail.com

 By [Neal Bridges \(Nbridges\)](#) on Friday, August 9, 2002 - 03:33 pm: [Edit](#)

Frank, I won't be able to send for another couple of hours; my apologies for the delay.

Neal

 By [Frank](#) on Friday, August 9, 2002 - 03:41 pm: [Edit](#)

It's okay,
It's just that i am at work now and I won;t be able to check for a day after this.

And now that I look close, I see at the mssg-timing that at your place it's 3.33 pm, so you just sent the other message 10 minutes before mine. I thought you sent that 6 hours ago. because here it's 9.30 pm an i didn't check for 6 hours.

Sorry for the mistake... didn` t want to look inpatient.



It happens.



By [Neal Bridges \(Nbridges\)](#) on Friday, August 9, 2002 - 03:46 pm: [Edit](#)

Not a problem, Frank; impatience implies eagerness, and that's not a bad thing.

Neal



By [Frank](#) on Friday, August 9, 2002 - 03:48 pm: [Edit](#)

Words of wisdom, Neal.



funny mistake anyway



By [Frank](#) on Saturday, August 10, 2002 - 07:42 am: [Edit](#)

Still nothing Neal, is something wrong?

I don't want to bother you, but I'm waiting...



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 10, 2002 - 11:13 am:

[Edit](#)

Not a bother, Frank. It has been sent; all looks fine from this end. I'll try again.

Neal



By [Frank](#) on Sunday, August 11, 2002 - 03:42 pm: [Edit](#)

It works Neal !

I am very happy. I could make the hello-world-PRC and it works properly.

But... (there is always a but)

I can not make my program. I'm looking for a discussion on 'problems with makePRC' in the wiki (i've seen it once i think) but can not find it.

Could you give me a hint?

Frank



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 11, 2002 - 04:19 pm:

[Edit](#)

Frank -- what error are you getting?

Neal



By [Frank](#) on Sunday, August 11, 2002 - 04:30 pm: [Edit](#)

I'm getting a reset.

I've been reading about not using create...

I use create, because it is used in bitmap definition. Nowhere else.

I am defining a structure outside a word-definition. Might this be it?



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 11, 2002 - 04:33 pm:

[Edit](#)

CREATE is just fine, used during compilation. Defining structures shouldn't present any difficulty either.

If you can shed any more light on what exactly is happening when you try to compile, that'd be good; alternatively, if you wish to send me your sources, I'll have a look.

Neal



By [frank](#) on Sunday, August 11, 2002 - 04:51 pm: [Edit](#)

It's quite a complicated program, maybe I should try to MAKE it bit by bit, slowly working till i find the error...

I'll work and let you know as soon as i find the problem.

I am using a database(from Ron Doerflers database tutorial). might this be the problem?



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 11, 2002 - 05:05 pm:

[Edit](#)

Databases are fine, too. Let me know what you find!

Neal



By [Frank](#) on Sunday, August 11, 2002 - 05:25 pm: [Edit](#)

it is something with the database, Neal.

I can add anything to the standalone, but when I try to open the database, it crashes.

I more or less took this from Ron's database-tutorial:

```
z" PWDB " dmModeReadWrite  
[ID] A2ID [ID] frec openDB  
2dup or if  
dbref 2! dbopen ! ?initrecs then
```

when I add that piece of code
(in the go-word), it crashes.



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 11, 2002 - 05:27 pm:

[Edit](#)

Frank, when you say it crashes, does it run properly prior to compilation, with the crash occurring during MakePRC?

Do you do error checking to be sure the database is being opened correctly?

Do you mean to have the extra space at the end of PWDB?

Neal



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 11, 2002 - 05:30 pm:

[Edit](#)

I'm also a bit confused by what happens inside the IF/THEN -- you're storing the dbref, which is fine, but what are you storing in dbopen?

Neal



By [Frank](#) on Sunday, August 11, 2002 - 05:42 pm: [Edit](#)

When i say it crashes, i mean it only crashes during makePRC, it runs properly if i don't MAKE it.

I think the database opens correctly, because I have never experienced problems and I've been using it for quite a while now, but only inside quartus-environment, never in standalone.

I don't know what you mean by having extra space at the end of PWDB. it is just a simple database.

DBopen is just a flag that tells if the db is open or not. I forgot to put a '1' before dbopen, sorry.



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 11, 2002 - 05:47 pm:

[Edit](#)

Frank, can you compile a test app that just does the OpenDB code you've posted?

Neal



By [Frank](#) on Sunday, August 11, 2002 - 05:50 pm: [Edit](#)

I'll try, Neal



By [Frank](#) on Sunday, August 11, 2002 - 06:20 pm: [Edit](#)

I found it !

I made another PRC from a DB-test memo that i did before. It worked. Only difference was that the DB was not opened inside the go-word but in a word that was called by go, just like in Ron's DB-tutorial.

I don't understand why you can not open the database in the go-word, but I do not really care. I am happy with this.

thanks again Neal, I was already thinking that there was something really wrong with my program. I'll go on programming now....



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 11, 2002 - 06:25 pm:

[Edit](#)

Curious. Glad it's working; let me know if you run into any other trouble! 😊

Neal



By [Frank](#) on Sunday, August 11, 2002 - 06:28 pm: [Edit](#)

I will Neal, don't worry...

I have a lot of questions on my mind. And I mean A LOT !

see you soon...

Frank

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Tactorus 3.3 and 3.5 are multi-segmented 139K PRCs built with Quartus Forth.

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Tactorus 3.3 and 3.5 are multi-segmented 139K PRCs built with Quartus Forth.



By [Thomas Gamet](#) on Saturday, May 18, 2002 - 11:07 am: [Edit](#)

Tactorus 3.3 is a PRC (Palm OS(R) application) built using Quartus Forth and RscrEdit that "links" in 7 code segments. The only problem is that it only runs on the Palm OS(R) 3.5 and higher (I'm not sure if this is a fundamental problem or if I'm just making a mistake). Also, the process of building a multi-segment PRC is rather manual and painful, but it can be done.

If you are interested in the technique used and would like to see how it was done, I will entertain the prospect of a non-exclusive, non-refundable and non-publishable source code sale of version 3.3 (meaning, sale of the source code provided that you do not publish it out for free or profit - I believe the equivalent of 10 sales (or \$100US) is a fair asking price). Alternatively, if you have the Palm OS(R) 2.0, are willing to keep the source private, and will share back a solution on the Palm OS(R) 2.0, then I will entertain the notion of sharing a non-exclusive, non-refundable and non-publishable version of the version 3.3 source code with you.

At any rate, download it at [PalmGear.com](#), [Palm.com](#) or [Handango.com](#) and check it out with RscrEdit.

I know the theoretical concepts of linkers, loaders and compilers. I now consider myself an intermediate Forth developer. It took me about 10 minutes per Forth word and an additional one hour per PRC to make the conversion from four PRCs (three subapps with one main app) to a seven segment PRC. Tactorus was converted manually and I have no interest in trying to build a tool (rather only a framework).

I can be reached at tactorus@cfl.rr.com or tgamet@cfl.rr.com

That's all.



By [Thomas Gamet](#) on Saturday, May 18, 2002 - 11:08 am: [Edit](#)

One more comment: I am using Quartus Forth 1.2.5R and reliant on some of its internals. The code probably will not compile and run correctly with other versions of Quartus Forth.



By [Thomas Gamet](#) on Saturday, May 18, 2002 - 04:36 pm: [Edit](#)

I now understand the reason it won't work on the Palm OS(R) versions prior to 3.5. The problem seems to be that the dynamic heap won't allow the 100K of code space and 24K of data space to be allocated. You run into the same problem with the Palm OS(R) 3.5 when the system has only 2MB of RAM (such as on a Palm m100). The Palm OS(R) simply says no to the request for another code segment's space and then the application exits (I probably should make a future version that tells the user more about the reason for exiting before it even starts its main loop).

The Palm OS(R) 3.5 allows

64K when it has 2MB

128K when it has 2-4MB

256K when it has more than 4MB.

Short of segment swapping (and that would be very inefficient) I do not know of a way around this problem. Still, the technique works, I simply won't be able to take all users forward with me.



By [Wade Carlson](#) on Saturday, May 18, 2002 - 07:31 pm: [Edit](#)

One of the main reasons I like Quartus Forth is because of the communal nature and sharing amongst the other developers on this message board. I have provided much source code and examples to other users over the years (as has everybody else), and yet I have never charged for it. Thomas, nobody is about to steal your idea and make a competing game. Have we now resorted to charging for support on this board?



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 18, 2002 - 07:34 pm:

[Edit](#)

Well, I'm the one who keeps this board free -- and indeed, everyone with intellectual property to offer is free to choose how they wish to market it, and at what price. I have to defend the free-enterprise system; I sell software myself.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, May 18, 2002 - 10:23 pm: [Edit](#)

At 10 minutes per word to do the manual conversion, I doubt I'd want to use this technique. My Forth coding style results in dozens or hundreds of words per app.

If I ever need to write a big app, I'll probably just do it (or rewrite it) in C. I like coding in Forth, and Quartus is great for implementing small apps, but it doesn't seem worth the hassle to "fight" with it to build a large app. It's

just not the right tool for this kind of job.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 18, 2002 - 10:25 pm:

[Edit](#)

It's clever, but indeed time-consuming. Thomas was doubtless motivated by the fact that his app is especially large; it's a complex game.

Neal



By [Thomas Gamet](#) on Sunday, May 19, 2002 - 10:40 am: [Edit](#)

I resolved the Palm OS(R) problem and can once again support users on version 2.0 and up. It turns out that the Quartus Forth code will run straight out of the resource file and thus does not need to consume space in the dynamic heap.

Neal, I don't have a breakout of the code I originally sent without the whole Tactorus application. However, I do recall that the only bug in it is that it eats one cell from the data stack on each invocation of each segment's variables. Also, the code shipped will allocate on the dynamic heap rather than running out of the PRC's resources. However, given a dummy cell it should work.

Signing off.

Thomas



By [Thomas Gamet](#) on Sunday, May 19, 2002 - 02:23 pm: [Edit](#)

I have resent the source code that shows the technique I used to link one additional segment to an existing PRC and dynamically construct the 16 bit addresses (via export declarations) to 32 bit addresses as the segments load into memory. Assuming that Neal adds two-segments.mpa to the contributed source you will be able to checkout and use my first crack at creating multi-segmented PRC. I fixed the one and only (later) found bug in the source code and thus it should work as is with Quartus Forth 1.2.5R.

The basic idea is:

1. Use tx-export to export all forth words that must be called from other segments.
2. Use tx-gosub to call "exported" forth words in other segments.
3. Use tx-uload-segs (modified as needed for your own source code) to load additional segments from the main PRC's segment.
4. Ensure that all PRCs (libraries and main) see the exact same variables in the exact same order (the libraries will share the main PRC's data segment

(variables, arrays, string literals, etc,)).

If you feel up to the challenge, then you can change it yourself to run out of linked in libraries (PRC p4ap segments) in the PRC file rather than off of the dynamic heap. You can also change it to not use the built-in assembler, but to make the machine code in-line and thus leave yourself with more dictionary space. At that point you´ll have what Tactorus itself has in it.

To the person (Wade Carlson) asking for free disclosure of source code...
No.

I will however share an isolated example showing how to approach the problem of creating a multi-segmented application using Quartus Forth (i.e. much like a text book example). There is of course no warranty and the copy right is still mine. To use it legally, in part or in whole, you must maintain my copyright statement in addition to your own (source code only - there is no need to acknowledge me in a binary). I am not reserving all rights in the example code for two-segments.mpa.

Best of luck and most of the time you get what you pay for (in one way or another we either pay or are denied).



By [Thomas Gamet](#) on Saturday, June 1, 2002 - 08:51 pm: [Edit](#)

To those developers that would like a copy of two-segments.mpa, please send a request to tgamet@cfl.rr.com and I will forward it to you. The overhead to you is about equivalent to the DLL export/import technique used in Microsoft's C and C++ (when building new applications using it from the start).



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 2, 2002 - 12:27 am: [Edit](#)

Thomas, did I not post that in the file area? ... apparently not. Sorry about that. I'll correct the oversight.

Neal

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Strategy to handle B&W and color.

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Strategy to handle B&W and color.



By [Paul](#) on Saturday, May 18, 2002 - 10:26 am: [Edit](#)

I'm wanting to colorize my app so that it will look right on either 1 bit or 8 bit displays. I would like to test to see if the machine supports 8 bit color and then act accordingly. Is that the proper strategy? How best to do that?

Paul



By [Kris Johnson \(Kdj\)](#) on Saturday, May 18, 2002 - 02:07 pm: [Edit](#)

Use the ScrDisplayMode/WinScreenMode function to determine the color depth.

How to write code that works in both monochrome and color depends upon what you are doing: are you displaying forms, drawing bitmaps, using line and test functions, do you have custom gadgets, ...?

Lots of developers write two different versions of the app, one in color and one in monochrome. This is beneficial for users, because they can install a small application that serves their specific needs rather than a bloated one that serves everyone's needs.

Operating system support is important too--if you want the app to work in monochrome on versions 2.0 or 3.0 of the OS, you have to make sure that the new color-aware routines aren't used unless the OS is new enough.

-- Kris



By [Paul Randall \(Paul\)](#) on Saturday, May 18, 2002 - 02:38 pm: [Edit](#)

Kris,

All I really need to accomplish is control of background color and foreground color while putting text and solid rectangles on the active form. I like the idea of separate apps for B&W and color. I just switched up to a color machine (m130) so I'm thrashing around trying to get up to speed. Thanks.

Paul



By [John Newell](#) on Monday, May 20, 2002 - 07:55 am: [Edit](#)

Hi,

To get the colour depth supported by your Palm do:

```
needs color
: getcolor-depth ( -- mask )
0. sp@
0. 2swap
0.
0.
DisplayModeGetSupportedDepths >byte
ScrDisplayMode
throw drop
;
```

Notice that this function returns a mask, not a number. (See Palm OS Reference manuals on ScrDisplayMode and WinScreenMode.) The mask will have the x080 bit set for 8 bit support, x04 bit for 4 bit, x02 for 2 bit and x01 for 1 bit.

You can then issue say:

```
getcolor-depth \ x080=8bit, x04=4bit, x02=2bit, x01=1bit
(hex) 80 and 0<> if
  8
else
  4
then
color-depth
```

to set the require colour depth.

See also files UIColor, color35, and colornames by various authors.

Regards

John



By [Paul](#) on Saturday, May 25, 2002 - 08:59 am: [Edit](#)

Thanks John.

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Strange behavior!

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Strange behavior!



By [Matthew Blair \(Blair\)](#) on Friday, May 17, 2002 - 01:19 pm: [Edit](#)

When I execute my application from the console following a HotSync, my application generates a Fatal Error and subsequent reset. After the reset, launching QF again and executing the application, the application runs as expected.

However, if I HotSync again, I generate a Fatal Error the next time I launch the application from the QF console. And again, after the reset, the application works fine.

Any ideas?

Matthew



By [Matthew Blair \(Blair\)](#) on Friday, May 17, 2002 - 02:29 pm: [Edit](#)

Another data point - the application as a standalone executable does not exhibit this behavior.



By [Neal Bridges \(Nbridges\)](#) on Friday, May 17, 2002 - 02:40 pm: [Edit](#)

Matthew, this rings a bell from long, long ago. I wish I could remember. I'll dig through the back issues and see if the faint ringing connects with anything relevant.

Neal



By [Matthew Blair \(Blair\)](#) on Friday, May 17, 2002 - 10:15 pm: [Edit](#)

Thanks Neal. If it helps, this problem manifested itself at the same time that I introduced a callback (using Steve Bohrer's module) in conjunction with a table UI element. The table UI element worked fine when the items in the table did not require a custom draw cell procedure (via callback).

Matthew



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 18, 2002 - 07:46 pm:

[Edit](#)

It may have to do with you unwittingly writing outside of the confines of dataspace, into memory you don't own.

Neal



By [Matthew Blair \(Blair\)](#) on Sunday, May 19, 2002 - 07:22 am: [Edit](#)

That may be, but I'm not sure how. When I made the change to using a callback for drawing certain items, I actually just started out with Trevor's code. In other words, the callback procedure does only what Trevor's code does, display row and column number.

However, I would be interested to know how the problem you mention would lead to the results I saw - it seems like violating memory confines would yield unpredictable results, and not the same pattern I'm seeing.

Thanks,

Matthew



By [Neal Bridges \(Nbridges\)](#) on Friday, May 24, 2002 - 03:35 pm: [Edit](#)

Matthew -- my suggestion was based on something not entirely dissimilar that happened long ago, which was in fact caused by an application writing to low memory.

I have your sources now and will test and let you know what I turn up.

Neal



By [Steve Bohrer \(Skb\)](#) on Tuesday, May 28, 2002 - 08:46 am: [Edit](#)

For what it is worth, long ago (Quartus Archive9.pdf, page 715) I had a crash that appeared to be caused by using `< # #s # >` in a list-draw callback. My symptom was not with `hotsync`, but showed up when I paged down the list.

As a test of a callback routine, I was just printing the record number, rather than showing the text from a DB record. But the test died when I used `.` to show the number, which I thought was perhaps `emit` being confused about whether it was safe to print or not. So, I used `0 < # #s # >` to convert the string, and `WinDrawChars` to show it. That failed too. Finally, I replaced `< # #s # >` with a special-case number-to-string converter, using `UM/MOD`, and that worked fine.

Initially I thought it was a stack space problem, but later testing showed it was not. We poked a round just a little, and did not find a fix. Calling `< # # >` in the callback did not cause any trouble, but adding `#` or `#s` did. Neal was not aware of anything that `#` was doing that should cause strange

results in a callback.

In practice, the list callbacks I needed only drew strings from the DB, so I did not need to get number conversions working within a callback. Thus, I dropped the topic. So, I can't say if this bug was just a strange special case.

But, if your code uses . or #, it might be interesting to replace them with a simple special case number converter, and see if it changes anything.

Or, perhaps this is all random.



By [Matthew Blair \(Blair\)](#) on Tuesday, May 28, 2002 - 11:33 am: [Edit](#)

Hi Steve,

I did take the out of the callback word, and simply dropped in a s" test" (i.e., instead of displaying row and column number, just display "test").

Same result 😞

Thanks for the suggestion, though!



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 28, 2002 - 05:02 pm: [Edit](#)

Matthew, if you skip the callback completely -- don't use it -- does the app exhibit the same behaviour?

I'm behind on testing your sources myself; hope to shortly.

Neal



By [Steve Bohrer \(Skb\)](#) on Tuesday, May 28, 2002 - 11:24 pm: [Edit](#)

Not to randomly blame Quartus, but try using WinDrawChars directly to display your test string from the callback.

If that makes no difference, try a do-nothing callback (but still with the callback setup/restore words).



By [Matthew Blair \(Blair\)](#) on Wednesday, May 29, 2002 - 12:43 pm: [Edit](#)

Neal, the previous iteration of the table in my application did not use a callback at all; the app did not exhibit the problems that I described in the initial post.

Steve, the source for the table drawing came directly from Trevor's source, and so WinDrawChars was already employed. However, I did try a

do-nothing callback, and had the same result.

Are we having fun yet? 😊

Thanks for the tips - I'm confident that there will be a simple explanation for this unusual behavior!

Matthew



By [Steve Bohrer \(Skb\)](#) on Thursday, May 30, 2002 - 12:47 pm: [Edit](#)

Another thing you've probably already tried: POSE.

Sometimes the emulator can give more detailed pointers to the source of trouble, or it may at least note some condition that the production systems conceal.

Quartus works on with the DEBUG versions of the 3.1 and 3.3 ROMs. For OS 3.5, you need to use the non-debug version, and that is less talkative, and thus perhaps less likely to help.



By [Matthew Blair \(Blair\)](#) on Thursday, May 30, 2002 - 01:04 pm: [Edit](#)

Actually, I've only thought about using POSE, and really only for development on the PC. I may have to try and download POSE as well as sign up for the ROMs.

Is it possible to hotsync on POSE, putting the system into the same state as when I hotsync with the actual unit?



By [Steve Bohrer \(Skb\)](#) on Friday, May 31, 2002 - 07:50 am: [Edit](#)

Yes, sort of. You can do a net work hotsync from POSE to your PC. But, to do the sync from POSE, you need to start it from the hotsync program, not just from the menu item.

I have two users set up, one POSE, and one my real palm. To get all my memos from my handheld to POSE, I copied and pasted them from user to user in the Palm Desktop program, and then hotsynced.

Another tack, to get all your device memos into POSE: Use RsrcEdit to copy your MemoDB, AND CHANGE THE COPY TO ANOTHER CREATOR ID. Then set the backup flag on the copy, and sync your device. This should give you the copy of the memopad in the backup directory on your PC. Import this file in to POSE, and then use RsrcEdit on POSE to delete the real memoDB and rename (and reset the creator) of the copy.



By [Steve Bohrer \(Skb\)](#) on Friday, May 31, 2002 - 07:55 am: [Edit](#)

See also the wiki POSE page:

<http://kristopherjohnson.net/cgi-bin/twiki/view/Main/PalmOSEmulator>



By [Neal Bridges \(Nbridges\)](#) on Friday, May 31, 2002 - 01:44 pm: [Edit](#)

You can also use something like pilot-xfer to directly extract the memopad database to your PC.

Neal



By [Matthew Blair \(Blair\)](#) on Thursday, June 13, 2002 - 12:16 pm: [Edit](#)

OK - after some delay, I've started back up again. I installed POSE, downloaded my ROM (OS 3.5), installed the memopad database as well as the resource file and Quartus.

Started up Quartus. My startup.quartus memo automatically loads the program into memory. I entered "go" and Quartus returns with "insufficient dynamic memory". I entered "go" again, and the program runs fine.

I'm not sure if I was using the debug or non-debug version of OS 3.5 - presumably the non-debug version since I downloaded the ROM from my Vx. POSE did complain about memory leakage from Quartus, but I seem to recall an earlier thread on that where it was determined to be of no consequence.

Any thoughts?

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Register use

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Register use



By [Julian Fondren](#) on Friday, May 17, 2002 - 09:27 am: [Edit](#)

I'm planning on using a1 for a machineForth-like address register and d1 for an iterator in low-level looping words -- like a word that scans a string for a character

```
: scan ( a n c -- a | 0 ) swap! swap!y
  :- i-if dup y@c = if drop@y exit then
  i-1 y+char -; then drop0 ;
```

and more involved words, of course =) I'd like to know beforehand how much I can count on these registers, or any register.



By [Kris Johnson \(Kdj\)](#) on Friday, May 17, 2002 - 10:44 am: [Edit](#)

Any Palm OS system traps or shared libraries you use could change them, so you shouldn't make any such calls in any loop that relies upon those registers.

As far as Quartus words go, I know that some of the floating-point words trash D1. I don't know of any "typical" words that use D1 or A1, but Neal would be the authority.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, May 17, 2002 - 01:31 pm: [Edit](#)

You can't rely on any registers surviving. If you need a register for some extreme optimization purpose, defensively save and restore it around every call.

Neal



By [Julian Fondren](#) on Friday, May 17, 2002 - 04:10 pm: [Edit](#)

OK, thank you =) The use I have in mind is word-trees that only directly access the stacks and memory, so defense around calls isn't important.

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Smaller 2>r 2r> 2r@

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Smaller 2>r 2r> 2r@](#)



By [Julian Fondren](#) on Wednesday, May 15, 2002 - 04:17 pm: [Edit](#)

These are defined in core-ext. 2>r and 2r> are both 14 bytes long; I don't know about [2r@](#).

The following 2>r and 2r> are 6 bytes long (are they faster?); I don't know about [2r@](#).

HEX

```
code 2>r
```

```
  a4 )+ a7 -) .w move
```

```
  ] >r [
```

```
end-code inline
```

```
: 2>r [ 3f1c cs, ] >r ; inline
```

```
code 2r>
```

```
  ] dup [
```

```
  a7 )+ a4 -) w. move
```

```
  a7 )+ d7 w. move
```

```
end-code inline
```

```
: 2r> dup [ 391f cs, 3elf cs, ] ; inline
```

```
: 2r@ dup [ xxxx cs, ] [ 1 ]r@ ; inline
```

```
xxxx is
```

```
  a7 ) a4 -) w. move
```

```
[ 1 ]r@ compiles to something that disassembles as  
  move.w 2(a7),-(a4)
```

(I always forget how to do such as 2(a7) ...)



By [Steve Bohrer \(Skb\)](#) on Thursday, May 16, 2002 - 09:31 am: [Edit](#)

See also Chap's modified version of core-ext, on the wiki at [CoreExtModule](#).

His versions of 2>R , 2R> , and 2R@ use a move.l from stack to stack, wrapped by a dup and drop.

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Getting Quartus lib texts into emulator

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Getting Quartus lib texts into emulator



By [Barry](#) on Tuesday, May 14, 2002 - 07:27 pm: [Edit](#)

I just downloaded and installed the emulator and I installed Quartus on it and I've spent the last 2 or 3 hours trying to come up with some way to move the Quartus lib files to the emulator.

I don't have 2 serial ports to use. Is there some other way?

By the way, about 3/4 of the programs I run on this thing get an error when they terminate that they had memory leaks. Quartus also gets this. Is there a solution or do you just ignore it? I'm assuming this just happens on the emulator since I don't seem to lose memory, or at least not enough to notice, on the Palm.

Barry



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 15, 2002 - 12:01 am:

[Edit](#)

Hi, Barry. The Emulator can be set up to do a network HotSync from your desktop; that's one way to install the libraries there. Another is to load the MemoDB.PDB file that's available in the File Area; it's a complete MemoPad database with nothing but the Quartus Forth memos in it.

The 'leaks' you're seeing aren't leaks -- they're memory handles that the app leaves for the PalmOS to close when the app exits. You'll learn that the Emulator is enormously pedantic and alarmist, which is possibly not always a bad thing, but can be annoying.

Neal



By [barry](#) on Wednesday, May 15, 2002 - 12:10 pm: [Edit](#)

Thanks. The network thingy worked just fine.

Barry

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

(:)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): \(:\)](#)



By [Julian Fondren](#) on Tuesday, May 14, 2002 - 03:57 pm: [Edit](#)

```
\ (:)
: (:) ( c-addr len -- )
  [ ' : cell+ cs@ cell+ cell+ compile, ]
  (header) ;
```

This works when : consists of a JSR to an unnamed word (X1) and a JMP to (HEADER) -- where X1 begins with a JSR to PARSE-WORD. (:) consists of a JSR to X1-after-the-PARSE-WORD and a JMP to (HEADER)



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 14, 2002 - 04:06 pm: [Edit](#)

Julian, I cleaned up the formatting a bit. Can you explain what your code is meant to do?

Neal



By [Samuel Tardieu](#) on Tuesday, May 14, 2002 - 04:50 pm: [Edit](#)

Given Julian's explanation, I understand it allows you to start a new named word definition from a string:

```
: make_name s" foobar" ;
make_name (:) ." I am in foobar" ;
foobar
I am in foobar
```

However, I would prefer the following (more portable) solution, which does not depend on a particular implementation and is (I think) ANSI compliant:

```
: (:) pad 0 s" : " append 2swap append evaluate ;
```

Sam

PS/ This version depends on the search order at the time (:) is called, which

may even have the desired effect



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 15, 2002 - 12:05 am:

[Edit](#)

I prefer the portable solution too -- no dependency on Quartus Forth internals. I cannot guarantee that : will keep the same internals in perpetuity, so relying on them is not prudent. In this case, the portable solution is identically functional with the added bonus of working with whatever the present definition of : is.

Neal



By [Julian Fondren](#) on Wednesday, May 15, 2002 - 08:25 am: [Edit](#)

Yes, thank you Sam. It seems that I lean so far toward early-binding that I don't even think of such methods if I don't have to =)

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SelectTime systrap

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): SelectTime systrap



By [Chris Bucsko](#) on Tuesday, May 14, 2002 - 09:49 am: [Edit](#)

I'm wondering if anyone has used the SelectTime systrap. The PalmOS docs and Quartus stack diagram don't seem to agree with the number of elements needed on the stack for the call.

The PalmOS docs state:

```
SelectTime (StartTimeP, EndTimeP, untimed,  
TitleP, StartOfDay, EndOfDay, StartOfDisplay)
```

While the QF stack diagram is:

```
SelectTime (&StartOfDay, title?,  
untimedEndOfDay, &EndTimeP, &StartTimeP)
```

does anyone know if this is just a mistake in the Quartus docs, or is the QF SelectTime systrap really the obsolete SelectTimeV33, which is actually a better match?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 15, 2002 - 12:16 am:

[Edit](#)

The Quartus Forth SelectTime call is the older one -- the new one is not difficult to implement as a definition. Let me know if you need any help.

Neal



By [Chris Bucsko](#) on Monday, May 20, 2002 - 09:50 am: [Edit](#)

Neal;

Thanks for the offer, I could use some help. I spent some time researching systraps and such on the WIKI. Here's the code I came up with:

```
needs zstrings  
\ structs for TimeType:  
create StartTime 2 chars allot  
create EndTime 2 chars allot  
\ from coretraps.h:  
(hex) a3c6 constant SelTime  
  
: TimeTitlePtr ( -- Tptr. )  
    z" Select a Time" drop >abs ;  
  
: SelectTime ( Startdisp, Endofday, Startofday, titleP.  untimed, EndtimeP.  
StarttimeP. -- bool )  
    8 12 6 TimeTitlePtr true  
    EndTime >abs StartTime >abs
```

```
SelTime systrap
2drop 2drop drop 2drop
drop drop drop
do drop 255 and
```

;

The 8, 12 and 6 integers are just test values for now. According to the Palm docs, they should be numbers between 0 and 12. Unfortunately, I just get a fatal exception error, so I don't know exactly what is wrong. I pulled some code from the WIKI which calls the SelectOneTime systrap, and that works great, and I think I have the correct systrap and stack order. Any suggestions would be appreciated.

 By [Neal Bridges \(Nbridges\)](#) on Monday, May 20, 2002 - 09:11 pm: [Edit](#)

Is that verbatim, Chris? If so, that should be 'd0' in the last line, not 'do'.

Neal

 By [Chris Bucsko](#) on Tuesday, May 21, 2002 - 09:25 am: [Edit](#)

Yes!! Sorry to waste your time on such a silly mistake. Victimized by my own graffitti error. It works great now.

 By [Neal Bridges \(Nbridges\)](#) on Friday, May 24, 2002 - 03:36 pm: [Edit](#)

Chris, never a waste of time -- glad it was so easy to fix!

Neal

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Scripting the PalmOS

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Scripting the PalmOS



By [Tim Chase](#) on Tuesday, May 14, 2002 - 08:00 am: [Edit](#)

I have used Quartus off and on for several months and, while I don't quite get enough of it to use it for significant projects, I can see its potential in my PalmOS programming. I would like to suggest a new use for Quartus.

Has anyone seen PopletKit from <http://www.handwave.com> ? It uses a hack to install an icon in the "command bar", which pops up in response to a Graffiti command stroke (OS 3.5 and greater). You can then choose a "poplet" to run.

The poplet runs and can interact with the application that was running when the poplet was invoked. I don't know how this works. It looks like multi-tasking, which I don't think PalmOS can do. For example, if text is selected, the poplet can process the text (upper case, translate to French, add all the numbers, etc.) and replace it. With the proper system trap calls, it appears that a program invoked this way could automatically fill in the fields on a form. This could be used as a general purpose scripting technology. While PopletKit appears to do an adequate job (its language is similar to Javascript), it would be interesting and efficient to do this type of scripting in Forth.

Thanks,

--Tim Chase



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 15, 2002 - 12:33 am:

[Edit](#)

An interesting thought, Tim. It isn't multitasking, as such; the poplet is called as a subroutine, and has access to data on the clipboard, selected text, etc.

Neal

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Finding menu item names

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Finding menu item names



By [ronald b. kopelman](#) on Sunday, May 12, 2002 - 08:46 am: [Edit](#)

Is there a way to get the name of a menu item? I need the name that is displayed when the menu is pulled down. I know I could just set up a string list but this seems like wasted space if I can pull out the name directly from the menu resource.

ronald b. kopelman
ronald.kopelman@verizon.net
<http://homepage.mac.com/rbkopelman/>



By [Neal Bridges \(Nbridges\)](#) on Sunday, May 12, 2002 - 07:42 pm: [Edit](#)

Ronald, I don't know of any way to extract the text of a menu item, without interrogating the menu structure directly -- which isn't a portable solution. I'd go with the string list. Simple and quick and not all that much space taken up.

Neal

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Callback questions

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Callback questions



By [Matthew Blair \(Blair\)](#) on Thursday, May 9, 2002 - 01:22 pm: [Edit](#)

Some questions about callbacks:

- 1) Is OS 3.5 the only version in which callbacks are broken in QF? Or is it any version ≥ 3.5 ?
- 2) Can Steve Bohrer's callback fix be used in any version of the OS? If not, then can I programmatically (in a standalone app) choose which callback installation procedure will be used?

Matthew



By [Steve Bohrer \(Skb\)](#) on Saturday, May 11, 2002 - 04:11 pm: [Edit](#)

- 1) Depends on the OS trap. SysSort callbacks were "broken" in OS 3.1, I think, as were list draws. These may have worked in 3.0; I've not tried, but I think I saw stuff on the forum about sorts not working ever.

You need the fix if the OS routine happens to use register A4 internally, because your callback expects A4 to be the data stack. My fix assigns a different block of memory to be the stack for the duration of the callback. Since what registers get used by the OS C code can change fairly arbitrarily from version to version, and certainly from trap to trap, the safest path is to always use my callbacks wrapper.

- 2) As far as I know, yes. The wiki [callbacks module](#) has the latest version, which decrements the A7 stack before using it for temp storage. This avoids a warning in later versions of POSE, but the old version worked on real devices.

My code does depend on some Quartus internals. I've not tried it with the current beta "launch code" version of Quartus, but I've not heard any complaints.



By [Matthew Blair \(Blair\)](#) on Monday, May 13, 2002 - 12:46 pm: [Edit](#)

Thanks Steve!

I thought I was going to need to use callbacks in conjunction with a table UI element, but it turns out that my requirements are simple enough that I

don't need to have custom draw or data load functions. However, my next planned application probably will need to make use of callbacks, so it's good to know that I can likely just use your solution rather than selecting a callback installation method in code...

Matthew

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Preventing non-numeric entries to a text field

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Preventing non-numeric entries to a text field



By [Joe Nasal \(Jsn\)](#) on Thursday, May 9, 2002 - 11:31 am: [Edit](#)

Hi all:

Should be a simple one: anyone know how to prevent a user from entering certain characters (like non-numeric ones) into a text field? Catching & discarding them in the main event loop is what I'm likely after...

I must admit that I'm being lazy this morning. I know that someone can point me to some code... 😊

Thanks,

Joe Nasal



By [Samuel Tardieu](#) on Thursday, May 9, 2002 - 11:34 am: [Edit](#)

Isn't that enough to mark the field as Numeric in RsrcEdit?



By [Joe Nasal \(Jsn\)](#) on Thursday, May 9, 2002 - 11:37 am: [Edit](#)

Ideally. However, the app requires the field to be text (for another reason)...

OK: let's say that I didn't want to allow the user to enter the character "x" into a text field. How would I do it?

I did this way-back-when in C (need to find that code...) but I'm sure I've seen something in the Wiki.



By [Joe Nasal \(Jsn\)](#) on Thursday, May 9, 2002 - 01:55 pm: [Edit](#)

Found it. This should do the trick:

<http://www.quartus.net/files/PalmOS/Forth/Snippets/intercept.txt>



By [Neal Bridges \(Nbridges\)](#) on Thursday, May 9, 2002 - 03:17 pm: [Edit](#)

Thanks, Joe -- was just looking for that myself.

Neal

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Hello World standalone problem

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Hello World standalone problem



By [Eufemio Polanco](#) on Thursday, May 9, 2002 - 08:28 am: [Edit](#)

I know this has got to be the most basic, and stupid, question there is . . . but how do you get Quartus to accept this memopad include file:

```
\ hello
```

```
: go page ." Hello, World!" begin key drop again ;
```

```
' go 12345. MakePRC Hello
```

without receiving this message message in return:

```
Exception in file: hello  
MakePRC? Invalid registration code
```

I mean, I can't even get "Hello World" running with a dummy creator ID! Am I stupid or what?!



By [Samuel Tardieu](#) on Thursday, May 9, 2002 - 08:45 am: [Edit](#)

Do you have a registration code at all? "Registration code" refers to the Quartus license, and has nothing to do with the creator ID you choose. Non-registered Quartus Forth will not let you create standalone applications.



By [Eufemio Polanco](#) on Thursday, May 9, 2002 - 08:57 am: [Edit](#)

Yep. I have a registration code. But the above example is supposed to run even in the unregistered version, is it not?



By [Steve Bohrer \(Skb\)](#) on Thursday, May 9, 2002 - 10:13 am: [Edit](#)

Nope. Making stand-alone compiled apps is explicitly the functionality that is missing from the demo version.

The "go" word above, which prints "hello world" and then waits for an exit event, will of course work in the demo version. Just key in "go" and return. But the second line is an example of compiling this word into a stand-alone app.



By [Eufemio Polanco \(Jive\)](#) on Thursday, May 9, 2002 - 02:58 pm: [Edit](#)

But I am not using an unregistered version.

 By [Neal Bridges \(Nbridges\)](#) on Thursday, May 9, 2002 - 03:16 pm: [Edit](#)

Eufemio; sorry to be coming late to this discussion. Indeed, 'invalid registration code' means you are running the registered version, but for some reason your registration code is not being accepted.

Have you put the

registered ...

line into your startup.quartus memo?

Neal

 By [Brian Chirgwin \(Bchirgwin\)](#) on Thursday, May 9, 2002 - 03:40 pm: [Edit](#)

You need a memo with the following lines replace xxxxx with your registration #:

```
\ startup.quartus
registered XXXXXXXX
.( startup.quartus processed )
```

Make sure your registration number has been entered correctly.

When you start Quartus Forth you should see the line 'startup.quartus processed'. If not, make sure '\ startup.quartus' is the first line of the memo.

 By [Eufemio Polanco \(Jive\)](#) on Thursday, May 9, 2002 - 05:20 pm: [Edit](#)

Thanks Neal! Thanks Brian!

 By [Gary Wiese \(Garyjwiese\)](#) on Thursday, May 9, 2002 - 08:29 pm: [Edit](#)

Is .(startup.quartus processed) nessary? I don't have it in my registered version. I am thinking its just a message letting me know which versions is running, correct.

Gary

 By [Kris Johnson \(Kdj\)](#) on Thursday, May 9, 2002 - 09:42 pm: [Edit](#)

Right, that line simply gives you verification that startup.quartus was

processed. This eliminates problems caused by (a) misspelling "startup.quartus" in the file and (b) having multiple memos named "startup.quartus" (in which case you don't know which one will be processed).

-- Kris



By [Brian Chirgwin \(Bchirgwin\)](#) on Friday, May 10, 2002 - 07:30 am:

[Edit](#)

Kris is correct. It isn't required, but is extremely useful. It is just a message to verify startup.quartus is being processed. I had trouble once and am now use to seeing the message.

I also put similar statements in all files so I know what files are being loaded and in what order. For example:

```
\ myfile-10
.( myfile-10 )
```

Where 10 is the version of myfile.

Brian



By [Julian Fondren](#) on Wednesday, May 15, 2002 - 08:14 am: [Edit](#)

```
: "included" ." included " parse-word type cr ;
: \ "included" postpone \ ;
```

but this would have other implications...

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name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

E-mail:

PalmOS Listbox question

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): PalmOS Listbox question



By [Matthew Blair \(Blair\)](#) on Wednesday, May 8, 2002 - 08:53 pm: [Edit](#)

In my application, I want a listbox from which the user can make multiple selections. I.e., if the choices are "eggs, milk, and bread" the user should be able to select both eggs and milk.

Does the PalmOS UI support a multi-selection listbox?

Thanks,

Matthew



By [Steve Bohrer \(Skb\)](#) on Wednesday, May 8, 2002 - 11:03 pm: [Edit](#)

I believe the OS list routines only support a single selection at a time. All the multi-selection things I've seen are tables with a checkbox item, where you can check as many items as you wish.

I have used a regular list control for multiple selections of a sort, with a custom draw routine that toggles a check mark at the left edge of the list when items are clicked. This is not ideal, because the standard list routines highlight the entire row when you click, not just the check box as a table does. But, it worked for me.

In my app, the list is drawn from a database, and each record starts with a flag byte that is true if it is checked. When an item is selected, I toggle the flag, and then redraw the list.

In black and white mode, I had a problem in updating the selected list item, as the system inverts the item's rectangle without telling you, so sometimes I got stray bits of black or white at the edge of the list. As a work-around, my list-redraw routine unselects the current item, then calls `LstDrawList`, and then resets the selection. Sometimes this gives a brief visible white flash when you toggle a check, but not usually. I call this list-redraw after I make any change to the contents of the list item.

(I believe that on color devices, the system resets the foreground and background colors and then calls the draw routine to select an item, so this may not be a problem, but I've not tested that. My work-around works okay in color, but it is probably slower than need be.)



By [Matthew Blair \(Blair\)](#) on Thursday, May 9, 2002 - 11:22 am: [Edit](#)

Thanks Steve. It looks like I'll need to implement a table (ugh) to get the functionality I want...

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External Code

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): External Code



By [Ronny Svensson](#) on Saturday, May 4, 2002 - 08:26 am: [Edit](#)

When reading your responses to my thread about external dictionary and checking up PIC on the Wiki i got this idea. It is based on two assumptions:

1. Xt:s returned by find and ' ['] are even.
2. The last definition is relocatable and can be executed anywhere in the address space.

I add the word external that moves the last definition out in the external dictionary and allocates an entry in the external jmp table.

Maybe also some words like begin-external and end-external that makes all code external and the word internal to have a normal word among the external.

' on an external word will return an odd xt that is handled specially by execute and the normal compiler loop.

Execute vill call the external code thru the jump table. I don't know if the negative offsets from a5 are used - if not the jump table could be placed there. Otherwise the address must reside in data space (slower).

The normal compiler loop will compile a call to the external code. This can be made in many different ways:

1. Calling execute (slow/space)
2. Moving the jump table offset into some unused register and calling some subroutine (possibly by jsr a5).
3. Calling thru the jump table inline (space).
4. Using some trap with the offset inline (if there are any traps left for user program use).

This is a tradeof that someone who is more familiar with the 68K than I am can make.

Originally I only envisioned to use this while compiling making compiling words, constants etc. into externals. I got this idea while trying to figure out how external word could call each other. But now I think it is possible to have external code in a stadalone (of course more work).

I would appreciate reactions to this - especially from Neil. But this is only a rough schetch just to get it out of my head.

Ronny



By [Chapman Flack](#) on Saturday, May 4, 2002 - 01:56 pm: [Edit](#)

Ronny,

You seem to have a pretty good grasp of the issues. IMO, what you suggest involves reimplementing rather a lot of Quartus; it might be more a Neal project than a community project. My MakePIC module takes a rather more lightweight approach. Just make a MARKER, compile a bunch of words normally, then use MakePIC to relocate everything since the marker into external space, and forget back to the marker. Existing functionality is used for most of the work.

MakePIC is also implemented and working (since about Thanksgiving) except a few words will need to be written to maintain name-to-address mappings--the last step to making it easy to use for practical purposes. I got distracted by the holidays and never finished it, but name maps are just boring, tedious, but not hard code to write.

If anyone is interested in contributing some code for that last little bit, I can context-switch back to it and remember exactly what still needs to be done; then a complete MakePIC module can be posted on the wiki and people can start beating on it.

-Chap



By [Ronny Svensson](#) on Monday, May 6, 2002 - 04:02 am: [Edit](#)

Thinking a little more about my idea I think that if the jump-table grows downwards from a5 calling the first external word would amount to:
mov -4(a5) a0 jsr a0
(or something in this direction)...

Ronny



By [Chapman Flack](#) on Tuesday, May 7, 2002 - 11:18 pm: [Edit](#)

By the way, there is already a proposal on the wiki that would involve the use of negative offsets from a5 for a different purpose (see DeterministicAllocate).

-Chap

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Quartus reviewed Handheldcomputing

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Quartus reviewed Handheldcomputing



By [Mike Will](#) on Friday, May 3, 2002 - 03:53 pm: [Edit](#)

Wow. A full page review of Quartus in the June issue of Handheld computing (p. 52) by Clayton Crooks. He says some very nice things about Quartus and even knows a bit about Forth (rare for a modern review of Forth). He's not too crazy about your docs, though, Neal.

All in all, very good to see. Congratulations, Neal.

Mike



By [Neal Bridges \(Nbridges\)](#) on Friday, May 3, 2002 - 07:10 pm: [Edit](#)

Thanks, Mike. I shall have to thank Clayton.

Neal

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Bitmaps from Windows

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Bitmaps from Windows



By [Ronny Svensson](#) on Friday, May 3, 2002 - 02:14 pm: [Edit](#)

I have made some programs that communicate with control systems using serial or Ir. Now my customers need to be able to select bitmaps that should be hotsync:ed to the Palm and sent on by my program out in the field. The problem is that I have got the impression that it takes a lot of work to make programs that interact with hotsync in Windows. So as this is a special application I wonder if there is some type of image handling application where my customer can enter bitmaps in Windows, hotsync them down to the Palm where my application can get at the bitmaps. One solution is to make a Windows program that saves the bitmaps in a text file that is converted to Doc format and hotsync:ed to the Palm where my program can read the bitmaps from the Doc. Of course from the Palm side it would be easier if I made a .pdb in Windows that just put the bitmaps one in each record. But I have got the impression that the format of the .pdb isn't fully documented. But maybe someone has seen some code-snippet that creates a .pdb? I need some reasonable solution that doesn't take to much work.

Ronny

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Displaying a bitmap using transparency

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Displaying a bitmap using transparency



By [Andrew Johnson](#) on Thursday, May 2, 2002 - 09:31 am: [Edit](#)

I have been able to create bitmaps on the screen to do bit bliting. Trouble is I can't get to set the WinSetDrawMode to work so that I can turn on mode scrOR 4 for transparency. Instead of displaying a bitmap directly over other graphics, I have to make the graphic on a blank screen as the program starts up, store it in an offscreen window and then erase the bitmap on the display screen. I can then use WinCopyRectangle with transparency mode set to copy it back to the active monito. As I have 16 different icons I want to display and move around the screen, it seems logical to display them directly from the bitmap definition if I can.

Can anybody help here?



By [Kris Johnson \(Kdj\)](#) on Thursday, May 2, 2002 - 01:15 pm: [Edit](#)

I don't understand exactly what the problem is, but here are a few things I notice:

- WinSetDrawMode only works in version 3.5 and higher of PalmOS.
- Instead of drawing the graphic onto a blank screen, and then copying it offscreen, can you just draw it offscreen to begin with (using WinSetDrawWindow)?

-- Kris



By [Andrew Johnson](#) on Thursday, May 2, 2002 - 08:33 pm: [Edit](#)

I got WinSetDrawWindow to work. To do it I had to set the offscreen window to active as well using WinSetActiveWindow.

Until I set both, I could only draw lines off screen and blit them back. Now I can use NAB's bitmap routines to draw directly offscreen and then blit them back.

I am running Emulator version 3.3 and Quartus Forth version 1.2.5R

I am happy to run these older versions because getting my program to work on them should mean wide compatiblity with older Palms, Right?

Thank you for you assistance.

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Trouble with WinCreateOffscreenWindow

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Trouble with WinCreateOffscreenWindow



By [Andrew Johnson](#) on Tuesday, April 30, 2002 - 10:58 am: [Edit](#)

I am building up some routines so that I can put a cursor on the screen and then move it around a graphic. So far, I have used Kris' and Neal's code to copy bits of the screen across to other parts of the screen and back again using BlitModule to drive the WinCopyRectangle API function. So far so good. For some reason I can't get an off screen window to open and give me a handle. Using:

```
2variable ^ error.  
1 constant generic  
^ error. generic 16 16  
WinCreateOffscreenWindow  
( &error. format height width -- WinHandle. )
```

just locks up the emulator and gives me an error message about writing to wrong memory addresses.

Can anybody see what I am doing wrong?

Andrew Johnson



By [Ron Doerfler](#) on Tuesday, April 30, 2002 - 11:59 am: [Edit](#)

You need to have ">abs" after your "^ error." in your third line. What may be confusing you is that although you created a double-length variable, when you call it you only get the 16-bit relative address of the variable, and you need to pass the absolute address to WinCreateOffscreenWindow.

Ron



By [Andrew Johnson](#) on Tuesday, April 30, 2002 - 05:38 pm: [Edit](#)

Ron,

That's it! It works. Thank you very much.

Andrew

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Tips

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Tips](#)



By [ronald b. kopelman](#) on Tuesday, April 30, 2002 - 09:32 am: [Edit](#)

I have asked a lot of help from this list & you have responded. Thanks; now it is payback time. Here are some tips for those who don't know this already: (1) There is a light (free) version of CodeWarrior for Palm. You can pick it up from the disc in Mykland's book. (2) Using a bare-bones starter stationary you can paste your own bitmaps into the resource file, compile, & download to plam. Viola, now you can cut & paste in RsrcEdit. (3) You can also construct tSTL string lists this way as well, though they are a bit harder to edit in RsrcEdit. This beats using a whole bunch of tSTR resources! Hope this helps someone.

Also, made my 1st standalone application. At present, all it does is list out 11 Jewish holidays for a given secular year (3761 BCE to 5000 CE) It is "tzedaka-ware" for those of you who know the term. It appears to run bug-free on my IIIc (sys 3.5) I will be adding some goodies shortly (date conversions & sundown times.)

ronald b. kopelman
ronald.kopelman@verizon.net
<http://homepage.mac.com/rbkopelman/>



By [Andrew Johnson](#) on Wednesday, May 1, 2002 - 04:05 pm: [Edit](#)

Ronald,

Thank you for this posting. I have the Lite version of Code Warrior and have found the listing of windows.h and FileStream.h very useful.

A. In point 2 above, are you talking about the CodeWarrior Lite tools for Resource creation?

B. I am interested in attaching text strings to icons placed over a graphic screen. I want a text window to pop up when I touch an icon. These icons must be able to move about the screen as I scroll the graphic. Can I create such icons and attach text using the method you described in 3. above?

Andrew



By [ronald b. kopelman](#) on Thursday, May 2, 2002 - 06:37 am: [Edit](#)

The CodeWarrior tool for resource creation is called Constructor. You can

certainly use it to create a graphic icon. & use the method I outlined to get it into the Palm. Popping up a text screen is probably handled best in Quartus.

As to moving the icon around the screen, I suspect there are 2 methods for doing that. (1) Erasing & redrawing the icon according to some criteria such as a stylus touch. I suspect this is what you want to do. (2) Displaying a series of slightly different images giving the illusion of motion.

I have never tried either method. However, if you have a graphics program, (I use a mac) you can create any sort of image, paste it into the Constructor window as an icon or bitmap and then compile. This produces a download-able (.prc) file which you can then cut & paste into your resource file on the palm (or use as is). I hope this answers your question.

ronald b. kopelman

ronald.kopelman@verizon.net

<http://homepage.mac.com/rbkopelman/>



By [Andrew Johnson](#) on Thursday, May 2, 2002 - 09:21 am: [Edit](#)

Ronald,

Thank you for answering. I'll give it a go.

Andrew

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Inverse trigonometry

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Inverse trigonometry



By [Frank](#) on Sunday, April 28, 2002 - 04:44 pm: [Edit](#)

Hi,

I am in need of a fast routine for inverse trigonometry. I see that the quartus sin-routine works with a table but I can not seem to find a way to use the same method for inv-tan.

I need to calculate the angles of triangles in the fastest possible way and for this I need an inv-tan routine. If you have any idee please let me know, thanks

Frank



By [Chapman Flack](#) on Sunday, April 28, 2002 - 08:16 pm: [Edit](#)

Hi Frank,

First, have you made sure that the already-available mathlib dfatan is too slow for your needs? And if so, by how much? Having some quantitative figure (say, "must be 3x faster than dfatan") gives a specific target for evaluating possible approaches.

The time you could spend developing, debugging, and verifying a new numerical routine, if you care at all about getting the right answers, ought to figure in to your speed considerations, somewhere.

-Chap



By [Frank](#) on Monday, April 29, 2002 - 08:32 am: [Edit](#)

Hey Chap, thanks,

Sorry, but I am quite new to Quartus and do not know anything about dfatan. Could you tell me how to access it? (My quartus does not respond to dfatan.)

thanks again,

Frank



By [Frank](#) on Monday, April 29, 2002 - 08:45 am: [Edit](#)

Oh wait, I found your discussion about the mathlib. I will try it now.

Frank

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Newbie Array Question

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie Array Question



By [Scott Derby \(Derby\)](#) on Sunday, April 28, 2002 - 08:29 am: [Edit](#)

Can anyone give me a tip on accessing the elements of an array using a variable as the reference to the element number of the array?

For example, if I have an array of five numbers and I want to print them out in a loop, I'd like to use the loop counter (i) to specify the element of the array. So if my loop goes from 1 to 5, I'd like to print myarray(i) for the duration of the loop.

Can anyone help me with what, I'm sure, is a simple task?

Thanks,

Scott
derby@sunydutchess.edu



By [Mike Will](#) on Sunday, April 28, 2002 - 09:58 am: [Edit](#)

Scott, here's a simple example:

```
\ from libraries (toolkit, I think)
: array ( cells -- )
  create cells allot
  does> ( n -- addr) swap cells + ;

5 constant ASIZE
ASIZE array myArray \ create array

: aFill ( --)
  ASIZE 0 do i ( count)
    i myArray ( count elementAddr)
    ! \ save i at referenced element
```

```
loop ;

: aShow ( --)
  ASIZE 0 do
    i myArray ( elementAddr)
    @ . \ get & print element
  loop ;

cr aFill aShow
```

Results:

```
0 1 2 3 4 ok
```

Forth is pretty, isn't it?

Mike

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External dictionary

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): External dictionary



By [Ronny Svensson](#) on Tuesday, April 23, 2002 - 07:47 am: [Edit](#)

Have I understood it right that the headers are stored in the code area. If it is so I have been thinking about making some patch to FIND so that it searches in a dictionary outside of the code area if a word isn't found. That would make it possible to create Constants, Variables etc. that saves the headers outside of the code area (when referenced they would be compiled as literals). I tend to use very long names so a lot of space is wasted on headers. I have also been thinking about some simple mechanism to handle code that is only executed when compiling. My idea would be to compile the word as normal, copy the name and code to some external memory area and remove the word from the dictionary. Then when the word is to be called it is copied in to the top of the dictionary and executed there. This also could save some space. Have anyone done something along this lines already? Anyone have a clue as to how much memory would be saved? Also what is the status regarding increasing the dictionary space of Quartus (nearly finished, halted or what)? What is the basic principle - 32-bit forth, 64K forth modules calling each other or something completely different?

Ronny



By [Chapman Flack](#) on Tuesday, April 23, 2002 - 02:11 pm: [Edit](#)

Hi,

Around Thanksgiving I had most of an implementation for what's essentially your copy-to-external-memory idea--look under QuartusExtension and MakePIC on the wiki. The holidays distracted me and I never got back to it. I guess I should finish it up and post it. Would you be interested in coding up some of the bits I've not done yet?

-Chap



By [Neal Bridges \(Nbridges\)](#) on Tuesday, April 23, 2002 - 02:21 pm: [Edit](#)

You'd save, in bytes, the number of characters used for each name plus about 1.5 extra per name.

One of the kernel enhancements I'm working on presently is to externalize the dictionary; I'd recommend against trying to extend FIND, as you'll be hacking away at system internals that are bound to change.

Neal



By [Mike Will](#) on Tuesday, April 23, 2002 - 04:05 pm: [Edit](#)

Sweet.

How about optimizing the compiler to make each addition to a definition take 16 bits instead of 32?



Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, April 23, 2002 - 04:31 pm: [Edit](#)

Some of them already are 16 bits, Mike! 😊

Neal



By [Chapman Flack](#) on Wednesday, April 24, 2002 - 02:33 pm: [Edit](#)

Neal,

Is the enhancement you're working on going to separate name space from code space, or will you in fact be providing multiple code spaces? Ronny's suggestion was to copy name -and code- to an external area, which is related to what I was working on last fall. How much of that overlaps what you're doing?

-Chap



By [Neal Bridges \(Nbridges\)](#) on Wednesday, April 24, 2002 - 02:41 pm:

[Edit](#)

I'm continuing to experiment with the best approach for multiple codespaces. Moving the headers out of the dictionary is a separate enhancement; one is possible without the other.

Neal

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Should i choose Forth for programming?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Should i choose Forth for programming?



By [Tomas](#) on Sunday, April 21, 2002 - 11:17 am: [Edit](#)

Hello. I am a programming beginner - have written so far only few little snippets of code in Basic and Python. I would like to choose between Pascal and Forth, and would like to know how Forth is better?

Also, will Forth be suitable also for larger projects (PIM app for todo handling similar to Project or LifeBalance apps, that are written in C++ and are 100-300 kB compiled .prc), and for projects that include about 50-100 bitmap screens and a very little code to browse and navigate between them?

I would like to learn only one language, and C is quite hard and also is very low level for me, so Forth or Pascal seem only choice now, when I would like to have a compiled standalone executable.



By [ronald b. kopelman](#) on Monday, April 22, 2002 - 09:15 am: [Edit](#)

Though I am not a professional programmer, I can offer the following: Different programming languages offer different ways of thinking about the problem. For me Fortran & Basic were always good because they stressed the mathematical nature of the problem at hand and I liked that approach. Pascal will probably continue to stress the mathematical approach. When I started programming HP calculators, Forth was the way to go because many of the HP calculators were programmed in a nearly similar language. They also used reverse Polish and had a stack structure. What Forth offers is a small but powerful kernal of commands that can be expanded by the user to fit the problem quite easily. The price that is paid for this is the need to orient one's self to a new way of thinking through the solution.

Forth is a hybrid (to me anyway) and acts like both a higher level language at the same time acting like a low level language. The burden is on the user (you) to figure out the best way to do things. This is often difficult but hardly impossible and can produce very efficient code. I never had the patience to master C/C++ or any of the other flavors of this cryptic language. Though I have a hard time mastering system stuff, coming up with quick and dirty algorithms in Forth is not that difficult.

In the end, Forth gives you an incredibly powerful tool for a reasonable cost. Sometimes you can even find free (\$0) Forth compilers. Quartus Forth, for a modest fee, allows you to compile free-standing applications for the Palm. Aside from the system stuff (forms/fields) you can port Forth to other platforms provided you can find the compiler.

The best way, I think, to learn forth is to pick a couple of simple tasks such as converting temperatures or reversing strings and start playing with it. If you have any questions, Forth programmers tend to be a very sharing lot, ask the list. Good luck in whatever you decide.

ronald b. kopelman
ronald.kopelman@verizon.net



By [Kris Johnson \(Kdj\)](#) on Monday, April 22, 2002 - 01:55 pm: [Edit](#)

In response to the concerns about application size, there is nothing about the Forth language that restricts the size of application it can support.

But the current Quartus Forth implementation does limit one to about 32K of code. There are workarounds, and I think Neal is looking at supporting larger applications in the future. And note that this limitation is for CODE--it has nothing to do with bitmaps, forms, and other resources in a .PRC.

Regarding the Forth vs. Pascal question, the only advice I'd give is that if you are comfortable with Basic and Python, then Pascal may be easier for you to learn. It would also probably be easier to read C code examples if you know Pascal.

But the really nice thing about Quartus Forth is that you can write your programs on the device itself, rather than cross-compiling from a desktop computer.

-- Kris



By [Tomas](#) on Monday, April 22, 2002 - 05:20 pm: [Edit](#)

Ronald and Kris, thanks for advice. I guess that I will try to do few little things with Forth first and then decide. And, well I prefer writing on desktop before Palm, but that is more matter of a lifestyle - I am not much in situations like waiting on airport etc. But that I can easily stand with any editor and Forth syntax file. Thanks again. Lets see what I can do with Forth.

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External graphic resources

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): External graphic resources



By [ronald b. kopelman](#) on Friday, April 19, 2002 - 12:53 pm: [Edit](#)

Has anyone out there tried creating a graphic on a mac or pc & porting it over to the palm? I would like to create an icon resource but the "fat-bit" icon editor in rsrc-edit drives me nuts. Maybe I could do this in Constructor but that would be yet another learning curve. Any insights?

ronald b. kopelman
ronald.kopelman@verizon.net



By [Richard Chamberlain \(Rac\)](#) on Saturday, April 20, 2002 - 11:19 am: [Edit](#)

individeo.net used to have a nice little application that you could use to pop bitmaps into a pdb file. Very simple to use when I tried it once.

Unfortunately after there demise I'm not sure what happened to it.

Richard



By [Paul](#) on Saturday, May 18, 2002 - 10:20 am: [Edit](#)

Tealpaint has a windows utility which will import .bmp files and save as tealpaint db.

RsrcEdit has an 'open as tealpaint db' option which will let you copy your image into your own rsrc pdb.

Paul

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Can Quartus Write Hacks?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Can Quartus Write Hacks?](#)



By [Brian Chirgwin \(Bchirgwin\)](#) on Thursday, April 18, 2002 - 12:18

pm: [Edit](#)

Can Quartus Forth be used to write a hackmaster compatible HACK program?



By [Matthew Burke \(Mmb\)](#) on Thursday, April 18, 2002 - 01:05 pm: [Edit](#)

Yes. Look for TickHack in PalmOS/Forth/Contrib in the file area at quartus.net



By [Brian Chirgwin \(Bchirgwin\)](#) on Thursday, April 18, 2002 - 02:00

pm: [Edit](#)

Thanks, I should have checked there. I checked the WIKI and searched the discussion groups.

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FileStreaming API words and parameters

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): FileStreaming API words and parameters



By [Andrew Johnson](#) on Tuesday, April 16, 2002 - 07:50 pm: [Edit](#)

I am writing an application to read a large amount of data and display it on the Palm.

I have got the FileReadLow word to work but I have guessed the meanings of the paramaters.

I presume FileReadLow is the way to read data as the API FileRead does not appear to be implemented. The SDK doc says FileReadLow is for system use only and is therefore not documented.

As per Quartus manual:

```
FileReadLow ( &errP. numObj. objSize. dataStoreBased? offset. &baseP. stream. -- Long. )
```

I can't find any documentation on:

dataStoreBased?
offset.
&baseP.

I have found everything else in the SDK documentation

Can anybody please point me in the direction for documentation?

Andrew Johnson



By [Steve Bohrer \(Skb\)](#) on Wednesday, April 17, 2002 - 08:05 am: [Edit](#)

It looks as if Quartus has built-in definitions for only a few of the current file words. My assumption is that the Quartus list is merely based on an earlier version of the OS, rather than being an indication that you should not use FileRead.

To get access the complete current API, you will need to write your own trap definition words for the missing routines. The [SystemTrap](#) page of the Wiki explains the details.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, April 17, 2002 - 08:46 am:

[Edit](#)

Actually, FileRead is a macro, not a sysstrap. Here's the C definition from the SDK header files:

```
#define FileRead(stream, bufP, objSize, numObj, errP)  
    FileReadLow((stream), (bufP), 0/*offset*/, false/*dataStoreBased*/,  
                (objSize), (numObj), (errP))
```

From this you can see that FileRead is actually a call to FileReadLow, with a couple of

fixed parameters.

Neal



By [Andrew Johnson](#) on Wednesday, April 17, 2002 - 07:31 pm: [Edit](#)

Thank you both for this information. You have sorted me out.

Andrew

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: :- -;

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): :- -;



By [Julian Fondren](#) on Tuesday, April 9, 2002 - 12:01 am: [Edit](#)

: cell- [21831 cs,] ; inline

create x-stack 8 cells allot

x-stack cell+ x-stack !

: x+cell cell+ dup [x-stack 8 cells +] literal

= [7 cells] literal and - ;

: x-cell cell- dup x-stack = [7 cells] literal

and + ;

: >x x-stack @ dup x+cell x-stack !! ;

: x> x-stack @ x-cell dup x-stack ! @ ;

: :- postpone begin >x ; immediate

: : : postpone :- ;

: -; x> postpone again ; immediate

A post by the same name on CLF describes this.

Add a Message

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Read/Write Integers from/to memo

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Read/Write Integers from/to memo



By [Frank](#) on Sunday, April 7, 2002 - 11:49 am: [Edit](#)

Hi, I am quite a newbie to Quartus. Could anyone tell me how to read and write integers from and to a memo?

I am working on a small (warcraft-type) strategy game for the palm. The playing-field consists of 16 arrays of size 100 (forming a 40 by 40 matrix). I would like to be able to save these arrays in a file and retrieve them so that players can load and save their levels. So if the memo-thing doesn't work, please let me know if there is another way.



By [Neal Bridges \(Nbridges\)](#) on Monday, April 8, 2002 - 02:41 pm: [Edit](#)

Hi, Frank. Using the memopad for that is probably a bit cumbersome, as you'd need to search it for candidate files, hope they haven't been corrupted, etc. You might be better off creating a database and storing your data in records.

Neal



By [Ron Doerfler](#) on Tuesday, April 9, 2002 - 12:38 pm: [Edit](#)

And in that regard, you may want to peruse my Quartus database tutorial (DatabaseTutorial) in the Tutorials section of the Quartus Forth Wiki:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthTutorials>

It does assume some knowledge of Quartus, as it doesn't go into detail on how some of the definitions work, but there are other tutorials on that page that provide intros to Quartus as well. The database tutorial presents a simple working application that stores and reads data from records in a database, and it includes two Quartus files containing general-purpose words for database and record creation, deletion, reading and writing.

Ron



By [Mark Beckman \(Mbeckman\)](#) on Tuesday, April 9, 2002 - 08:53 pm:

[Edit](#)

Frank,

If your only purpose for writing the memo/database is to save the ongoing game data,

and you don't need to save more than 1 game,
then:
You might look at PrefSetAppPreferencesV10 and
PrefGetAppPreferencesV10 as an easy way to do that.

Mark



By [Frank](#) on Wednesday, April 17, 2002 - 09:20 am: [Edit](#)

Hey, thanks Ron, Neal and Mark!

I wasn't expecting an answer this fast and as i do not have an internet account at home i could not answer. Sorry for that.

I will try your tips and see if i can do it. The game is almost ready for use. It comprises an enemy controlled by an evolutionairy controlled neural network (hmmm...?)_.

Now I still need the registered version of Quartus to make a prc. Planning to buy it very soon but as I live in Europe and do not own a credit card I do not know how to yet. 😊

Frank



By [Frank](#) on Saturday, April 27, 2002 - 03:12 pm: [Edit](#)

Hello Ron,

I' have been reading your tutorial,

I am trying it now. I can (I think) open a DB, make a new record, close a record etc. But I seem to have a problem using DmWrite. I have checked and double checked everything but I keep getting soft-resets. Do you know what can be wrong?

Thanks in advance,

Frank



By [Steve Bohrer \(Skb\)](#) on Saturday, April 27, 2002 - 10:32 pm: [Edit](#)

Frank, please post some sample code, as small a section as you can that shows your dmWrites in context.

Offhand, things to be careful of are that the database is open for writing, the record is opened with DmGetRecord rather than DmQueryRecord, and that the record is big enough to write the number of bytes you want to write.

Also, after you crash, you can look with rsrcEdit to see if your record did, in fact, get created, and if anything at all got written to it. You are probably

testing one step at a time, but if you are running a bunch of untested code, it may be hard to know which bit actually crashes.



By [Ron Doerfler](#) on Saturday, April 27, 2002 - 11:23 pm: [Edit](#)

Yes, please post some code that we can look at, or if you would rather contact me directly to look over your code, feel free to email me at doerfler@earthlink.net. We here, or me there, should be able to help you, although there are more folks here to help.

Cheers,

Ron



By [Frank](#) on Sunday, April 28, 2002 - 12:18 pm: [Edit](#)

Wow thanks!

I will explain what I'm doing.

I am using just exactly your code to create a db-test program. The code looks like this:

```
\ dbtest
```

```
needs dboutines
```

```
needs struct
```

```
needs zstrings
```

```
needs ids
```

```
variable dsize
```

```
variable temp1
```

```
variable recopen
```

```
variable dbopen
```

```
variable index
```

```
2variable dbref
```

```
2variable recptr
```

```
-257 constant byeThrow
```

```
struct
```

```
5 field name
```

```
5 field ide
```

```
end-struct frec:
```

```
sizeof frec: dsize !
```

frec: recdata-->

: null-rec (recptr --)

2>r 0 dsize @ s>d 0. 2r> DmSet drop ;

: new-frec (index --)

temp1 ! dsize @ s>d temp1 >abs dbref 2@ new-record 2dup 2>r null-rec
true temp1 @ dbref 2@ 2r> release-record drop ;

: ?initrecs (--)

dbref 2@ undeleted-recs 0 = if 0 new-frec 0 index ! then ;

: ?close-rec (--)

recopen @ 1 = if true index @ dbref 2@ recptr 2@ release-record drop 0
recopen ! then ;

: ?open-rec (--)

recopen @ 0 = if
index @ dbref 2@ get-record recptr 2! 1 recopen ! then ;

: load (--)

?open-rec

dsize @ s>d recptr 2@

recdata--> >abs MemMove drop ;

: save (--)

dsize @ s>d recdata--> >abs 0. recptr 2@ DmWrite drop ;

: ptdat (--)

5 recdata--> ide c!

recdata--> ide c@ .

;

: toscr (--)

recdata--> ide c@ dup . ;

: ?closeDB (--)

dbopen @ 1 = if

0 dbopen ! closeDB then ;

: (go) (--)

z" Frank " dmModeReadWrite

[ID] AaID [ID] frec openDB 2dup or if

dbref 2! 1 dbopen !

?initrecs then

\ 1 new-frec

load toscr

```
ptdat save
?close-rec
;

: go ( -- )
0 index !
['] (go) catch
byeThrow = if
?closeDB
(bye) then ;

go
```

Can you tell me; Did I miss anything from your tutorial? The problem is the 'save' routine. Everytime that I try to use it, I get a soft reset. Thanks very much. You are really a great help to me.

Frank (from Holland)



By [Steve Bohrer \(Skb\)](#) on Sunday, April 28, 2002 - 10:13 pm: [Edit](#)

Ron can give a detailed response, as he is already acquainted with most of this code, but a good first step for any OS routine which returns an error code, is to replace the drop after the routine with a throw.

Many OS routines return error codes to let you know when they have had a problem, and to give some indication of what type of problem it was. Since you are trying to find the cause of a problem, perhaps this error code information may be useful.

(Of course, due to an error in your arguments, some OS routine may trigger the reset internally, rather than giving back a useful code. Yet, it is also possible that one routine does return an error value, and then reset is triggered when you continue to process the record after that error. By dropping the result, you lose the chance to catch these cases.)



By [Ron Doerfler](#) on Monday, April 29, 2002 - 03:01 am: [Edit](#)

Found it. You need to initialize your recopen variable to 0 as a default value at the beginning. When you call ?OPEN_REC in your LOAD word, the value has not been set, so it is most likely non-zero. Then the record is not opened because it thinks it is already open, and so the later write fails.

I was able to remove your soft reset problem on my Palm by adding the following text right after your variable declarations:

```
\ Default values.  
0 recopen !  
0 dbopen !
```

In my tutorial, these default declarations are at the bottom of the DBTutorial-Headers memo, in which the variables and constants are declared. I see now that this could have been arranged to be clearer.

I noticed a few other things while I was playing with your code that I thought I should mention:

1. Did you know that you can replace "0 =" with "0=" to increase speed and decrease code size?
2. In a case like "recopen @ 1 = if" where you really only need to find if it's nonzero, you can just have "recopen @ if"
3. Your TOSCR word leaves an extra value on the stack--you want to remove the DUP in it.
4. Did you know that you can replace z" Frank " with z" Frank" instead. I don't know if you want a space after the database name or not, but I just thought I'd mention it in case you thought that there had to be a space before the end-quote.

Also, I am always remiss on capturing return codes, so most of my code has no THROWS at all. Someday...

Please let us know of further questions, or if you still have resets after this fix. There probably will be more hurdles--believe me, we all have them. The good news is that once you get a chunk of code to work in your first app, you just start copying and pasting into later apps and it becomes natural.

Cheers,

Ron



By [Ron Doerfler](#) on Monday, April 29, 2002 - 03:05 am: [Edit](#)

Oh, by the way, be sure to use RsrcEdit to open the "Frank " database you created. You will see one record, and if you open the one record, you will see that the 6th byte is 0x05 as your program has written it. All other bytes are 0x0, since you nulled the record first. It's always a good idea to use RsrcEdit to verify that your records are being written to correctly.

Ron



By [Steve Bohrer \(Skb\)](#) on Monday, April 29, 2002 - 09:46 am: [Edit](#)

THROW is only 5/4 harder to Graffiti than DROP, so it is a good habit to be in from the very beginning.

There is a slight code size penalty, as each DROP is 2 bytes inline, and each call to THROW is 4 bytes. (Plus, the THROW word is about 50 bytes, but that will very likely be included anyway, since it is probably used by the Quartus internals, or by other libraries you include.)

The code with THROW will be easier to develop, and, once working, will fail more gracefully in the face of real-world errors, such as full memory.



By [Frank](#) on Tuesday, April 30, 2002 - 03:59 am: [Edit](#)

Ok, I see my error now. I will fix it and try to play with databases. After that I will implement in in the game when I find the time.

More news to come !



Thanks,
Frank



By [Frank](#) on Friday, May 31, 2002 - 01:50 pm: [Edit](#)

Hello,

it's one month later now and I finally found the time to play around with my little palm again.

Now I am using the database-routines almost exactly as described above and it really works perfectly while running the program.

BUT... when i try to work on the program again in memopad after using it, in memopad i get a soft-reset telling me: 'object overloked' or 'field overloked' or some other messages like that and i need to reset.

What I'm doing now is the following:

```
: (go) ( -- )  
begin
```

```
> (including some save assignments as described above and an ekey  
assignment)
```

```
again
;

: go ( -- )
0 index ! 0 recopen ! 0 dbopen !
z" Frank " dmModeReadWrite
[ID] AaID [ID] frec openDB 2dup or if
dbref 2! 1 dbopen ! ?initrecs then
load
['] (go) catch
byeThrow = if
?close-rec
?closeDB
(bye) then ;

go
```

The rest is exactly the same as above except that I fixed a little bug in the ?close-db routine (closedb needs a dbref. on stack).

What can be wrong, now?

thanks a lot and excuse me for disturbing you again.

Frank



By [Frank](#) on Tuesday, June 25, 2002 - 04:00 pm: [Edit](#)

Ron,

you never answered at my previous question.

Could you please help me?

Frank



By [Ron Doerfler](#) on Wednesday, June 26, 2002 - 03:25 pm: [Edit](#)

Hi Frank,

Sorry about that--I missed it. I don't see any problem with what you posted. It may be that somehow you are locking the memopad database instead at some point??--the database routines were developed originally from memopad database routines, and perhaps if the wrong, or an additional, memo is included, your program is using the wrong definition for a word.

Is it possible to send your code memos and your resource database to me at:

doerfler@earthlink.net

and I will try to load it on my Palm and see if I get the same error situation? I can look at it this evening, or whenever you can send it to me. Meanwhile I will load what you have above and see if I get the error situation you describe, using the database memos on my Palm.

Ron



By [Frank](#) on Friday, June 28, 2002 - 02:59 pm: [Edit](#)

Hey Ron, thanks,

I knew that I could count on you.

I am at my work now and I don't have a link from my Palm to this computer so I can't send you the memo. I will try to send you my program as soon as I can... might take a few days.

(As you can see, I'm a slow but patient programmer 😊) Thanks. In the mean time, I'll try to see if I can find a wrong turn somewhere in the program.

Frank



By [Frank](#) on Friday, June 28, 2002 - 03:52 pm: [Edit](#)

The way i see it now is that indeed another memo is included after the db-routines are processed.

Or to say it in better way:

-I have one memo that is called '\ DB'

-I have another memo that includes the DB-memo and then defines a whole lot of other words. At the end of this memo are the 'go' and '(go)' words as described above.

This memo (I think) is the one that is wrongly closed by the program and then gives me the reset when i try to edit it.

Can this be it? Can it be solved easily?

I will try to send you the prog tomorrow..

Frank



By [Frank](#) on Friday, July 26, 2002 - 06:33 pm: [Edit](#)

Ron, I think I need your help once more....

I've been working on my app a lot...

I ordered the quartus registered version to be able to launch apps.

Now the app is too big and i get the 'dictionary overflow'- warning.

I want to be able to make a resource-file, or: i need to be able to do this.

I know that a lot of things have been said about this in the wiki and elsewhere, but i kind of get lost in the woods. I've been studying your app and i see that it uses resources.

NOW, what I want to ask you is: Can I consider the resources file as an extension to the library? In other words: Can i, once that i have defined words in a resources file, use them without any trouble whatsoever in a standalone- app(once that i have initiated the resources)?

I hope i am being clear. I really want to finish this thing, i just need a little bit more space.

I hope to get the registered version of quartus in a couple of days, but i want to be sure to understand this stuff so that i can go on...

thanks.

Frank



By [Frank](#) on Tuesday, August 13, 2002 - 07:31 am: [Edit](#)

Hello Ron, I hope you read this...

I've been working with your DB-routines quite a while now and I must say it works perfectly.

I now want to make a program that stores text in a Database that later can be retrieved by another program and printed to the screen...

In your DBTutorial, I see you do that using fields etc...

But I don't want to use fields. I just want to load a fixed text from the

database to the screen, nothing else.

Can you help me?

The way I see it, a database can only contain numerical data. Are there words like:

Convert_Text_To_Number

and

Convert_Number_To_Text ?

Am I making any sense here?

Thanks, Frank



By [Frank](#) on Wednesday, August 14, 2002 - 12:14 pm: [Edit](#)

Ron, are you on a vacation?



I hope you can help me with the question i stated above.

Frank



By [Steve Bohrer \(Skb\)](#) on Wednesday, August 14, 2002 - 03:35 pm: [Edit](#)

The records in a database can contain whatever arbitrary data you choose to store in them, and it is up to your program to choose how to deal with the data.

In particular, if you write a series of characters to a record, then you can pass a pointer to the record data and a count of characters to any of the Palm OS routines that draw strings of characters. In no sense must you "convert text to a number" or vice-versa. It is all just bytes of data.

If you want to use Forth words like "type" to print your strings to the screen, then I think it will be necessary to copy the strings from the database record into a buffer in the Quartus data space first.



By [Frank](#) on Thursday, August 15, 2002 - 09:51 am: [Edit](#)

Thanks Steve,

I am just a newbie, don't know a lot about quartus or Palm-routines yet. Could you tell me what kind of words i can use (more words like type,

charracter-counts etc....)

Or coul you show me a place where i can find information or maybe an example?

thanks,

frank

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Dynamic text selection

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Dynamic text selection



By [ronald b. kopelman](#) on Sunday, April 7, 2002 - 11:22 am: [Edit](#)

I dump a number of lines (> 10) into a text field which can display 10 lines. If the last text line is displayed, I can use my stylus to highlight text. If the last line of text is not in the display, I cannot use my stylus to highlight text.

Is this a known behavior? I see no mention of it anywhere on the Wicki or in the Palm stuff. Is it (1) a Palm bug, (2) a quartus bug, or (3) am I getting bugged over something obvious? Please help.

ronald b. kopelman
ronald.kopelman@verizon.net



By [Steve Bohrer \(Skb\)](#) on Monday, April 8, 2002 - 07:36 am: [Edit](#)

This is related to the "dynamicSize" flag. In RsrcEdit, I can duplicate your results if I make a multiline field with the dynamic bit set, yet the field works fine and "scrolls" the text properly if I clear dynamicSize.

I've not used dynamicSize fields, which increase the size of the current line when you are actively editing it, as in the Address book's "edit" mode.

So, if you need this dynamic effect, you apparently need to do some additional work to make it happen. If you just want a normal 10-line field that handles 11 or more lines of text properly, turn off the dynamicSize flag.



By [Steve Bohrer \(Skb\)](#) on Monday, April 8, 2002 - 07:36 am: [Edit](#)

If you do need a dynamic field, check the reference for `FldMakeFullyVisible`.

Quote:

`FldMakeFullyVisible`

Purpose

Cause a dynamically resizable field to expand its height to make its text fully visible.

[...]

Comments

This function does not actually resize the field. Instead, it computes how big the field should be to be fully visible and then posts this information to the event queue in a `fldHeightChangedEvent`.

[...]



By [ronald b. kopelman](#) on Monday, April 8, 2002 - 02:57 pm: [Edit](#)

This worked! Thanks a bunch. I do not need dynamic fields and never checked to see if this was set or not. Bless this list!

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Popup list and triggers

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Popup list and triggers



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, April 4, 2002 - 06:10 pm:

[Edit](#)

I have something like this to create a buffer for an input field

```
create spanintBuf InputFieldLen 1+ chars ALLOT
```

/ I am using fractions and this will be the integer part of the number.

My numerator and denominator are coming from triggers and popup list from RsrcEdit.

My question is, do I need to create a buffer for these input fields as well and if so do I approach it the same as I did with the integer.

Gary



By [Neal Bridges \(Nbridges\)](#) on Thursday, April 4, 2002 - 08:22 pm: [Edit](#)

Gary -- you don't need a buffer for the trigger and pop-up list GUI elements, unless you need for some reason to, say, copy the text of a list item out of the list to manipulate it in some way.

Neal



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, April 4, 2002 - 09:11 pm:

[Edit](#)

I will be putting it into a variable to use it in calculations. I guess I will be needing to copy it to a variable, correct. Do I set it up the same as my first example?

Something completely unrelated to my last question.

While I was writing this I needed to go back to one of my last programs, I could not find it in Palm desktop, but it was on the pda. I did a hot sync and now its missing from both the desk top and the pda. The problem is I didn't make a copy of my last update.

Is there a way to get the source code from the compiled code? I fell a little stupid for not coping right away, but it was late..... 😞



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, April 4, 2002 - 10:50 pm:

[Edit](#)

Forget the last part, I found my code and copied it 😊

Now to the next question.

If I put the popup list selection into a variable then I must create a buffer for it, correct. Do I use the same method as before in my last post?

Gary



By [Neal Bridges \(Nbridges\)](#) on Friday, April 5, 2002 - 09:45 am: [Edit](#)

Glad to hear you found your code.

Yes, you can use CREATE to set up a buffer to copy a list selection into.

Neal

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LITERAL bug, 1.2.1U

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): LITERAL bug, 1.2.1U](#)



By [Julian Fondren](#) on Wednesday, April 3, 2002 - 07:23 pm: [Edit](#)

For Quartus Forth version 1.2.1U, build 1999.03.06...

Hopefully this isn't a known bug, clearly described and fixed in a list somewhere, of which I am unaware.

Anyway, LITERAL improperly compiles move.w instructions for values (-2 to -128, and 127, though I haven't explored values below 127, like 126) that ought to be compiled to moveq.l Oddly, there are also the following two words; the first compiles a moveq.l and the second compiles a move.w

```
: t1 -1 ;  
: t2 [ -1 ] literal ;
```

Here's a quick fix for explicit LITERAL usage.

```
: (qlit) (hex) 7E00 or cs, ;  
: literal dup -128 0 within if 256 + (qlit) exit  
then dup 0 128 within if (qlit) exit then  
postpone literal ; immediate
```



By [Julian Fondren](#) on Wednesday, April 3, 2002 - 07:26 pm: [Edit](#)

sigh. Maybe the following.

```
: literal dup -128 128 within if dup 0 < 256 and  
+ (qlit) exit then postpone literal ;
```



By [Kris Johnson \(Kdj\)](#) on Wednesday, April 3, 2002 - 10:39 pm: [Edit](#)

It's not really a bug--it's a missing optimization. There's no requirement that ": foo -1 ;" and ": foo [-1] literal ;" generate the exact same code (but it would be nice).

See <http://sleepless-night.com/cgi-bin/twiki/view/Main/M68kMoveQModule> for my way of dealing with this.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Thursday, April 4, 2002 - 08:14 am: [Edit](#)

By the way, in version 1.2.7R, small positive arguments (1..127) to the built-in LITERAL do generate MOVEQ instructions. But negative arguments (-128..-1) still generate MOVE instructions.

-- Kris



By [Julian Fondren](#) on Thursday, April 4, 2002 - 03:51 pm: [Edit](#)

OK, thank you.

And, final revision:

: literal dup -128 128 within if (hex) 7E csc,
csc, exit then postpone literal ;

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Hardware Register Maps

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Hardware Register Maps



By [JohnM](#) on Wednesday, April 3, 2002 - 04:00 pm: [Edit](#)

Just downloaded the ports lib to my new M500 - does anyone know where I can find a map of the hardware registers or any documentation?

Found out that 2 6 bit will toggle the backlight and accidentally turned off the screen and on the vibrator but am looking for the ability to read and write to the IR Port directly. Think the pilot would make a boss universal remote!



By [Mark Browne \(Markbrowne\)](#) on Thursday, April 4, 2002 - 02:41 am: [Edit](#)

The only problem with using it as a remote, is that it cannot be remote 😊
The range of transmission is very short - Using OmniRemote (I think) I was able to remotely control my TV from 10cm!



By [Mark Browne \(Markbrowne\)](#) on Thursday, April 4, 2002 - 03:05 am: [Edit](#)

The only problem with using it as a remote, is that it cannot be remote 😊
The range of transmission is very short - Using OmniRemote (I think) I was able to remotely control my TV from 10cm!



By [Kris Johnson \(Kdj\)](#) on Thursday, April 4, 2002 - 12:01 pm: [Edit](#)

The Visor has a more powerful IR port than the Palm units. Using the OmniRemote software, I could control my TV from about six feet away. Unfortunately, my couch is about nine feet away from the TV, so I bought the OmniRemote Springboard module, which works well from much farther away.

-- Kris

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Problems with Reset

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problems with Reset



By [Steve Graham \(Steve\)](#) on Wednesday, April 3, 2002 - 12:00 am: [Edit](#)

I know this is not exactly the right forum for this question, but it is the one which I follow the most and I figured the folks here might have seen this problem.

A number of times I have had my Palm IIIx start flashing the Palm logo screen. In the past I have had to resort to a hard reset. However, today not even a hard reset fixes the problem.

Don't have a clue what caused this. It was stuck on a fatal exception screen and when I pushed the button I started getting the flashing screen.

Any help is appreciated.

Thanks, Steve



By [Kris Johnson \(Kdj\)](#) on Wednesday, April 3, 2002 - 12:34 am: [Edit](#)

When a hard reset doesn't work, you can take out the batteries, let the unit sit for a while, and then reinsert the batteries and it should work.

Don't know anything about why it is crashing. The standard suspects would be hacks and/or whatever application you are running when it goes haywire.

It could also be a hardware problem.

-- Kris



By [Mike Will](#) on Wednesday, April 3, 2002 - 08:04 am: [Edit](#)

I had the same problem with a PalmIIIxe. I finally found that my unit had a bad memory chip, a fault shared by many, many other PalmIII's made in 1999. Palm doesn't take any responsibility for these wonky chips (they blame a parts supplier). They do, however, have a software fix for it on their website which mostly solves the problem (at the cost of higher power consumption).

Mike



By [Steve Graham \(Steve\)](#) on Thursday, April 4, 2002 - 06:52 am: [Edit](#)

I found the software fix mentioned on their site. However, because I cannot get my Palm into a normal state, I am not sure how I would download the fix.

BTW, the discussion forum lists 5 for this particular thread, when there were only 3.

Steve



By [Mike Will](#) on Thursday, April 4, 2002 - 07:34 am: [Edit](#)

When my III went into 'pycho-flash' mode, I had to leave the batteries out for 24 hours to get control of it again. I suspect that the problem with the memory chip is a nasty little latch that doesn't return to off state until the power to it approaches 1 electron-Volt. The fix might involve driving the latch low for a prolonged pulse, but I'm just guessing. Only the geniuses at Palm know for sure.

Assuming Neal is powering the forum with DISCUS, I've noticed that it occasionally counts posts that were edited but not actually posted, in the thread count. People complain about the difficulty in maintaining large Forth programs, but have you ever tried it with Perl? Sheesh.

Mike



By [Neal Bridges \(Nbridges\)](#) on Thursday, April 4, 2002 - 03:16 pm: [Edit](#)

Indeed; the Discus software is a whole lot of Perl.

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, April 5, 2002 - 10:01 am: [Edit](#)

I believe "load of Perl" is a more apt phrasing.

-- Kris



By [Steve Graham \(Steve\)](#) on Saturday, April 6, 2002 - 01:20 pm: [Edit](#)

Mike,

I've left the batteries out for a number of days, and when I then put some new ones in, I still get the flashing screen. Do I need to put old batteries in? Any further ideas?

TIA, Steve



By [Brian Chirgwin \(Bchirgwin\)](#) on Saturday, April 6, 2002 - 01:56 pm:

[Edit](#)

I ran into a similar problem on my TRG Pro. I was really low on memory and a hard reset didn't solve it. I know a TRG Pro has an ability to start when holding the Up arrow (I think). This will prevent certain extensions from starting (hacks, etc..). Kind of "safe mode" for the Palm. This might get you started to delete an app or two or at least back up your data (if you low on memory). Not sure if this will work on a IIIx, but worth a try.



By [Mike Will](#) on Saturday, April 6, 2002 - 03:50 pm: [Edit](#)

Yes, Steve, Brian is correct. The sequence is:

- 1) stick a pin in the reset hole & hold
- 2) press the UP button & hold
- 3) release the reset pin
- 4) wait until you get a steady Palm display, then release the UP button

Also, there is the standard hard reset:

- 1) stick a pin in the reset hold & hold
- 2) press the ON button & hold
- 3) release the reset pin
- 4) release the ON button

You should be asked whether or not you wish to reset all RAM at this point.

If it's the same as mine, it can be stubborn in releasing from 'psycho-flash' mode until you manage to get the memory chip fix installed.

Mike

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Scrolling & synching text fields

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Scrolling & synching text fields



By [ronald b. kopelman](#) on Tuesday, April 2, 2002 - 08:39 am: [Edit](#)

Anyone have some insights on how to scroll or how to synch a text field with the scroll bar? Also, when I dump some text into the field, if the last line is showing I can drag to select. If, however, the last line is not showing, I can't drag to select. I suspect the problems are related but I don't know. Any good places to begin looking?

ronald b. kopelman
ronald.kopelman@verizon.net



By [Neal Bridges \(Nbridges\)](#) on Monday, April 8, 2002 - 02:43 pm: [Edit](#)

I've noticed that problem with selecting the last line of fields in the Palm OS generally; most commonly it comes up in the MemoPad for me.

Neal



By [Joe Nasal \(Jsn\)](#) on Friday, May 3, 2002 - 11:15 pm: [Edit](#)

Hi Ronald:

I wasn't sure if you'd received an answer to your scrolling / field syncing question. Even if you have, this may help someone else. Here's how I do it:

First, I catch *all* events via "custom event handling":

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/CustomEventHandling>

because ekey has a problem catching sclRepeatEvent.

So, in my main event loop I do something like:

```
begin
  -1. event >abs EvtGetEvent
  handleEvent event @
  on: sclRepeatEvent do: do-scroll /on-do module
again
```

I set up some variables which will hold pointers to both my scroll-bar and my field (two cells wide):

```
2variable _scrollptr
2variable _fieldptr
```

I define some words to fetch the values stored in these locations:

```
: scrollptr ( -- ptr. ) _scrollptr 2@ ;
: fieldptr ( -- ptr. ) _fieldptr 2@ ;
```

At some point I'll initialize the scroll-bar (passing in its id. I store other attributes of the scroll-bar in the variables sclpage, sclmax, sclmin, sclval):

```
: initialise-scrollbar ( id -- )
  GetObjectPtr _scrollptr 2!
  sclpage @ sclmax @ sclmin @ sclval @
  scrollptr SclSetScrollbar scrollptr
  SclDrawScrollBar
;
```

Finally, here's do-scroll, which fires every time I catch a sclRepeatEvent in my event loop:

```
: do-scroll ( -- )
  sclpage >abs sclmax >abs sclmin
  >abs sclval >abs scrollptr
  SclGetScrollbar sclval @
  oldsclval @ - abs
  sclvaldiff !
  sclvaldiff @ 0 > if
    thisfieldid @ GetObjectPtr _fieldptr 2!
    sclpage >abs sclmax >abs sclmin
    >abs sclval >abs scrollptr
    SclGetScrollbar
    sclval @ dup oldsclval @ > if
      \ scroll down
      1 >byte sclvaldiff @ thisfieldptr          fldscrollfield
    else
      \ scroll up
      0 >byte sclvaldiff @ thisfieldptr          fldscrollfield
    then
    oldsclval !
  then
;
```

The only thing new here is "oldsclval", which contains the previous value of sclval.

I'm fairly sure that I stole most of this from Trevor Steele's "Palm Tables in

Quartus Forth" tutorial

(<http://www.mechengineer.freeseve.co.uk/palmtbl.htm>). The difference is that Trevor fires do-scroll in response to a sclExitEvent. This is not as natural as doing it in response to sclRepeatEvent. However, as I've mentioned, AFAIK you can't catch sclRepeatEvent with ekey.

Regards,

Joe Nasal

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Alignment issues?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Alignment issues?



By [Julian Fondren](#) on Saturday, March 30, 2002 - 02:53 pm: [Edit](#)

Are there any alignment issues? When should I call ALIGN? I mean for cells, as I don't much care about floats in memory. Would I get faster faster fetches and stores, say, if I ALIGNED addresses?



By [Chapman Flack](#) on Saturday, March 30, 2002 - 03:18 pm: [Edit](#)

On the 68k, cells **must** be aligned. You'll know you need to use ALIGN when you crash your PDA or catch exception -23 (address alignment exception).

-Chap



By [Julian Fondren](#) on Saturday, March 30, 2002 - 03:26 pm: [Edit](#)

Yikes! Thanks.

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3 new Quartus App.

Quartus Handheld Software: Discussion Forum: [Quartus Forth \(PalmOS version\)](#): 3 new Quartus App.



By [Frank Lin](#) on Friday, March 29, 2002 - 09:24 am: [Edit](#)

Hi!!

I write 3 Quartus App. and published on PalmGear.

1. Othello 0.98, a Othello game.

<http://www.palmgear.com/software/showsoftware.cfm?sid=45593620011030114544&prodID=34599>

2. EHP500 AMU calculator 1.02, a small calculator to calculate the magnet calibration parameters on Varian ion implanter EHP500.

<http://www.palmgear.com/software/showsoftware.cfm?sid=45593620011030114544&prodID=14280>

3. ThermalWave Sensitivity Calculator 1.00, a small calculator to calculate the sensitivity of thermal wave measurement.

<http://www.palmgear.com/software/showsoftware.cfm?sid=45593620011030114544&prodID=14718>

Have fun with them...

- Frank



By [Neal Bridges \(Nbridges\)](#) on Saturday, March 30, 2002 - 01:03 am:

[Edit](#)

Three at once -- impressive!

Thanks for letting us know about them, and congratulations!

Neal

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Treo and Sound

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Treo and Sound](#)



By [Richard Chamberlain \(Rac\)](#) on Friday, March 22, 2002 - 06:48 pm:

[Edit](#)

Hi Folks,

I've been contacted by someone who has a treo and that tells me sound doesn't work on the treo with my Metronome application.

Does any one have a Treo yet, and if so could they possibly test the sound word.

Or if not does anyone know anything about the Treo to explain why it doesn't work.

Thanks,

Richard

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Any help for beginners ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Any help for beginners ?



By [David Godfrey](#) on Thursday, March 21, 2002 - 06:56 pm: [Edit](#)

I am new to Quartus Forth and can't understand much of it from the documentation I've seen. Whilst I've written some quite involved programs in PocketC and OPL (on Psion), I am totally at sea with Quartus. I follow the manual and can print "Hello World" but then what? I can't seem to find the way in for beginners giving simple example code and explanations. Everything I read seems to assume knowledge I don't have and don't know where to get. I need a step by step guide. Any suggestions please??
David



By [Joe Nasal \(Jsn\)](#) on Thursday, March 21, 2002 - 10:14 pm: [Edit](#)

David:

Check out the tutorials here in the Wiki -- I found HelloWorldTutorial & TheDudlStory to be useful as a beginner. Take some time to troll around the Wiki; there's lots of great information here.

Since you've developed for Palm in the past you've got a leg up in terms of understanding resources, PalmOS databases, etc. If you're new to FORTH, though, start slow and be prepared to think about coding in a way which is much different from what you've done in the past.

Because of the abbreviated nature of FORTH syntax I found that examining other developer's (sophisticated) source code was not really helpful until I "got" what FORTH was all about. You must fully understand simple stack operations before you'll even want to tackle understanding other folks' code. Stick to the Tutorials until you get there.

I'm a C programmer, too. I really had to plow through some simple FORTH stuff for about a week before I had an "aha!" moment. If you get there, you may find FORTH to be a much more "natural" way of thinking about some software problems. As it turns out, solutions to many of these problems find an ideal application in embedded systems development, such as developing for PalmOS.

Think very small, very simply at the start.

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Cmove

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Cmove](#)



By [Roland Herrera](#) on Tuesday, March 19, 2002 - 08:42 am: [Edit](#)

Hi,
cmove : I'm following an old 79-standard book : Is there a cmove word for Quartus, or a modern ANS equivalent ?

Thx
Roland H



By [Kris Johnson \(Kdj\)](#) on Tuesday, March 19, 2002 - 09:51 am: [Edit](#)

For most purposes, MOVE and CMOVE are equivalent. So you can just do this:

```
: cmove move ;
```

However, note that the "memory propagation" aspect of CMOVE isn't duplicated by MOVE. If you need that, then you may want to implement CMOVE like this:

```
: cmove ( a1 a2 u -- )  
  for  
    >r c@ >r 1+ r> r> over c! 1+  
  next  
  2drop ;
```

See <http://64.21.136.85/dpans/dpansa17.htm#A.17.6.1.0910> for more on the details of CMOVE, CMOVE>, and MOVE.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Tuesday, March 19, 2002 - 08:33 pm: [Edit](#)

The above definition of CMOVE is missing a DUP. It should be like this:

```
: cmove ( asrc adst u -- )  
  for  
    >r dup c@ >r 1+ r> r> over c! 1+  
  next  
  2drop ;
```

And it may still be wrong. 😊 Use my code at your own risk. Also, the above is not ANS-compliant, as it assumes that a character and an "address unit" are the same size, and it uses the non-standard FOR..NEXT construct.

-- Kris



By [Roland Herrera](#) on Tuesday, March 19, 2002 - 10:14 pm: [Edit](#)

thx, kris

I noticed that as I got fatal exception !
but seriously, thx again

Roland

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Where do I start when writing a keyboard driver

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Where do I start when writing a keyboard driver



By [Mark Browne \(Markbrowne\)](#) on Monday, March 18, 2002 - 12:22

pm: [Edit](#)

I have fiddled a bit with Quartus at the console for some time now, but have never written anything worth while.

I would like to write a keyboard driver (to go with a keyboard that I have built). This is because, although KeyZ works OK, it has a few things that I would like to fix, and Quartus strikes me as the perfect tool.

The problem is, that whilst I am a competent programmer 😊, the Palm environment is rather different from the 68K Forth that I have used before. Can anyone give me some pointers on where to start? The tutorial stuff is more to do with GUI operations than with writing a Hack.

Thanks

Mark Browne

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Pedit32 files

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Pedit32 files](#)



By [Roland Herrera](#) on Sunday, March 17, 2002 - 11:37 am: [Edit](#)

Thanks for the dump tool, Neal

I've been trying out peditpro

Can I include a 32k (pedit32) file directly into Quartus ?

(I know I can export my pedit32 file to doc format and then use docinclude... but otherwise nothing recognises directly my source created with pedit32).

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Tools such as DUMP

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Tools such as DUMP



By [Roland Herrera](#) on Saturday, March 16, 2002 - 09:06 pm: [Edit](#)

Hello,

Where can I find tool words such as DUMP (sure I wrote a messy one... but I want an official neat & tidy one) for Quartus (and other forths?). Is there a downloadable collection of ANS forth tools somewhere ? Not urgentissimo, but Thx..

Roland Herrera



By [Neal Bridges \(Nbridges\)](#) on Saturday, March 16, 2002 - 09:56 pm:

[Edit](#)

The forum archives have several implementations of DUMP in them, as does the Wiki: <http://sleepless-night.com/cgi-bin/twiki/view/Main/MemoryDump>

Neal

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Wiki MsOnlyWorksForMultiplesOfTen

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Wiki MsOnlyWorksForMultiplesOfTen



By [John Newell](#) on Thursday, March 14, 2002 - 01:50 pm: [Edit](#)

I had that MS problem - AGAIN... hanging up if the number of MS was not a multiple of 10.

Looking at the Wiki, the suggested fix is not quite correct. The sysTaskDelay call needs ticks, not milli-seconds. So, I would suggest:

```
: MS ( n -- )  
sysTicksPerSecond 1000 */ s>d sysTaskDelay throw  
;  
N.B. */ as one word.
```

This works for all values of n.

I haven't got a login for the Wiki otherwise I would have put this there.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Sunday, March 17, 2002 - 07:59 pm: [Edit](#)

If you need your wiki password reset, send e-mail to wikiwebmaster@sleepless-night.com.

-- Kris

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Double tapping fields

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Double tapping fields



By [Chris Bucsko](#) on Monday, March 11, 2002 - 10:16 pm: [Edit](#)

I'm playing around with using double taps in a field to pop up menus, and I found that the `FldEnterEvent` has a tap count byte in its event structure. Initially, I expected it at the top of the structure from the SDK docs. Then, after looking at `events.h`, I expected it at the second byte. I finally found it at the 3rd byte:

```
event >abs 3 m+ c@a
```

I think Word 0 is the pen down boolean, since it always seems to be (hex) 0F, but I don't know why I'm finding tap count at an odd offset. Am I wrong to think the struct starts at event + 0? or does the event struct start at event + 1?



By [Steve Bohrer \(Skb\)](#) on Tuesday, March 12, 2002 - 11:20 pm: [Edit](#)

Structs start at zero, but the `penDown` boolean is 1 byte at offset 2, then the tap count is 1 byte at offset 3. A two or four byte value must be at an even address (the C compiler will add pad bytes if necessary) but single bytes can be at odd offsets.

The event structure starts with `eType`, a two-byte value filling bytes 0 and 1.

Offset	Field	size
0	<code>eType</code>	2
2	<code>penDown</code>	1
3	<code>tapCount</code>	1
4	<code>screenX</code>	2
6	<code>screenY</code>	2
8	<code>data union</code>	16

Also, unless you need to pass a 32-bit address to an OS function (or to a forth word that works on 32-bit addresses) there is no need to use `>abs`. To fetch the `tapCount`, just use `"event 3 + c@"`. To fetch the type, just `"event @"`.

Neal's obsolete menu handler code apparently had some words which needed to deal with 32-bit pointers to event structures, and this seems to have established the practice of always using `>abs` with event.

Also, remember that tapcount is only valid with OS 3.5 and greater.



By [Chris Bucsko](#) on Wednesday, March 13, 2002 - 09:45 am: [Edit](#)

Thanks, Steve. That clears it up, I must've missed that etype word in the Palm code. You're right about >abs, I was using code, which I got from someone else as my model. That code converts the event struct address >abs before calling itemid from the Events memo. I guess I won't worry about older Palm versions at this point. For anyone else interested, I also recommend using FlushQueue, or flushing the event queue yourself after getting the tap count, to ensure that the next tap count is valid.

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Freeing a pointer

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Freeing a pointer



By [ronald b. kopelman](#) on Saturday, March 9, 2002 - 11:39 pm: [Edit](#)

I can use MemPtrNew (size. -- &VoidPtr.) to create a temporary pointer in which to dump some data but I can't free it up. There seems to be no MemPtrFree. Is this a design consideration or an oversight? It seems like memory can get seriously gobbled up this way!?



By [Neal Bridges \(Nbridges\)](#) on Sunday, March 10, 2002 - 08:06 am:
[Edit](#)

MemChunkFree is what you're after. That same function is also now aliased as MemPtrFree in the Palm SDK, and you can do the same via:

```
: MemPtrFree MemChunkFree ;
```

if you so choose.

Neal



By [ronald b. kopelman](#) on Sunday, March 10, 2002 - 08:16 am: [Edit](#)

Thanks, it seemed silly to use a handle for something very temporary which would only be locked for its useful lifetime anyway. I'll check it out. By the way, as a hobby type programmer, I wish to thank everyone here for all the support I've received.

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Wireless QF PQA apps?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Wireless QF PQA apps?



By [Yeshiah](#) on Wednesday, March 6, 2002 - 09:52 am: [Edit](#)

Anyone created any Palm Wireless PQA apps in Forth yet? I want to be able to have a pqa with links to 1) start a palm app, 2) download jpg's, and 3) download a fixed web page.

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Infrared (using srm)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Infrared (using srm)



By [Ladislav Kostal \(Palmlk\)](#) on Sunday, March 3, 2002 - 08:33 am: [Edit](#)

Hello,

In process of learning Forth I'm playing with app that should communicate with GSM phone. I've found code from Samuel Tardieu. Code works for me, but not completely. I can send command to phone but can not get response (response is same as command sent). E.g. if I send AT+CGMI I get AT+CGMI as response. Command itself is accepted by phone and executed (AT+CHUP works - hang up call). I found some information that I have to disable receiver, when using infra and enable when want to get some data back. I've tried to set this with:

```
0. 0. srmCtlRxDisable portid @ srmControl
```

but it returns some error (769). Using srmcontrol for setting baudrate works. My "go" word seems like this:

```
ircmopen
atcmd
getline drop type
ircmclose
```

Have you any suggestion to get this app work?

Thanks

Ladislav Kostal



By [Ronny Svensson](#) on Monday, March 4, 2002 - 05:41 am: [Edit](#)

This works for me:

```
2variable templong 0. templong 2! ( from serial.txt)
Variable SrmPort
```

```
Create IrSettings
9600. , , ( baud )
0 , (hex) c2 , ( flags - 8/1/o )
0 , 0 , ( ctsto )
```

: xxx

SrmPort >Abs 9600. 32769. SrmOpen Throw

4. TempLong 2!

TempLong >Abs IrSettings 4 + (flags) >Abs

3 (srmCtlSetFlags) SrmPort @ SrmControl ?Dup

If SrmPort @ SrmClose Drop Throw Then

TempLong >Abs Pad >Abs

11 (srmCtlIrDAEnable) SrmPort @ SrmControl ?Dup

If SrmPort @ SrmClose Drop Throw Then ;

I do a SrmReceiveFlush before calling SrmSend to clear receive errors.

Then i poll the response with SrmReceiveCheck in the event loop - and finally calls SrmReceive with a timeout of 0.

Otherwise call SrmClearErr on error in SrmReceive.

Ronny



By [Ladislav Kostal \(Palmlk\)](#) on Monday, March 4, 2002 - 08:26 am: [Edit](#)

Would you be so kind and send minimal-yet working example? I'm just beginner... 😊

Thanks

Ladislav Kostal

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M50x series vibrate/LED hack?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): M50x series vibrate/LED hack?](#)



By [Yeshiah](#) on Thursday, February 28, 2002 - 03:40 pm: [Edit](#)

can someone write a hack which will allow m50x users to pick which of the 3 sound settings (or all) would be redirected to the m50x vibrate feature and/or power-button-LED?????

sortoff like tail-light



By [Neal Bridges \(Nbridges\)](#) on Friday, March 1, 2002 - 11:29 am: [Edit](#)

I'm not sure the power-button light is accessible via software -- in fact I believe it isn't.

Neal



By [Yeshiah](#) on Wednesday, March 6, 2002 - 09:54 am: [Edit](#)

Bat Hack uses this light for custom battery monitoring. So it IS useable somehow. The question is, who can find out?



By [Chapman Flack](#) on Wednesday, March 6, 2002 - 04:10 pm: [Edit](#)

Does Bat Hack come with a license that says you shouldn't disassemble it? ;)

-Chap



By [Samuel Tardieu](#) on Wednesday, March 6, 2002 - 04:44 pm: [Edit](#)

It is accessible indirectly (though it took me a long time to figure out how at first). You have to use the "attention manager". I think I found the doc on Palm's site, here is what I could find in my memos:

```
\ led ST 2002-01-07
```

```
: AttnDoSpecialEffect  
  (hex) 042E systrap drop ;  
  
: blink  
  (hex) 802 AttnDoSpecialEffect ;
```

However, I think it would be great to disassemble AttnDoSpecialEffect and friends so that we can control the led directly. I couldn't find any hardware info on how the led is connected to the Palm, even on hardware-related sites where people do open Palm handhelds to take nice pictures of their guts.



By [Yeshiah](#) on Wednesday, March 6, 2002 - 06:31 pm: [Edit](#)

The Url for BatLight is:

<http://www.palmgear.com/software/showsoftware.cfm?prodID=32879>

and I believe he also uses the OSManager. Even with this someone could write hack that m50x users to pick which of the 3 sound settings (or all) would be redirected to the power-button-LED.

The vibrate feature is part of the Alarm Manager set.

And with the new m515 coming out. This design is sure to be around for a while. The only other design to hold out long was the III.

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Compile Error

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Compile Error



By [David Shenk \(Dshenk\)](#) on Tuesday, February 26, 2002 - 10:15 pm:

[Edit](#)

My program runs fine in the Quartus environment but when I try to compile it I get a "Fatal Error ... MemoryMgrNew.c, Invalid handle" message near the end of my "make". After I reset, it leaves an app on my Visor that has my main include file name and has the Quartus icon. When I tap it, it shows the same message described above.

I am running 1.2.5R on a Handspring Visor and have compiled many other smaller programs with success.

I checked my "make" file and everything looks okay ... I modeled it after my other make files that worked fine.

Help!



By [David Shenk \(Dshenk\)](#) on Wednesday, February 27, 2002 - 12:03

am: [Edit](#)

Nevermind ... What an idiot!

I listed two Talt resources as tFRM's in my make file. Geez, was this ever embarrassing.

Sorry, to have wasted your space, Neal.

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DmSearchStateType is 32 bytes, not 16

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): DmSearchStateType is 32 bytes, not 16



By [Steve Bohrer \(Skb\)](#) on Tuesday, February 26, 2002 - 07:23 pm: [Edit](#)

Various sample code using DmGetNextDatabaseByTypeCreator uses
create DmSearchStateType 16 allot

to make the required buffer for this trap. However, the Palm OS headers
define DmSearchStateType as an array of 8 UInt32's, or 32 bytes.

I found this bug because the first few bytes of an s" " string after my
searchState buffer were getting trashed when I used a 16 byte buffer.

Interestingly, in the OS 3.0 SDK, a "private" header shows that the OS only
used 14 bytes, so a 16 byte buffer would have worked fine on that OS. With
OS 3.5, the private header is no longer available, thus it makes sense to
use the published value of 32 bytes.

Using the 16 byte buffer for DmGetNextDatabaseByTypeCreator could be a
source of strange bugs on OSes later than 3.0, as using this trap may
scramble whatever few variables are next in memory after the buffer.

Does it make sense to use Pad for temporary OS buffers like this? It seems
that Pad uses space above here which is otherwise unused.

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Is there a dsunused ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Is there a dsunused ?



By [Mike Will](#) on Tuesday, February 26, 2002 - 06:00 pm: [Edit](#)

Is there any way to determine either the amount of unused dataspace or the highest available dataspace address?

32767 HERE -
doesn't work

TIA

Mike



By [Kris Johnson \(Kdj\)](#) on Tuesday, February 26, 2002 - 08:41 pm: [Edit](#)

There is a word UNUSED that will return the amount of free dataspace. However, it always returns 256. Quartus Forth automatically expands the dataspace as ALLOT and other dataspace-allocation words are called so that there are always 256 bytes available above HERE.

For more information about these issues, see the RuntimeAllot and StandaloneVsQuartus topics in the wiki.

-- Kris



By [Mike Will](#) on Tuesday, February 26, 2002 - 10:09 pm: [Edit](#)

Thanks, Kris. Most helpful.

From the Wiki notes on StandaloneVsQuartus:

"A standalone app is not allowed to grow the data space"

That is precisely why I want to allocate the maximum possible dataspace before creating a standalone. There just doesn't seem to be any deterministic way to do it.

I've read some of the excellent posts from Ron, Chap, yourself and others on these issues in the Wiki. This is a slippery one. I didn't want to get into dynamic allocation or *gulp* changes to the kernel right now. This topic is dredging up nightmares that I thought had ended when I burned all my "Windows Architecture" books.

Sadder but wiser,

Mike



By [Kris Johnson \(Kdj\)](#) on Wednesday, February 27, 2002 - 09:34 am:

[Edit](#)

I think "32768 256 - HERE - ALLOT" will allocate the maximum amount of dataspace.

-- Kris



By [Mike Will](#) on Wednesday, February 27, 2002 - 12:24 pm: [Edit](#)

Kris,

You are indeed correct. Of course, this formula will only work if it follows ALL other DS use. As a happy side effect, it gives you a way to pre-test for runtime allocation errors instead of waiting for users to tell you about it. Not that that's ever happened to me. Thanks again for your help.

Mike



By [Kris Johnson \(Kdj\)](#) on Wednesday, February 27, 2002 - 06:26 pm:

[Edit](#)

I guess I still don't understand what it is you are asking for. But here's a summary of what I know:

- There will always be at least 256 bytes of unused dataspace above HERE.
- HERE can have a maximum value of (32768 - 256).
- If you want, you can ALLOT a big amount of memory, thus increasing the dataspace segment to the maximum size you'll need, and then use ALLOT with a negative value to move HERE back to where you want. This will leave a large amount of unused memory above HERE, and you can then use ALLOT to grab chunks of it.
- You can use "32768 256 - HERE ALLOT" right before your MAKE-PRC if you want to guarantee that the standalone application has a maxed-out dataspace.

-- Kris



By [Mike Will](#) on Thursday, February 28, 2002 - 05:33 pm: [Edit](#)

Kris,

I'm ok with:
32768 256 - HERE - ALLOT

The only problem with it is that it must follow all DS writes in my code, but I've worked around that with a couple of DEFERs.

Thanks again.

 By [Steve Bohrer \(Skb\)](#) on Thursday, February 28, 2002 - 08:59 pm: [Edit](#)

Or, as Kris notes, you can use a negative value with ALLOT to move HERE back, so that there is room for later expansion. Quartus will call the OS to allocate more memory as necessary, until it hits the limit of 32K - 256. But, when you use a negative allot, Quartus does not release the memory back to the OS.

Thus, as Kris suggests, you can grow the data space to the maximum possible size, and then move here back to the actual end of your data area. When you compile the app to standalone, it will bring the full-size dataspace with it, and you can then do run-time ALLOTs up to the limit of 32K-256.

 By [Chapman Flack](#) on Friday, March 1, 2002 - 02:08 pm: [Edit](#)

Run-time ALLOTs still gronk the OS on an invalid handle even in that case (at least in 1.2.5R) but if that were fixed the technique would work fine, see RuntimeAllot on the wiki.

-Chap

 By [Kris Johnson \(Kdj\)](#) on Friday, March 1, 2002 - 02:30 pm: [Edit](#)

I thought when you wrote (in the wiki) "Preallocating dataspace is a fine idea. The segment is locked at all times and a moving resize is done only when a non-moving resize fails so (unless Neal were to change that, and I can't think of any reason he would) a dataspace run out to its maximum size would be safe from future moving.", it implied that the above-described technique would work.

But maybe I just don't fully understand the meaning of the word "gronk". 😊

-- Kris

 By [Chapman Flack](#) on Friday, March 1, 2002 - 07:34 pm: [Edit](#)

Aha. Yes. The suggestion on the wiki was to grow the data space to the maximum size, do the MakePRC, and then have the standalone app do the

negative ALLOT when it starts up. That (mostly) works, though it does bloat the PRC with unused space.

Steve's suggestion above was to do the ALLOT and the negative ALLOT, then MakePRC, which isn't quite the same, and isn't safe.

New things I just learned in checking this out more thoroughly (all observations from 1.2.5R):

1. MakePRC only creates a DATA 1 resource in the PRC of size exactly HERE bytes. It doesn't matter if you have grown and then ungrown, MakePRC does not copy the unused space, even the PAD area.

2. When the standalone app starts up, a new chunk is allocated 40 bytes larger than the DATA 1 resource, and the resource is copied into it. Note the 40 bytes differs from the 256 bytes above HERE that are present at the console.

3. PAD returns HERE 84 + (both at the console and in a standalone app) so in the standalone app it actually gives you an address 44 bytes beyond the end of the dataspace chunk. This is a bug affecting existing code that writes memory at PAD at run time. It is writing to Palm OS dynamic heap space outside the DS chunk. At best that is unused memory; at less than best, it will be another chunk the app has allocated with (allocate) or the memory manager API, or that a caller has allocated if this app has been called by another (Find, say).

Any existing app with unexplained Heisenbugs might be checked for use of PAD at run time. Any existing app that uses PAD at run time and has never misbehaved is lucky. This is definitely a Heisenbug - whether it bites will depend on whether anything else you care about has been allocated in dynamic heap at 44 bytes past the end of data space.

It can be worked around by doing an ALLOT of (at least) 216 bytes before MakePRC, and unALLOTting the same amount at app startup. That leaves the same 256 bytes (at least) beyond HERE as in the standalone app, and ensures PAD points into allocated space.

4. UNUSED is not re-initialized by MakePRC or at app startup to reflect the actual size of the dataspace chunk. Therefore in the typical standalone app UNUSED will be 256 (the value it had at the console) when there are only 40 bytes beyond HERE in the dataspace. It is even more wrong if dataspace was preallotted-then-deallotted before MakePRC (as in Steve's suggestion): the app may then wake up thinking it has, say, 30000 bytes unused, when it has 40. This will allow many ALLOTs to "succeed" at run time, but the app would be clobbering arbitrary Palm OS dynamic heap space.

So to do this preallot thing right, you should allot 32768 256 - HERE - before MakePRC, then have the app unALLOT that same amount, and then be sure not to allot more than 32768 256 - 216 - HERE - bytes after that (to leave room for PAD). And don't trust UNUSED.

It would be good if someone checked my work (especially wrt points 2 and 3) but I'm pretty sure. You can find the actual current size of the dataspace chunk with 0 >abs MemPtrSize D.

-Chap



By [Kris Johnson \(Kdj\)](#) on Friday, March 1, 2002 - 09:25 pm: [Edit](#)

Neal has mentioned the problem with PAD before. If one needs to use PAD in a standalone app, it is recommended that one redefine PAD to use allotted data space, e.g,

```
create pad 84 chars allot
```

BTW, PAD is defined in the core-ext module included with Quartus. As per the ANS Forth standard, it is not used by any kernel words nor by any of the standard library modules.

--Kris



By [Steve Bohrer \(Skb\)](#) on Friday, March 1, 2002 - 10:50 pm: [Edit](#)

Thanks, Chap and Kris, for correcting my errors, and for explaining about Pad. I'd heard various mumbles about Pad, but had not heard that it wrote to arbitrary memory.

POSE doesn't complain about a compiled app writing to PAD, so I was thinking it was a great spot for temporary text buffers. No so, apparently.



By [Neal Bridges \(Nbridges\)](#) on Saturday, March 2, 2002 - 09:54 am:

[Edit](#)

You can certainly write to PAD in a compiled app, provided that PAD is below HERE, defined as Kris suggests above. No problem at all.

Neal

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Zen of Palm

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Zen of Palm](#)



By [Steve Bohrer \(Skb\)](#) on Monday, February 25, 2002 - 11:49 am: [Edit](#)

Palm has added (Feb 2, 2002) a new document, "Zen of Palm" at their main developer docs page <http://www.palmos.com/dev/support/docs/>.

It is a discussion of design for the Palm OS, and also their case against Pocket PCs and Linux and other general purpose "big" OSes in the handheld arena.

I've only read a bit so far, but it looks interesting.



By [Dave Bennett \(Dbennett\)](#) on Sunday, March 3, 2002 - 02:49 pm:

[Edit](#)

This was about the most hilarious read of self-serving, faux-technical, documentation that I have ever encountered. The whole premise of the document was "listen to the user" and "give the user what they want", yet every example from Palm was a direct exception to that tenet. My favorite example was that just after the Design Validation chapter the next chapter actually said, "When people asked for a handheld web browser, Palm, Inc. product designers realized that what users really needed was to get information from the Internet." And instead of providing a browser, they invented "Web clipping" instead. So now the user had to purchase a new hardware device. Subscribe to a monthly service from Palm. And hope the website they wanted to browse bought into the "web clipping" stuff and created and maintained a Palm specific page in addition to the PC browser version. So much for listening to the user!

I also enjoyed Table 1.1 where everything users expressed an interest in, Palm provides! Only most of the features (expansion slots) were not only not pioneered by Palm, but other companies. And introduced so pathetically late by Palm that they once again lost market share.

The document is an embarrassment to Palm and really highlights their inability to innovate in a field they claim to have invented. (The Sharp Wizard was not such a bad product from a Palm design point of view.) They should pull this document and bury their head in the sand.

Dave



By [Kris Johnson \(Kdj\)](#) on Sunday, March 3, 2002 - 03:18 pm: [Edit](#)

I largely agree, but the article does illustrate a few useful principles. I am dismayed at the movement to make handheld applications as complicated, bloated, and unreliable as their desktop analogues. If people want Pocket PC or Linux handhelds, they know where to get them. I am glad that Palm OS is available as a lightweight alternative.

I agree that this article is largely an attempt to justify Palm's lack of progress and to throw rocks at the competition. I'd be a lot more interested in a "Zen of Treo" or "Zen of (something interesting)" than in anything Palm wants to say about their past design decisions.

-- Kris



By [Mike Will](#) on Sunday, March 3, 2002 - 05:17 pm: [Edit](#)

My \$0.02:

The only things Palm are Zen about are customer support and their shareholders' pain. For everything else, it's unbridled excess.

They've misplaced, ignored, and even mis-spelled Quartus since the beginning.

Zen is an important philosophy, near and dear to my heart. People who use it as a sorry excuse for laziness, incompetence and total lack of vision bother me.

Mike



By [Gary Wiese \(Garyjwiese\)](#) on Sunday, March 3, 2002 - 08:27 pm:

[Edit](#)

Here is my 2 cents as a member of the not so computer freindly world. First of all the Palm in my opion is the better of all the handhelds out there because of one fact, its very easy to use. I mean very easy, I have an HP calculator I used for college and at the time it was great, but I haven't use it in so long I forgot how. My brother in law just got a pocket pc for christmas from his boss. He brought it home for me to figure out. Forget it, its like a pc in your hand. Who in the world will ever need all that computer power in a handheld. I know there are a few who will find uses, but the many will not. I see the computer world and how it changes so fast and wonder why I should invest in something that is made useless in a few months. My computer that I use to follow this forum is a slow 233 mhz and it suits me fine. Some of my family and friends are buying new computers on a regular basis. This whole issue about being the fastest is completely useless to me. The issue has to do with ease of use and nothing else. I have a VCR at home that I spent 20 minutes learning how to use because

of some weird buttons and what they actually are used for, now when I need to use the VCR which is very infrequent I have to look through the directions all over again, I think it's junk and I hate it and wouldn't buy anything that is so hard to use again. Who cares that it has the potential to do so much, I only want to tape a program not produce one.

My HP calculator is now sitting on my desk collecting dust. Sure there are people who use it and love it, but that's what they were created for, not the average user. The average user is not a mathematician or an engineer the average user is a carpenter a salesman a mailman a truck driver... The Palm was created for the average user and it does what it was supposed to do. It has the potential to do so much more, but at what expense. Lose the average user to the more computer literate.

Ok maybe 2.5 cents
Gary



By [Dave Bennett \(Dbennett\)](#) on Monday, March 4, 2002 - 12:50 pm:

[Edit](#)

I like the Palm. Really. I agree that it is insanely easy to use. I don't like large palm apps either. In fact, I just sent back the free upgrades to the Quick... products just because of this. (Quickwords now uses RTF on the palm. Trying to pagedown through a document using the hardware button or scrollbutton causes a reset because the display can't keep up with the commands. A file with 27 characters in it as a memo went to a 4.3k file when copied into their new format!)

I just see Palm as another Microsoft (waiting to see what others do and then riding on those innovations or promising vaporware that has positive spin in the oh so objective computing press) with one exception: at least Microsoft's management has figured out how to make money following this route.

Dave

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Newbie needs YOUR **HELP**

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie needs YOUR **HELP**



By [Lazy Turtle](#) on Sunday, February 24, 2002 - 12:12 pm: [Edit](#)

Hi!! I was thinking about programomg for the palm for a long time, however i know *nothing* about programing. i would realy like to learn how. if you have a tutorial or other doc.'s that you fell can help me please email me: imuptodate@yahoo.com. Thanks Alot!!!



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Palm OS 3.1 bugs

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Palm OS 3.1 bugs



By [Steve Bohrer \(Skb\)](#) on Sunday, February 24, 2002 - 12:03 am: [Edit](#)

Just a rant. Not an issue for anyone who has newer Palms, but I've been surprised twice when I've tried OS traps added with the OS 3.1 feature set, only to find that they seem to have bugs in OS 3.1 (as in my Palm IIIe). These traps work fine with POSE running OS 3.5, but the same code runs goofily on 3.1 POSE or my IIIe.

1) WinDrawTruncChars : In OS 3.1, the wrong character is drawn for the ellipsis.

2) WinDrawChar : in OS 3.1, it draws a random character at the specified position.

I have not yet tested the other traps in this feature set, but I would not bet on them.

SO, despite these traps being documented as "needing the OS 3.1 feature set", in fact they are not safe until OS 3.5, or perhaps 3.3 (not tested in 3.3). Sigh.



By [Neal Bridges \(Nbridges\)](#) on Sunday, February 24, 2002 - 12:24 am:

[Edit](#)

WinDrawChar definitely works -- the character you pass has to be promoted via >BYTE.

Neal



By [Jim Hendricks \(Jimh\)](#) on Sunday, February 24, 2002 - 08:30 am:

[Edit](#)

If I recall correctly, there were some API's added in 3.1 that were not fully supported yet also. These API's were added in anticipation of Color which was fully introduced in the 3.5 API. There were also a few API calls that were corrected by a series of patches issued, I seem to recall at least 3 patches for the 3.1 OS.



By [Steve Bohrer \(Skb\)](#) on Monday, February 25, 2002 - 11:41 am: [Edit](#)

I tried using >Byte, even though the C prototype is in the OS3.5 header is WChar. With or without >Byte, I get nonsense on 3.1, both from POSE and

a IIIe. On POSE 3.5, it works without >Byte, and with >Byte gives a warning: "TextMgr.c Invalid Char passed to TxtSetNextChar", and it draws the missing character box.

So, I'm pretty sure that this trap does not want a >byte value.

Here was my attempt at WinDrawChar, which works on 3.5 by not 3.1:

```
: WinDrawChar ( y x wchar -- )  
  (hex) A350 systrap 3drop  
;
```

With OS 3.5, "30 150 char A WinDrawChar" puts a nice A on the right edge of the screen. This same code on OS 3.1 sometimes draws a 9, sometimes a box, and sometimes an accented char, probably depending on what else is on the stack.

I have the 3.1.1 patch on my handheld, but not on POSE, and it does not fix either of these bugs. Perhaps there are more patches for 3.1; it is a good idea to look.

But, I think I'll just not use WinDrawChar unless I want to require OS 3.5.

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Handspring springboard modules

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Handspring springboard modules



By [matthew mercaldo](#) on Saturday, February 23, 2002 - 09:53 pm: [Edit](#)

I am new to the Quartus forum.

I haven't seen any thread on Handspring hardware support yet. Does Quartus have support for Handspring hardware modules (springboard)?

If there is a thread already running, could someone point me to it?

Thanks,



By [Kris Johnson \(Kdj\)](#) on Sunday, February 24, 2002 - 12:18 am: [Edit](#)

A Handspring library module is available here:

<http://www.quartus.net/files/PalmOS/Forth/Contrib/hsext.txt>

-- Kris



By [mattmercaldo](#) on Sunday, February 24, 2002 - 10:08 pm: [Edit](#)

Thanks Kris!

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Real-time UI Object Creation

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Real-time UI Object Creation



By [Eric Cole](#) on Friday, February 22, 2002 - 04:07 pm: [Edit](#)

Hi Folks,

I was wondering if anybody had pointers on dynamic placement of graphics/controls in a form. What I need is to be able to allow users to select the graphic they want to display and have it display at the current screen coordinates. (At the moment I can draw circles at any point on the screen I tap.)

After placing the graphic(s) on the screen the user needs to be able to select any graphic already displayed and trigger an event. In this case it will be a database lookup based on the specific type of graphic selected in the UI.

Thanks
Eric

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Palm OS 4.x??

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Palm OS 4.x??



By [Chris Bucsko](#) on Thursday, February 21, 2002 - 06:24 pm: [Edit](#)

I'm thinking of upgrading my IIIxe to a new Palm. I'm looking at either a Handspring, Handera, or Sony. As a PC user, I've always regretted not upgrading to a new OS version (come to think of it, I usually regret upgrading, as well! Hmmm...). But Handspring and Handera are still running OS 3.5, while the Sonys have 4.0. Is there any problem running QF 1.2.5 with OS 4? Are there any advantages? Any new systrips we can use? Can we access memory cards using QF? Any problem with a 16MB PDA (versus the normal 8MB?) Any insight would be appreciated. Thanks

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Quartus Manual

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Quartus Manual](#)



By [Roland Herrera](#) on Wednesday, February 20, 2002 - 10:41 pm: [Edit](#)

I have this in .pdf format, which I can't seem to zoom in on using Adobe's .pdf free viewer for palmOS - so is there a .pdb version anywhere ?



By [Roland Herrera](#) on Thursday, February 21, 2002 - 09:02 am: [Edit](#)

Actually I have managed to view it, and convert it to viewable for with Adobe's .pdf viewer by excluding the graphics - Still, it takes up 1.5MB on my new m505 ;o(!



By [Chris Bucsko](#) on Thursday, February 21, 2002 - 02:11 pm: [Edit](#)

If you convert it to a pdb file, you can put it on a memory card and use Palm Reader, from your install CD to view it. I use 2-3 doc readers on my IIIxe such as Aportis, CSpotRun, iSilo for viewing docs, such as QF systrops, and the Palm SDK. But these older programs won't 'see' the memory card. Only Palm Reader will as far as I know.



By [John Newell](#) on Wednesday, February 27, 2002 - 07:18 am: [Edit](#)

Roland,
There's a qdocs.zip file somewhere or other which contains a Doc file and TealInfo file of Quartus words including the PalmOS systrops.

Regards
John



By [Christopher J. Smith \(Missilemax\)](#) on Thursday, February 28, 2002 - 01:30 am: [Edit](#)

You could do a "Custom" channel through Avantgo with a 1 time sync to Neal's online version...This worked well for me.

-Chris



By [Mark Browne \(Markbrowne\)](#) on Thursday, February 28, 2002 - 04:36 am: [Edit](#)

The only problem with that is AvantGo's decision to limit the number of users of any one custom channel to 8. The other option is to use Plucker or iSilo. I've not done this myself, but I can't see why it shouldn't work.

Mark



By [Ladislav Kostal \(Palmk\)](#) on Thursday, February 28, 2002 - 07:27
am: [Edit](#)

I use Plucker for this and it is ok. No problems.

lk

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Any m100 issues?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Any m100 issues?

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, February 19, 2002 - 08:40 am: [Edit](#)

Are there any issues with the m100 that would make a program incompatible? I had a question from one user checking on compatibility (he didn't say he had actually tried the program) and I responded that I was unaware of any issues. He followed up a couple of days later with a note that said "palm" told him the program would be incompatible.

I have asked for more detail on who he got this information from. Not having an m100 myself, I also wanted to double-check and make sure there wasn't a backwards-compatibility issue out there that I was unaware of.

Thanks in advance,

Barry

 By [Yeshiah](#) on Tuesday, February 19, 2002 - 09:00 am: [Edit](#)

I have an m125 PalmOS4 and there is something which appears definitely wrong. Neal is looking into it since I can compile programs on my TRG but they are not compiling or running properly on my m125. I get Wrong Answers outputted.

Quartus is useless for my m125 (only for certain programs) until this is resolved. Neal will find it. I am sure.

Yeshiah

- > Are there any issues with the m100 that would make a
- > program incompatible? I had a question from one user
- > checking on compatibility (he didn't say he had actually
- > tried the program) and I responded that I was unaware of any
- > issues. He followed up a couple of days later with a note
- > that said "palm" told him the program would be incompatible.
- >
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- > from. Not having an m100 myself, I also wanted to
- > double-check and make sure there wasn't a
- > backwards-compatibility issue out there that I was unaware

> of.

>



By [Gary Wiese \(Garyjwiese\)](#) on Tuesday, February 19, 2002 - 09:00

pm: [Edit](#)

My app. runs on a M100 without problems, it also runs on Palm IIIe, IIIx, IIIc, and I have heard it runs on a Visor Prism.

It was developed on a M505.

Gary



By [Ron Doerfler](#) on Tuesday, February 19, 2002 - 11:45 pm: [Edit](#)

I have never heard of any of my apps having any problems running on an M100. I developed them on a Palm III upgrade unit and a PalmIIIc. I do see from the ordering data that indeed some have M100s. None of my apps involve hardware-specific actions, however, such as manipulating registers or accessing the serial port (directly or indirectly).

Ron



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, February 20, 2002 - 08:42 am: [Edit](#)

Gary and Ron,

Thanks for the input and comments. Until getting this somewhat cryptic note, I never have had any user imply any of my programs might not be compatible with any PalmOS machine. I still don't know that he even tried it - from his description it sounds like someone simply told him it wouldn't be compatible. I'll contact the user again to address and hopefully put it to rest.

Thanks again,

Barry



By [Neal Bridges \(Nbridges\)](#) on Wednesday, February 20, 2002 - 02:14

pm: [Edit](#)

Indeed, there's nothing about the M100 specifically that makes it different from other Palm OS devices. I suspect that Yeshiah's problem is inherent in his code, related to dynamic memory, but I haven't tracked it down yet.

Neal

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Newbie needs your help

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie needs your help



By [peter lelkes \(Plelkes\)](#) on Monday, February 18, 2002 - 09:38 am:

[Edit](#)

I wish to create an app for conversion between A and B. The screen layout will be as follows:

on the right half of the screen buttons for input of numbers and for the event (i.e calculation).

On the left half - from top 2 buttons:

- * table/list (dropdown or lookup)
- * input-field
- * table/list (dropdown or lookup)
- * output-field

The app will be used in the following manner:

1) from the list I chose A

2) the 'insert point' jumps to the input field

3) input with help of the buttons on the right side

4) Press the calc/convert button

4c) depending on which of A or B I select so calculates formula 1 or 2

5c) in the second table/list the app shows B and

5 d) display the result in the output-field.

Q1: can this be done with Quartus Forth?

Q2: could anyone in this group

point me in the right direction, and help me with the code?

Any help will be appreciated

Yours

Peter



By [Joe Nasal \(Jsna\)](#) on Monday, February 18, 2002 - 09:44 am: [Edit](#)

Peter:

Easily done with QF.

Since you're learning my suggestion is to check out the EZUI library. It has been designed for manipulating data via the UI in this fashion. The example code that comes with the library has many of the features that you're describing here.

Joe



By [peter lelkes \(Plelkes\)](#) on Monday, February 18, 2002 - 09:49 am:

[Edit](#)

Joe:

Thanks for your quick respons, BUT :

Q1)could you please explain what you mean with: "manipulating data via the UI in this fashion"?? and

Q2) do You have the url?

/Peter



By [Joe Nasal \(Jsn\)](#) on Monday, February 18, 2002 - 10:17 am: [Edit](#)

Look for EZUI in the user-contributed code area of the Wiki.

By "manipulating the data..." I meant that the EZUI library contains interfaces that may meet your design rqt's as you've specified them above (table/list, input, output, etc.).



By [Dave Bennett \(Dbennett\)](#) on Monday, February 18, 2002 - 04:55

pm: [Edit](#)

Peter,

You might take a look at my Wind Chill Factor G program. It gets the air temp and windspeed from a user then performs a calculation and fills an output field with the result. The source code is available at my site www.micoks.net/~dbennett. It is pretty easy to follow and you can just ask any question you want right here!

Dave

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Popup Keyboard & ACCEPT

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Popup Keyboard & ACCEPT](#)



By [Mike Will](#) on Sunday, February 17, 2002 - 05:26 pm: [Edit](#)

Is there any particular reason why the popup keyboard's Carriage Return doesn't work with ACCEPT, but graffiti's does work? Also, why doesn't Tab work with either?

TIA

Mike



By [Neal Bridges \(Nbridges\)](#) on Monday, February 18, 2002 - 09:19 am: [Edit](#)

Re the carriage-return, there is a particular reason why, yes -- it relates to the popup keyboard being a closed dialog that doesn't reveal its event handling, so the Quartus Forth console can't see the carriage-return that is generated during the popup keyboard dialog.

Tabs are disregarded. I believe I did this because the tab character doesn't function in single-line fields, but I'd need to check my implementation notes.

Neal



By [Mike Will](#) on Monday, February 18, 2002 - 05:57 pm: [Edit](#)

Ok, thanks Neal.

I'll take a look at that function and see if I might at least be able to stuff a CR on the popup getting closed.

Mike



By [Mike Will](#) on Monday, February 25, 2002 - 10:57 am: [Edit](#)

Solved it by invoking SysKeyboardDialog directly and stuffing a CR upon its return.

On an associated problem, would it be troublesome to fix TYPE so that it obeys the wrap flag like EMIT does?

Right now, I'm using this fix:

```
: wrapType ( caddr u --)
  0 ?do dup i + c@ emit loop drop ;
```

However, I've got a lot of 'wrapType's piling up and they're slow. Using 1.2.7R

Many thanks as always.

Mike



By [Mike Will](#) on Monday, February 25, 2002 - 02:02 pm: [Edit](#)

.... or....

I could just redefine type as:

```
: Type wrapType ;
```

and maybe code it in assembler if I need more speed. What, if any, are the ramifications of redefining Quartus core words (especially for standalones)?

Mike



By [Mike Will](#) on Thursday, February 28, 2002 - 05:36 pm: [Edit](#)

Another ACCEPT question:

This is a code snippet from the forum posted in Feb 1999. I've extended it to create a standalone. It crashes with an invalid memory error in POSE, and an object not in form error on a real device. All the standard resources are in the Test.prc but obviously I'm missing something.

```
\ accept test

create string 10 chars allot
: go
  string 10 accept
  cr ." You typed: "
  string swap type cr
;

' go 12345. MakePRC Test
```

Please stop whatever you're working on and help me with this problem 😊

Mike



By [Kris Johnson \(Kdj\)](#) on Thursday, February 28, 2002 - 06:15 pm: [Edit](#)

Start the GO word with "BlankFormID ShowForm", and all will be well.

A standalone application doesn't automatically load a form at startup; you need to do it explicitly.

-- Kris



By [Mike Will](#) on Friday, March 1, 2002 - 10:21 am: [Edit](#)

Of course. It's been a couple of years since I tried to create a standalone with the built-in resources. Thanks, Kris.

Mike

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More on string resources

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): More on string resources



By [ronald b. kopelman](#) on Sunday, February 17, 2002 - 07:43 am: [Edit](#)

When I try the following:

```
: testCode 1000 [id] tSTR dmGet1Resource 2dup
memHandleLock >rel 5 type 2dup
memHandleUnlock drop
dmReleaseResource drop ;
```

it seems to work but I get garbage instead of the characters I expect. If I change dmGet1Resource to dmGetResource, saI get the same result but different garbage. Any clues??

ronald b. kopelman



By [Steve Bohrer \(Skb\)](#) on Sunday, February 17, 2002 - 10:31 pm: [Edit](#)

rel> can not make an arbitrary address be within a 16-bit offset of the quartus data pointer, but merely can "undo" what a previous >abs might have done to make such an address be a global 32-bit pointer to some buffer in the data space.

So, to display the contents of a handle at an arbitrary 32-bit address, you can either copy it to a local buffer via an OS function that deals with global addresses, and then type that buffer, or else use an OS fuction to draw the text directly.

Do you need the word wrapping and page support that type provides? If so, it is easiest to copy your resource into a local buffer. But, if you just need to plop the text onto the screen, then save the memory and time of the copy, and draw the chars yourself.



By [ronald b. kopelman](#) on Monday, February 18, 2002 - 08:05 am: [Edit](#)

Yes, this was it. I had no trouble dumping the text into a field & displaying it which was my goal all along. Thanks for the tip.

ronald b. kopelman

ronald.kopelman@verizon.net

<http://homepage.mac.com/rbkopelman/>

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Tips

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Tips](#)



By [Steve Graham \(Steve\)](#) on Saturday, February 16, 2002 - 08:35 pm:

[Edit](#)

I've learned a lot in my latest application. Thought I'd like to pass on some lessons learned.

I find that I often have a situation where I need to repeatedly check if I should execute a word and, if not, repeat the process again with yet another word. In order to reduce line count, I've developed a technique of combining the test with the action. For example:

```
: do-SetTimeFormActions? ( n --f )
  dup SetTimeFormAction=
  if      dup do-SetTimeFormOK? 0=
          if do-DigitPressedActions?
            then
            drop -1
  else drop 0
  then
;
```

In `SetTimeFormActions?` I check to see if I should execute an action. If so, I execute the action and return true. Otherwise, I simply return false. If I return false (0=), I can repeat the action. So, I both check a condition and perform an action by invoking 1 word = 1 line.

Another technique I found useful is to number all controls for a given form in 1 number range, and then perform a check for that range to see if I need to perform an action for any of that form's controls. For example, if all of my forms controls are in the 14000-14999 range, I can check to see if I need to handle any of them by:

ControlID 1000 / 14 =

So it only requires 1 line to test for each form's controls. I'm pretty sure I discovered this technique in this forum. Just want to say that it works well. It could be further optimized by making a table of xt's for each form and executing the xt based upon an offset to the table. So, if I had 14 forms with controls numbered from 1xxx to 14xxx, I could put an xt for each form in a table, and could execute the controlling word for the above form's

controls by something like:

```
xt-table 13 ( controlID 1000 / ) cells + @ execute
```

Thanks again for the forum. Great to compare notes with you all.

Steve



By [Kris Johnson \(Kdj\)](#) on Saturday, February 16, 2002 - 09:34 pm: [Edit](#)

You might want to share some of these tips in the wiki. Forum postings tend to get "lost" as they eventually get archived, making it difficult for people to find the information they are looking for.

-- Kris



By [Steve Graham \(Steve\)](#) on Saturday, February 16, 2002 - 10:32 pm:

[Edit](#)

Kris,

Good idea. I have added it to the Tips section. Never thought I would be adding, instead of receiving, tips.

Steve



By [Steve Graham \(Steve\)](#) on Saturday, February 16, 2002 - 10:52 pm:

[Edit](#)

Kris,

Figured it was more of a general Forth comment, so moved it to General Forth Topics/Forth Code Snippets

Add a Message

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Forms - Problems and Resolution

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Forms - Problems and Resolution



By [Steve Graham \(Steve\)](#) on Saturday, February 16, 2002 - 09:52 am:

[Edit](#)

First I would like to thank Neal for this product and this forum. I was able to solve my form problem and get answers to other questions.

Now, why I was having the form problem (not erasing a window upon executing FrmReturntoForm), I do not know. I next created a bare bones app, just to prove to myself that the concept worked. Then I moved over my code and resources to that program and new resource. Working great.

I wonder how often people have found a work around without ever really knowing why the original did not work as it should have?!?!?



By [Kris Johnson \(Kdj\)](#) on Saturday, February 16, 2002 - 10:17 am: [Edit](#)

It happens to me all the time, although I really haven't had that experience with Quartus yet.

Problems such as these are commonly attributed to sunspots or the phase of the moon.

-- Kris



By [dbennett](#) on Saturday, February 16, 2002 - 11:01 am: [Edit](#)

Or neutrinos. Bank of America in the late '70s actually offered, as an official explanation for why someone's account balance went from \$7,000,000 to \$700,000, the argument that a neutrino from the sun passed through the bank's computer memory and flipped a bit on that person's account! They did put the zero back on the account balance. 😊 We laughed over that news item for days.

Dave



By [Kris Johnson \(Kdj\)](#) on Saturday, February 16, 2002 - 09:41 pm: [Edit](#)

I had a client who was willing to accept "Y2K" as the explanation for an unexplainable and unreproducible issue we had a few months ago (late 2001).

-- Kris



By [Kris Johnson \(Kdj\)](#) on Saturday, February 16, 2002 - 09:43 pm: [Edit](#)

(I should note that I'm not the one who suggested that Y2K was the problem, and I explained that Y2K probably had nothing to do with it.)



By [Jim Hendricks \(Jimh\)](#) on Saturday, February 16, 2002 - 10:13 pm:

[Edit](#)

When I was in the Navy I was a Radioman. Believe it or not, sun spots are a real reason for unexplainable radio behavior. So is weather, and any atmospheric conditions. We actually experience once being 6 or 7 hundred miles from the coast and yet were able to receive an AM radio station. Our chief explained that it was probably caused by just the right humidity conditions which causes major radio frequency bounce. We were able to receive the station for about 3 hours.

The Navy actually issued weather advisories which included sun spot activity so we could be prepared for the strange anomalies that would happen. We looked forward to when there was a lot of activity 'cause we had an excuse that the non-technical could not refute!

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My memo

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): My memo

 By [Dave Bennett \(Dbennett\)](#) on Wednesday, February 13, 2002 - 11:18 am: [Edit](#)

Does anyone have any code for opening a memo where the name is known? For instance, my memo is named myMemo. I want to open it.

I've searched the archives and though several people have looked at this, there is no code samples of actually doing it.

Dave

 By [Matthew Burke \(Mmb\)](#) on Wednesday, February 13, 2002 - 11:58 am: [Edit](#)

If you grab <http://www.quartus.net/files/PalmOS/Forth/Library/newmemo.txt> the word FindMemoInCategory gets you most of the way there. It loops over all memos, checks to see if they are in the category of interest and then checks the memo name (first line).

All you need to do is yank out the category test.

 By [Ron Doerfler](#) on Wednesday, February 13, 2002 - 12:30 pm: [Edit](#)

Hi Dave,

I have apps that show the titles of memos so that the `_user_` can select a memo. For example, my TeachFile app allows a user to import a list of students into a class from a memo that is created on the PC and then hotsync'd onto the Palm. The user selects the Class Import menu option and gets a screen of the first 10 memo titles, and can then use arrows to navigate through the screens, tap on a title, and then tap an Import button for my app to read the student names and populate the class. So while I don't search for a title in my app, I do extract the titles and show them to the user.

Anyway, the title of a memo is the text prior to the first linefeed (0x0a), so you could open the memo database, find the number of records (one per memo), and loop through each one until you find the title string you want to match. Once you open the record and get the absolute address of it, you can use:

```

:line-len (a-addr. -- u EOF?)
\ Returns the length of a line
\ beginning at the absolute
\ address given, based on the
\ next location of a linefeed
\ 0x0a.  If none is found, it
\ is assumed that this is the
\ last line.  A flag indicating
\ whether this is the last line
\ is also returned.
2dup 2dup 10 rot rot StrChr
2dup 2rot d- d>s rot rot
or 0= if
  drop StrLen true
else
  rot rot 2drop false
then ;

```

Then you can use the PalmOS function StrCompare, but first you have to copy this first line into a location to make it a null-delimited string. I'm absolutely sure that there are more convenient ways to do this (Neal?), but my brute force approach is to create a buffer of sufficient length (which I use for all sorts of things), initialize it to all zeros, and then copy the line into it so that it will then end with a 0x00.

needs toolkit

```

121 constant TSize
variable tptr
create tbuf TSize 0allot

: init-t ( -- )
\ Fills the text buffer with 0x00's.
tbuf TSize 0 fill;

: as>t ( a-addr. u -- )
\ Copies a string at abs. address
\ to the beginning of the text
\ buffer.
s>d 2swap tptr @ >abs
MemMove drop ;

```

So after you open the memo database, you would open each record, find the line length, init the text buffer, and copy the string into the buffer, thereby now having a null-delimited string, which you can compare to your

expected string using StrCompare against the absolute addresses for the buffer (tbuf > abs) and the expected string.

Ron



By [Ron Doerfler](#) on Wednesday, February 13, 2002 - 12:35 pm: [Edit](#)

Ah, Matthew's post happened while I was preparing mine, so I didn't see it. Looks like it's a lot more convenient. In my app, I needed to actually know the line length, as I copy the string into a field on the form, so the solution mentioned by Matthew is not of use to me, but it looks ideal for you.

Ron



By [Ron Doerfler](#) on Wednesday, February 13, 2002 - 01:11 pm: [Edit](#)

In any event, I garbled the text buffer code a bit in the process of customizing it. Below is the complete file I include for my text buffer use. It's very convenient for creating long null-delimited strings from S"-created strings or other pieces, or for moving strings into a null-delimited area, and I use it all the time. It also avoids occasional problems with the scratchpad area of Forth (used by APPEND, I think?) being overwritten by other functions, and it doesn't have the length limitation. I set the length to the maximum I need in my app, but it can be set much larger, of course. I can't recall if I put it on the Wiki--I'll look and submit it if it's not there.

```
\ buffer-ext2 073000 RWD

\ General text buffer routines.
needs toolkit

121 constant TSize \ 120 plus null.
variable tptr
create tbuf TSize 0 allot

: init-t ( -- )
\ Fills the text buffer with 0x00's
\ and resets current location to the
\ beginning.
tbuf tptr ! tbuf TSize 0 fill;

: tptr+ ( u -- )
\ Moves current location in
\ text buffer.
tptr +! ;

: >t ( char -- )
```

```

\ Adds character to next
\ location in text buffer
\ and increments location.
tptr @ c! 1 tptr+ ;

: ,>t ( -- )
\ Appends comma
44 >t ;

: cr>t ( -- )
\ Appends carriage return
10 >t ;

: bl>t ( -- )
\ Appends space
bl >t ;

: as>t ( a-addr. u -- )
\ Copies a string at abs. address
\ to the next location of the text
\ buffer and moves the current
\ location.
dup >r s>d 2swap tptr @ >abs
MemMove drop r> tptr+ ;

: s>t ( c-addr u -- )
\ Appends string to next location
\ of text buffer and moves the
\ current location.
>r >abs r> as>t ;

: t>s ( -- c-addr u )
\ Text buffer to string.
tbuf tptr @ tbuf - ;

: t>as ( -- a-addr. u )
\ Text buffer to absolute
\ string.
t>s >r >abs r> ;

```

Ron



By [Joe Nasal \(Jsnn\)](#) on Wednesday, February 13, 2002 - 01:23 pm: [Edit](#)

Ron:

Where were you when I posted my "Large Strings" query to the Wiki a few

days ago... 😊

Anyhow, thanks for these routines -- they look very useful.

Joe



By [Ron Doerfler](#) on Wednesday, February 13, 2002 - 01:32 pm: [Edit](#)

Oh, I just went back and I found those posts on this forum that were posted last weekend--I wasn't online last weekend, and I usually just link to the "Last Day" view, as I am generally fairly current, so I missed those posts.

Ron

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Large Strings

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Large Strings



By [Joe Nasal \(Jsn\)](#) on Saturday, February 9, 2002 - 05:50 pm: [Edit](#)

Hi all:

I'm trying to populate a scrollable field with a large string (several hundred characters over several lines). I've tried creating a zero-terminated string with z", but when I get over some (variable) critical length (around 200 characters) Quartus fails to compile the code and bails with a "Fatal Exception", resets my box, etc. I'm a newbie, so the chances I've missed something are great...

My approach is this -- within a colon word I start typing, z" blahhblahblah...blahblahblah " What's between the quotes is several hundred characters; as I'd mentioned it spans several lines in my text editor. Ideally, I'd like to embed carriage-returns in the string for formatting purposes, but I don't know how to do this...

...which brings up another question: can I somehow take the contents of a string resource (tStr) and use them to populate a field? Since this is "static" text it would be convenient for me to define these long strings for reference in a string resource.

Thanks,

Joe



By [Chapman Flack](#) on Sunday, February 10, 2002 - 03:37 pm: [Edit](#)

Absolutely - a resource would be the way to go for something like that. Easier to edit, you don't need to worry about Forth line length limits, and you keep those several hundred characters out of the Forth dataspace.

Once you've done DmGetResource and MemHandleLock you have a 32-bit absolute address of the string, which is just what the Palm OS calls should want as input. There may even be simpler Palm OS calls that combine those steps for you, but I don't remember offhand.

-Chap



By [Joe Nasal \(Jsn\)](#) on Monday, February 11, 2002 - 10:52 am: [Edit](#)

Chap:

Thanks. Throw in FldSetTextPtr FldDrawField & I should be G2G. I'll post code after I've got it nailed for reference.

BTW, before you posted I did a bit of this the hard way -- created a string buffer and append'd into it to build the resultant (large) string. In this case that's a hassle, but this technique might be useful for others. As you mention, though, this takes some codespace via the buffer init.

Thanks for the help,

Joe



By [Joe Nasal \(Jsn\)](#) on Saturday, February 16, 2002 - 03:57 pm: [Edit](#)

I need some help:

I used handle>Field (handle. fieldID --) from string>anyField for this. Here's my code:

```
8000 [ID] tSTR DMGetResource / get resource handle
2dup >r >r 2dup
MemHandleLock 2drop
2040 handle>Field / 2040 = field ID
r> r> 2dup
MemHandleUnlock drop
DmReleaseResource drop
```

This does the trick -- I'm able to grab a handle to the string resource & then use handle>Field to draw the string to the field.

The problem comes when I attempt to close the form. I crash with:

"Field.c, Line: 5998, Deleting dm Handle"

Am I not locking and releasing the resource properly? Any clues...?

Thanks,

Joe



By [Steve Bohrer \(Skb\)](#) on Sunday, February 17, 2002 - 12:11 am: [Edit](#)

Fields (I'm pretty sure) dispose of their handles when the form (and thus the field) is closed; otherwise, they would leak memory. BUT, if you give the field some piece of your resource file to display, then there will be trouble when the field gets disposed of, and it tries to free the handle you

gave it.

A workaround, I think, is to pass that field a null handle before you close. This is noted somewhere in the OS Reference, very probably in the comments for whatever OS routine the handle>field word uses. Try looking that up for details.



By [Joe Nasal \(Jsn\)](#) on Monday, February 18, 2002 - 08:26 am: [Edit](#)

Found this in the OS reference. I passed the field a null handle before closing the form and all is well...

Thanks Steve.

Joe

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Float out of range error

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Float out of range error



By [Dave Bennett \(Dbennett\)](#) on Friday, February 8, 2002 - 02:18 pm:

[Edit](#)

I discovered the problem with the exit to the app launcher with my Lorenz program. It is a "float out of range" error. I'd appreciate any ideas on how to detect/handle this situation.

Thanks.

Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, February 8, 2002 - 02:24 pm:

[Edit](#)

CATCH will be able to trap those errors. Here's some simple code that will catch errors for you to handle as you wish (by restarting your app, issuing an error message, etc.):

```
: yourmain ... ;  
  
: go  
  ['] yourmain catch ( -- throwcode )  
  \ ... check the throwcode here, handle accordingly  
;
```

Neal



By [Neal Bridges \(Nbridges\)](#) on Friday, February 8, 2002 - 02:25 pm:

[Edit](#)

Sorry, error in the original of that last message, which some of you will have in email; the one in the forum is corrected.

Neal



By [Dave Bennett \(Dbennett\)](#) on Friday, February 8, 2002 - 05:51 pm:

[Edit](#)

OK, I've come up with this from a sample on the wiki.

```
: go  
['] mygo catch CASE
```

```
0 of (bye) endof
-257 of (bye) endof
-43 of
hFOOR \ handle float out of range
endof
ENDCASE
;
```

I just want hFOOR to say "tone down that 4th parameter" and restart my app. What kind of loop should I put around the above to achieve that?

Dave



By [Dave Bennett \(Dbennett\)](#) on Saturday, February 9, 2002 - 08:52

am: [Edit](#)

I'll blame the drugs for that last post. 😞

Here's the solution I came up with and it works fine. Thanks for the pointer, Neal.

```
: go
begin
['] mygo catch CASE
0 of (bye) endof
-257 of (bye) endof
-43 of
hFOOR \ handle float out of range
FrmCloseAllForms
endof
ENDCASE
again
;
```

Dave

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Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Filling on-screen rectangles

Quartus Handheld Software: Discussion Forum: [Quartus Forth \(PalmOS version\)](#): Filling on-screen rectangles



By [Bryan A. Zimmer \(Bzimmer\)](#) on Thursday, February 7, 2002 - 08:12 am: [Edit](#)

Hello,

I did the Mirror Tutorial that is on-line at the Wiki Site. Unfortunately it only says how to fill the whole screen. I am trying to create something that looks like a piano keyboard and it needs to have the black keys filled in. Can someone tell me how to do this? Just fill in a specific rectangle instead of the whole screen?

Or possibly can someone recommend a good book on more-advanced Forth topics that I can use with Quartus?

I also wonder what happened to RsrcEdit, the onboard compiler. Their web site seems to have disappeared.

Thanks,

Bryan Zimmer
baz@baz-tech.com



By [Chapman Flack](#) on Thursday, February 7, 2002 - 11:50 am: [Edit](#)

Bryan,

To your last question:

<http://www.quartus.net/discus/messages/29/1578.html?1011662317>

-Chap



By [Kris Johnson \(Kdj\)](#) on Thursday, February 7, 2002 - 12:13 pm: [Edit](#)

And to your first question: yes, just figure out which little rectangles you want to fill, and use WinFillRectangle or something like the fill-rect word from the tutorial.

The 'graphics' module included with Quartus includes some utility words that may help.

You also might want to look at the UsingTheStackAsAMemoryBuffer topic in the wiki (although it may be a little too advanced, and just confuse you).

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Thursday, February 7, 2002 - 12:54 pm: [Edit](#)

I tried WinFillRectangle recently and didn't have any luck. What happened was it "filled" the area I selected with several vertical lines, leaving vertical spaces between them. I didn't experiment much further as I really didn't need this, just thought it would be a quick thing.

Dave



By [Kris Johnson \(Kdj\)](#) on Thursday, February 7, 2002 - 01:31 pm: [Edit](#)

You need to make sure you set the fill pattern first, using WinSetPattern as demonstrated in the MirrorTutorial.

-- Kris



By [Paul Randall \(Paul\)](#) on Thursday, February 7, 2002 - 10:11 pm: [Edit](#)

And if you need to design a special pattern you can use my pattern editor available at:

<http://www.palmgear.com/software/showsoftware.cfm?sid=53457420020104183554&prodID=39088>

You can also use winFillLine with custom patterns to create various sorts of dotted lines.

- Paul



By [Steve Bohrer \(Skb\)](#) on Friday, February 8, 2002 - 09:52 am: [Edit](#)

WinDrawRectangle just uses the current foreground color, rather than WinFillRectangle, which uses the current pattern.

So, if you just want a solid rectangles, WinDrawRectangle and WinEraseRectangle are simpler. WinInvertRectangle was the other simple rectangle routine, but it can give funky looking results on color screens, so OS 3.5 doesn't use it for highlighting buttons and such.

If you need patterns or the other drawing modes, then use WinFillRectangle or WinPaintRectangle, which use these features.



By [Kris Johnson \(Kdj\)](#) on Friday, February 8, 2002 - 11:30 am: [Edit](#)

Does WinDrawRectangle draw a solid rectangle? I thought it only drew outlines.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, February 8, 2002 - 01:38 pm: [Edit](#)

OK, I now notice that there is a WinDrawRectangleFrame function that does outlines.

I'll update the MirrorTutorial to use WinDrawRectangle. It is intended to be as simple as possible.

-- Kris

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Date selector

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Date selector



By [SamuelTardieu](#) on Wednesday, February 6, 2002 - 05:22 pm: [Edit](#)

This ought to be a Frequently Asked Question, but I couldn't find an answer while using briefly the search engines.

I am writing an application in which I need to have the user select a date (or no date). Is there any systrap or Quartus code which opens a proper date window and allows me to do that without coding a calendar frame?



By [Steve Bohrer \(Skb\)](#) on Wednesday, February 6, 2002 - 09:11 pm:

[Edit](#)

SelectDay appears to be the OS trap you want.

I've not used it, but just after I read your post, I was poking around at the PalmOS site, reading the new (to me, anyway) [Palm OS Programming Recipes](#) pages. SelectDay is the example on the selector trigger page.



By [Chris Bucsko](#) on Thursday, February 7, 2002 - 05:30 pm: [Edit](#)

yup, here's some example code, I modified from the forum:

```
needs calendar
needs facility-ext
needs zstrings

: cal-init ( -- )
  \ initialize to today :
  time&date year ! month ! day ! drop
  2drop ;

: title z" Select a Day" ;

: cal-popup ( -- )
  \ pops up a calendar, returns date :
  cal-init
  title drop >abs
  year >abs
  day >abs
  month >abs
```

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New Quartus App - Lorenz Attractor

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Quartus App - Lorenz Attractor



By [Dave Bennett \(Dbennett\)](#) on Wednesday, February 6, 2002 - 04:36 pm: [Edit](#)

No electricity for 6 days and all I had was a Palm Vx. So this is the result.

A Lorenz attractor implementation for the Palm OS. It allows you to "roll your own" inputs and generates the resulting map through 10,000 iterations. Allows you to zoom 1 - 5 times for more detailed inspection of the resulting image. Maps in XY, XZ, and YZ coordinates.

It's only available at my site www.micoks.net/~dbennett/la.html right now, but will be up on Palm Gear in a couple of days.

I'd advise clicking on the info icon in the top right corner and reading through that information first.

To get an idea of the simplest inputs making a BIG difference, go to the I page and enter 5, 50, 4, 0.001 as the input set and then map it. Then go back to the I page and change the 0.001 to 0.002 and remap it.

WARNING!! This app carries a BB (battery burner) label. I sucked a lot of solar power down recharging my palm during the power outage from playing with this thing.

Dave



By [Mike Will](#) on Wednesday, February 6, 2002 - 07:45 pm: [Edit](#)

That is a cool app, Dave. It's fast (even compared to similar things I've seen for the PC). Is it all integer calcs? Ever thought of doing the Mandelbrot set? Sorry to hear about the power problems. Personally, I blame Enron.

I used to hang around with strange attractors, but I was afraid of catching something. So, I got into data modeling. Well, my date told me she was a model, but she turned out to be just a little schema.

Mike



By [Dave Bennett \(Dbennett\)](#) on Thursday, February 7, 2002 - 09:06 am: [Edit](#)

Actually, we had an ice storm. Rained 2" while it was 26F. Stuck to everything. There isn't a tree within 100 miles that is damaged with broken limbs or completely down. There are city, county, State, and National emergencies declared for several counties in Eastern Kansas and Western Missouri.

Haven't thought about doing the Mandelbrot set at all. I just liked strange attractors, specifically the Lorenz and coded this on a lark between serious apps.

It isn't integer math, but uses the internal Quartus float stuff. I thought about using MathLib, but since Lorenz's "Royal McBee" had accuracy to 6 decimal points, and as the Motorola FFP on the Palm does also, I thought I'd try to keep the outcomes of the calculations somewhat similar. The Palm is much faster: the Royal McBee could only do 60 multiplies a second.

I knew a little schema once. Her data structure was flexible, but she had a functional dependency outside the normal forms so I went for someone more stable.

Dave



By [Kris Johnson \(Kdj\)](#) on Thursday, February 7, 2002 - 09:21 am: [Edit](#)

This reminds me of the time, early in my career, when I was having trouble with getting Oracle's date/time functions to do what I want. So I broadcast an e-mail asking "Can anyone tell me how to manipulate a DATE?"

I got some very informative responses.

-- Kris



By [Mike Will](#) on Thursday, February 7, 2002 - 01:06 pm: [Edit](#)

I'm even more impressed with the Lorenz grapher now that I know it's in floating point. This makes a nice showcase app for Quartus itself. It serves as proof once again that a large portion of a PC's power is wasted on the massive bulk of the operating system it has to carry.

Mike



By [Kelly Janz](#) on Thursday, February 7, 2002 - 03:18 pm: [Edit](#)

I tried rolling my own using 10, 28, 2.666666, 0.040000 and the app quit back to the launcher. Varying that last parameter seems to cause the quit fairly frequently.

Fun toy!!!



By [Dave Bennett \(Dbennett\)](#) on Thursday, February 7, 2002 - 06:39

pm: [Edit](#)

Hmmmm. I haven't had that, but I'll try it on a couple of other palms with different OSs. What device and OS are you using?

Dave



By [Steve Bohrer \(Skb\)](#) on Friday, February 8, 2002 - 10:00 am: [Edit](#)

Not to minimize how slick this is, but, in terms of speed, keep in mind that most PC implementations of this sort of thing are drawing LOTS more pixels. A 160x160 window on a desktop machine looks pretty tiny.

Of course, the desktops also have to deal with very fat OSes. But, PalmOS 4.0 is getting a bit plump, and once PalmOS can count on an ARM, who knows?



By [Dave Bennett \(Dbennett\)](#) on Friday, February 8, 2002 - 10:39 am:

[Edit](#)

When we get to ARMs, I'm going with Linux. 😊 I'll go with a mature OS that already has "everything" instead of watching Palm play catch-up with WinCE.

Dave



By [Mike Will](#) on Friday, February 8, 2002 - 11:50 am: [Edit](#)

I, on the other hand, will look to something like Quartus. Forth allows direct application development with the OS as strictly an optional toolkit. I don't mind having lots of eye candy (I love my PocketPC), so long as my apps don't have to be built on top of it.

Steve -- yes, point taken. However, have you noticed how difficult it's getting to write this type of app on a PC in recent years? If you're not glueing Outlook to IE, you may as well forget MS tools as that's all they're good for anymore. I could write a good version of Dave's program in QuickBASIC or QuickC. I wouldn't even attempt to build and distribute it in .net or C#

Mike



By [Kris Johnson \(Kdj\)](#) on Friday, February 8, 2002 - 01:14 pm: [Edit](#)

Having spent some time with Linux PDAs, I'll stick with Palm OS + Quartus

Forth for as long as they are available.

Linux is great for developing server-side stuff, but for an application that requires a simple UI, it is a nightmare.

-- Kris



By [Chapman Flack](#) on Friday, February 8, 2002 - 01:46 pm: [Edit](#)

I wonder how long before a Palm OS emulation library for ARM Linux? 😊

-Chap



By [Heather Risedorph \(Rise1525\)](#) on Friday, February 8, 2002 - 02:07 pm: [Edit](#)

Maybe I missed something but what's an ARM other than the thing attached to my shoulder?



By [Dave Bennett \(Dbennett\)](#) on Friday, February 8, 2002 - 02:11 pm: [Edit](#)

That's what I was thinking Chapman. Perhaps we'll be able to run POSE on the ARM Linux and therefore still run our Palm apps as well.

I'll probably stay with Quartus and Palm OS myself as long as they are available; but my main user box will be the Linux handheld. I love Quartus and Forth, but hate most of the restrictive apps for the Palm that treat the Palm as an adjunct to a desktop machine. I think in a few years we'll all have handhelds that drop into a "cradle" when we get home that'll give us keyboard input and display on our TVs. (I wouldn't be surprised if Sony pioneered this kind of thing.)

I just don't have any confidence whatsoever in Palm's ability to deliver anything innovative. They have played "us too" all the way down the road. When they were looking for a board member to direct their strategy their main point was "someone familiar with Microsoft handheld efforts", not someone with creative, innovative ideas outside the already existing world of handhelds.

Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, February 8, 2002 - 02:13 pm: [Edit](#)

Heather, ARM is a class of CPU. RISC-based, fast, and increasingly popular. Palm is moving to them with their next gadget.

Neal



By [Dave Bennett \(Dbennett\)](#) on Friday, February 8, 2002 - 05:58 pm:

[Edit](#)

Kelly,

I was able to consistently duplicate the problem you pointed out. It seems that that fourth parameter causes the results to get really big, really fast. (About 12 iterations with .04 will cause the "unscheduled exit".) My first thought was to just remove that parameter, but carefully playing with it causes some very nice results image-wise so I really don't want to get rid of it.

What I've decided to do instead is to trap the error when it occurs, point out that the 4th parameter is too big, and then restart the app.

Does this sound reasonable to you? or to anyone else reading this thread?

Thanks for the feedback.

Dave



By [Kelly Janz](#) on Friday, February 8, 2002 - 06:40 pm: [Edit](#)

First crack, I'd like to see a dialog telling me what the min and max for that parameter was. Long term, I'd love to see sliders or scroll bars that would automatically keep the parameters in the range the program likes.

Also, when the user uses the I button to roll their own, the drop down list should automatically go to the roll your own option to use those parameters immediately - consolidate those two controls, since they are tied together.

Just for the record, I'm on a Handspring Edge with OS 3.5H.

Kelly



By [Dave Bennett \(Dbennett\)](#) on Friday, February 8, 2002 - 07:30 pm:

[Edit](#)

The min and max can vary depending on what you enter for the other values. If the error occurs at X, and any of the other values * the fourth value are greater than or equal to X, then there is a problem. But it could be caused by any number of things. Because the A, B, and C values (explained in the info screen) interact in the equations, their multiplying by the fourth value can have myriad results. That's why I don't think I can actually say the 4th value is between this or that.

I thought about tying the two controls together, but found that I don't always want to run "roll your own" after going to the I button. Sometimes I enter the I button parameters, then run one of the standard data sets, then go to "roll your own" so I can see the difference.

I'll have to think about that a little more. Perhaps after I get more feedback once it's posted on PalmGear I'll have a clearer idea of what should be considered "normal" use.

Dave



By [Dave Bennett \(Dbennett\)](#) on Saturday, February 9, 2002 - 03:37 pm: [Edit](#)

Fixed App Available

I've fixed the unexpected exit problem caused by a "float out of range" (-43) error. The app now gives you a message that the numbers won't compute and restarts itself.

It is available at www.micoks.net/~dbennett/la.html

Dave



By [Dave Bennett \(Dbennett\)](#) on Thursday, March 13, 2003 - 04:42 pm: [Edit](#)

Another year, another surgery. Down 15 months and counting. But not to worry, I've kept my mind alive. My Palm Vx died a few weeks ago and to cheer me up after my most recent surgery (right shoulder as they try to find why the pain on that side wasn't fixed with the neck surgery last year), my wife bought me a Sony Clie replacement. It is a color device so what would I do with that, and no right hand? Yup, modify an existing app to take advantage of the new device's capabilities!

I've upgraded the Lorenz Attractor to Lorenzc (color). If you'd like to try a copy, I'll email you one directly. Using a twiddler2 for input isn't the swiftest and I'm not quite up to attempting packaging and parking it on my website for some time.

Drop me an email and I'll send out the PRC file. (It has a different ID than the first one so you can keep them both online if you'd like.)

Dave Bennett, Professional Patient

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Problem with FrmReturntoForm

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problem with FrmReturntoForm



By [Steve Graham \(Steve\)](#) on Saturday, February 2, 2002 - 03:18 pm:

[Edit](#)

In my program I am bringing up a main window and then a secondary window using PopupForm in both cases. So far so good. When I try to clear the secondary window, with FrmReturntoForm, nothing seems to happen, though I am certain the code is being executed. I've dummied up a smaller version of the same program, and it seems to work just fine. I'm out of clues. Any ideas would be much appreciated.

TIA, Steve



By [Chris Bucsko](#) on Tuesday, February 5, 2002 - 05:06 pm: [Edit](#)

If you're changing something which may affect the main form's display, FrmReturnToFrom won't work. I got a lot of crashes and erratic behavior by popping up a form which deleted records and then trying to return to a main form which displayed records. I re-wrote the code to only use FrmReturnToForm when there were displayable records. Otherwise, I bailed into a startup form using ShowForm. You might also try putting the beep word in the code, just to make sure you're executing it. Crude, I know, but easy and quick.

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"including" source programmatically???

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): "including" source programmatically???



By [Frantisek Fuka](#) on Saturday, February 2, 2002 - 09:59 am: [Edit](#)

Because I used to program for Amiga I am using the improved DISASM (99.3.1 15:44 NAB JCF) to look at Quartus Forth word definitions and I find it tremendously helpful in explaining how Forth works. I included "needs disasm" in my startup.quartus file and I also created my shortcut word "S" that invokes SEE after performing "true more drop". However, this means that every time I switch to Quartus Forth, there is several seconds delay while the DISASM is compiled.

My question is: Can I somehow change my "S" definition so that the whole "disasm" is included only after I first invoke the "S" command? (So that when I don't want to use it, I don't have to wait several seconds each time I switch to Quartus.)

I presume there is no way to switch from Quartus to documentation or MemoPad, then switch back and have the Quartus in the exact same state I left it...?



By [Kris Johnson \(Kdj\)](#) on Saturday, February 2, 2002 - 12:42 pm: [Edit](#)

Some people use the PopUpNote hack to view/edit sources while in Quartus.

To define "S" such that it loads disasm on first invocation, you can put this into your startup.quartus:

```
create sbuf
  char s c,  bl c,
create sbufword
  84 chars allot

: s
  parse-word >r sbufword r@ move          \ copy word to sbufword
  cr s" Loading disasm..." type
  s" needs disasm" evaluate              \ load disasm
  s" : s true more drop see ;" evaluate  \ redefine S
  sbuf r> 2 + evaluate ;                  \ invoke S with sbufword
```

If you have ChapsDisassemblerMods from the wiki, you can define this in terms of his SEECs word, and avoid the need for the temporary buffer.

-- Kris



By [Frantisek Fuka](#) on Saturday, February 2, 2002 - 01:29 pm: [Edit](#)

Whew, thanks... Before I start digging into what all this means, could you just explain how you came up with that "84"?



By [Kris Johnson \(Kdj\)](#) on Saturday, February 2, 2002 - 02:47 pm: [Edit](#)

I just wanted a buffer large enough to hold whatever someone might enter on a line. Lines have to be less than 84 characters (I think--I could be wrong). If this were a "serious program", I'd put more thought into it and check for buffer overflow.

-- Kris

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Bitmaps or fields

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Bitmaps or fields



By [yeshiah](#) on Friday, February 1, 2002 - 11:04 am: [Edit](#)

I want to have a random number of bitmaps which are displayed on screen left to right. When a bitmap reaches the last horizontal position the next should be placed below it.

1 2 3
4 5

or

1 2 3
4 5 6
7

etc

do I do this dynamically (how) or hard code some buttons in the form and access them in order as needed?

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address is optional.

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Dynamic objects

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Dynamic objects



By [yeshiah](#) on Friday, February 1, 2002 - 11:03 am: [Edit](#)

how do I dynamically hide, display objects or dynamically make fields uneditable?



By [Paul Randall \(Paul\)](#) on Saturday, February 2, 2002 - 07:07 am: [Edit](#)

I keep the list of Quartus system traps handy at all times. (Html version on my pc desktop and theres a palm on-board version too.) If you want to dynamically hide/show controls there are traps that let you do that. I'm not sure about the fields question.



By [Kris Johnson \(Kdj\)](#) on Saturday, February 2, 2002 - 09:00 am: [Edit](#)

Here are some words I wrote for JacksOrBetter to show and hide controls:

needs Forms

```
: id>index ( ctlID -- n )
  GetObjectIndex ;

: >ControlPtr ( ctlID -- &ControlPtr. )
  GetObjectPtr ;

: active-form ( -- &FormPtr. )
  FrmGetActiveForm ;

\ Make given control visible & usable
: show-ctl ( controlId -- )
  id>index
  active-form FrmShowObject
;

\ Make given control invisible
: hide-ctl ( controlId -- )
  dup
  id>index
  active-form FrmHideObject

\ Workaround for bug in OS 3.2
\ and earlier
```

```
>ControlPtr CtlHideControl  
;
```

--Kris

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Implimenting editing features

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Implimenting editing features



By [ronald b. kopelman](#) on Thursday, January 31, 2002 - 12:23 pm: [Edit](#)

OK, I have coded up 3 editing functions of the sort

: doCut curFieldPtr fldCut ;

The others are doCopy & doPaste. These work fine from the menu & with the control codes. However, if I choose the little icons at the bottom of the screen, nothing happens. Anyone care to suggest what I should try next?



By [Heather Risedorph \(Rise1525\)](#) on Thursday, January 31, 2002 - 02:05 pm: [Edit](#)

If you pick the button it changes the curFieldPtr maybe? So how about storing the curFieldPtr everytime a field becomes active and then calling that?



By [Kris Johnson \(Kdj\)](#) on Thursday, January 31, 2002 - 10:33 pm: [Edit](#)

"little icons at the bottom of the screen" -- are you talking about the icons that show up when you do a Command stroke, or are these buttons/controls that are on your form?

If it's the Command-stroke buttons, might it be that your form is not the active form when the messages are sent?

-- Kris



By [ronald b. kopelman](#) on Friday, February 1, 2002 - 05:43 pm: [Edit](#)

I am indeed talking about the icons that show up when you do a Command stroke. Am I to understand that upon selecting one of these that the form or field changes? That's not nice! Still, I will try it with this assumption. Thanks.

ron



By [Steve Bohrer \(Skb\)](#) on Tuesday, February 5, 2002 - 10:24 pm: [Edit](#)

From Palm's OS 3.5 Top Issues page:

<http://www.palmos.com/dev/support/docs/palmos35/topissues.html>

Quote:

Problem Symptom:

The automatic cut/copy/paste/undo buttons on the 3.5 command bar appear correctly, but don't do anything when tapped.

Problem Cause:

The application is probably incorrectly saying that it handled the event sent by the command bar. If an application's event handling routine always returns TRUE for menu events, even those it doesn't actually handle, then the system doesn't get a chance to process those buttons. (These buttons send menu events with IDs ≥ 10000 , which are in the system reserved range.)

Solution:

Only return TRUE from your event handler if you've fully handled an event and don't want the system to take action on it.

Additional Info:

If your application needs to handle these events on its own, either add your own buttons to the command bar when you get a menuCmdBarOpenEvent, or else handle the menu command events with IDs 10000 to 10003 (sysEditMenuUndoCmd through sysEditMenuPasteCmd) yourself.

Any chance this is related to the default system edit menu not working with standard Quartus forms?



By [Steve Bohrer \(Skb\)](#) on Tuesday, February 5, 2002 - 10:59 pm: [Edit](#)

As for Ronald's original question, you might try Palm's suggestion of looking for the system menu commands and passing them to your handlers.

As a test, try printing the event types and ids so you can see what is generated when you tap on one of the menu buttons.

It is possible that all of these events are consumed within Ekey. If so, for a slightly more involved test, you can call EvtGetEvent directly, print the event types and values, and then call handleEvent.

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Newbie installCbStack question

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie installCbStack question



By [Eric Cole](#) on Thursday, January 31, 2002 - 12:38 am: [Edit](#)

Hi,
I have been working through the code Steve Bohrer posted in August 2000 using list draw callbacks for dynamic lists (though applied to reading elements of the array created by SysCreateDatabaseList). Looks good up to the point where I call "installCbStack" as the first word of the "ListDrawCb" word from the tutorial. At which point I get a Fatal Exception and need to tap reset.

I have been poking at this for a bit and have no idea where to look for answers. Any ideas or resources (I checked the Wiki and read/skimmed the archives, did I miss something?) Could this be an OS version issue? I am using a recently purchased Visor Deluxe (Palm OS v. 3.0.1 ?) for development.

Thanks in advance,

Eric



By [Steve Bohrer \(Skb\)](#) on Thursday, January 31, 2002 - 08:37 am: [Edit](#)

It is necessary to allocate memory for the the callback stack before you run the callback code. Call allocCbStack before you enable a word that will call installCbStack. allocCbStack takes the stack size as an argument.

Updated versions of the callback code, and (hopefully) clearer usage information, are on the wiki as [CallbacksModule](#).

There is a additional tutorial that uses callbacks to sort databases, on the wiki as [SortExamples](#).

(There is also a [known bug](#) in the Quartus definition of LstSetListChoices, but that would cause a crash when you call this trap, not when you call installCbStack, so you probably already have that fix.)



By [Eric Cole](#) on Thursday, January 31, 2002 - 12:18 pm: [Edit](#)

Thanks Steve. It turns out that unless I place the allocCbStack in the same word as where the installCbStack is I get the error. Doing that it works. Now to see why the ->xy errors! I'll check out the other examples you point to to see what is going on.

Thanks again!

Eric



By [Eric Cole](#) on Thursday, January 31, 2002 - 01:34 pm: [Edit](#)

Multiple misunderstandings on my part, masking other misunderstandings. I was using ['] (note the space between the [and the ' and the) . this mistake appears to have caused a number of problems down the line. So I fixed it and then went to work on the (initlist) word. For some reason it works now when I call the getObjectPointer to get the pointer to the list on the form each time I need it instead of using the return stack to store it. ??? I think ->xy is working. Almost there!
Thanks for the help.
Eric

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Plotting & Graphing

Quartus Handheld Software: Discussion Forum: [Quartus Forth \(PalmOS version\)](#):
Plotting & Graphing



By [Joe Nasal \(Jsn\)](#) on Wednesday, January 30, 2002 - 03:27 pm: [Edit](#)

Hi All:

Has anyone developed any code to aid in building simple graphs? I'm thinking of simple 2-D Line, Bar, Area kind of stuff.

My apologies in advance if this is something I should have spotted in the Wiki...

TIA,

Joe



By [Joe Nasal \(Jsn\)](#) on Wednesday, January 30, 2002 - 03:29 pm: [Edit](#)

Hi All:

Has anyone developed any code to aid in building simple graphs? I'm thinking of simple 2-D Line, Bar, Area kind of stuff.

My apologies in advance if this is something I should have spotted in the Wiki...

TIA,

Joe



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 30, 2002 - 03:52 pm:

[Edit](#)

2-D Line and Bar graphs are pretty trivial to do. What's in the "graphics" module should suffice.

Doing pie charts would be non-trivial, as Palm OS has no built-in functions for handling arcs or wedges. (You can sorta fake a circle by drawing a rounded rectangle with the right radius.) You may be able to use Neal's floodfill module to fill areas, but be aware that it only works on Palm OS 3.5 and higher.

-- Kris



By [Jim Hendricks \(Jimh\)](#) on Wednesday, January 30, 2002 - 04:18 pm:

[Edit](#)

The pie charts could also be done using the trig module to plot all 360 degrees in the circle, as well as to plot the end points for the radial lines. If I recall, there was also another trig module that allowed for more precision than just whole degrees.



By [Chapman Flack](#) on Wednesday, January 30, 2002 - 05:33 pm: [Edit](#)

If you do want to plot circles or circular arcs, there exist particularly good algorithms for it. There are some references near the end of the "Memory allocation assigned to address without a name" thread below (in case you wouldn't have guessed from the title of the thread).

-Chap



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 30, 2002 - 05:45 pm:

[Edit](#)

You also might want to check the Google Groups archives on comp.lang.forth. Every couple of months, someone asks about implementing Bresenham's scan-line conversion algorithms and similar things in Forth.

The implementations always look very, very messy in Forth. They aren't designed with a stack machine in mind. I've even seen Bresenham's line algorithm shown as "proof" that local variables are a necessary addition to Forth.

-- Kris



By [Chapman Flack](#) on Thursday, January 31, 2002 - 12:20 pm: [Edit](#)

It's possible then that the ideal implementations of the inner loops in those algorithms would be in asm68k using registers.

-Chap



By [Heather Risedorph \(Rise1525\)](#) on Friday, February 1, 2002 - 02:08 pm: [Edit](#)

My Bresenham works. I don't know if it's pretty or not. I think it is, but then it's the most complicated thing I've ever done in Forth. I don't remember my Wiki password or I would post it there, but here is the code:

```
\ MoreStackOps
```

```
: 1>4 3 roll 2swap ;
: 1>3 rot rot ;
: 4>1 2swap rot ;
: sMix swap 2swap swap ;
```

```
\ bcircle
```

```
needs MoreStackOps
```

```
1414 constant sqrt2
variable r/sqrt2
variable cpx
variable cpy
```

```
: bpixel ( x y -- x y ) 2dup 2dup WinDrawLine ;

: refpt ( x y -- x y ) bpixel swap bpixel ;

: 2pt++ ( x y -- x y ) 2dup cpx @ swap+- swap cpy @ swap + refpt 2drop ;
: 2pt+- ( x y -- x y ) 2dup cpx @ swap + swap cpy @ swap - refpt 2drop ;
: 2pt-- ( x y -- x y ) 2dup cpx @ swap - swap cpy @ swap + refpt 2drop ;
: 2pt-- ( x y -- x y ) 2dup cpx @ swap - swap cpy @ swap - refpt 2drop ;

: 8pt ( x y -- x y ) 2pt++ 2pt+- 2pt-- 2pt-- ;

: r/sqrt2! ( r -- r ) dup 1000 * sqrt2 / r/sqrt2 ! ;

: (8thc) dup r/sqrt2! 0 8pt drop -1 * -1 1 ;

: 8thcircle( r -- ) (8thc) begin 1>4 2 + tuck + dup -1 > if rot 1- tuck 1 lshift -
```

```
1>3 4>1 else sMix then 8pt 2>4 1+ dup r/sqrt2 @ > until ;
: drawcircle (x y r -- ) cpx ! cpy ! 8thcircle 2drop 2drop ;

\ test
10 80 80 drawcircle
```

Oh...I'm sorry if my stack thingies are messed up. I always get confused in definitions whether left or right means TOS. In drawcircle, x is TOS and r is 3rd on the stack.



By [Heather Risedorh \(Rise1525\)](#) on Friday, February 1, 2002 - 02:18 pm: [Edit](#)

One little fix... change

```
: r/sqrt2! ( r -- r ) dup 1000 * sqrt2 / r/sqrt2 ! ;
```

to

```
: r/sqrt2! ( r -- r ) dup 1000 * 500 + sqrt2 / r/sqrt2 ! ;
```

Radius 14 had holes. Now it doesn't.



By [Kris Johnson \(Kdj\)](#) on Friday, February 1, 2002 - 02:24 pm: [Edit](#)

Send me some e-mail if you'd like me to reset your wiki password. You can either tell me what you want it to be, or I'll just make one up that you can then change.

wikiwebmaster@sleepless-night.com.

-- Kris



By [Chapman Flack](#) on Friday, February 1, 2002 - 05:16 pm: [Edit](#)

The way I remember the order for stack diagrams is it's the same order your arguments are in when you test the word. You tested the word as

```
r y x drawcircle
```

so the stack diagram would be (r y x --)

-Chap



By [Kelly Janz](#) on Saturday, February 2, 2002 - 12:15 am: [Edit](#)

Not to pick on Heather, but this is a useful, non trivial piece of code that could be a great teaching tool if some of the experts here could look at it and make suggestions on Forth style, naming and optimization. I'm a newbie without even as much experience as Heather - I haven't written anything this good either! - but it looks wordy and there might be other ways to factor it. Any suggestions from the experienced ones?

Heather - I'm not trying to hold your code up for ridicule or anything like that; it works and that makes it leaps and bounds better than mine. But we never get to see first drafts of stuff from Neil or Chap or Kris, so we don't see the process of taking some code that works and polishing it to something that you would be happy to have in the library for the whole world to use.

I think there's a lot I could learn if anyone is willing to use this as an example.

Kelly



By [Kris Johnson \(Kdj\)](#) on Saturday, February 2, 2002 - 01:01 am: [Edit](#)

Neal Bridges' 'graphics' module has a CIRCLE word that, at first glance, looks a little simpler. ("Always use Neal's code" is a good rule to follow, unless you are trying to learn by doing it yourself.)

Some of the common phrases of Heather's implementation could be factored out into their own words (e.g., "2dup cpx @ swap", "swap cpy @ swap", "refpt 2drop"). And I might use more verbose word names.

I haven't looked closely at the algorithm. But I think "swap +" is the same as just "+". "-1 *" can be replaced with "negate", and "swap -" could be replaced with "negate + negate", which produces faster and smaller object code.

But this is mostly nitpicking. If you wrote it yourself and it works, be proud!

-- Kris



By [Chapman Flack](#) on Saturday, February 2, 2002 - 01:31 am: [Edit](#)

Kris,

I'm sure you wrote "negate + negate" to cleverly sidestep some boundary condition that "- negate" gets wrong and I'm too tired to pick it out; can you elucidate so we learn why the trick?

-Chap



By [Kris Johnson \(Kdj\)](#) on Saturday, February 2, 2002 - 07:59 am: [Edit](#)

No, I just wasn't thinking clearly at 1:00 am.

"negate + negate" and "- negate" generate exactly the same code in Quartus. The key point is to avoid the SWAP.

-- Kris



By [Heather Risedorph \(Rise1525\)](#) on Monday, February 4, 2002 - 10:28 am: [Edit](#)

I've looked at it a bit and I did my own modifications before reading the posts that piled up over the weekend while I was gone. I didn't see circle till I had this working. I am all for using Neal's code instead of my own, especially if I can figure out why he did what he did. I don't understand the return stack stuff at all, but basically his module was done the same way I did it with a few optimizations, one of those I already had tried but was worked out of my code when I actually got to debugging. With plotting the x and y in the 8 locations, I noticed you do the X Y and then switch and do Y X. My code does that and so does Neal's. I also noticed that you can do X Y, multiply the first one by -1 (negate, multiply, whatever) and get -X Y, then switch and get -Y -X then Y -X and that covers all the points. I was going to do it that way but it didn't work out in the first draft. Neal's does, so it's a good feeling that I was at least planning on doing it that way.

I didn't know the word negate till now. The changes have been made. I had already optimized out swap + because order of addition doesn't matter, I just had it there because I copied and pasted from code that was doing a subtract.

And you aren't picking on me. I posted here to have it be picked apart. I'd much rather have people who are already veteran programmers help me instead of pulling some sort of "you can never be one of us" attitude with me like I got at school when I wanted to take CS classes my senior year (what they didn't realize is I enjoy doing this more than some of the code geniuses so what I lack in experience I make up for in interest: I was the top scorer in one of those classes). I'll be the first to admit that learning by trial and error is not as good as taking classes but having

real programmers take the time to tell me how things SHOULD be done instead of how my limited experience lends me to do things is the only way I can learn at this point.

Anyway, doing circles was never really the goal for me, because I want to do graphics. I'm working on the bezier curves. I have the math worked out on paper and am working on implementing the first test of the code. If there are people who know a lot about rendering bezier curves I'd be interested in hearing from you, either here or by email. The thing I'm worried about right now is because it's implemented using a parametric equation, how many points you take determines how choppy the spline is drawing. You can either save a boatload of blending constants or possibly draw with spline interpolation, and I'm not sure which one to put all my effort into implementing first. I'm starting with 11 blending constants for $t = 0$ to $t = 1$ at .1 intervals and drawing a line between each through point, but refining that later will mean resolving the problem of which option to use.



By [Joe Nasal \(Jsn\)](#) on Monday, February 4, 2002 - 10:41 am: [Edit](#)

Heather:

Don't let anyone fool you -- "real" programmers learn via trail & error, too.

I appreciate this board for the same reasons you've stated -- folks here are helpful, friendly, and inquisitive.

Joe



By [Heather Risedorph \(Rise1525\)](#) on Monday, February 4, 2002 - 04:48 pm: [Edit](#)

So... New Wiki topic dedicated to my ill-fated code snippet:
<http://sleepless-night.com/cgi-bin/twiki/view/Main/BresCircle>

Feel free to pick at it there. 😊 Oh and for those who don't go visit the site, I found a really juicy Java applet that has the source for plotting bezier curves in it that I'm going to pick apart. Expect more from me on that later, although when I can't say. I'm excited about it because it looks relatively simple for Java code (only 12 pages, yay!) and I understand it. The hard part will be throwing off all of the Java and turning it into neat, tight Forth code, and for that I will probably need some help if there are still kind soles in the universe.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, February 5, 2002 - 12:16 pm: [Edit](#)

Kind soles, and also heels and buckles if you're lucky 😊

I've just had a look at your code, it's not bad. I have a little difficulty with the extra stack manipulators you've defined, but I can sort through it well enough.

Neal



By [Heather Risedorph \(Rise1525\)](#) on Tuesday, February 5, 2002 - 12:40 pm: [Edit](#)

Maybe it's a problem of culture? I use the standard stack stuff all the time and I STILL have to refer back to documentation constantly. What is a tuck? What is a nip? And when I look I summarize it as (dup|no dup) positionFrom positionTo basically. So when I wrote the extra stack stuff I named them that way. None of them dup, so it's just from>to. Starts at 1st goes to 3rd, 1>3. It makes more sense to me than roll. sMix I've renamed to 4flip on the Wiki because it goes 1 2 3 4 > 4 3 2 1. And I redid the part where you 1>3 4>1 because I analyzed it and you can shorten it by just switching 4 and 1 around (renamed on the Wiki version). You lose a couple of steps doing that instead of 1>3 4>1.

I'm working on an advanced graphics module that will draw various things. I'm maybe 1/3 of the way through bezier splines. The forward difference method for rendering splines is about as stack messy as circles. What I'm thinking about is creating an 8-cell graphics buffer that is a use at your own risk thing. Basically, you'd leave nothing on it between words and you would not call any words that use it while you are. Circle wouldn't be called within spline and vice versa. It would gain advantage because it could be reused over and over every time a new graphic was drawn.

The question is, does anyone see why that might be a bad idea? Of course I would make every attempt at not using it unless there is some clarity and tangled-web of stack ops reason for using it. I think I've proven I'm not afraid of messing around with the stack. 😊



By [Kris Johnson \(Kdj\)](#) on Tuesday, February 5, 2002 - 04:10 pm: [Edit](#)

The stack stuff will eventually become second nature--just keep doing it. It's unfortunate that ROT, OVER, NIP, and TUCK are not descriptive, but you'll get used to them.

Many people use the name -ROT to refer the operation of your 1>3 word (so named because it is the opposite of ROT). And I've seen people use letters instead of numbers to name other stack manipulations: for example, ABCD>DCBA instead of 1234>4321.

-- Kris



By [Heather Risedorph \(Rise1525\)](#) on Tuesday, February 5, 2002 - 04:18 pm: [Edit](#)

Oh that makes sense. So you are saying if I name it with letters then both of us might be happy?

(And I pull the topic completely off topic once more...)

I've been reading Forth to try to get the knack of naming, but I'm still not quite there it seems. I try to make it spoken English, but especially in graphics, there's just too much little chunks sometimes to be really analytic as well as descriptive. I guess better fitting into the more subtle aspects of conventional Forth naming is another thing that comes with practice. For now, pardon my accent. 😊



By [Chapman Flack](#) on Tuesday, February 5, 2002 - 06:16 pm: [Edit](#)

Here's one of those completely off-the-wall suggestions ...

I don't know how much of your effort in developing circles and splines from scratch is for the joy of learning (a perfectly good reason) and how much is because you eventually want to be able to DO some graphics.

I'm thinking one problem you may well run into is by the time you've implemented enough primitives and transformations to do some interesting stuff, you won't have the code space left to DO anything with them.

I'm also thinking that a lot of the hard work in designing a library of graphics operators is in deciding on the right collection of user-visible functions and the handiest way to pass around their parameters and the most usable ways to have them work together.

For example, it sounded like you want to do 3D modeling, so you eventually need your viewing transformation in there somewhere; that affects what device-space primitives you want to spend time implementing, and which of your routines you mean to live in model space and which in device space. For example, I'm not picking on your bcircle, but it will only be useful when you look at a circle straight on. All other circles in your model will wind up ellipses in device space, so maybe a fast device-space ellipse is one of the primitives you really want, so to plot any circle in your model you first transform its equation into the resulting ellipse and quickly plot that. Those are all the kinds of decisions that go into the popular graphics libraries like GL, and that make those libraries magnificent achievements not just because of the amount of code they contain, but

because so many design decisions were made right to make the library easy and natural to use.

And then there are populations of programmers already familiar with the APIs of certain famous libraries. When I asked Prof. Hoffmann for a graphics text recommendation earlier, he remarked that today's graphics courses spend very little time on the "Adam and Eve" stuff like circle rasterizers, and are taught almost entirely with reference to an API like GL.

Here is an off the wall suggestion. It would mean learning to do a whole new sort of development using a new development environment. You could think of doing something like Rick Huebner did with MathLib: find an existing, open source, C implementation of a popular graphics library (Mesa is an open source project intended to be GL-compatible), port some (maybe very small) subset of it to work on PalmOS, and build it as a shared library (or maybe more than one, if it's easy in the source to separate chunks of functionality different folks might or might not need). Then write Forth words to call the library.

Keeps all that graphics code out of your Forth codespace. Saves you having to make a lot of design decisions from scratch (though you'll have enough to do porting something like GL and deciding what to leave out to get a sane subset). Results in something that can be useful both to Forth programmers and users of other development environments. Makes you famous, and maybe gets you to doing your fun graphics stuff faster.

If Mesa turns out to be way too big to port a subset of reasonable size, you might also look at the graphics primitive parts of Ghostscript, which IIRC were also intended to serve as a (much simpler) library for other purposes--though they'd be tied more to Postscript's 2D model. That would still be way cool, especially as a step toward being able to see Postscript on a Palm.

Anyway, there's just my off the wall idea.

Cheers,
-Chap



By [Heather Risedorph \(Rise1525\)](#) on Wednesday, February 6, 2002 - 07:42 am: [Edit](#)

Well, the thing is I don't really know what is all out there. I could spend a lot of time looking, but I guess you can say that's what I'm doing. No, I don't expect to accomplish anything people will actually want. Of course that's my goal all along but not my expectation. I don't really have anything to offer people who know what they are doing. 😊

My approach to this has been...yes I do want to do solid modeling but really, on a Palm? There has to be a reason why most of the games for it are done with bitmap libraries.

It's mostly about learning. A circle wasn't one of my primitives. I was just writing something to plot one because I didn't yet know the math for a spline and it was the logical next step. I changed colors, called up the MainForm, plotted a pixel. Then I did a line. Then I did a hard-coded wireframe cube. Then I wanted to do something just a step more complicated.

I learn best how to not reinvent the wheel by trying to reinvent it and when I reach a part I don't know how to implement, go search for examples and see how other people do it. That gets me over the massive information overload barrier I get facing a complete work of code that I want to digest and understand. I'm coming at it from how the original people who wrote the code were...ok we got this far, now how do we want to solve this issue? Except I already have examples to look at and I can more readily pick out their solution to this stage of the problem than I can figure out how their whole solves the entire problem.

Your idea is a good one and I may try that if I find any reason to believe it's actually possible to put something like this on a handheld but only after I have some claim of knowledge of how graphics are programmed. I know some of the stuff from seeing programs work but not always the math and logic behind how they are put there and in the process of writing my own code that's never going anywhere I will get my experience in it.

Call it tangential learning? I don't know. It's my way.



By [Mark Beckman \(Mbeckman\)](#) on Wednesday, February 6, 2002 - 01:46 pm: [Edit](#)

Heather,

I've been through the same process and find that the algorithms I worked on first (and then found someone else's "more optimal" version) are the ones I understand and remember. However this whole thread reminded me of an entry in my "Quotes" file.

A coupla months in the laboratory can save a coupla hours in the library.
--Westheimer's Discovery



By [Heather Risedorph \(Rise1525\)](#) on Wednesday, February 6, 2002 - 02:09 pm: [Edit](#)

Words of much wisdom.

I downloaded Mesa but even if I could figure it out (and we are talking a lot more than a couple hours here), I wouldn't know what to do to port it as a library into a Palm. You mean you can just dump C files into your Palm and run them? I know about PocketC, I was using it before I came to Quartus, but this is different, right?



By [Chapman Flack](#) on Wednesday, February 6, 2002 - 03:16 pm: [Edit](#)

If you were gonna do it ...

It would mean getting a C development environment for the desktop. (I naturally would think of doing it with prc-tools, the free environment based on gcc).

The task would have two parts, brain-work and busy-work. The brain-work would be figuring out what parts of Mesa to select as a manageably small but still useful subset, and porting the code to work with the Palm OS API and graphics capabilities.

Then the busy work is converting it into a shared library, which if you do a SysLib style (like MathLib) means going through and adding wrapper routines that take an extra parameter and handle return values, and a dispatch routine, all fairly straightforward, tedious, mechanical coding. Then you compile it down to a .PRC file with a 'lib 0' resource. Rick Huebner wrote fairly good documentation of the process he went through with MathLib. Then you write Forth words that call into the library.

There was a version of prc-tools that would let you make a different kind of shared library called a glib, that required a lot less busy-work writing wrappers and stuff in the source. Basically you told the compiler you wanted a glib and it did the work for you. Then Palm got hold of the prc-tools project and took that functionality out, saying they'd put it back later with a different implementation. I don't know if they have yet.

That would make the job of preparing the library a lot easier, but it would be more interesting to write the Forth words that call it. There are already lots of examples you can look at on the wiki where people have written Forth words to call SysLibs (MathLib, new serial manager, etc.) but so far none that I know of for calling glibs yet.

I have a feeling the project you were setting out on was gonna be a lot more than a coupla months, too. ;) But I'm not knocking tangential learning, sometimes the best kind.

You would also learn a great deal (some of it about other things) by doing a port and making a library. This isn't hard sell, I just thought I'd throw in another way to look at the project.

-Chap



By [Heather Risedorph \(Rise1525\)](#) on Thursday, February 7, 2002 - 10:20 am: [Edit](#)

Thanks for the help. I may try that sometime. In fact, I will probably try it, maybe not yet, but eventually.

Who says a coupla month + project is bad? It might be if I was getting paid. 😊 There has to be some advantage for doing this entirely for fun, right?

Part of the adventure has been poking the boundaries of the Palm hardware as well as Forth. I'm going to write a smaller app first...I mean it's ambitious to think I could do something that big having never written a small app. I was playing Snake on my Nokia phone and I thought ... hmmm... that game doesn't look very complicated. So I'm going to try it in Forth. I feel pretty confident I can handle that, it's not some lofty project no one's ever tried. I'll get to the lofty stuff later. 😊



By [Heather Risedorph \(Rise1525\)](#) on Saturday, February 9, 2002 - 11:18 pm: [Edit](#)

Why 3d graphics isn't very feasible on a little handheld unless you are smarter than I am:

I wrote code that uses my new BitsModule (see the Wiki) to define where the obstacles are in the snake game and then use that data to paint the screen. This initial paint is the heavy one because once it's done there'll only be minimal changes made while the little snake is moving around.

I divided 160x160 into 32x32 positions and drew a rectangle in each of the outside wall positions. You can actually see it drawing on the screen and this is only squares!

Anyway, just thought that it should be noted that complicated graphics are not for the faint of heart. 😊 Back to coding.



By [Kris Johnson \(Kdj\)](#) on Sunday, February 10, 2002 - 09:50 am: [Edit](#)

You might want to post your code. Maybe there is a bottleneck that can be worked around.

I'm not sure that I understand exactly what you are trying to do--I haven't seen the Nokia Snake game. But if you are drawing lots and lots of individual 5x5 squares, then it probably is noticeably slow. The trick would be to find "runs" of adjacent squares, and draw all those squares as one big rectangle.

Or, if initial setup is expensive, but subsequent screen updates are small, you may just want to save the initial screen as a bitmap resource, and just blit that to the screen at startup.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Sunday, February 10, 2002 - 11:05 am: [Edit](#)

Kris is right about coding "the big picture". When I write code for the CNC router to cut lots of pieces out of a sheet of plywood, I don't look at the individual pieces at all. I look at what the longest cuts are that I can make. These long cuts go across multiple pieces. I use the same thing when drawing images on the screen. If I'm at Ypos, I'll draw everything I can on that Y axis before moving to another Y axis.

Ignore the small parts and draw the longest line possible.

Dave



By [Kris Johnson \(Kdj\)](#) on Sunday, February 10, 2002 - 05:25 pm: [Edit](#)

I may need to buy some computer-controlled carpentry equipment. It would be nice to write some code that actually did something, like shredding lumber, rather than just showing dots on a screen.

-- Kris



By [Heather Risedorph \(Rise1525\)](#) on Sunday, February 10, 2002 - 10:46 pm: [Edit](#)

I was just posting an observation about how noticable drawing a lot of things on the screen can be. Optimization later, discussion forum orders. It won't be noticable in the game it's just noticable in initial draw right now. It's not time to work on speed yet.

The snake game is known by many names... centipede, snake, worm, it's the one with the little slithering guy who wanders around the game board eating little bites and getting longer until you run over a wall or your tail.

I can draw the screen, randomly place the bites, and have picked colors and shapes for the snake itself. I use 3 bits to determine what is at every place on the game board, 0=background, 1=wall, 2=bite, 3=wormup, 4=wormright, 5=wormdown, 6=wormleft, and 7 is unused for now. The game board is 32x32 and I store values in the bits module I created based on what is there. I'll keep a reference to where head or tail is and use a word I wrote called board> to retrieve the 3bit value and make all the decisions and >board to assign new values, then redraw the board on only what has changed which will be not more than 3 5x5 squares every game tick.



By [Kris Johnson \(Kdj\)](#) on Monday, February 11, 2002 - 10:35 pm: [Edit](#)

Speaking of premature optimization:

You may want to consider that a 32x32 array of bytes or cells would not be very big (about a thousand elements). Squeezing the data into 3-bit fields is not saving a significant amount of memory, and is going to slow down all the accesses into that data structure.

There's no need to change things if they are working. Just offering some friendly criticism...

-- Kris

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Latest version only for registered users?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Latest version only for registered users?



By [Frantisek Fuka](#) on Monday, January 28, 2002 - 03:14 pm: [Edit](#)

This is probably a stupid question but what is the latest Quartus Forth version? The freely downloadable version is 1.2.1 (the file is called q4th121e.prc) but I can see references to 1.2.7 in this Forum. Is this new version available only for registered users or is the latest version hidden somewhere in downloads area?



By [Neal Bridges \(Nbridges\)](#) on Monday, January 28, 2002 - 03:24 pm:

[Edit](#)

1.2.1 is the evaluation version; other, more recent versions are only available for registered users. 1.2.7 is a beta version that supports the handling of launch codes.

Neal



By [Frantisek Fuka](#) on Tuesday, January 29, 2002 - 12:41 pm: [Edit](#)

Thanks. Are the latest versions updates included in the price of registration? Or do I have to pay again each year (for example) to receive up-to date version?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 29, 2002 - 01:40 pm:

[Edit](#)

The updates thus far are available free of charge to registered users.

Neal



By [Frantisek Fuka](#) on Tuesday, January 29, 2002 - 01:57 pm: [Edit](#)

Thanks. In that case, you've just sold another one. 😊



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 29, 2002 - 02:02 pm:

[Edit](#)

Great! 😊

Neal



By [Nick S.](#) on Friday, March 1, 2002 - 09:55 am: [Edit](#)

... and just another one J

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Save and restore the color statement

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Save and restore the color statement



By [Igor Vikhrov](#) on Monday, January 28, 2002 - 05:05 am: [Edit](#)

Hi,
Please, help me anybody with color application. I'm trying to write programm for HandEra 330 with implementing of gray colors of 4 bits depth. The problem is after executing of my programm the system UI color table is particularly violated. Another applications don't show the proper colors in some of forms or menus.

To solve this problem, I tried to insert `UIColorPushTable` and `WinPushDrawState` before changing of color depth and other actions, and `WinPopDrawState` and `UIColorPopTable` after restoring of color depth and leaving of programm. It helped with black-white applications, but not with 16 colors ones.

I'm grateful if anybody show me another effective way to save and restore the system color statement.

Please, excuse my English.

Igor.



By [Heather Risedorph \(Rise1525\)](#) on Monday, January 28, 2002 - 05:29 am: [Edit](#)

Did you save the state before setting the color depth? I'm looking at Neal's color module and it calls `DisplayModeSet` and `ScrDisplayMode` in a word called color-depth. I haven't looked up the systraps to see what they do, but I would expect that it affects `DrawState`.



By [Igor Vikhrov](#) on Tuesday, January 29, 2002 - 02:45 am: [Edit](#)

Yes, I saved the state before setting the color depth. The layout of my program is something like this:

```
: go
UIColorPushTable
WinPushDrawState
4 color-depth

begin
0. ['] (ekey) catch ByeThrow =
if
2drop 1 color-depth
WinPopDrawState UIColorPopTable
```

(bye)
then

\ body of program

again ;

In the body of the program I changed settings of UI table, forecolor and backcolor. It seems to me that with this code color settings after executing of the program shouldn't depend on the body of the program.

Igor

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Newmemo.txt??

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Newmemo.txt??](#)



By [Dave Bennett \(Dbennett\)](#) on Sunday, January 27, 2002 - 01:07

pm: [Edit](#)

I saw several references through the archives about newmemo.txt being in the file area, but it is not. Search does not locate it, but points to the wiki. The wiki then points back here.

Can someone direct me to newmemo.txt? or something that'll help me open MemoDB at my prenamed memo?

Thanks.



By [Paul Randall \(Paul\)](#) on Sunday, January 27, 2002 - 03:40 pm: [Edit](#)

Try here:

<http://www.quartus.net/files/PalmOS/Forth/Library/memo.txt>



By [Kris Johnson \(Kdj\)](#) on Sunday, January 27, 2002 - 06:00 pm: [Edit](#)

"newmemo" refers to Allen Chen's memo module:

<http://www.quartus.net/files/PalmOS/Forth/Library/newmemo.txt>

There is some confusion because "newmemo" is actually called "memo", and there is also an older memo module by Neal Bridges called "memo".

I'd appreciate it if you'd add or fix the link in the wiki.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Sunday, January 27, 2002 - 06:08

pm: [Edit](#)

Thanks guys. The one Paul pointed to looks like Neal's old one, the one Kris pointed at is Allen Chen's. The naming issue probably added to my confusion.



By [Paul Randall \(Paul\)](#) on Monday, January 28, 2002 - 07:39 am: [Edit](#)

I'm delving into reading from the memo db myself and didn't realize there was another library file. Looks very useful. Thanks for bringing it up!

Paul



By [Bob Gibson \(Ragibson\)](#) on Monday, January 28, 2002 - 02:31 pm:

[Edit](#)

Hmmm.... Am I the only one with the following problem? I tried the following:

```
needs memo
dir
```

I appears that the "dir" word is executing OK, until it (apparently) falls off the end of the list. I get a:

```
FatalAlert
MemoryMgr.c, Line:4340, NULL handle
```

Does "dir" work, without error, for anyone?

Thanks
Bob



By [Neal Bridges \(Nbridges\)](#) on Monday, January 28, 2002 - 03:05 pm:

[Edit](#)

"dir" is just an example of how to use the functions defined in that module, Bob -- it isn't production code per se. It can be tripped up by private memos, if I recall correctly.

Neal



By [Paul Randall \(Paul\)](#) on Monday, January 28, 2002 - 05:23 pm: [Edit](#)

In the newmemo module the definition of GetCurrentMemo does a queryrecord and locks the resulting handle. However ReleaseCurrentMemo does not do the corresponding memHandleUnlock that I was expecting to see. Both of these words are used in FindMemoInCatagory which performs a memPtrUnlock prior to ReleaseCurrentMemo. So I have two questions.

Is this module tried & true (guessing it is.)

and can someone summerize easily the difference between memHandleUnlock & memPtrUnlock?

Much obliged...

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

VFS

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): VFS](#)



By [Eli](#) on Sunday, January 27, 2002 - 09:21 am: [Edit](#)

There is good explanation about defining new API using systraps on wiki. I tried to define VFS API but I didn't find the systraps of VFS. can someone help?



By [Wade Carlson](#) on Tuesday, February 5, 2002 - 10:12 pm: [Edit](#)

Hmm, no replies here. I was hoping someone would have chimed in by now. I guess nobody has tackled this beast yet.



By [Wade Carlson](#) on Monday, March 4, 2002 - 10:01 pm: [Edit](#)

I think VFS is a library that must be added, not a systrap.

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Stringtable needs improvement

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Stringtable needs improvement



By [Yeshiah](#) on Thursday, January 24, 2002 - 08:25 pm: [Edit](#)

It works but appears rather like a flying whale.... Can it be simplified?

```
\ table YMZ 02.01.23
needs zstrings
```

```
here 1 cells - constant table
: init ( - )
z" four"
z" three"
z" two"
z" one"
z" zero" ;
init
```

```
\ must call init before using .n
: .n ( n -- addr u) dup >r \ save copy
0 do 2drop loop type \ until found
4 \ number of items -1 \ drop
r> - 0 do 2drop loop ; \ rest addr
```



By [Kris Johnson \(Kdj\)](#) on Thursday, January 24, 2002 - 08:43 pm: [Edit](#)

Some people use string-list resources for this sort of thing.

-- Kris



By [Mark Beckman \(Mbeckman\)](#) on Friday, January 25, 2002 - 12:27 am: [Edit](#)

I'm partial to my StringList module.

[StringList Module Source](#)

It's not simpler but, this is just the sort of thing I wrote it for. (but not as much fun as rolling your own).

```
\ tbltst

needs StringList
5 stringlist numberWords

: addNumberWord ( --)
  numberWords New$ drop ;
: initNumberWords
  s" zero " addNumberWord
  s" one " addNumberWord
  s" two " addNumberWord
  s" three " addNumberWord
  s" four " addNumberWord
  ; initNumberWords

: .num ( i -- ) \ print "i" in english
  numberWords @$ type cr ;
```

After trying some in range values (0-4) try a "bad" one like:
9 .num

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

DayOfMonth sample

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): DayOfMonth sample



By [Dave Bennett \(Dbennett\)](#) on Thursday, January 24, 2002 - 07:37

pm: [Edit](#)

Does anyone have a DayOfMonth sample? The Palm SDK says

Int16 DayOfMonth (Int16 month, Int16 day, Int16 year)

For example, "first Monday" is returned for 2/7/00.

When I enter this in QF

```
2002 24 1 DayOfMonth
```

I get back 25.

I'm confused by this return value.

Dave



By [Paul Randall \(Paul\)](#) on Thursday, January 24, 2002 - 08:11 pm: [Edit](#)

If you count the enumerated values in the API reference starting at 0 then '25' does specify the "4th Thursday" of the month which is correct. Enums start at 0.

Some sort of table look-up would have to be set up in order to relate the number 25 to the text string "fourth Thursday".

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Duplicate databases

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Duplicate databases



By [Chris Bucsko](#) on Thursday, January 24, 2002 - 03:09 pm: [Edit](#)

This may sound crazy, but if anyone can show me what I may be doing wrong, I'd appreciate it. Here's the problem: I took a database and duplicated it in rsrcedit. Then I changed the title, type, and creator. I moved the initializing code from a memo into a non-compressed palm doc format. The original code is this:

```
needs resources
needs ids
\ db id constants
(ID) rsrc 2constant mtid
(ID) MTrs 2constant mtcreator
mtcreator mtid use-resources
```

The New code looks like this:

```
needs resources
needs ids
\ db id constants
(ID) dlrs 2constant mdid
(ID) Mydl 2constant mdcreator
mdcreator mdid use-resources
```

I changed the forms, lists, labels, etc. but not their ids. Here's the strange part; when I run the 'go' code, I get the OLD DATABASE! I can't seem to get the new database to display. I've tried changing the creator and type names several times, I've purposely put the wrong name in the code, to see if it's not compiling correctly (QF correctly fails to find the resources), and I've looked for any leftover code which may be invoking the old database by mistake. I can't figure it out. has anyone ever seen this? Could it be a problem with DmOpenDatabaseByTypeCreator, or am I somehow 'finding' my old memo code? I use docinclude when compiling, and I've put 'needs docinc' in my startup memo. Any ideas would be appreciated, thanks.



By [Dave Bennett \(Dbennett\)](#) on Thursday, January 24, 2002 - 04:59 pm: [Edit](#)

Are you deleting the old app before building the new one? I had that once

where it said it was building, but the old one wasn't being over written since the end name was the same.



By [Chris Bucsko](#) on Thursday, January 24, 2002 - 05:48 pm: [Edit](#)

Actually, no, I was hoping to save the old resource database as a backup. Is there any way to change the end name to avoid confusion? If not, I guess I better just delete the old one...



By [Heather Risedorph \(Rise1525\)](#) on Thursday, January 24, 2002 - 05:51 pm: [Edit](#)

Is there any way to archive the old one to a PC and then delete it? Sorry if that's a stupid question but it seems like it would help make it so that you can at least recover it later if you verify that's not your problem (although with the old stuff gone it can't very well find it anywhere, can it?)



By [Hans Nordstrom](#) on Thursday, January 24, 2002 - 06:26 pm: [Edit](#)

With [Filez](#) can you change attributes on a resource, to make a backup copy. You can even change Creator and Type, to make it unique. The utility Filez is quite handy.



By [Steve Bohrer \(Skb\)](#) on Thursday, January 24, 2002 - 11:05 pm: [Edit](#)

Not sure I understand the issue here, but to archive a database to a PC, set the backup bit of a database (eg in RsrcEdit, select the database, check backup, and click "Apply") and then hotsync. The default Palm backup conduit should copy this database to your host computer as a .PDB file in the "backup" subdirectory of the directory for that user name. From here, you can copy the .PDB file somewhere else, and then mess with the original file on the Palm.

If you want to "re-install" the old version, use the normal hotsync installer. (Of course, this will overwrite your modified version on the Palm unless you rename that first.)

As for your duplicate database problem, is it possible that you have some "stray" copies of your old database with the modified type and creator? RsrcEdit's "Sort by Creator" mode is handy for double-checking for this sort of thing.

It also seems like an easy test to temporarily rename your old memo version of the code.

Add a Message

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E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

New Quartus App - Kitchen Witch

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Quartus App - Kitchen Witch



By [Dave Bennett \(Dbennett\)](#) on Thursday, January 24, 2002 - 10:42

am: [Edit](#)

Kitchen Witch is my latest Quartus Forth app. It provides professional cooks, serious amateurs, and culinary boneheads like myself a resource of cooking information. It also allows conversion between the US and Metric cooking measurement systems. Oven and microwave oven guidelines and, for me, a useful pan size substitution listing. Cooking oil smoke points (My alarm company always calls when the smoke alarm goes off and asks, "Is Dave cooking again?". Not that this happens often or anything... 😊) and High Altitude baking information is also provided.

It can currently be downloaded with or without source code at my site (www.micoks.net/~dbennett). I will upload it to Palm Gear in the near future.

This project was a collaborative effort between myself and my wife Liz. She's already laying out another app for me to write. (She'd be good in marketing- "Just add this one little thing and it'll be ready to go!")

Comments on the app and my redesigned website are welcome.

Dave



By [Jamie Cairns \(Jamie\)](#) on Friday, January 25, 2002 - 11:44 pm: [Edit](#)

Dave - my wife scores this app high - With this, HandyShopper, and Cookbook - I almost have her convinced to get a Palm of her own... (Did you notice that it's impossible to enter a negative temperature in your F C conversions ? Although I will admit it wouldn't be terribly missed in most kitchens... probably something only us frostbitten Canadians would try anyways...)

Jamie



By [SamuelTardieu](#) on Monday, January 28, 2002 - 05:55 pm: [Edit](#)

Dave,

I read parts of your code, and I wonder whether using continued fractions would give you a smaller and faster code. See

<http://sleepless-night.com/cgi-bin/twiki/view/Main/ContinuedFractions> for more information on continued fractions applied to Quartus Forth.

Sam



By [Dave Bennett \(Dbennett\)](#) on Monday, January 28, 2002 - 06:23

pm: [Edit](#)

Jamie,

I did the no negative thing on purpose as I can't get our oven to cool things down for us. 😊 I just used numeric as the field type which precludes the entering of a - (negative) sign for input. (Who at Palm thought that numeric field precluded the use of a negative sign??) To get negative values you could change it to not be a number field and tickle it yourself. (My Wind Chill Factor - G program does this.)

My wife has used a Palm heavily since December 1998 and would never give it up for anything. She is the Queen of HandyShop with every store, item, aisle, and price. Her addressbook is legendary among the family. Funnily, all the women she shows it to marvels at it and love the idea, but none of them actually take the plunge of getting one for themselves. Some people have "oohed and ahed" over it for a couple of years, even bringing others to have her show it off, without jumping in themselves. I'm not quite sure what that's about.

Sam,

I thought about integer math for this, but the resultant program was relatively small anyways. I did forgo using MathLib however to correct the one float problem I did encounter. 😊 The only fudge I had to make to correct the internal float stuff was the cm to inch conversion. a $2.54e * 1.0e$ is 2.53. I just converted the 1e via f>d d>s and did a test, then returned 2.541e that displayed as 2.54. The rest of the math worked out fine- or as close a necessary for the real world.

Typically when working on math for the real world I approach it from the standpoint of what is possible for a real person (in this case mixing ingredients), not what is excruciatingly accurate to the Nth degree. I usually pull my slide rule out and run a few samples through it (Remember, we put people on the moon with slide rules!) to get a "what'll work in the real world" idea of the accuracy required. For kitchen work, I doubt that anyone will notice the difference of a drop or gram difference in an ingredient amount. Personally, I always try to error on the + side with things like sugar and butter though. 😊



By [Chapman Flack](#) on Monday, January 28, 2002 - 08:43 pm: [Edit](#)

Dave,

Out of curiosity, what float problem led you to forgo MathLib?

-Chap



By [Dave Bennett \(Dbennett\)](#) on Tuesday, January 29, 2002 - 10:46 am: [Edit](#)

No problem with MathLib at all. What I was saying was that the internal float stuff worked fine, not requiring MathLib. The only problem I had was with the internal float stuff, but it was easily worked around so I did not feel it was necessary to bring MathLib into the application.

MathLib works fine for me. I doubt that I'd be able to detect a problem there unless it was glaring. In fact, I'm working on something right now that will depend heavily on MathLib.



By [Mark Browne \(Markbrowne\)](#) on Tuesday, January 29, 2002 - 12:01 pm: [Edit](#)

Following this thread induced me into having a look at the Continued Fractions on the Wiki. I'm obviously missing some files somewhere, as I cannot get it to complete compilation - while loading file sfdf it cannot find (2>r). Can anyone tell me where I might find this?

Thanks,

Mark Browne



By [Joe Nasal \(Jsn\)](#) on Tuesday, January 29, 2002 - 12:23 pm: [Edit](#)

2>r is defined in NAB's core-ext module



By [Mark Browne \(Markbrowne\)](#) on Tuesday, January 29, 2002 - 12:28 pm: [Edit](#)

Sorry, not 2>r, but the bracketed version (2>r). Thanks for the reply.



By [Joe Nasal \(Jsn\)](#) on Tuesday, January 29, 2002 - 12:30 pm: [Edit](#)

Oop. Sorry.



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 29, 2002 - 12:43 pm: [Edit](#)

There's a customized version of core-ext in the wiki somewhere that has

(2>r). I think Chapman Flack and/or Bob Ryan had something to do with it.

Unfortunately, the wiki isn't working for me right now, so I can't find it.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 29, 2002 - 03:51 pm: [Edit](#)

The customized version of core-ext is available here:

<http://sleepless-night.com/twiki/pub/Main/CoreExtModule/core-ext.txt>

-- Kris



By [Paul Norman](#) on Thursday, June 27, 2002 - 01:55 am: [Edit](#)

Thanks for that Lorentz Attractor! I recently got the Clie T515C and I'm being constantly amazed at the amount of really great math software available on this platform ... and so SMALL. I also have the HP720 handheld but it's growing green with jealousy.

I'm hoping to receive the registered version of Quartus by tomorrow at the latest [I hope!]. I have no programming experience, but Forth had interested me from quite some time back, and I have a pretty good collection of Forth books. Recently, I had been intending to clear them out, but with Quartus now in my shirt-pocket ... no way!



By [Mike Will](#) on Thursday, June 27, 2002 - 11:11 am: [Edit](#)

After keeping them for about 20 years, I threw out all my Forth books a month before discovering Quartus. It has cost me over \$100 to replace them (and many hours scanning eBay).

Here's my advice: only throw out books containing the following words or phrases:

multimedia

internet

emerging technology

convergence

hyper- [anything]

new age

I'm currently standing in an Internet café at a computer conference in Boston, and my BS detector is pegged at full scale.

Mike



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 27, 2002 - 02:23 pm:

[Edit](#)

Years past, I enjoyed browsing the computer book section of the local bookstore. Over time, the fun went out of it; more and more of the books seemed like the same book, and the wheat disappeared in the chaff.

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, June 27, 2002 - 02:42 pm: [Edit](#)

It's time for someone to write "How to Instantly Unleash Professional Quartus Forth for Dummies in 24 Hours Step-by-Step in a Nutshell "



By [Joe Nasal \(Jsn\)](#) on Thursday, June 27, 2002 - 02:49 pm: [Edit](#)

I don't think the world is ready... Besides, this title soesn't have the word "Java" in it so it probably won't sell very well...

One of the nice things about QF is that it is (slightly) off the beaten path. We can keep pumping out "Made with QF" apps and leave the rest of the world to wonder...



By [Gary Wiese \(Garyjwiese\)](#) on Thursday, June 27, 2002 - 07:39 pm:

[Edit](#)

In addition, I think, I am actually learning to program a computer correctly. Nothing like I was learning in the local college. It was far to easy.

Gary



By [Julian Fondren](#) on Monday, July 1, 2002 - 10:44 am: [Edit](#)

Neal, that is **exactly** my experience. I still look, occasionally, to see if there is something unusual (like "The Little Schemer", or a Prolog book).



By [Dave Bennett \(Dbennett\)](#) on Tuesday, July 2, 2002 - 07:08 am: [Edit](#)

"The Little Schemer" brings up another Scheme/Lisp book that I recently picked up. It is called "How to Design Programs, An Introduction to Programming & Computing". It is a companion to DrScheme and is very nicely done. I knew it was a keeper with the intro to Chapter 1 being this quote.

"It goes against the grain of modern education to teach children to program. What fun is there in making plans, acquiring discipline in organizing thoughts, devoting attention to detail and learning to be self-critical?" (Alan Perlis, Epigrams in Programming)

With regards to the suggested title of the new book above in this discussion, with the advent of Java in Palm OS 6.x we could crowd "java" in there somewhere!!

Dave



By [Dave Bennett \(Dbennett\)](#) on Tuesday, July 2, 2002 - 07:13 am: [Edit](#)

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With regards to the suggested title of the new book above in this discussion, with the advent of Java in Palm OS 6.x we could crowd "java" in there somewhere!!

Dave



By [Dave Bennett \(Dbennett\)](#) on Tuesday, July 2, 2002 - 07:16 am: [Edit](#)

"The Little Schemer" brings up another Scheme/Lisp book that I recently picked up. It is called "How to Design Programs, An Introduction to Programming & Computing". It is a companion to DrScheme and is very nicely done. I knew it was a keeper with the intro to Chapter 1 being this quote.

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With regards to the suggested title of the new book above in this discussion, with the advent of Java in Palm OS 6.x we could crowd "java" in there somewhere!!

Dave

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"Safe" module

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): "Safe" module](#)



By [Bryan A. Zimmer \(Bzimmer\)](#) on Wednesday, January 23, 2002 - 04:43 pm: [Edit](#)

Hello,

I would like to learn how the safe module works, and how to use it. I'm not exactly a newbie, but I'm far from an expert. I don't understand how ":noname" works, or colon definitions that include the word [.

Can someone point out where I can learn how to use safe, and possibly some of the more advanced features of Forth? I'm talking about things like compiling words (with "postpone" and "immediate").

I would like to be able to do things like write a find/replace program that would work for memos.

Thanks for your help. Quartus is fantastic!

Bryan Zimmer



By [Chris Bucsko](#) on Thursday, January 24, 2002 - 10:25 am: [Edit](#)

For help with postpone/immediate, go to the Wiki site, and click on the search link. In the search page, type the phrase 'immediate word' in the search box. In the results, you'll see a topic titled 'immediate words' by Kris Johnson. It's a very good discussion of this technique. The Forth programmers handbook also has a good chapter on postpone/immediate.



By [Kris Johnson \(Kdj\)](#) on Thursday, January 24, 2002 - 01:27 pm: [Edit](#)

Thanks for the good review of that topic, but I think it is still very difficult to understand. If anyone has any ideas for improvement, or questions that are not answered, please speak up.

-- Kris

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Memo for word ^ , "raised to the power of"

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Memo for word ^ , "raised to the power of"



By [Bryan A. Zimmer \(Bzimmer\)](#) on Wednesday, January 23, 2002 - 04:31 pm: [Edit](#)

```
\ exp 1/23/2002  BAZ
\ This memo provides the word ^
\ which computes
\ a base raised to an exponent,
\ as in "2 to the 10th power" ,
\ which would be given as " 2 10 ^ "

\ Usage:
\ 7 10 ^ ( yields 7 to the 10th power)
\ 7 10 .^ ( prints 7 to the 10th)
\ Results are double-cell integers.

\ No floating point numbers are
\ used. In calling ^ , the stack must
\ contain 2 single-cell integers. One
\ double-cell number, the result of
\ the operation, is left on the stack.

\ The stack picture for this word is
\ as follows:
\ : ^ ( S: base S: exp -- D: result )

\ I am including the word .^ , which
\ prints the (unsigned) result with
\ commas, in the familiar format
\ notation for the US, viz.
\ 7 10 .^ ( 7 to the 10th power )
\ yields 282,475,249

\ The words ^ and .^ are
\ accurate up to
\ 2 ^ 31 ( 2 to the 31st power )
\ or 2,147,418,648

\ A logarithmic algorithm is used
\ to calculate x raised to the power
\ of y.
```

```
\ Simply stated:  
\ x ^ 0 = 1  
\ x ^ 1 = x  
\ x ^ n =  
\ x * ( x ^ i ) for i = 1 to n-1  
\ Onee again, the result is a  
\ double cell (32-bit) integer.
```

```
\ Any suggestions for improvement  
\ would be appreciated. I hope to  
\ use a more efficient algorithm  
\ or use assembly language to speed  
\ things up.  
\ - Bryan Zimmer 1/23/2002
```

needs dblmath

```
: not 0= ;  
  
: ^ ( base exp -- D )  
  dup 0= if 2drop 1. exit else  
    dup 1 = if over 0 exit else  
    swap dup rot 1- 0 swap  
      0 do  
        2 pick dm*  
      loop  
    then  
  then  
  rot drop ;
```

```
\ : .^ ^ 20 d.r ;
```

needs core-ext
needs double-tools
\ double-tools is available at
\ the Quartus Wiki site.

```
\ My thanks to the author of "ascii"  
: ascii ( -- c ) \ compile: c ( -- )  
\ Interpret: c ( -- c )  
  bl word 1+ c@ state @  
  if [compile] literal then ; immediate
```

```
\ UD.FMT prints out a double-cell  
\ integer with commas.
```

```

: UD.FMT ( D -- )
2dup dabs 2>R
  <#
    begin
    2R> 1000 dm/ dabs
    2dup 2>R
    D0> if
      # # # ascii , hold else
      #S then
    2R@ d0=
    until
  #> type
  2R> 2drop ;

```

```

: .^ ( D -- )
  ^ UD.FMT ;

```

needs tools-ext

```
1 [if]
```

```

: squared ( n -- D: n^2 )
  2 ^ ;
: .squared ( n -- )
  2 .^ ;
: cubed ( n -- D: n^3 )
  3 ^ ;
: .cubed ( n -- )
  3 .^ ;
: ^s ( same as ^ , single-cell result)
  ^ d>s ;

```

```
: test
```

```
page ." Powers of 2 " cr
```

```
11 0 do
```

```
  ." 2 ^ " i . ." = " 2 i .^ cr
```

```
loop
```

```
  ." Use a graffiti 'Return' to continue"
```

```
  key drop cr
```

```
23 11 do
```

```
  ." 2 ^ " i . ." = " 2 i .^ cr
```

```
loop
```

```
  ." Use a graffiti 'Return' to continue"
```

```
  key drop cr
```

```
32 23 do
```

```
  ." 2 ^ " i . ." = " 2 i .^ cr
```

```
loop
```

;
[then]



By [Chapman Flack](#) on Wednesday, January 23, 2002 - 05:39 pm: [Edit](#)

The Forth-style name would be `**` (same as in FORTRAN, and parallel to the floating version which in ANS Forth is called `F**` and in FloatLib `DF**`).

-Chap



By [Bryan A. Zimmer \(Bzimmer\)](#) on Saturday, January 26, 2002 - 03:51 pm: [Edit](#)

Here is the ammended version, with the words `**` and `.**` replacing `^` and `.^`.

```
\ exp 1/26/2002  BAZ
\ This memo provides the word **
\ which computes
\ a base raised to an exponent,
\ as in "2 to the 10th power" ,
\ which would be given as "2 10 ** "

\ Usage:
\ 7 10 ** ( yields 7 to the 10th power)
\ 7 10 .** ( prints 7 to the 10th)
\ Results are double-cell integers.
\ No floating point numbers are
\ used. In calling ** , the stack must
\ contain 2 single-cell integers. One
\ double-cell number, the result of
\ the operation, is left on the stack.

\ The stack picture for this word is
\ as follows:
\ : ** ( S: base S: exp -- D: result )

\ I am including the word .** , which
\ prints the (unsigned) result with
\ commas, in the familiar format
\ notation for the US, viz.
\ 7 10 .** ( 7 to the 10th power )
\ yields 282,475,249

\ The words ** and .** are
\ accurate up to
```

```

\ 2 ^ 31 ( 2 to the 31st power )
\ or 2,147,418,648

\ A logarithmic algorithm is used
\ to calculate x raised to the power
\ of y.

\ Simply stated:
\ x ** 0 = 1
\ x ** 1 = x
\ x ** n =
\   x * ( x ** i ) for i = 1 to n-1
\ Once again, the result is a
\ double cell (32-bit) integer.

\ Any suggestions for improvement
\ would be appreciated. I hope to
\ use a more efficient algorithm
\ or use assembly language to speed
\ things up.
\ - Bryan Zimmer 1/23/2002

```

needs dblmath

```

: not 0= ;

: ** ( base exp -- D )
  dup 0= if 2drop 1. exit else
    dup 1 = if over 0 exit else
      swap dup rot 1- 0 swap
        0 do
          2 pick dm*
        loop
      then
    then
  rot drop ;

\ : .** ** 20 d.r ;

```

needs core-ext
needs double-tools
\ double-tools is available at
\ the Quartus Wiki site.

```

\ My thanks to the author of "ascii"
: ascii ( -- c ) \ compile: c ( -- )
\ Interpret: c ( -- c )

```

```
bl word 1+ c@ state @
if [compile] literal then ; immediate
```

```
\ UD.FMT prints out a double-cell
\ integer with commas.
```

```
: UD.FMT ( D -- )
2dup dabs 2>R
  1000 dm/ dabs
  2dup 2>R
  D0> if
    # # # ascii , hold else
    #S then
  2R@ d0=
  until
#> type
2R> 2drop ;
```

```
: .** ( D -- )
  ** UD.FMT ;
```

```
needs tools-ext
1 [if]
```

```
: squared ( n -- D: n^2 )
  2 ** ;
: .squared ( n -- )
  2 .** ;
: cubed ( n -- D: n^3 )
  3 ** ;
: .cubed ( n -- )
  3 .** ;
: **s ( same as ** , single-cell result)
  ** d>s ;
```

```
: test
page ." Powers of 2 " cr
11 0 do
  ." 2 ** " i . ." = " 2 i .** cr
loop
." Use a graffiti 'Return' to continue"
key drop cr
23 11 do
  ." 2 ** " i . ." = " 2 i .** cr
loop
." Use a graffiti 'Return' to continue"
key drop cr
```

```
32 23 do
    ." 2 ** " i . ." = " 2 i .** cr
loop
;
[then]
```



By [Kris Johnson \(Kdj\)](#) on Saturday, January 26, 2002 - 08:07 pm: [Edit](#)

You might want to put this into the wiki, so that it is easy for others to find it.

See <http://sleepless-night.com/wiki/QuartusForthUserContribution>

-- Kris



By [Stephen C. Gilardi](#) on Thursday, February 14, 2002 - 01:49 am: [Edit](#)

This web page has a nice discussion of a more efficient algorithm:

http://www.uvsc.edu/profpages/merrinst/exponentiation_and_java.html

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

s" September"
s" August"
s" July"
s" June"
s" May"
s" April"
s" March"
s" February"
s" January" ; init

Also your table uses 2 cells per month but you are only using a 1 cell offset.
How about this:

```
: .month (n --) cells 2 * monthtable + 2@ type ;
```

Remember that this table is "Zero Origin" so
0 .month will give you January and
4 .month will give you May

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Lock-Device SIMPLE CODE crashes

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Lock-Device SIMPLE CODE crashes



By [Yeshiah](#) on Tuesday, January 22, 2002 - 07:48 pm: [Edit](#)

heres the simplest code which crashes any hotsync operation. It DOES lock the device on startup as supposed to but I have not been able to use this in any program attempt yet where locking the device did not also prevent hotsyncs.

```
\ -lock
\ Lock-Device after Reset
\ subsequent Hotsynce crash Palm
```

```
needs ids
needs launchcodes
```

```
(hex) 0112 constant vchrLock
(hex) 0008 constant commandKeyMask
```

```
: go
  0
  commandKeyMask vchrLock dup
  EvtEnqueueKey throw ;
```

```
CmdNormalLaunch activate-launchcode
CmdSystemReset activate-launchcode
```

```
' go (id) LOCK MakePRC AutoLock
```



By [Yeshiah](#) on Thursday, January 24, 2002 - 10:55 am: [Edit](#)

Interesting note: It only crashes hotsync If I am using Commander or PDAGuard



By [Neal Bridges \(Nbridges\)](#) on Thursday, January 24, 2002 - 03:20 pm: [Edit](#)

Ah, interesting.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Launchcodes and security HELP

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Launchcodes and security HELP



By [Yeshiah](#) on Tuesday, January 22, 2002 - 09:07 am: [Edit](#)

The complete App is about done and will be posted with resources as a demo of using Launchcodes. The only problem is that when I choose LOCK. Not only is the security app activated but Hotsync then crashes when run until the app is deactivated. Complete resources for compiling are available to anyone who asks and can help.

It does not matter if the Lock-Device function is part of an app or the only function of an app. When activated it works as stated but prevents hotsync. This is useful in some cases but not generally.

HEEELP

```
\ AutoReset YMZ 02.01.20
\ LAUNCHCODES APPLICATION:

\ needs safe
needs ids
needs events
needs toolkit
needs Fields
needs core-ext
needs launchcodes
needs resources

\ SETUP FORM OBJECTS
1000 constant MainForm
1001 constant btnBeep
1002 constant btnLocked
1003 constant btnBoth
1004 constant btnReset
1005 constant btnDisable
1020 constant btnPrefs
1021 constant fldPrefs
(ID) AutR (ID) rsrc use-resources

\ SETUP SECURITY APP CODES
(hex) 0112 constant vchrLock
(hex) 0008 constant commandKeyMask
```

```
\ SETUP PREF VARIABLE
\ ADDR AND LEN
here constant prefs-base
variable nRType \ *** PREF VAR ***
here prefs-base - constant prefs-size
```

```
: prefSetup
  prefs-size prefs-base >abs
  1 [id] AutR
\ *** YOUR PREF KEY ***
  ;
```

```
\ RETRIEVE PREF INTO
\ 1VARIABLE + FLAG
: Prefs< ( -- flag )
  prefSetup
  PrefGetAppPreferencesV10
  ;
```

```
\ STORE PREF VARIABLE TO PREFS
: Prefs> ( -- )
  prefSetup
  PrefSetAppPreferencesV10
  ;
```

```
\ CHECK IF PREF EXISTS
: app-init
  Prefs< dup 0 = if
    1 nRType ! \ SET DEFAULT
  drop
\ SET DEFAULT BEEP
  then
  ;
```

```
\ SETUP WRITE TO FIELDID =====
CREATE fd-buf 20 CHARS ALLOT
: field>d ( fieldID -- d. )
  >R fd-buf DUP R> Field>string
  0. 2SWAP >NUMBER 2DROP ;
: d>field ( d. -- fieldID )
  >R <# #S #> R> string>Field ;
\ END WRITE-TO FIELDID =====
```

```
: lock-device ( -- )
  0
  commandKeyMask vchrLock dup
```

```

EvtEnqueueKey throw ;

\ SOUNDS =====
: SystemSound ( soundID --)
  >byte SndPlaySystemSound ;

: SndOldDoCmd ( &sndcmd -- err)
  0 rot rot 0 0 SndDoCmd drop ;

create sndcmd 1 >byte , 0 , 0 , 0 , 0 ,

: sound ( vol0..64 ms hz --)
  sndcmd 2 cells + ! \ hz
  sndcmd 3 cells + ! \ ms
  sndcmd 4 cells + ! \ vol
  sndcmd >abs SndOldDoCmd ;

: beep
10 50 880 sound
; \ =====

: pastePrefs \ TO FIELD..
  nRType @
  0 fldPrefs d>field drop
  \ ( n 0 FieldID -- )
;

\ EVENT LOOP FOR BUTTON
: do-event ( ekey -- )
  ctlSelectEvent = if
    event >abs itemid
dup \ FOR NEXT =IF
  btnBeep = if
    beep
    1 nRType !
    drop \ RESULT NOT NEEDED
    Prefs> \ STORE CHOICE
    pastePrefs
  then
else dup \ FOR NEXT = IF
  btnLocked = if
    \ LOCK-DEVICE
    \ CRASHES HOTSYNC ALSO
    2 nRType !
    drop \ RESULT NOT NEEDED
    Prefs> \ STORE CHOICE
    pastePrefs

```

```
then
else dup \ FOR NEXT = IF
  btnReset = if
    SysReset ( ) \ 140 systrap
    drop \ RESULT NOT NEEDED
  then
else dup
  btnPrefs = if
    pastePrefs
  then
else dup
  btnDisable = if
    9 nRType !
    drop \ RESULT NOT NEEDED
    Prefs> \ STORE CHOICE
    pastePrefs
  then
then ;
```

```
\ PROGRAM EXECUTION BEGINS HERE
: go
app-init \ initialize pref variable
launchcode CmdNormalLaunch =
  if
  MainForm ShowForm
  pastePrefs
dup
  begin ekey
  do-event
  again
else
launchcode CmdSystemReset =
if
  nRType @ 1 = if beep
  then
  nRType @ 2 = if beep
  drop
  lock-device
  then
  nRType @ 9 = if \ dev-null
  then
then then ;
```

```
\ ENABLE LAUNCHCODE AWARE APP
CmdNormalLaunch activate-launchcode
CmdSystemReset activate-launchcode
```

```
\ CREATE APP
' go (id) AutR MakePRC AutoReset
```

```
\ TRANSFER RESOURCES
1000 (id) tFRM copyrsrc
1100 (id) Tbmp copyrsrc
1200 (id) tSTR copyrsrc
1000 (id) tAIB copyrsrc
1001 (id) tAIB copyrsrc
```



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 22, 2002 - 01:51 pm: [Edit](#)

Might it be necessary to set up an A4 stack (using Steve Bohrer's callback stuff) during a HotSync operation?

-- Kris



By [Yeshiah](#) on Tuesday, January 22, 2002 - 03:06 pm: [Edit](#)

what is that? What do you mean? I would have to setup a program to run before hotsync?



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 22, 2002 - 03:26 pm: [Edit](#)

Disclaimer: I don't really know what I'm talking about here.

Search the wiki for "callback". There are some articles that Steve Bohrer wrote about issues with the Forth data stack. The deal is that Forth words assume that the A4 register is pointing to the Forth data stack. But if your Forth code is called as part of a callback from the OS (which I think it might be during a HotSync), then A4 may not point to a valid stack. So Steve wrote some words that would create a Forth stack that can be used during the callback.

So this might explain why your stack is getting hosed at HotSync time. But I don't know this for sure.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 22, 2002 - 03:48 pm:

[Edit](#)

You might try doing a BYE after you call lock-device.

Neal



By [Chapman Flack](#) on Tuesday, January 22, 2002 - 04:19 pm: [Edit](#)

How about before? 😊 I mean, would it work to enqueue an AppExitEvent and then a vchrLock key, and then do ekey, causing the Forth app to exit first and then the vchrLock to be processed?

Just a weird idea off the top of my head.

-Chap



By [Yeshiah](#) on Tuesday, January 22, 2002 - 04:45 pm: [Edit](#)

I added bye after Lock-device call in routine : go

it now crashes on reset instead of hotsync.

CHAP - how do I try what you suggest? Anyone want the resource file and memopad code?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 22, 2002 - 05:04 pm:

[Edit](#)

It may be that what you're doing -- issuing a lock-device keycode during the system-reset handling -- doesn't make the Palm OS happy. You might try a smaller app that does only that and nothing else, to be sure that you've correctly isolated the problem.

Neal



By [Yeshiah](#) on Tuesday, January 22, 2002 - 07:20 pm: [Edit](#)

I did.

The : go routine did nothing but issue the Lock-Device and this causes the problem. Since Commander and PDAdefense can do this I know it is just a matter of the right Lock command.

Ill repost a simpler code and reask for help

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Memory allocation assigned to address without a "name"

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Memory allocation assigned to address without a "name"



By [Heather Risedorph](#) on Tuesday, January 22, 2002 - 07:08 am: [Edit](#)

I am guessing this has been posted before. I checked the Wiki but Kris's link to Dynamic Memory Allocation topic while sounding promising only talked about what could be a buggy heap module?

I want to follow "proper" Forth programming techniques, so tell me if there is a way to do this other than the way that C-ish languages do...

I want to build in Forth a set of draw window components. I do not want to allocate a "million" parts of memory to display a very simple picture and I do not want to allocate very little memory and run out. I want to build some sort of simplified linked list, just a data structure where you create "linked list name" 1 cells allot, store the address of the head of the linked list and a few defining words that allow you to allot double cell sections of memory sometime in the future as you add new components. The first cell is the address of the component in question. The second is the address of the next item in the list.

To do this, it would be hard to come up with a name for every component and every list item 2 cell thing, because it is created at runtime.

I thought I saw an OOP module and a Linked List module here somewhere before, but it wasn't there this time when I tried to search for it.

Again, the important thing to me is getting the results I want in a way that is more or less proper for Forth, so take a moment to educate me how Forth is not C if you are so inclined. 😊



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 22, 2002 - 07:59 am: [Edit](#)

A potentially less buggy implementation of the Forth-ish heap words is available here:

<ftp://ftp.taygeta.com/pub/Forth/Applications/ANS/memory.fth>. I haven't tried it. And it may need some adaptation to work with Quartus.

But you may be better off using the Palm OS memory allocation API, especially if you want to minimize memory usage.

.

-- Kris



By [Heather Risedorph](#) on Tuesday, January 22, 2002 - 10:02 am: [Edit](#)

Oh so I would do it with PalmOS systraps rather than native Forth code?



By [Chapman Flack](#) on Tuesday, January 22, 2002 - 12:05 pm: [Edit](#)

Heather,

So the list structure you're thinking about is basically cons cells (LISP and Scheme lingo, a cons cell is a two word structure where the first is something you're interested in and the second points to the next cons cell). In your case the something you're interested in is itself a pointer to some window component.

So my first question would be, how are you allocating those components? Will they be in Forth dataspace (with single-cell addresses) or in arbitrary space (where you'll need double-cell addresses)?

Is a linked list the only data structure you've considered? What operations will you need on your structure, and which ones will be more and less frequent; which ones need to be especially fast?

will you need to:

put things at the end of your structure?

take things off the end of your structure?

put things INTO the structure?

take things OUT OF the structure?

keep things in a specific order?

find a specific thing?

how many things in a typical structure?

how many such structures typically in the program?

Then we could compare some different approaches on the strength of what you need to use them for.

-Chap



By [Heather Risedorph](#) on Tuesday, January 22, 2002 - 12:31 pm: [Edit](#)

To best answer this I have to say a quick note about who I am.

Up till now I've been tinkering and trying to gather enough background understanding of Forth to be ready to actually put together a program worth turning into a prc. I learned the basics of sound, systraps, XTs, UI, events, defining words, control structures, and lately draw windows.

At work I work with a 3d solid modeling program. I am also a bit of a fantasy nut with an artistic streak. For a very long time now I have wanted to build a model castle (ask me sometime to go into detail but be warned-it's long). Anyway, I thought a good first project would be a simple architecture program to help me visualize the model. I've researched various 3d techniques and I am up for a challenge.

Probably the components of the 3D model would be stored in a database so they could be retrieved and worked on. They would need to be stored in a specific order to prevent ambiguous nonsense. I would need to be able to add, remove, and redefine the targets (meaning add, remove, and retrieve the addresses). I have no idea how many I would need but I would prefer to be limited only by safe environment space at runtime.

I was thinking small at first. Right now I am able to hard code points and put lines between them. Next I'd like to start defining edges. Edges will either be straight or arc. I don't have any intention at this point to do any background culling or painting surfaces with a fill but I would like to be able to have a viewing plane that can rotate and move around the model.

I looked at linked list first because of OOP experience and work in C it's the kind of thing I think about first. I don't have much idea of how to start working with the memory information. I could figure it out if I knew how many points I had and built an array, but the ability to set up dynamic memory is what I need a bit of advice about.



By [Chapman Flack](#) on Tuesday, January 22, 2002 - 01:25 pm: [Edit](#)

Hmm...

so the components will be in databases, i.e. storage heap. That's probably a good choice--there's lots more storage heap than dynamic heap, and reading from storage is just as fast, though writing is a little slower because of the protection.

Are you thinking each-component-izza-database-record, or maybe group components into records?

What is the order requirement--what's the ambiguity you need to avoid? If you were doing a drawing program you might want to keep a rendering order so things on top are drawn later--but if you're doing full-fledged 3D modeling with varying viewpoint then there isn't so much an intrinsic order, you'll need to do hidden-line/hidden-surface removal with respect to the current viewpoint.

Will you be able to refer to a specific component mutiple times in the

model, say a window or column that appears multiple places?

Here are some of the sorts of tradeoffs I was thinking about:

Could compare a singly-linked list to a dynamically-resized array (essentially what you get with MultipleDataSpaces on the wiki).

In the list, every new cons cell you allocate takes about the same time. In an array, sometimes resizing the array will be fast, sometimes it might have to move, which involves copying, in time proportional to the total array size. It's automatic--you don't have to deal with it--but it means some allocations will be faster than others. (Unless the array is very large, the time may not be significant.)

The cons cell approach is a little more tolerant of fragmentation; resizing the array might fail if there isn't a single free space in the heap big enough for the whole array, but allocating a cons cell will succeed as long as there's any free nook or cranny big enough.

On the other hand, the cons cell approach will -create- fragmentation like crazy. All these little 2, 3, or 4 word blocks scattered through the heap, probably locked down so they can't be shifted to compact the heap. An array only occupies one contiguous chunk of heap and, if you use MultipleDataSpaces, it's unlocked whenever you aren't talking about it, so Palm OS can shove it around and satisfy other allocations.

And of course if each cons cell is one word that you want and one word of overhead (next cell pointer) the cons cell approach is 50% overhead, or you'll use 100% more total space than if you just keep the words you want in an array.

(Maybe more--I don't remember offhand what Palm OS overhead there is per allocated chunk.)

Neglecting the fragmentation issue, the array approach doubles your upper capacity limit.

Adding to the end of either structure is fast (if you maintain a pointer to the last cons cell). Adding to the beginning is faster for the list than the array. Finding the Nth item is fast with an array, but in the list you have to scan. Inserting after the Nth item is fast with a list (once you find the item, but that requires scanning). In the array it requires copying the remaining part of the array upward, but you spend no time scanning to find the insert point in the first place. The considerations for deleting items are similar to inserting. If you ever have to re-order your items, the array likely wins.

If you keep the array in a known order you can search for a specific element in $\log N$ time, where in the list you have to scan for it. (But unless the array is quite big, the extra complexity of binary search probably

wouldn't pay off and you'd do linear search anyway.)

So picking your data structure will be a matter of deciding which of those issues will be most important for your application. Which operations will you be doing a lot of, in tight loops? Those you want fast. Which ones will you be doing less, or only as the user interacts with the interface, where you can afford to be a little slow because the user is slower? And so on.

Hope some of that's useful,
-Chap

 By [Heather Risedorph \(Rise1525\)](#) on Tuesday, January 22, 2002 - 02:07 pm: [Edit](#)

So if I use the database I won't need an array or linked list, right?

That sounds best because then I can just add onto the database. Second choice or first choice of the dynamic heap (if I need both) is the array because for the most part things won't be needing resized very often. If they do, it would probably be because of adding a section, meaning it would be faster to add a chunk instead of several crumbs.

I guess it's a good time to go back to reading about resources handling.

 By [Chapman Flack](#) on Tuesday, January 22, 2002 - 02:46 pm: [Edit](#)

Well, you can have your records refer to each other and keep track of things that way. Again there are different approaches to think about; if records refer to each other by record number then inserting a record might throw things off; if they refer to each other by LocalID you need to be smart about hotsyncs and restores. And you still have the question of whether you want one component per DB record, or maybe one section per DB record, and treat each record as an array of components: the chunk-or-crumbs decision again, just now on a storage heap instead of dynamic heap.

-Chap

 By [Heather Risedorph \(Rise1525\)](#) on Tuesday, January 22, 2002 - 04:15 pm: [Edit](#)

Probably would group records by feature in some sort of makes sense way and write the program so that it won't randomly insert new records without some sort of verifying thing. I know I'm not making sense, it'll have to wait till I get a better idea of how the PalmOS uses type data DBs.

Writing wireframe would just involve each point knowing having a collection of "this is who I am attached to and it is a [straight line|arc(with radius and

centerpoint)] edge" and then make sure that each line is only defined for one of the connecting points to prevent drawing the image twice.

Surfaced models would be grouped by faces. I suppose when I get that far a little rearrangement will be minimal.

There would need to be other information like line color, constraints that are used to define everything so that the quickest thing could be stored for the model and then if something gets moved the model won't look like crushed chicken wire.

Thanks for your help in pointing me where I'm going. 😊

 By [Heather Risedorph \(Rise1525\)](#) on Tuesday, January 22, 2002 - 04:36 pm: [Edit](#)

Now why are all the functions I want to use returning a VoidHand. ? I thought that DmGetRecord, DmReleaseRecord, DmNewRecord, and DmNumRecords would be a good place to start using the storage heap but they return a VoidHand. I tried using another systrap that returned that and I got a memory mgr null handle exception (duh) and it needed reset using the stylus.

Suggestions of what i should use instead?

 By [Chapman Flack](#) on Tuesday, January 22, 2002 - 04:39 pm: [Edit](#)

De nada. I looked through the Win... functions and there doesn't look to be anything built in to draw any kind of a curve, circular arc or otherwise. So if you have to roll your own, if I were you, I'd implement Bézier curves instead of circular arcs--they're so flexible and still easy to use, and you only have to store two control points plus the endpoints.

And then be sure to put the module on the wiki! 😊

-Chap

 By [Heather Risedorph \(Rise1525\)](#) on Tuesday, January 22, 2002 - 04:48 pm: [Edit](#)

Sure, and the good thing is in my 3d solid modeling courses I was given a handout with all the equations built for me, so I just have to go dig them up out of my "BADCOLLEGEBAD" pile.

Oh... Database tutorial on the Wiki. All of the storage and retrieval stuff was there.

Yeah anything I write with this will be public domain and I hope to be able to offer the database after I'm done building the model. 😊 Maybe a link to a site with pics of the completed realworld project if/when/I hope it gets done? I have to fight the layzee bug first.

I have a lot of other graphical stuff I'd like to contribute eventually (after I've written it) so if that's a bare spot in the contributed source arena...who knows, maybe some day I'll be useful.



By [Chapman Flack](#) on Tuesday, January 22, 2002 - 09:56 pm: [Edit](#)

Can't tell from what you wrote if the database tutorial answered -all- your questions. The type "VoidHand." should not worry you--the void doesn't mean there's something invalid about it, it's more a borrowing of ANSI C lingo where the type (void *) is a pointer type that just tells you nothing about what it happens to point to. VoidHand. of course is a -handle- to a chunk that might contain anything.

If you got a null handle exception some other time when something returned a value of the VoidHand. type, it was probably because the pointer it returned happened to be null (because something else about your call didn't work, like you may have passed an argument it didn't expect--or you could have passed it a null pointer by mistake).

-Chap



By [Heather Risedorph \(Rise1525\)](#) on Wednesday, January 23, 2002 - 10:04 am: [Edit](#)

Oh, well I had done a .s and the result was 0 0 before I made the next call so I guess that means it happened to return a null handle.

Btw, does anyone know how come when I typed in the database-ext file and tried to include it, quartus told me dmresizdmresiz ? undefined word and then when I tried to include it again it didn't give me that error? It's supposed to be dmresizerecord and I quadruple checked and I had typed it right. Is this a known bug, an unknown bug, or a programmer=ID10T error?



By [Heather Risedorph \(Rise1525\)](#) on Wednesday, January 23, 2002 - 10:22 am: [Edit](#)

Call for advice:

While working on a test of drawing curves I realized I'm going to need a bit of higher math for this stuff. Tangents and curves and other calculations require trig and powers. Part of the beauty of doing all this in pixels is being able to expect integers for input and return integers for output, so I don't

want to get into floating point numbers. I've already worked out a algorithm (but not code yet) that squares any 16-bit integer in only 16 additions using bit shifting and I'm pretty close to having a 16-bit integer square root algorithm that is similar in overhead. I've downloaded the algorithm page from the MathLab topic on the Wiki.

Should I go ahead and try to implement this stuff in an integer higher math module or is that stupid? I don't really want to use floats if I don't have to because these words are going to get called a LOT.



By [Jim Hendricks \(Jimh\)](#) on Wednesday, January 23, 2002 - 10:27 am:

[Edit](#)

there is a trig module in the standard Quartus libs which provides integer based trig calls.



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 23, 2002 - 11:01 am:

[Edit](#)

Is your bit-shift-and-add square algorithm significantly faster than just doing "dup *"?

-- Kris



By [Heather Risedorph \(Rise1525\)](#) on Wednesday, January 23, 2002 - 12:03 pm: [Edit](#)

I don't know I haven't checked it, but I would think that 16 additions and a couple of dups, bit shifts, and ifs would be significantly faster than $10456 * 10456$.

For the test it doesn't matter. I wasn't being picky or anything, I just only have access to the internet and all the notes while I'm at work and I was working on it from home.



By [Heather Risedorph \(Rise1525\)](#) on Wednesday, January 23, 2002 - 12:04 pm: [Edit](#)

Strike that, $10456 * 10456$ doesn't stay within 16-bits so it doesn't count anyway.



By [Jim Cook \(Jimrcook\)](#) on Wednesday, January 23, 2002 - 01:09 pm:

[Edit](#)

> think that 16 additions and a couple of dups,
> bit shifts, and ifs would be significantly
> faster than $10456 * 10456$.

If I read the documentation correctly, a multiply is something like 70 clocks.

Each add is 4 clocks (for a total of 64) and the extra dup and bit shift is going to kill you.

I'd be interested to know if I've totally misunderstood the documentation, though.

<http://e-www.motorola.com/brdata/PDFDB/docs/M68000UM.pdf>

Section 8.



By [Chapman Flack](#) on Wednesday, January 23, 2002 - 02:18 pm: [Edit](#)

I'm guessing the stuff that will be called "a LOT" will be addition and multiplication. Drawing lines and Bezier curves all comes down to evaluating polynomials (addition and multiplication). You might need trig for things like "make this object tangent to that one" but you do that calculation once when you create the object. Likewise if you want to rotate an object or rotate a view you need sine and cosine to set up your transformation matrix, but the only stuff you'll do a LOT of will be matrix multiplies. So I wouldn't worry too much about the speed of the transcendental functions. What you'll want is fast matrix multiplication and polynomial evaluation. You shouldn't even have to worry much about squares or powers (remember Horner's and de Castel'jau's algorithms for those polynomials).

As for whether you do the adds and multiplies in fixed or floating point, I think speed will be one question and accuracy/numerical stability will be the other big one. That stuff is hard to analyze (I had to take the course and have the bruises to prove it, but mostly what I took away from the course is PLEASE DON'T MAKE ME HAVE TO DO THAT.) What makes it counterintuitive is you may know the scaling of your inputs and outputs but not necessarily of the intermediate results that crop up during evaluation, and truncation or overflow there might throw the results way off.

I think my approach would be to be lazy (and safe) and use floats at least to get a first version working. After that it's always possible to optimize by making int copies before the tight loops and doing int arithmetic in the loops, and see what it does to the output quality.

In other words, "premature optimization is the root of all evil." If you go for the simplest, safest design first, but design it so the hottest words can be replaced with more sophisticated versions later, you'll have to do a lot less work before you see the first functioning fruit of your labor.

-Chap



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 23, 2002 - 02:54 pm:

[Edit](#)

"I don't know I haven't checked it, but I would think that 16 additions and a couple of dups, bit shifts, and ifs would be significantly faster than $10456 * 10456$."

It sounds to me like you're thinking that $10456 * 10456$ would be calculated as " $10456 + 10456 + 10456 + \dots + 10456$ " (10456 terms). That's not how a multiply works on the M68000--the CPU does something similar to how you are implementing the operation.

I remember implementing shift-and-add multiplication functions for the 6502 processor. Having a MUL instruction in hardware is very nice.

You might want to try adding your implementation to the <http://sleepless-night.com/cgi-bin/twiki/view/Main/ArithmeticPerformance> module in the wiki to see how it compares.

-- Kris

 By [Heather Risedorph \(Rise1525\)](#) on Thursday, January 24, 2002 - 10:22 am: [Edit](#)

I haven't written it yet (Palm ran out of batteries before I got done). Thanks for the help everyone. I feel kind of like an ignoramus trying to work on things that I didn't go to college to do so thanks for being patient with my ignorance. 😊

The multiply algorithm is

1. Check rightmost bit.
 - 1a. If 0, add 2 to a 0 tack on variable's value
 - 1b. If 1, lshift to the 0 tack on variable and add the sum to the pot, then add 1 to the 0 tack on variable
2. Repeat this until you have reached the 0s on the left side of the number (or 16 times if there's no good way to figure out when that is).

The result is the square of the number. You are probably right that this algorithm is much slower than the hardware multiply. Computing the square root would be similar but in reverse. I haven't worked it out yet.

Instead I was basically taking the advice of go for something easy that you know works. I don't know how to use floats yet, so I wrote a quick guess and check square root word that takes in a guess, squares it, and checks it to the original number you want the root of. It keeps track of whether it's adding or subtracting 1 each time and as soon as it goes from one to the other or hits 0 it exits the loop. I think it is a good approach to circle making because you can get the previous Y value and in order for the circle to appear continuous, you can't really move more than 1 pixel in the Y direction.

I wanted to have a square root word so I can at least just put an arc on the screen without having to learn about floats or get too heavy into math code.



By [Chapman Flack](#) on Thursday, January 24, 2002 - 11:45 am: [Edit](#)

There's a Bresenham circle algorithm too, with nothing in the loop but bit shifts and adds and a test. You need sqrt only for the constant sqrt(2) which you could build in.

E.g. <http://www.rpi.edu/dept/ecse/graphics-f99/Classes/24/>

-Chap



By [Heather Risedorph \(Rise1525\)](#) on Thursday, January 24, 2002 - 06:15 pm: [Edit](#)

Bah. I wish I knew where to find all these resources. I'm from the one-stop-shopper generation. Anyone know of a really good computer programming essentials algorithm book or internet site? It'd be nice to be presented with just a little summary of the information that CS students get at college. And no, I don't have any real ambition of being able to absorb that much, but it'd be nice to know where to go for a reference.



By [Kris Johnson \(Kdj\)](#) on Thursday, January 24, 2002 - 08:15 pm: [Edit](#)

I don't know of any one-stop-shopping book that gives everything. There's a reason a CS degree takes four years. (And it turns out that a CS degree has very little to do with being a good programmer.)

But I'd suggest the following:

- A good introductory book on whatever programming language you plan to use (with Forth, the choices are limited, unfortunately)
- A good general algorithms book. I've heard good things about Robert Sedgewick's books, but haven't read them myself.
- A good graphics book (because this seems to be where your interests lie)

And don't be afraid to ask questions on forums like this. No one knows everything.

-- Kris



By [Heather Risedorph \(Rise1525\)](#) on Friday, January 25, 2002 - 10:06 am: [Edit](#)

I have all but the graphics book. I took an introductory course in Java and I have worked up to the equivalent of Algorithms 2 through self-taught and courses and interacting with people who are CS people.

Hope I didn't sound like I was belittling the CS degree. I'm not at all. I'm just a bit disappointed I didn't make different choices at college so I took it up as a hobby instead.



By [Chapman Flack](#) on Friday, January 25, 2002 - 11:21 am: [Edit](#)

There are a bunch of algorithms in the Cormen, Leiserson, Rivest Introduction to Algorithms (a/k/a the Great Big Fat White Book), but it would still have to be supplemented with something graphics-specific. I don't know what's a good graphics book now; we used Newman and Sproull Principles of Interactive Computer Graphics but it was already oldish then. A lot of modern topics won't be in there. I remember we worked out the Bresenham circle algorithm at the board in class and I was scribbling notes furiously cos none of it was in the book, but since the class was over I've never been able to make sense of those notes. 😊 I'll ask around for what would be a good graphics book these days.

-Chap

-Chap



By [Chapman Flack](#) on Friday, January 25, 2002 - 06:54 pm: [Edit](#)

This was recommended by a student in the visualization lab downstairs. It sure looks like a good bet:

<http://www.aw.com/catalog/academic/product/1,4096,0201848406,00.html>

Also looked good, on Prof. Hoffmann's bookshelf:

<http://shop.mcgraw-hill.com/cgi-bin/pbg/0070535485.html>

it's one year more recent, 400 pages shorter, and covers fewer topics (but maybe in more depth--I couldn't say).

This is probably a companion to it, that covers some of the more mathematical/modeling aspects:

<http://shop.mcgraw-hill.com/cgi-bin/pbg/0070535302.html>

If you were going to get only one graphics book, I'm guessing the first one should probably be it.

Prof. Hoffmann also suggested that Google is a pretty good resource for recent developments and papers and such, once you have an idea of the right search terms (which you can get from the books); e.g. once you know a matrix of pixels is a 'raster' and algorithms to draw shapes on a raster

are called raster conversion or scan conversion algorithms, you can go to Google with "raster algorithm circle" and get lots of hits like the Bresenham link I gave earlier.

-Chap

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Wiki Upgrade

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Wiki Upgrade](#)



By [Kris Johnson \(Kdj\)](#) on Saturday, January 19, 2002 - 11:33 am: [Edit](#)

I'm in the process of updating the TWiki software in the wiki. This shouldn't take too long (less than an hour). Everything should work okay during most of the upgrade process, but it would probably be a good idea to not attempt to modify anything in the wiki until I give the "all clear".

Thanks,
-- Kris



By [Kris Johnson \(Kdj\)](#) on Saturday, January 19, 2002 - 12:59 pm: [Edit](#)

The software has been upgraded. There are a few little things for me to clean up (like getting custom variables working), but it should be working well enough for people to use it.

To see some of the new text-formatting features available, visit <http://sleepless-night.com/cgi-bin/twiki/view/TWiki/TextFormattingRules>

Let me know if you have any problems or questions.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Saturday, January 19, 2002 - 04:07 pm: [Edit](#)

I've had one report from someone having trouble using the wiki since the upgrade. I'd appreciate it if others would try making some edits and let me know whether it is working (it is working fine for me).

-- Kris

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Handling launch codes

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Handling launch codes



By [Yeshiah](#) on Friday, January 18, 2002 - 01:44 pm: [Edit](#)

ok how do I go about handling launch codes? I would like to intercept the launch code sent to the app after a reset. And is persistent preferences handled better by saving to prefs, memo or a DB?



By [Kris Johnson \(Kdj\)](#) on Friday, January 18, 2002 - 02:43 pm: [Edit](#)

To handle launch codes, you need to request the newest beta version of Quartus from Neal. It includes instructions on how to handle the codes.

If the persistent preferences are pretty simple, I'd recommend just saving them to the preferences database. There's no need to go to the trouble of using the Data Manager unless you need multiple records or other advanced features.

-- Kris



By [Yeshiah Zalman](#) on Monday, January 21, 2002 - 10:32 am: [Edit](#)

ok IT basically WORKS HANDLING THE RESET LAUNCH CODE except THAT The Stack is left unstable and ANY hotsync crashes the palm until I delete the app and reset. On one hand this is good because it ensures that someone cant hotsync the palm to get around the security lockout. But I would like to know why and be able to take advantage of this "flaw" or choose not too.

Code below.

```
\ AutoBeep YMZ 02.01.20
\ Lock the palm after reset:
```

```
needs ids
needs toolkit
needs core-ext
needs FindParams
needs launchcodes
```

```
(hex) 0112 constant vchrLock
(hex) 0008 constant commandKeyMask
```

```
: lock-device ( -- )
  commandKeyMask vchrLock dup
  EvtEnqueueKey throw ;
```

```
\ Sounds -----
```

```
: SystemSound ( soundID --)
  >byte SndPlaySystemSound ;
```

```
: SndOldDoCmd ( &sndcmd -- err)
  0 rot rot 0 0 SndDoCmd drop ;
```

```
create sndcmd 1 >byte , 0 , 0 , 0 , 0 ,
```

```
: sound ( vol0..64 ms hz --)
  sndcmd 2 cells + ! \ hz
  sndcmd 3 cells + ! \ ms
  sndcmd 4 cells + ! \ vol
  sndcmd >abs SndOldDoCmd ;
```

```
: beep
10 50 880 sound
;
```

```
: go
beep
lock-device
;
```

```
CmdSystemReset activate-launchcode
```

```
' go (id) AutB MakePRC AutoBeep
```

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Word names: fixed length in codespace?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Word names: fixed length in codespace?



By [Elan Goldman](#) on Thursday, January 17, 2002 - 03:44 pm: [Edit](#)

Hi.

Does QF always reserve the same number of bytes for the names of words, or does the number of bytes allocated in codespace for the name of a word depend on the effective length of that name?

I.e. will the name of the word

: a ;

use up as much codespace as the name of the word

: abcdefghijk ;

(Still trying to reduce the size of codespace used in my app ...)

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Thursday, January 17, 2002 - 04:03 pm: [Edit](#)

The number of bytes directly relates to the length of the name.

Neal



By [Elan Goldman](#) on Thursday, January 17, 2002 - 04:30 pm: [Edit](#)

Thanks Neal.

That will give me that ability to compress my app even further.

Take Care,

Elan



By [Chapman Flack](#) on Thursday, January 17, 2002 - 04:52 pm: [Edit](#)

And :NONAME words use even less space than that, if you get really crunched.

Could still probably do you an extra code segment in the near future, if you're still interested.

-Chap



By [Chapman Flack](#) on Thursday, January 17, 2002 - 08:34 pm: [Edit](#)

Some more documentation is on the wiki under PositionIndependentCode. If you think some portion of your app could be organized according to those rules, it might be a candidate for a separate segment.

-Chap

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Understanding keycodes

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Understanding keycodes



By [Yeshiah](#) on Thursday, January 17, 2002 - 11:37 am: [Edit](#)

this is a separate topic thread I think, but it goes with my thread on the security app and locking the device. Neal, you mentioned key codes.

What the heck and how do I use them....?

I found this info in chars.h of the SDK. I believe it is what you meant. how do I use them?

```
// The following are key codes used for virtual events, like
// low battery warnings, etc. These keyboard events MUST
// have the commandKeyMask bit set in the modifiers in order
// to be recognized.
```

```
#define vchrLock 0x0112 // switch to the Security app and lock the device
```



By [Chapman Flack](#) on Thursday, January 17, 2002 - 12:29 pm: [Edit](#)

Look up `EvtAddEventToQueue` or for extra added convenience, `EvtEnqueueKey`.

-Chap



By [Yeshiah](#) on Friday, January 18, 2002 - 09:03 am: [Edit](#)

I did but found nothing to help me use it



By [Kris Johnson \(Kdj\)](#) on Friday, January 18, 2002 - 10:00 am: [Edit](#)

This works:

```
(hex) 0112 constant vchrLock          \ from Chars.h
(hex) 0008 constant commandKeyMask    \ from SysEvent.h
```

```
: lock-device ( -- )
  commandKeyMask vchrLock dup
  EvtEnqueueKey throw ;
```

-- Kris

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Security and off&lock

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Security and off&lock



By [Yeshiah](#) on Wednesday, January 16, 2002 - 10:21 am: [Edit](#)

how do I power-off or off&lock by software?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, January 16, 2002 - 03:24 pm: [Edit](#)

Yeshiah, you'd need to add a certain keycodes to the event queue. I'm not in front of the SDK, but it's one of the special keycodes documented there. The Quartus discussion archives contain examples of how to do add events to the queue.

Neal



By [Yeshiah](#) on Wednesday, January 16, 2002 - 06:37 pm: [Edit](#)

I need a bit more guidance because I looked in the docs and must be searching for the wrong keywords



By [Yeshiah](#) on Thursday, January 17, 2002 - 11:27 am: [Edit](#)

I was able to get this far and launch the security app but dont know how to pass launch codes or what

sorry if it seems newbie after all this time.

I just was trying other programing tools with easier language I could grasp but they still produced inferior code. So I just need to figure out forth

Where do I place the launchcode and where do I find what code to use for the security app?

```
\ Secure
\ Launch the Security application:
```

```
needs ids
needs core-ext
```

```
create DmSearchStateType 16 allot
variable cardnum
2variable localid
```

```
18 constant cmdPbSize

: go ( -- )
\ Find the MemoPad application:
  localid >abs cardnum >abs true
  [ID] secr [ID] appl
  DmSearchStateType >abs true
  DmGetNextDatabaseByTypeCreator throw

\ Allocate a system-owned dynamic region:
  cmdPbSize s>d MemPtrNew 2>r
  0 2r@ MemPtrSetOwner throw

\ Launch the app:
  2r> 0 localid 2@ cardnum @
  SysUIAppSwitch throw ;
```

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Where to start?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Where to start?



By [Bob Gibson \(Ragibson\)](#) on Monday, January 14, 2002 - 11:15 pm:

[Edit](#)

I now have a new Palm PDA (very nice Handspring Prism), and a new language to learn (Forth).

I have some applications that I would like to write using Quartus Forth.

Is it recommended that one read the Palm Programming books that focus on C (or C++)? Or, should I just start with the Wiki Tutorials found on this site?

Having looked at a number of threads both in the current list, and in the archive, there seems to be a huge amount of information to digest. This is quite intimidating, and it makes a newbie, such as myself, feeling a bit overwhelmed.

Thanks, in advance, for your suggestions, and assistance.

Bob



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 15, 2002 - 12:26 am: [Edit](#)

I'd recommend plowing through the C/C++ Palm programming books quickly to pick up the Palm OS concepts, and then go through the wiki tutorials to see how things are done with Forth.

Quartus does a lot of things that make it simpler than using C/C++. But you need to understand a little of what's going on under the hood. And, unfortunately, there are a few things in Quartus that are not as easy to do, because the Palm API is C-based. So familiarity with the C API is valuable.

-- Kris



By [Chapman Flack](#) on Tuesday, January 15, 2002 - 01:11 pm: [Edit](#)

And be sure to download the software development kit. It's free. It includes all the C header files.

One of the (current) complications of using QF is you don't have easy access to all of the definitions in the C header files. QF does have all the system service names built in, but the C header files define a lot more than that: types, structures, masks, enum constants, and so on. Various QF library modules define subsets of those for you, but you sometimes need to go read the C headers to find the offset of some struct member or the value of some constant, and copy the definition into Forth.

-Chap



By [Chris Bucsko](#) on Tuesday, January 15, 2002 - 05:55 pm: [Edit](#)

Here's a simple tutorial to get you started, it's in the QF file area:

<http://www.quartus.net/files/PalmOS/Forth/Contrib/Tutorial-v1.02.zip>

It's a very simple and easy intro to some basic Forth and PalmOS concepts.

Also be sure to download rsrcedit from:

<http://www.individeo.net/>. It's a valuable forms editor for as long as the web site lasts.



By [Heather Risedorph](#) on Wednesday, January 16, 2002 - 10:25 am:

[Edit](#)

Just a note from another newbie who is (but is becoming much less) overwhelmed:

Check out <http://www.phys.virginia.edu/classes/551.jvn.fall01/primer.htm> for a good complete and thorough introduction to Forth programming. The info about defining words and XTs and how he relates it to C have been helpful to me.

Also, I recommend downloading as much sample code as you can. I am really glad I asked for the source code to a Tetris program because I keep coming back to that to learn how Forth is actually used to write real programs. I also downloaded like every library that I could find on the Wiki (search for .txt and download like mad).

The one thing that kept me from being hopelessly overwhelmed is that I did not read them after I downloaded them. I waited until I needed to know how to do something and then started searching for examples of people actually doing it. I kept a scratch paper handy to write stack diagrams down. I built "mimic" words that get passed the same information as the real word, but then instead of just doing everything, they would do a .s before almost every word that I was unsure of it's affect on the stack. This has helped me learn a little more about pointers in Forth.

And go to the Palm development site and download the pdf files. The

systraps reference that comes with Quartus is a good way to keep track of what systraps are available, but if you are trying to figure out how to get a valid &pID. value, you will need to look at the Adobe file to figure out what the OS is expecting from you. My example was trying to figure out how the sound library file works. I went to the systraps file and found the SndDoCmd prototype and saw that it was saying we could specify a channel and a wait? flag and then went to the Adobe file and realized that if you don't put a 0 or 0. for those Palm won't know what you mean because the other parameters aren't implemented.

I haven't written anything worthwhile yet, but I did make my Palm make a C chord by repeating the 3 notes at a 1 ms duration (it sounds really chunky). I think Forth becomes a lot less overwhelming when you get to the point where you get it. Hang in there!



By [Chris Bucsko](#) on Wednesday, January 16, 2002 - 12:08 pm: [Edit](#)

That's good advice. I also keep a pad next to my Palm to write down stack diags, etc. I frequently dissect example code, writing out the stack for each Forth word. That gives me real insight into what's going on. I think it would most helpful for newbies to get the QF evaluation code, the hello world tutorial, rsrcedit, and the systraps reference in both pdb and text format, all in a single zip file for downloading. That would make a good 'getting started' kit.



By [Gary Wiese \(Garyjwiese\)](#) on Wednesday, January 16, 2002 - 07:41 pm: [Edit](#)

I have been using quartus off and on for about 2 years. I am what you would really call a newbie, I don't have any programming experience except for a couple of classes at the local college. I don't know your level of experience, but for me, reading didn't help much because I don't know the terminology and don't really know what is going on in a computer.

The way I am learning is by trial and error. And I mean error, I have to reset my palm on a regular basis. I look at programs by others and try doing it my self. Once I get it to work then it sticks and go on from there, one step at a time. This forum helps alot, I don't post much, but I do lurk around the backround to pick up some things. I do a lot of searches in the archives too. When I do post I don't always get the answer, but I am always put in the right direction.

I now have two working programs under my belt with more planned. It would be better if I didn't have to work so I could spend all my time learning forth, but you know how that goes. Its a great little hobby 😊

Gary



By [Heather Risedorph](#) on Thursday, January 17, 2002 - 12:16 pm: [Edit](#)

I'm a "hobbier" too, but I already had knowledge of C. Everyone probably has their own ways they learn best.

I was totally lost when I started, but last night I was able to write a program that plays an entire song in 2 part harmony! Woot! It's still in the hacked-together stage so I won't post the utility words yet, but there is hope!

I locked my LCD in the off position once, not even a soft reset worked to fix it. I had to hard reset. I was so proud. I am still having Fatal Errors daily.



By [Chapman Flack](#) on Thursday, January 17, 2002 - 12:22 pm: [Edit](#)

Hey Heather,

How do you get the polyphony? Alternating notes at 1 ms durations? Does it actually sound ... you know ... good?

-Chap



By [Heather Risedorph](#) on Thursday, January 17, 2002 - 02:20 pm: [Edit](#)

It sounds ok. 2 notes sounds a lot better than 3 notes as far as melting together the tones.

I got the idea from a program called MusicTracker which lets you pay money to have it write music for you that doesn't sound very good. I once sent them a tech support request asking why it sounded really chunky and they said it was because of the virtual channels. So that was all the proof I needed that I could make this kind of noise and have more control over it through programming.

I don't think in MusicTracker that you get to tell it "HEY, I'm only playing 2 notes, so don't try to play 3 of them" very easily and I want to be able to alter the volume of them (simulating real music where notes aren't the same amplitude for the entire note). Obviously doing all this and making it not sound chunkier from processing means that however I do the commands it has to be as little overhead as possible...so...

What I'm doing is writing up basically a music scripting language where you have a couple of tables stored for easy retrieval of pitches and volumes and stuff, and you have a text string. Each character read in will affect the state of the interpreter and do some action. You start off with the default settings all ready and it's waiting for a command, it'll either be change precision (1ms default controls chunkiness) duration (how long note is held)

volume tempo octave...that's all the way it is in the lib file except that volume duration and octave are stored by channel, so if you tell it to change volume, it next wants what channel and last what value to change to. Or if you aren't doing one of those commands, you are asking it to play a note or note sequence. This is getting long, hope you get the idea.

The goal is being able to basically compile songs into a mix of easy to store and easy to play. I could compile the songs all the way into prcs, but that's a bit of a waste, so I hope to someday build a GUI around this and let people work with sheet music. The song gets stored as the script in a database. To play the song you just load that string and have my program interpret it.

I don't think you can use the 2 or 3 channel music in games or other apps because it would take up too much cpu.

I haven't really done anything like this before, so I'm open to suggestions. What do you guys think?



By [Chapman Flack](#) on Thursday, January 17, 2002 - 04:49 pm: [Edit](#)

I was looking earlier into doing up some Forth words that would compile into MIDI file format, which PalmOS knows how to play natively. It supports just about exactly the model of processing you're talking about, but the one thing it won't do for you is simulate polyphony. I'd still like to see something like that, though, maybe even with a GUI. I never got far with it; seems I can't just download the MIDI spec but would have to buy it. Lowers my enthusiasm.

I've noticed with the stock Palm or Handspring hardware, amplitude changes have a big effect on timbre, even more noticeable than the volume change (even sometimes seeming to reverse the volume change). I bet it sounds a lot better on something like a TRG Pro or HandEra with a real amp and speaker.

I once tried out a 4-part piece I'd written by beaming one part to my other Visor, one part to my old PalmPilot Pro, and singing the 4th. It sounded pretty darned silly. 😊

-Chap



By [Dave Bennett \(Dbennett\)](#) on Thursday, January 17, 2002 - 06:33 pm: [Edit](#)

The biggest problem with music of any kind on the Palm is the inability to play sounds with decimal point tonalities. ie 237.4 vs say, 440. If you stay in a very tight range and use only notes with whole numbers frequencies as

tones, you're fine. Otherwise, it sucks. Hopefully the next generation devices will have decent sound support.



By [Chapman Flack](#) on Thursday, January 17, 2002 - 07:04 pm: [Edit](#)

I bet the 1-Hz granularity is just an artifact of the PalmOS calls where you give the frequency as an int, and not any limitation of the DragonBall PWM. The MIDI format allows for precise specification of pitch; if they've done a decent implementation they should play MIDI files pretty well in tune (I haven't done careful experiments to see, though).

Another reason to want to do music via the MIDI calls, and not the other sound manager calls.

-Chap



By [Heather Risedorph](#) on Friday, January 18, 2002 - 10:15 am: [Edit](#)

And it'd be nice to have an actual wave generator to play with, then you could make real sounds or have actual harmonies by adding two different sound waves together.

What I did was put in a song I happened to have sheet music and a harmony for, one time single note and another time with the harmony. The melody is single octave and the harmony is too except for one note that is a C in the next octave up. I played it for my mom, who knows the song. She had a hard time recognizing it because it sounds a little bit strange. When you know what song it is, you don't have any problems picking out the parts.

Makes me wish you could just plug on a sound card or something and have the Palm Pilot running forth driving the sound or something. I had been thinking about what if I could use my serial port with a serial connector hooked up to some game console memory connector so you could like use PS2 memory cards to have expandable storage. I think I'm just dreaming though. I kind of wish I'd bought a handheld that is more versatile.



By [Chapman Flack](#) on Friday, January 18, 2002 - 11:38 am: [Edit](#)

I vaguely remember from the DragonBall docs that it's a general-purpose pulse-width modulator circuit that's used for the sound. They included that in a microcontroller so you can do cool industrial things like variable-speed motor control, but by learning the registers and how to program the PWM directly you might in principle be able to do some sound synthesis. Don't know how many CPU cycles you'd have left for anything else, though. Lessee, to do CD-quality you'd probably have to be able to update the PWM registers every 360 CPU clocks....

The biggest issue is what Palm did with it in hardware--they're just taking the digital output (square wave!) signal and feeding a piezo speaker, which is why it sounds so much like a piezo buzzer playing square waves. What you'd want is a nice low-pass filter on the output, an amplifier, and a decent speaker. I think that's what you get in the TRG Pro or the HandEra. You could probably add something similar, if you don't mind getting your hands dirty and can find a way to make it fit (or put, like, a submini phone jack on the PDA and build a filter-amp-and-speaker in a separate box).

Which device have you got?

-Chap



By [Heather Risedorph](#) on Friday, January 18, 2002 - 12:06 pm: [Edit](#)

Palm IIIc. I don't have a ton of money, I'm not really a developer, and it was a splurge.

My problem with building hardware is my imagination is bigger than my education and wallet. :P College engineering classes taught me enough to be able to dream up stuff but actually putting them into practice is a lot more to ask.

I'm looking forward to the day that we will say "I have more computing power in this handheld than I had in my entire desktop computer back in the early '00s."



By [Chapman Flack](#) on Friday, January 18, 2002 - 12:13 pm: [Edit](#)

I wouldn't be surprised if somebody has done the filter/amplifier/speaker trick, maybe illustrated on one of the Palm-hardware-hacking sites. I don't imagine the materials would run more'n \$15. But yeah, I'd have to dig out my college electronics book too, if I were going to design it myself.

-Chap



By [Heather Risedorph](#) on Friday, January 18, 2002 - 02:20 pm: [Edit](#)

Looks like they have a Midi synthesizer for serial ports if you have a Palm V series. I found it at the Palm Store. Know where a good place to start looking for palm hardware hacks? I didn't get any good search results at Google.



By [Heather Risedorph](#) on Friday, January 18, 2002 - 02:27 pm: [Edit](#)

I found something at

<http://www.massena.com/darrin/pilot/luiz/extaudio.htm>

but I don't know if that's what you had in mind?



By [Chapman Flack](#) on Friday, January 18, 2002 - 03:04 pm: [Edit](#)

That looks cool, if a little more complicated than I expected--it's designed for stereo with software driving an extra pin! Also too bad there are no values for the components yet.

There was a palm freeware site I got a URL for recently, but I can't seem to find it just now. It had a link to a page with links to hardware mods. I don't remember if a simple audio mod was among them, but probably an e-mail to any of the folks who do that kind of thing would get a response to point in the right direction.

-Chap



By [Dave Bennett \(Dbennett\)](#) on Friday, January 18, 2002 - 08:15 pm:

[Edit](#)

I recall a guy had done the hack to get better sound out of the Palm. I don't remember the hardware hack site for it though. It was a couple of years ago, maybe even '99. He'd replaced the piezo "buzzer" to get a better sound quality. Still couldn't generate DTMF though. ☹



By [Dave Bennett \(Dbennett\)](#) on Friday, January 18, 2002 - 08:30 pm:

[Edit](#)

Amazing, I found it in record time. This guy has a lot of links to other palm tinkerers as well.

<http://www.dobyns.com/barry/palm/>



By [Heather Risedorph](#) on Monday, January 21, 2002 - 06:57 am: [Edit](#)

But the link on there for upgrading sound was broken...

It's ok in the end because I am too novice and lack the soldering tools. I'd be too scared of having no handheld at all to risk opening it up and messing with it.



By [Heather Risedorph \(Rise1525\)](#) on Monday, February 11, 2002 - 12:31 pm: [Edit](#)

I did a search for newbie in this forum and decided to post this here. I wanted to offer a sort of tutorial that's under construction but still might be helpful to newbies like me. I wrote it, documenting stuff I've done in

developing an app for as far as I have come on the project so far. I figure that seeing a newbie work on an app can help another newbie who wants to do the same thing.

You can find it on the Wiki by searching the newbie content or at my yahoo website:

http://www.geocities.com/alycia_1525/worm.htm

I will be adding more to it later, as I get more code to add. I also want to post the source at various stages and do stuff to the webpage format. I posted now so at least it's up.

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QF Desktop?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): QF Desktop?](#)



By [Elan Goldman](#) on Monday, January 14, 2002 - 02:23 pm: [Edit](#)

Hi.

I assume that QF's dictionary overflow condition does not necessarily indicate that the resulting binary is too large to run on the Palm. I.e. my perception is that instruction sequences that would lead to legal (sizewise) binaries fail with a dictionary overflow, not because the resulting binaries are too large, but rather because QF is itself restricted by the Palm OS memory limitations. Perhaps I am mistaken. The following is based on that assumption.

This message addresses three issues, and offers a hypothetical solution intended to solicit opinions. The issues are

1. The QF compiler itself falls victim to the PalmOS memory restrictions (dictionary overflow), and therefore occasionally fails to complete compiles that would result in binaries which would be able to execute on the Palm. If my perception is correct, then QF imposes a more limiting restriction on the size of Palm executables than Palm OS does.
2. With the upcoming StrongArm architecture, we will need to compile our programs twice over (if we want them to be responsive), once for the machines currently in use, and an additional time for newer machines that employ StrongArm.
3. Even though I am no friend of the PocketPC myself, the PocketPC could present additional revenue, and therefore should not be ignored.

I think that perhaps a QF companion desktop compiler could help us solve these problems. The Palm OS version would be used to build small, and medium sized applications, i.e. that fit QF's current limitations, whereas the desktop version would be used to generate larger applications. Since it would be running on the desktop it could have a more complex and feature-rich architecture that could include the following (desirable ?) abilities:

- Cross-compile to different target platforms (including Dragonball, StrongArm, PocketPC machines);
- include the ability to directly download changes in the executable to the target machine (for an example of what I mean see: <http://holonforth.com/using/online.htm>)
- with Individeo quitting their RsrcEdit support, the much needed Resource

Editor could be integrated into the desktop system.

This would enable QF programmers to build on their experience with QF and target larger (more lucrative?) applications and deliver them to different handheld platforms. BTW, there is no reason why the architecture of QF/Desktop could not be made flexible enough to support additional mobile platforms. Perhaps 3rd parties could even add platform support by utilizing a possible backend plugin technology.

Well, there's my \$.02 cents. I hope this fits on this forum.

Opions anyone?

TIA,

Elan



By [Kris Johnson \(Kdj\)](#) on Monday, January 14, 2002 - 02:51 pm: [Edit](#)

The issue with dictionary overflow isn't really due to Palm OS restrictions--it is because Quartus uses a 16-bit offset to specify locations within the codespace, so there's only a range of 64K.

The idea of having a desktop machine create executables for multiple architectures isn't bad. But you could accomplish the same thing by running Quartus inside POSE on the desktop.

I doubt QF/Desktop would attract anyone other than a few existing Quartus developers. That market is fairly small, and the cost of developing it would be high.

My own feeling is that if I'm going to be chained to a desktop, I'll just use C/C++ and all the other available desktop development tools. The strength of Quartus is that it can be used to develop applications on the device itself.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, January 14, 2002 - 03:06 pm:

[Edit](#)

As relates to cross-platform development, it's something of a pipe-dream. Virtually all non-trivial apps need specific tailoring to fit the device and the OS.

Neal



By [Chapman Flack](#) on Monday, January 14, 2002 - 03:17 pm: [Edit](#)

Hi,

Just to clarify where those dictionary overflows are coming from -

1. Palm OS limits the size of a code segment, but it doesn't limit the number of code segments an app can have, so there isn't much of a Palm OS limit on app size.
2. QF currently produces apps with a single code segment. That limits QF app size. I'm tinkering with additional QF code segments; I think Neal might be, too. Other development environments provide easy ways to make multisegment apps; QF doesn't ... yet ... but it wouldn't have to become a desktop environment to do so.
3. As you build your app, the QF dictionary contains all the Forth kernel words and all the words in your app and libraries used by your app, even the words that are only used at build time. MakePRC then pulls out only the words your app will need. That's why you tend to run out of space at build time, even when the final app is a comfortable size. This can be addressed by judicious use of multiple segments, building different segments of the app in phases with forgets in between, and providing more of the larger library modules as QuartusExtensions that intrude less on the dictionary space.
4. A related issue is that QF now puts both code and names in the same workspace. Names are never included in the final PRC, so having them in the workspace at build time increases the discrepancy between the biggest app you can `_have_` and the biggest app you can actually `_build_`. ANS allows the code space and name space to be separate (DragonForth takes that approach, I think) and it would improve matters, though if Neal changes it now it will require changes to existing code that uses `xt>abs` and retrieves the name from code space. Neal recently hinted he's working on dictionary internals and reducing code space use; it wouldn't surprise me if separating out name space is one thing he might be thinking about.
5. Integrating with Palm OS requires accommodating lots and lots of VeryLongAPINames. The ones that are built into QF are kept in a separate resource where they don't eat dictionary space, but writers of library modules for other Palm OS API (the serial manager, for instance) can't easily avail themselves of a similar mechanism. An extensible dictionary search (it's on the wiki wish list) would improve that situation.

My conclusion: the existing size limits can be addressed by improvements and additions to QF as an on-board environment without needing to develop a desktop version (which would be a substantial project in its own right). Support for lots of target architectures would be wonderful, but I'm not sure Neal has the staff to undertake it. Kris's suggestion for a

ForthResourceEditor would be able to address the RsrcEdit gap; an industrious volunteer could even implement graphical editing words for bitmaps and such.

Bringing the total to four cents ...

-Chap



By [Elan Goldman](#) on Monday, January 14, 2002 - 04:30 pm: [Edit](#)

Hi.

Shucks. I guess it wasn't such a good idea after all ;-).
Guess I'll have to put my almost-completed software aside for now, and wait until on-board QF can squeeze an extra 5-10KB into the executable file.

TIA,

Elan



By [Kris Johnson \(Kdj\)](#) on Monday, January 14, 2002 - 04:41 pm: [Edit](#)

The usual cure for that problem is to split the app into multiple apps. Check the forum archives for suggestions.

Or rewrite it in C. ☹

-- Kris

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Future of Quartus Forth and Strongarm

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Future of Quartus Forth and Strongarm



By [Carl Zmola](#) on Sunday, January 13, 2002 - 02:55 pm: [Edit](#)

Has anyone thought about the issue of porting Quartus Forth to the new Palm devices when they come out?

I am just starting serious Palm development, and I am concerned about investing too much effort into a development system if it isn't going to be moved to these new platforms.



By [Kris Johnson \(Kdj\)](#) on Sunday, January 13, 2002 - 03:53 pm: [Edit](#)

Take a look at the "Quartus for ARM" topic in the General area of the discussion forum.

-- Kris

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Evaluating a memo as one line

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Evaluating a memo as one line



By [Julian Robin Fondren](#) on Saturday, January 12, 2002 - 12:26 pm:

[Edit](#)

Is there a simple way to do this? What I want is for forward-parsing words to ignore line boundaries in memos, so that data-creating words like

```
: roomdesc" s" stow-desc ;
```

and

```
: wordtable dup $stable for add-word next drop ;
```

would be as simply implemented and as simply used as

```
roomdesc"
```

I see no Room Description here.

```
"
```

```
12 10 wordtable artless bawdy beslubbering bootless churlish cockered  
clouted craven currish dankish
```

see? For a Shakespearean Insult Generator I could devote a memo to each of the three variable parts of a shakespearean insult, with only three words more than the insulting words. (The above, btw, would create an array of fixed-length counted strings, so with a random number I could simply multiply by the fixed-length and use COUNT to extract my random string.)



By [Kris Johnson \(Kdj\)](#) on Saturday, January 12, 2002 - 03:32 pm: [Edit](#)

The problem here is that Quartus copies lines from the memo into a data-space buffer before processing them. That buffer is not large enough to hold an entire memo (I think it only holds 80 characters). So, if you do want an entire memo to be treated as one big line, you can

a) ALLOT your own 4K buffer, copy all the lines from the memo into the buffer yourself (using PARSE and REFILL), and then EVALUATE the whole buffer. There are issues here for words like \, which read the rest of the line or parse area--I don't know exactly how that is implemented, nor whether

you need to add or strip CR/LFs when copying lines to the buffer.

b) Figure out how to directly access the memo record, and write your own version of EVALUATE than can handle a buffer with an absolute address.

Alternatively, you could write your ROOMDESC" word such that it takes care of crossing line boundaries. You can take a look at the CommentModule in the wiki for an example of how I did this for the (word, or look at how [IF] is implemented in the tools-ext module.

-- Kris



By [Julian Robin Fondren](#) on Saturday, January 12, 2002 - 03:44 pm:

[Edit](#)

Thank you, Kris. Actually I think generalization of your (word would be perfect =)



By [Paul Randall](#) on Saturday, January 12, 2002 - 03:54 pm: [Edit](#)

In my data text generator (Godot) I create my word lists using custom compiling words instead of trying to read the memo data with my own code. Then I can just include the memo and not worry about it.

```
newlist verbs
| run. | hide. | jump.
endlist
```

This creates a word called 'verbs' which when executed produces one of its' component words (via random number selection) for output. (In practice it adds the word to a buffer.)

The '|' word grabs text up to the '.' delimiter and adds it to the dictionary under a 'created' data structure set up by 'newlist'.

Hope this helps, Paul



By [Kris Johnson \(Kdj\)](#) on Saturday, January 12, 2002 - 03:55 pm: [Edit](#)

When generalizing this, keep the following issues in mind:

- The (word is pretty easy because it just throws away everything up to the next). If you need to actually do something with the intervening text, things get complicated.
- The Quartus terminal buffer is only 80 characters. So if your memo has

lines with more than 80 characters, the additional characters on each such line will be truncated.

- You may want to add spaces or CRs between lines, or collapse multiple spaces into single spaces.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, January 13, 2002 - 02:33 pm: [Edit](#)

The SCAN word I just added to the wiki may be useful for this:

<http://sleepless-night.com/wiki/ScanModule>

-- Kris

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Unconditional Forward Branch in asm68k

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Unconditional Forward Branch in asm68k



By [Kris Johnson \(Kdj\)](#) on Friday, January 11, 2002 - 02:44 pm: [Edit](#)

I know I'm probably missing something obvious here, but...

Is there an equivalent to AHEAD..THEN in asm68k mode? I see how to use the structured conditionals, and the IF..THEN, and backward branches, but how can I just say "branch forward to a target" without using IF?

Right now, I'm doing it like this:

```
code foo
  (some-instructions)
  cshere 6 + bra \ forward branch
  (some-instruction)
  (some-instruction)
\ target of branch:
  (some-instructions)
end-code
```

-- Kris



By [Chapman Flack](#) on Friday, January 11, 2002 - 03:12 pm: [Edit](#)

I think

(octal) 6000 IF

in asm68k is equivalent to AHEAD, and you could define AHEAD accordingly as long as you make sure to get the states and postpones and wordlists right, for which I'm too lazy at the moment.

-Chap



By [Kris Johnson \(Kdj\)](#) on Friday, January 11, 2002 - 05:48 pm: [Edit](#)

Thanks.

I tried using "]" AHEAD [" followed by "]" THEN [" in my code, but ran into the wordlist issue (THEN being n both asm68k and Forth lists) and decided I was too lazy to deal with it. Now that I think about it, something like "ALSO FORTH] THEN [PREVIOUS" would probably work.

-- Kris



By [Chapman Flack](#) on Friday, January 11, 2002 - 05:57 pm: [Edit](#)

The nice thing about (octal) 6000 IF is it would be properly matched by the asm68k version of THEN; you wouldn't need the clutter of alsos and brackets.

-Chap



By [Kris Johnson \(Kdj\)](#) on Saturday, January 12, 2002 - 12:43 am: [Edit](#)

It turns out that it needs to be "(hex) 6000" rather than "(octal) 6000".

Here's a complete definition that uses the ASSEMBLER wordlist:

```
needs asm68k
```

```
get-current
```

```
also assembler definitions
```

```
: ahead ( -- ) ( C: -- orig )  
  (hex) 6000 if ;
```

```
previous
```

```
set-current
```

Example use:

```
code foo  
  d0 .w tst  
  ahead  
  d1 .w tst  
  d2 .w tst  
  then  
  d3 .w tst  
end-code
```

Which compiles to

```
tst.w d0  
bra _then  
tst.w d1  
tst.w d2  
_then:
```

tst.w d3
rts

-- Kris



By [Chapman Flack](#) on Sunday, January 13, 2002 - 04:33 pm: [Edit](#)

Ah, now I see the "hex" buried in there, after a semicolon. Sorry I didn't spot it before.

-Chap

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Paradise Postponed

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Paradise Postponed](#)



By [Mike Will](#) on Thursday, January 10, 2002 - 09:56 pm: [Edit](#)

Forgive me if this has been covered previously. I notice that POSTPONE throws an error if the next word is on the next line:

```
: reality postpone
utopia ;
reality
? name argument missing
```

The same is true for '[' and maybe other forward reference words. Is this a simple bug or a deep insight into Forth? I'm using 1.2.7R

Cheerio

Mike



By [Neal Bridges \(Nbridges\)](#) on Thursday, January 10, 2002 - 10:06 pm: [Edit](#)

You are correct; forward-parsing words require the parsed text to follow on the same line, not on the subsequent line. Nothing especially deep about it -- it's just the simplest implementation.

Neal



By [Paul Randall \(Paul\)](#) on Friday, January 11, 2002 - 06:25 am: [Edit](#)

Speaking of forward parsing words, is there a way to implement multi-line comments in Quartus? Swiftforth has the curly braces {} that do that and I'd like to be able to unconditionally comment out paragraphs of commentary without using backslash-space at the beginning of each line. This would save memo memory (a little) and look Much Better. And I could edit the comments without regards to the location of crlfs, ie let Pedit wrap my words.

Best of all this would encourage me to include more detailed documentation of my definitions.

Regards, Paul



By [Kris Johnson \(Kdj\)](#) on Friday, January 11, 2002 - 09:33 am: [Edit](#)

One easy ANS-compliant way is to use "0 [if]" and "[then]" around your comments.

I think pedit has a command to comment-out a set of lines. I don't have my PDA handy to check it out.

-- Kris



By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, January 11, 2002 - 10:08 am: [Edit](#)

pedit indeed has the capability of commenting out sections. It works very well, and is one of the reasons I like pedit so much. Here is how I make it work:

In the Edit+ menu, choose Autoindent, check to 'allow automatic indentation', 'space character is whitespace' and 'extra whitespace character:'. Set the extra whitespace character to be "\".

When you want to automatically place a space in front of a line (or multiple lines), choose 'SP' as the right shift character in the Autoindent menu, then highlight the block of text and choose Shift Right in the Edit+ menu. A space will appear as the first character in each line. When you want to add the "\" character as the first character of a line to comment it out, choose 'XTR' in the Autoindent menu, then highlight the block of text and choose Shift Right in the Edit+ menu. A "\" character will appear as the first character in each line. Thus, to comment out a section, you need to first add the space and then the "\" character. This can be automated using pscripts in pedit.

Note that you need a hard return at the end of each line rather than word wrap or your characters may appear somewhere other than where you expected.

Also, when autoindent is turned on, pedit will continue to use whatever indentation you begin using - in other words, if you indent 2 spaces after a return pedit will automatically indent 2 spaces to begin the next line and will continue to do so until you change it (after which the change is continued).

Barry

 By [Paul Randall \(Paul\)](#) on Friday, January 11, 2002 - 02:22 pm: [Edit](#)

I appreciate that Barry. What I really would like is the clean look of some brackets around my word wrapped text. I am playing with defining a { word based on the logic of [if] (thanks Kris) from the library definition. (no luck yet, but I'm learning.) I know that won't be standard but if Chuck Moore doesn't care about ANS why should I?

So far all I can get '{' to do is gobble up my entire file, skipping over the '}' delimiter.

ciao, Paul

 By [Chapman Flack](#) on Friday, January 11, 2002 - 03:06 pm: [Edit](#)

I've been good-naturedly agitating for a ProposedInputArchitecture (on the wiki) that would be a good excuse to begin implementing the ANS File-Access word set. That word set happens to include a redefinition of (that does what you want. You could probably implement it independently, just follow what it says in the standard. As things stand now you could easily get it to work for memos but would have to do extra work to have it work for other sources like Doc (same reasons as the ConditionalCompileFailsInDoc wiki topic) but your work would be useful and could later be integrated into a file-access wordset module.

-Chap

 By [Kris Johnson \(Kdj\)](#) on Friday, January 11, 2002 - 03:21 pm: [Edit](#)

You might want to take a look at Neil Bawd's \\ word, which skips the remainder of the file. See <http://home.earthlink.net/~neilbawd/toolbelt.html>

-- Kris

 By [Julian Fondren](#) on Friday, January 11, 2002 - 04:18 pm: [Edit](#)

Neal said, "You are correct; forward-parsing words require the parsed text to follow on the same line, not on the subsequent line. Nothing especially deep about it -- it's just the simplest implementation."

Perhaps I read it wrong... doesn't the Quartus documentation claim that all whitespace is treated identically?

Anyway, I *really* don't like this implementation... but it should be no big deal, since I can conceivably create an 'include' that removes newlines before evaluating.

Mike Will: No, it's not a deep insight into Forth. Traditional behavior of a Forth system would have your code compiled without error. Since Forths have been moving from code-in-blocks to

code-in-files, Forths have been reading code line-by-line instead of block-by-block, and such things happen (but I've read old logs, and seen people complain about this when it happens on a block boundary =)



By [Chapman Flack](#) on Friday, January 11, 2002 - 05:28 pm: [Edit](#)

Just to be contrary, I'll say this maybe `_does_` involve a deep insight into ANS section 3.4.1 (Parsing).

You can see that any single attempt to parse is confined to the current contents of the parse area (that is, from `>IN` up to the current end of the input buffer). As the ANS says, "If the parse area is empty, i.e., when the number in `>IN` is equal to the length of the input buffer, or contains no characters other than delimiters, the selected string is empty."

The way the "text interpreter" is supposed to behave is found in the description of the QUIT word 6.1.2050 (an odd place to look, but fortunately section 3.4 references it). It is supposed to:

Repeat the following:

Accept a line from the input source into the input buffer, set `>IN` to zero, and interpret.

Display the implementation-defined system prompt if in interpretation state, all processing has been completed, and no ambiguous condition exists.

That is, the text interpreter (QUIT) loop goes `refill -- interpret -- refill -- interpret -- etc.` And what does "interpret" expand to? Bounce back to section 3.4 (paraphrased):

Repeat until the parse area is empty or an ambiguous condition exists (something goes wrong):

skip leading spaces and parse a name

find it and perform the appropriate semantics depending on current state

So that loop is what "interpret" means. When it comes to the end of the parse area at the top of the loop, it returns normally, we refill, and invoke "interpret" again. But if "perform the appropriate semantics" for some word involves trying to parse additional text from the parse area, and there isn't any, we know from 3.4.1 that "the selected string is empty" and so we get the ambiguous condition (`=>` exception).

So the deep insight is "you can't forward parse over the end of the input buffer" and so just what that means depends on how the input buffer is being filled--that is, on the behavior of REFILL. The CORE version of REFILL (6.2.2125) is specified for terminal interaction and brings back whatever the terminal driver supplies at one time--typically a line. The FILE-ACCESS version of REFILL (11.6.2.2125) is explicitly specified to work a line at a time, and the BLOCK version (7.6.2.2125) is specified to work a block at a time--that's why people accustomed to block systems aren't used to parsing-across-line problems, but they still know about parsing-across-block problems.

-Chap



By [Kris Johnson \(Kdj\)](#) on Friday, January 11, 2002 - 05:33 pm: [Edit](#)

The ANS standard specifies that QUIT, INCLUDE-FILE, and INCLUDED read the input source line-by-line. So it seems like a reasonable thing for Quartus to do with its INCLUDE and NEEDS words.

-- Kris



By [Chapman Flack](#) on Friday, January 11, 2002 - 05:53 pm: [Edit](#)

Right--it's pretty much the behavior you'd expect from the standard, except in the case of LOAD

from blocks.

-Chap

 By [Kris Johnson \(Kdj\)](#) on Saturday, January 12, 2002 - 04:40 am: [Edit](#)

I implemented a variant of (that will parse multiple lines in a memo. See <http://sleepless-night.com/wiki/CommentModule>

-- Kris

 By [Mike Will](#) on Saturday, January 12, 2002 - 09:07 am: [Edit](#)

Wow, that's pretty cool, Kris.

I have one more question on postpone before I stop beating this horse. Going back to the original example,

: reality postpone utopia ; immediate
: nirvana reality ;

Question: which address gets compiled into nirvana: utopia or reality? Does this vary from one implementation to another, or is it ANS?

Thanks

Mike

 By [Kris Johnson \(Kdj\)](#) on Saturday, January 12, 2002 - 10:23 am: [Edit](#)

The definition of NIRVANA will be exactly the same as if you wrote it as
: nirvana utopia ;

(assuming that UTOPIA doesn't do anything bizarre with the return stack or the dictionary).

There is no REALITY in NIRVANA. 😊 To put it another way, an immediate word is executed at compile time; a call to an immediate word is not compiled into the definition.

This behavior will not vary between ANS Forth implementations.

-- Kris

 By [Julian Robin Fondren](#) on Saturday, January 12, 2002 - 11:49 am: [Edit](#)

Thank you, Kris and Chapman, (and sorry to everyone for the negative tone of my message -- if it's any excuse, I'd just come from Usenet).

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Palm M505 green led

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Palm M505 green led



By [SamuelTardieu](#) on Thursday, January 10, 2002 - 04:34 pm: [Edit](#)

This is more a hardware question than a Quartus Forth one, but I need the answer for a Quartus Forth project.

Does anyone know how to directly access the green LED on a Palm M505? I do not want to use PalmOS attention manager, I am looking for a way to directly access the hardware.

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Heck of a time to not be able to post. 😊

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Heck of a time to not be able to post. 😊



By [Chapman Flack](#) on Thursday, January 10, 2002 - 02:40 pm: [Edit](#)

apology: I didn't intend my long answer in the QF Overlays thread as any comment on Elan's or Kris's answers, they just got their answers in while I was writing it. 😊

I wanted to add this at the end of the QF Overlays thread but posting didn't work (23/1557 not in tree file). So before I forget to say it, I'll try a new thread.

-Chap



By [Neal Bridges \(Nbridges\)](#) on Thursday, January 10, 2002 - 03:18 pm: [Edit](#)

Indexing problem; resolved. Thanks for letting me know!

Neal

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QF Overlays?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): QF Overlays?](#)



By [Elan Goldman](#) on Wednesday, January 9, 2002 - 04:41 pm: [Edit](#)

Hi.

Most of the apps I build under QF eventually run out of dictionary space. (Other developers also appear to occasionally run into this problem.)

Is there any chance we may eventually (soon? :-)) see built-in semi-automated overlay processing included in QF?

TIA,

Elan



By [Chapman Flack](#) on Wednesday, January 9, 2002 - 05:53 pm: [Edit](#)

I'm fiddling with some ways to do extra code segments (a la QuartusExtensions) without having to write entirely in assembler. It'll be semi-automated with heavy emphasis on the "semi" and likely require slavish adherence to a strict subset of Forth (at least for the parts that go in the extra segments). That's all I've got going. Anybody else?

-Chap



By [Elan Goldman](#) on Wednesday, January 9, 2002 - 08:25 pm: [Edit](#)

Chap,

that is great!

Looking forward to it.

Elan



By [Neal Bridges \(Nbridges\)](#) on Thursday, January 10, 2002 - 12:59 pm: [Edit](#)

In conjunction with my efforts to expand available dictionary space, I'm working on an enhancement to the Quartus Forth kernel that will permit unused definitions in library code to be discarded. If I'm successful, it should help a great deal.

Neal



By [Joe Nasal \(Jsn\)](#) on Thursday, January 10, 2002 - 01:39 pm: [Edit](#)

Newbie question:

How do I know when I'm running out of dictionary space? Is there a linear relationship between the number of user-defined words and the amount of dictionary space consumed?

Joe



By [Elan Goldman](#) on Thursday, January 10, 2002 - 02:11 pm: [Edit](#)

Don't worry. The compiler will tell you ;-).

Elan



By [Kris Johnson \(Kdj\)](#) on Thursday, January 10, 2002 - 02:12 pm: [Edit](#)

The word CSUNUSED will return the number of bytes remaining in the dictionary.

If you want to find out how much space a module uses, just call CSUNUSED before and after including the module, and then subtract. For example:

```
csunused  
needs asm68k  
csunused - u.
```

-- Kris



By [Joe Nasal \(Jsn\)](#) on Thursday, January 10, 2002 - 02:14 pm: [Edit](#)

Thanks Kris. That's the help I needed.

Joe



By [Chapman Flack](#) on Thursday, January 10, 2002 - 02:28 pm: [Edit](#)

The ANS defines 'dictionary' as "An extensible structure that contains definitions and associated data space." (2.1 Definitions of terms.) In Section 3.3 (The Forth dictionary) it says "While the form of this structure is not specified by the Standard, it can be described as consisting of three logical parts: a name space, a code space, and a data space. The logical separation of these parts does not require their physical separation."

As currently implemented in Quartus, the data space is physically separate from the other two, while the code space and name space are combined in one physical area (which QFers usually just call the codespace even though names are in there too). The data space can grow up to almost 32kB (subject to available dynamic heap space on the device), and the code+name space can grow to almost 64kB.

Every time you define a word, you definitely use up code+name space. The amount isn't simply linear in the `_number_` of words you define, but in the total `_size_` of those words in compiled machine instructions, plus the length of each word's name.

Not every word also uses data space, but words that ALLOT or do things like `."` or `s"` that call ALLOT do.

Since code+name space and data space are both parts of the "dictionary" you've technically run out of dictionary space whichever one runs out first. But you do get different exceptions in QF to tell you which one ran out.

If you run out of data space, you'll get `-256 THROW` (insufficient dynamic memory), and if you run out of code+name space, you'll get `-8 THROW` (dictionary overflow). I think people most commonly run out of code+name space first and that's what most QFers are talking about when they "run out of dictionary space" though in standard usage it could mean either one.

You can check your use of code+name space with `cshere`; it grows toward `+32766` as you use more of the space (it starts out around `-32000` or so, which is how the code+name space accomodates nearly 64kB). Or you can just look at `csunused`, which will tell you how much is left.

In the same way you can keep tabs on your use of data space with the word `HERE` whose value also grows to a max of `+32766` (it's not negative to start with, so you only get about 32kB to allot).

The word `UNUSED` is less useful than you'd think it would be, because it shows you "the amount of space remaining in the region addressed by `HERE`" but doesn't tell you the region will happily grow as soon as you've used that up, unless you've reached the 32k limit.

-Chap



By [Joe Nasal \(Jsn\)](#) on Thursday, January 10, 2002 - 02:44 pm: [Edit](#)

Chapman:

Thanks a bunch for the informed answer. Great information!

Joe



By [Joe Nasal \(Jsn\)](#) on Thursday, January 10, 2002 - 04:13 pm: [Edit](#)

Chapman:

Just for clarification:

When I fire-up QF and do a cshere it reports -12618. I'm assuming that this means that the base QF dictionary occupies approx. 20K of code+name space...?

If I load up all of the words for an application I'm currently working on cshere reports back 11126, which tells me that I've got about 20K worth of code+name space left. Right?

Thanks,

Joe



By [Kris Johnson \(Kdj\)](#) on Thursday, January 10, 2002 - 05:19 pm: [Edit](#)

CSUNUSED will tell you how much code+name space is left.

Using CSHERE to calculate it is the hard way to do it (and may not even be accurate with future versions of Quartus).

As Chapman mentions, UNUSED is useless (it always returns 256), so using HERE and subtracting that from 32K is how to figure out how more data space you can allocate.

-- Kris



By [Joe Nasal \(Jsn\)](#) on Thursday, January 10, 2002 - 05:29 pm: [Edit](#)

Thanks Kris. That makes sense.

I'll think about Chapman's "MultipleDataSpaces" document in the wiki in addressing this problem. It seems like the :init and :relo methods would be particularly useful here.

In "MultipleDataSpaces" it is clear that :relo is used to allocate space for storing xt's only. From a newbie perspective, though, it is unclear how I would go about using :init to store both xt's and other values.



By [Elan Goldman](#) on Thursday, January 10, 2002 - 07:00 pm: [Edit](#)

Hi Neal.

Any chance you may soon need some beta testers for your enhancement to

the Quartus Forth kernel?

I would be very delighted to volunteer ...

TIA,

Elan



By [Kris Johnson \(Kdj\)](#) on Thursday, January 10, 2002 - 07:28 pm: [Edit](#)

BTW, the precise amount of memory you can ALLOT is 32K - 256 - HERE. (Assuming the Palm OS dynamic memory heap has a sufficiently large block available.)

So this will work:

```
32768 256 - here - allot
```

But this will fail:

```
32786 256 - here - 1+ allot
```

Also note that you can call ALLOT with a negative argument. When you do this, HERE is moved backwards but the dynamic Palm OS memory stays allocated. So in this case, UNUSED will return a number other than 256.

Check out the RuntimeAllot topic in the wiki for some further discussion of this, and how the rules are a little different for standalone applications.

-- Kris



By [Chapman Flack](#) on Friday, January 11, 2002 - 02:05 pm: [Edit](#)

Re: Joe's question on :init and :relo --

An :init dataspace begins life empty when your standalone app runs, regardless of what had been stored into it at the QF console before doing MakePRC. So there isn't any possibility of storing an xt into an :init dataspace before MakePRC and then using it in the standalone app. So there's no problem. You can certainly use any kind of dataspace you want to collect xts at build time that you will only use at build time, or to collect xts at run time that you will only use at run time.

The real difficulty is in what happens to xts in the process of making a standalone app (MakePRC). They all get new values, different from the ones they had at the console. MakePRC has to fix everything it knows is an xt,

but xts are just 16-bit numbers so there's no way to recognize an xt when you see it except in context. xts will only be recognized and fixed if they appear in distinct contexts like actual calls in Forth code, ['], xtliteral/xtvalue, select/xt/end-select, or as values in :relo dataspace. And those are the mechanisms you should use if you need to store an xt at build time and then recover it and use it at run time.

-Chap



By [Joe Nasal \(Jsn\)](#) on Friday, January 11, 2002 - 02:34 pm: [Edit](#)

Thanks Chapman. That makes sense.

Can you also comment briefly on this snippet from the wiki:

```
dspace :init CONSTANT bar
```

[...]

bar can be used at the console and also in the standalone app. It will be set to its initial empty state at app startup, and contain none of the data from the console session. It takes up no space in the PRC (besides a small function that initializes it).

That is, once I :init bar how do I use this dataspace to store values other than xt's?

Joe



By [Chapman Flack](#) on Friday, January 11, 2002 - 02:55 pm: [Edit](#)

Joe,

step by step:

dspace creates a new dataspace and puts its id on the stack. This dataspace is the default variety, that will be usable at the console but completely unusable in the standalone app.

:init takes the dataspace id on top of the stack and modifies that dataspace into the :init-flavor, which means it is usable both at the console and in the standalone app, but in the app it will be empty again regardless of what you stored in it during your console session. The dataspace id of the (so modified) dataspace is left on the stack.

CONSTANT bar simply takes that dataspace id off the stack and makes "bar" a name for it.

so now to store any value x at any aligned offset y in the "bar" dataspace you would say:

x y bar :!

and to get it back you could say

y bar :@

You have to allot space for any cells you store, either by using

n CELLS bar :allot

beforehand, or using :, instead of :! to store them. It all works completely analogously to the standard Forth (colonless) words ALLOT ! @ , HERE and so on.

You can do as much storing or fetching as you want during the console session. You can do as much storing or fetching as you want within the standalone app. But the app starts with a clean slate: you can't store stuff in an :init dataspace at build time and then fetch it at run time. (You can use the :copy flavor instead of :init if you need to do that.)

Does that help?

-Chap



By [Joe Nasal \(Jsn\)](#) on Friday, January 11, 2002 - 03:03 pm: [Edit](#)

Yes, Chapman -- brilliantly. Thanks

Now I'm wondering (rhetorically) why we'd run out of dataspace if we have these words available...



By [Chapman Flack](#) on Friday, January 11, 2002 - 03:16 pm: [Edit](#)

Well, it is good to remember that the Palm OS dynamic heap is where all these goodies have to go. In principle you could make as many dspaces as you want and each one could be up to 64k--but remember on the earlier Palm OS devices the total dynamic heap available was around 12kB!

-Chap

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Overlapping Windows

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Overlapping Windows



By [Steve Graham \(Steve\)](#) on Wednesday, January 9, 2002 - 06:38 am:

[Edit](#)

I have an app with a main window and a secondary one. I press a button on the former to signal my intention to pop to the next one. And on the second one I have a cancel button to pop back to the first. However, when I do this latter action, part of the buttons on the second window are still visible, even though both windows are defined as 160x160. Any ideas?

Also, I need to disable the automatic sleep function for this app. Any pointers?

Thanks, Steve



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 9, 2002 - 09:39 am: [Edit](#)

To disable sleep, call `EvtResetAutoOffTimer` periodically.

-- Kris



By [Elan Goldman](#) on Wednesday, January 9, 2002 - 04:23 pm: [Edit](#)

Are you using `FrmReturnToForm` in response to the 2nd form's cancel button?

Does the 2nd form have have the `Save Behind` attribute set in the resource editor?

Hope this helps.

Elan

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Source editor for Quartus

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\):](#)

Source editor for Quartus



By [Julian Fondren](#) on Tuesday, January 8, 2002 - 01:02 pm: [Edit](#)

My original thought was that MemoPad is plenty nice, and that I could just have categories for each of my projects... except that there's a limit of 15 categories. Are there other editors I could use, in the manner that MemoPad is used, which would allow more categories? How do others store source in MemoPad? Just put everything together?



By [Joe Nasal \(Jsn\)](#) on Tuesday, January 8, 2002 - 01:11 pm: [Edit](#)

I'll make my plug for `pedit`. Very nice programmer's text editor for PalmOS, lots of features. You'll find that `pedit` has a *rabid* following of users/developers. This aside, it is a really useful piece of software if you intend to do any serious text editing on your palm device. In my opinion you will get frustrated with Memopad in very short order.

`pedit` uses the Memopad database, so it is restricted by the 4k file-size limit. I'm not sure what the category restrictions are, but I'd imagine that they are similar to memopad. If you purchase `pedit pro`, you will not be restricted by 4k memos but you will have to jump through some hoops in order to get QF to read your source code. See:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthDevelopmentEnvironment>

for a relevant thread.



By [Mark Beckman \(Mbeckman\)](#) on Tuesday, January 8, 2002 - 01:26 pm: [Edit](#)

I've pretty much stayed with memopad. For the last year or so I've used CryptoPad which uses the Memopad database (for non-encrypted memos at least) but does allow >4 memos. I'm using an older version of CryptoPad (3.63) because version 4 and on takes too long to load when you have 300+ memos (as most Quartus developers will).

As to organization, I keep most of my projects in 1 category ("Quartus Work") but have been using MegaWiki to organize my projects as well as tie all the source files of a particular project together.

[MegaWiki on Palm Gear](#)



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 8, 2002 - 02:41 pm: [Edit](#)

I have all the Quartus library memos in one category, a few dozen utility modules and small applications in another, and then a category for each "big" application.

When I finish an application, I usually move all its memos into the "utility" category. So I really just use the categories to separate "what I'm working on" from "stuff that is finished".

I highly recommend pEdit over MemoPad.

-- Kris



By [Julian Fondren](#) on Tuesday, January 8, 2002 - 03:42 pm: [Edit](#)

Thanks, all of you!

I'll take a look at pEdit, follow Kris's use of categories (with the Forth Lexicon by itself), and see if I can use PalmWiki or MegaWiki to organize things a little more.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, January 8, 2002 - 04:22 pm: [Edit](#)

One more vote for peditPro. I use pedit in the 32K mode, then export the file to doc format prior to compiling - you need to include the docinc library in the Quartus startup file. It takes a couple of taps, but works well and I never worry about running out of filespace for the programming itself. Beyond that, peditPro is an excellent editor that does a lot more than I've used so far.

Barry



By [Chris Bucsko](#) on Tuesday, January 8, 2002 - 05:21 pm: [Edit](#)

I use the memopad for now. I have all the Forth Library files in a category called "ForthLib". This includes some memos I've picked up along the way such as string>anyfield, etc. which aren't in the initial QF library. My plan was to keep each app in its own category, and archive the category when I'm done (I only have one at the moment). But I'm planning on using Wordsmith as a doc editor to see how that works for my next app. I've put "needs docinc" in my startup.quartus memo so I just need to type "docinclude myapp" in Quartus to run the app from terminal mode. I'm just starting this, so I don't know where I'll end up. Erwin S. recommends SmartDoc as another doc editor for this.



By [Steve Bohrer \(Skb\)](#) on Wednesday, January 9, 2002 - 08:13 am: [Edit](#)

I think it is worth keeping just the original Quartus lib files in their own category ("forth lib", in my case), and using a separate "forth extend" category for pieces I've downloaded such as string>anyfield and Chap's stuff. This should make it easier to know what is what when a new version of Quartus and the library are released.

I also use a three-letter prefix for any of my own source files that are specific to particular project, so that they all cluster together in an alphabetical memo list. This also avoids name clashes between projects, e.g. each project has an xxxMain file.

I think it would be bad to have two different memos with the same name, as it is not clear which one Quartus will include. This may be hard to notice if the identically named items are in different categories. It is easy to think of categories as being different directories, but in fact there is just one flat list of memos, each with a category attribute.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, January 9, 2002 - 08:49 am: [Edit](#)

To clarify my earlier comment - I also have the quartus library files in Memopad in their own category, and the "extension" library files posted by programmers in a separate category. I use the doc format only for the code itself, and the driver there is simply to avoid the 4K limit without having to break the program file up into individual modules. Probably really a poor reason, but I prefer the code I'm writing to be in one file.

Barry



By [Jim Hendricks \(Jimh\)](#) on Wednesday, January 9, 2002 - 09:40 am:

[Edit](#)

I'm a waffler on Quartus project editing/management.

My original approach was to put all quartus stuff into it's own category. Can't reserve other categories for Quartus because I actually use the memo pad for notes etc. for work and have enough of them that I need the categories to organize all that stuff. Once I developed something that exceeded the 4k limit, I moved over to DOC format for my own code using the QED doc editor. I also liked the fact that the DOC format compresses the data which gives me more free space.

As I developed projects, I was building my own lib of routines but in doc format. I decided to convert my lib routines into memo's so that at least my libs were not at the mercy of having doc support. At that point I also realized the problem of seperation between Quartus libs, UC libs, and my own libs. I now also use the 3 letter prefix for my own libs. I still haven't seperated out the Quartus libs from the UC libs.

My newest project I am using memos and a 3 letter prefix. This is because the DOC format doesn't support conditional compilation (ie. [IF][ELSE][THEN]) and for development, I find CC a very useful testing tool. Looking back in the archives you may still find my discussions on developing CC for DOC, but it was a failure and I ran out of time to try to figure out why.



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 9, 2002 - 09:53 am: [Edit](#)

I developed JacksOrBetter using SmartDoc and docfiles, but have since decided that memos are better for me.

My development style with Forth is to write one word definition, test it, write another word definition, test that, and so on. Doc files slow that process down too much for me.

Also, one can use PopUpMemo to make minor changes to memos while staying inside the Quartus console.

Finally, the Palm OS "Find" feature works much faster with memos than with Docs. I use this a lot.

But Doc files are better than memos when you are manipulating them on the desktop, or want to store the source in a version control system, or zip them up into an archive.

-- Kris



By [Chapman Flack](#) on Wednesday, January 9, 2002 - 12:28 pm: [Edit](#)

I wonder if the speed of Palm OS Find is affected by which doc read/edit application you use. Find uses a special launch code to defer to the application itself, which does the actual searching. There are simple algorithms for substring search, and there are more

complicated ones (Knuth-Morris-Pratt, Boyer-Moore) that can be far faster. The doc reader I've been using, RichReader (the free version) searches very, very slowly--I've always assumed that's because the author didn't bother implementing a faster algorithm.

Just a possibility it might be interesting to investigate.

-Chap



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 9, 2002 - 02:06 pm: [Edit](#)

SmartDoc's Find is slow as well. I've assumed the slow Doc search is due to the need to decompress the files as they are searched. Maybe if you leave all your Docs uncompressed, it will be faster, but that's probably not a great idea.

-- Kris



By [Chapman Flack](#) on Wednesday, January 9, 2002 - 05:46 pm: [Edit](#)

In most text compression algorithms, decompression is a very cheap operation. Of course it would slow searching somewhat, but I wouldn't think enough to account for the slowness of RichReader's searching. And the difference between good and bad search algorithms can be substantial. I haven't done any experimenting to try to separate the two effects. But it might be interesting to see if certain docwares support Find appreciably faster than others--not only could they be using different search algorithms, they might have more or less efficient decompression code, too.

-Chap



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 9, 2002 - 06:35 pm: [Edit](#)

Doc files are compressed on a line-by-line basis, so the Find operations probably have a "find the next line, decompress it into a buffer, search the buffer for the substring, repeat" loop. Alternatively, I guess they could decompress an entire document (of arbitrary size) into a big buffer, but that would involve some memory management overhead.

I haven't studied the KMP or BM algorithms, but I suspect the improved efficiency over a naive algorithm is proportional to the length of the string being searched for and the length of the buffer being searched. For the short strings generally used in a handheld "Find" operation, decompression of each line could be a pretty big chunk of the overall cost. (And frankly I don't see how text decompression would be cheaper than any simple substring search.)

But if anyone has a fast Doc string finder, I'd be glad to hear about it.

-- Kris



By [Jim Hendricks \(Jimh\)](#) on Wednesday, January 9, 2002 - 06:38 pm:

[Edit](#)

Normal decompression is a cheap operation, but I don't think that is so with DOC format compression. I say that because the docincludes take significantly longer to process than memo includes. This could be in part that memo includes are part of the kernel and docincludes are written and processed in Forth, but I suspect more has to do with the decompression than anything else.



By [Chapman Flack](#) on Wednesday, January 9, 2002 - 07:28 pm: [Edit](#)

I think text decompressors are pretty much linear in the size of the uncompressed text, with small constants. In general they couldn't be better, because they need to cough up the text.

The most naive string search algorithm has worst-case time NM (where N is the text length and M the pattern length) but the worst case is highly unlikely. In practice I think it winds up being linear with some near-constant you could count on one hand (being the expected number of characters that are compared to disqualify each nonmatch). I say near-constant because I expect the probability of matching q characters at a nonmatch to drop off very quickly with increasing q , almost independent of pattern length.

Boyer-Moore is sometimes described as sublinear, but that wouldn't matter in the case of doc searching because decompression would dominate and the whole project is still linear. But reducing the constant factor can still make a big difference. If decompression is cN and you change a $2cN$ search to a $.5cN$ search you've got a 50% speedup. Of course for the moment I'm just pulling numbers out of the air.

I wouldn't assume the doc module is an especially fast example of doc decompression. If the ProposedInputArchitecture goes through, a nice tuned assembler version of doc decompress might be one of the first things worth writing as an input filter.

-Chap



By [Heather Risedorph](#) on Tuesday, January 15, 2002 - 02:14 pm: [Edit](#)

Just a note about the 15 categories thing earlier mentioned... I found out why while I was browsing Palm documentation.

In the Data Manager module is a constant called `DmRecNumCategories` which is set to 16, so any resource database that uses the built in stuff is limited to 16 categories. One of these categories is "Unfiled." This leaves 15 for customization.

I'm a newbie so don't quote me, but I would assume this means that probably `pedit` limits you to 15 categories too, and that it would be difficult to program a work around into an app (like a category-clone program that does it's own categories without using the built in functions).



By [Chapman Flack](#) on Tuesday, January 15, 2002 - 03:13 pm: [Edit](#)

Some apps do exactly that--RichReader (free version, a doc reader I'm using) lets me define more than 15 categories; I don't know what its limit is, I've never hit it.

But then in the case of RichReader they had to implement their own category scheme, since doc files are distinct databases, not just records in one database, so they aren't just using the 4-bit category field reserved in record headers. RichReader has a separate database it uses to associate doc files with categories.

You could write a MemoDB editor that did the same thing and used a custom category list for its own purposes; it would just have to put `-something-` in the 4-bit field for each record so if you then looked at your memos in MemoPad they would all be glommed into 15 or fewer categories.

-Chap



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 15, 2002 - 07:28 pm: [Edit](#)

Another issue with categories: if you use multiple Doc editors/viewers, you need to set up the exact same set of categories in each one if you want your Docs to be categorized correctly. Each Doc database has that 0-15 "category code", but the editors don't know that you want category 1 to be "Personal", category 2 to be "Business", category 3 to be "Forth", etc.

And if you move a Doc file to another handheld, then that other person will probably not have the same categories set up. So it is usually best to set the category to "Unfiled" before sharing it with anyone else.

-- Kris

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Using clipboardadditem

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Using clipboardadditem



By [Paul Randall \(Paul\)](#) on Monday, January 7, 2002 - 07:26 pm: [Edit](#)

I can't figure out what the format paramater is supposed to be for text. Palm OS companion doesn't give the value.

```
20 cliptext >abs ? >byte clipboardadditem
```

cliptext is the addr of my string, 20 is its length. If I fill in the ? correctly will this work?

More importantly, where does one look for OS fixed values like this?

TIA Paul



By [Jim Hendricks \(Jimh\)](#) on Monday, January 7, 2002 - 08:24 pm: [Edit](#)

This is a case where having the Palm OS SDK comes in handy. In the includes for the SDK are the definitions for all the constants and typedefs you will need to interpret each systrap.

In the case of the example you provide, ? is ClipboardFormatType which is defined in clipboard.h which is found in the include\Core\UI folder. ClipboardFormatType is def'd as type clipboardFormats which is an Enum. The Enum contains clipboardText, clipboardInk, clipboardBitmap which would be 0, 1, and 2 respectively.



By [Paul Randall \(Paul\)](#) on Monday, January 7, 2002 - 08:53 pm: [Edit](#)

Thanks Jim - it works! I'll download the SDK and take a look.



By [Chapman Flack](#) on Monday, January 7, 2002 - 09:59 pm: [Edit](#)

You might also find the ClipboardModule handy (on the wiki).

-Chap

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Serial communication attempt

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Serial communication attempt



By [vasily zibarov](#) on Sunday, January 6, 2002 - 11:11 pm: [Edit](#)

Hi All!

i was trying to output a string with 40 'z' letters to terminal program. no success.

maybe someone could help me. here is my code.

palm IIIxe connected thru cradle to com1.

in hyperterminal i receive some garbage that looks like port speed is not programmed in palm.

```
needs serial
```

```
initserlib
```

```
create bu 40 chars allot
```

```
bu 40 char z fill
```

```
9600 seropen
```

```
bu 40 sersend
```

```
serclose
```

thanks,

vasily



By [SamuelTardieu](#) on Thursday, January 10, 2002 - 04:29 pm: [Edit](#)

SerOpen takes a double argument. Using

```
9600. SerOpen
```

(note the dot after 9600) should work fine.

However, on recent devices, I would suggest that you use the new serial manager (see <http://www.quartus.net/files/PalmOS/Forth/Contrib/srm.txt>).

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Difficulty sending a registration - Burkart

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Difficulty sending a registration - Burkart



By [Neal Bridges \(Nbridges\)](#) on Friday, January 4, 2002 - 07:37 pm: [Edit](#)

I'm having trouble sending the registered version to a Mr. Burkart -- your mailbox is continuing to complain that it's full. I'll keep trying to send, but please let me know if you have another email address.

Thanks for your registration!

Neal

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Execution Tokens

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Execution Tokens](#)



By [Joe Nasal \(Jsn\)](#) on Wednesday, January 2, 2002 - 10:59 am: [Edit](#)

Can someone point me to a good reference (some sample code would be nice) on xt's (in general) and the use of ' and ['. My background is experienced software engineer & relative FORTH newbie. QF specific information would be preferred. Is there stuff somewhere in the Wiki?

Thanks,

Joe



By [Chapman Flack](#) on Wednesday, January 2, 2002 - 12:05 pm: [Edit](#)

Hi Joe,

There's lots of stuff on the wiki, spread over a few different topics... try, uh, I think it's XtsInStandaloneApplications and follow the see alsos. A search would probably work, too.

-Chap



By [Joe Nasal \(Jsn\)](#) on Wednesday, January 2, 2002 - 12:41 pm: [Edit](#)

Chapman:

Thanks. I've been through the Wiki but somehow missed XtsInStandalone... That was very informative, thank you.

Ever notice how it's hard to find good Forth resources on the public network?

FYI, I did find this link, however:

<http://www.phys.virginia.edu/classes/551.jvn.fall01/primer.htm>

which is a document called "A Beginner's Guide to Forth" by J.V. Noble

The section titled: "Advanced Uses of the Compiler" was very helpful on this subject and provided a useful example with respect to understanding Execution Tokens.



By [Heather Risedorph](#) on Friday, January 11, 2002 - 12:10 pm: [Edit](#)

Woohoo. I'm finally on the map. I wrote my first Forth word that has any value worth saving. While other newbies write entire apps and are proud, I'm beaming about one little word... Ah well. 😊

The word is nrep (for n-repeat, repeat a code section n times). It uses XTs, which is why I put it in this discussion.

```
: nrep (xt n -- , repeat xt n times)
begin swap dup execute swap 1- dup 0= until
2drop ;
```

I was wondering if the veterans could tell me if there is an existing word which already does this? Also, is it buggy or not best-practices? It has worked in all times I've tried it, but I want to make sure I understand the xt concept and that I learn solid code practices.



By [Kris Johnson \(Kdj\)](#) on Friday, January 11, 2002 - 12:27 pm: [Edit](#)

In Quartus, you can use the FOR..NEXT construct to make this a little simpler:

```
: nrep ( xt n -- )
  for dup execute next drop ;
```

This also works properly for N = 0 (which your version doesn't handle). Another (ANS-compliant) way of doing it would be

```
: nrep ( xt n -- )
  0 ?do dup execute loop drop ;
```

Some Forth veterans would call this word REPS or TIMES rather than NREP, as "15 reps" or "15 times" sounds more like English than "15 nrep".

-- Kris



By [Heather Risedorph](#) on Friday, January 11, 2002 - 02:04 pm: [Edit](#)

Ooo. Good, thanks. 😊 REPS it is (times could sound like multiplication for people from my out of the way region of the universe).



By [Chapman Flack](#) on Friday, January 11, 2002 - 03:41 pm: [Edit](#)

Heather's approach is the same one ANS settled on for DO/LOOP: it does exactly N iterations for every value of N except zero, and in that one exceptional case it does something useful: an exact 64k loop, which you

otherwise couldn't specify without double-cell arithmetic. AFAIK that's part of the reason ANS liked the same behavior.

Using ?DO instead of DO would be appropriate if what you want is zero iterations when N is zero (and the loop is counting up, as Kris has written it).

for/next has yet a third idea of proper behavior: in 1.2.5R anyway, a for/next body executes N times when N is signed positive [1..32767], one time when N is zero, one time when N is any negative signed value except -32768, and N times when N is (unsigned) 32768 (= signed -32768).

Finally, ?DO in a downward loop behaves in yet another way, which might not be intuitive but is detailed in the QuestionDo wiki topic.

None would be proper for all purposes, but Heather's approach is surely in good company, being the same ANS chose for DO/LOOP.

-Chap



By [Heather Risedorph](#) on Friday, January 11, 2002 - 04:21 pm: [Edit](#)

... and in the end all I wanted to do was make something repeat a pre-determined number of times without rewriting a bunch of code for every such loop in my program. It's good to know the only issues brought up were in my handling of looping structures and not the "hard stuff" with the XTs.

I'm almost familiar with doing it like this:

```
10 begin 1-  
5 begin 1-  
1 begin 1-
```

```
dup 0= until drop  
dup 0= until drop  
dup 0= until drop
```

This might be less overhead, but it's so much easier to read if it's basically

Maybe I should reconsider how I do it? I wouldn't want to put an absolute value calculation in front, because that'd be stupid for all those times when the programmer (me since I'm not thinking this is a highly-desirable collector's word) makes sure the number WON'T be negative or zero before the loop command.

I think it's neat to note that if you wanted to be really sloppy you could mess with the loop using the command as I wrote it by having your word assume it's in a loop and modify the loop counter, but that'd be dangerous in case the word was ever used outside of the loop. I wonder how similar this is to C-like languages where you can modify your index in the for-loop despite how many books recommend you don't?



By [Heather Risedorph](#) on Friday, January 11, 2002 - 04:22 pm: [Edit](#)

Oops. I preview and I am still blind...

What I meant to say was

10 begin 1-

5 begin 1-

1 begin 1-

STUFF

dup 0= until drop

dup 0= until drop

dup 0= until drop

This might be less overhead, but it's so much easier to read if it's basically 'Stuff to do' 'Number of times' 'Go do it'



By [Chapman Flack](#) on Friday, January 11, 2002 - 05:47 pm: [Edit](#)

Easy to read is always a win, and it looks like REPS would be great when you have something that you want to exactly repeat some number of times, like 'beep 3 REPS.

I think the other looping structures start to look more attractive when you have something to inexactly repeat some number of times, e.g. something you want to do to each element of an array, so the array index is different each time. That's when it's handy to have DO/LOOP with easy access to I and J, or BEGIN/... where you're doing your index calculations and can refer to the index whenever. As you pointed out, a word invoked by REPS can find its loop index on the stack below its own xt--but by that point you're using a second word and extra stack ops and so in those situations the existing loop constructs might have the advantage in readability.

-Chap

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Resolving time to a hundredth of a second

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Resolving time to a hundredth of a second](#)



By [Steve Graham \(Steve\)](#) on Wednesday, January 2, 2002 - 10:54 am:

[Edit](#)

I need to resolve time to a 1/100 of a second. Found the code in facility-ext to do that to the nearest second. How do I get finer precision?

Thanks, Steve



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 2, 2002 - 02:58 pm: [Edit](#)

You can use `TimGetTicks` and `SysTicksPerSecond` to measure elapsed time in hundredths of a second. But if you want to figure out "wall clock time" to hundredths of a second, I don't think Palm OS provides a way to do it.

I suppose you could call `TimGetSeconds` in a tight loop, wait for the value to change, and then use the current value of `TimGetTicks` to figure out how to synchronize ticks with seconds.

-- Kris



By [John Newell](#) on Thursday, January 3, 2002 - 08:31 am: [Edit](#)

From the palm OS Companion,

"Using System Ticks Functions

The Palm OS device maintains a tick count that starts at 0 when the device is reset. This tick increments

- 100 times per second when running on the Palm OS device
- 60 times per second when running on the Macintosh under the Simulator

For tick-based timing purposes, applications should use the macro `SysTicksPerSecond`, which is conditionally compiled for different platforms. Use the function `TimGetTicks` to read the current tick count.

Although the `TimGetTicks` function could be used in a loop to implement a delay, it is recommended that applications use the `SysTaskDelay` function instead. The `SysTaskDelay` function automatically puts the unit into low-power mode during the delay. Using `TimGetTicks` in a loop consumes much more current."

Regards
John



By [Kris Johnson \(Kdj\)](#) on Thursday, January 3, 2002 - 12:20 pm: [Edit](#)

That "tight loop" I suggested should probably have a SysTaskDelay call with a 1 tick delay. Also, once you sync up, you shouldn't have to do it every second.

But you may need to re-sync once in a while. I don't know whether the ticks clock and real-time clock are driven from the same clock.

-- Kris



By [Steve Graham \(Steve\)](#) on Wednesday, January 9, 2002 - 06:39 am:

[Edit](#)

Thanks to all the comments I have received on this.

Steve

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Help with DOER/MAKE

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Help with DOER/MAKE



By [PBlenkinsop](#) on Wednesday, January 2, 2002 - 07:21 am: [Edit](#)

Has anyone successfully got Brodie's DOER/MAKE construct working under Quartus? I realise that as a newbie to Forth I shouldn't be messing with this stuff yet but now I'm keen to see it through.

I've fallen at the first hurdle with

```
: NOTHING ;  
: DOER CREATE ['] NOTHING >BODY , DOES> @ >R ;
```

DOER TEST then triggers the error

">BODY used on non-CREATED word"

In MAKE I've substituted POSTPONE for COMPILE and [COMPILE] but I haven't managed to get that far yet.

Any help would be gratefully received

(sorry for the use of all-caps. I realise that mixed case is de rigueur in Forth these days!)



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 2, 2002 - 09:21 am: [Edit](#)

This works:

```
needs core-ext \ for 2>r  
: nothing ;  
: doer create ['] nothing , does> @ xt>abs 2>r ;
```

You don't need >BODY: In ANS Forth, you're not supposed to use >BODY on an XT that was not defined via CREATE.

Also, in Quartus, XTs are 16-bit offsets into codespace, but return addresses on the return stack are 32-bit absolute addresses, so that's why the "xt>abs 2>r" is needed instead of just ">r".

You might want to take a look at <http://sleepless-night.com/cgi-bin/twiki/view/Main/DeferModule> for an alternative method of handling vectored execution. Also take note of the

issues involved in use of vectored execution in standalone applications.

-- Kris



By [Chapman Flack](#) on Wednesday, January 2, 2002 - 12:03 pm: [Edit](#)

Also beware that

create ['] someword ,

causes someword's XT to be stored in the created word's data field as of the time DOER is executed. If that is at build time, the value stored in dataspace will be incorrect at run time in a standalone application. As Kris mentioned, the issues are covered on the wiki.

-Chap



By [PBlenkinsop](#) on Thursday, January 3, 2002 - 03:50 am: [Edit](#)

Thanks to both of you for this help.

I had a quick look at (MAKE) last night and it's clear this is going to need the same sort of 32-bit absolute address treatment.

I'm now off to pursue the stuff on xts generated by Joe Nasal in the thread two above this.



By [PBlenkinsop](#) on Sunday, January 6, 2002 - 09:14 am: [Edit](#)

Kris

I finally got around to reading your excellent post (with very helpful input from Chapman) on the defer/is module and became suddenly aware of how misguided I was to try and rewrite DOER/MAKE under Quartus.

Not only is defer/is much slicker, your lucid explanation means I can actually understand what's going on!

(belated) thanks for pointing me at this.



By [Kris Johnson \(Kdj\)](#) on Sunday, January 6, 2002 - 11:05 am: [Edit](#)

I wouldn't say you were misguided. DEFER may be a better way to do it, but knowing how DOER/MAKE can be implemented under Quartus is helpful in understanding how Quartus works "under the hood".

-- Kris



By [Mike Will](#) on Sunday, January 6, 2002 - 06:06 pm: [Edit](#)

I notice that Leo Brodie devotes Appendix B in "Thinking FORTH" to explaining why DOER/MAKE is better than 'traditional' vectored execution.

Personally, I prefer DEFER, but that's just me.

Mike

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Help converting C code to Forth

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Help converting C code to Forth



By [Yeshiah Zalman](#) on Tuesday, January 1, 2002 - 03:18 pm: [Edit](#)

Would someone be interested in converting some custom calendar code from C++ to Forth? Or tutoring me through converting it?



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 1, 2002 - 03:44 pm: [Edit](#)

Are you looking for volunteers, or is this something you'd be willing to pay for?

You might want to look at the "calendar" module included with Quartus for ideas.

-- Kris



By [Yeshiah Zalman](#) on Tuesday, January 1, 2002 - 05:24 pm: [Edit](#)

pay would not be much as I dont have much. I suppose it could be discussed. If someone converted it for me Ild see what I could afford. We could negotiate something.

The calendar module only handles gregorian. I have code for a hebrew calendar.



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 1, 2002 - 07:02 pm: [Edit](#)

If the code isn't proprietary/secret, you might try posting it to the wiki to see if anyone wants to attempt some translation or provide some suggestions.

-- Kris



By [Yeshiah Zalman](#) on Wednesday, January 2, 2002 - 10:42 am: [Edit](#)

The code IS proprietary for now So I cant publically post it yet.

Anyone interested privately and we can discuss it,



By [ronald b. kopelman](#) on Wednesday, January 2, 2002 - 04:52 pm: [Edit](#)

What kind of caledar stuff are you looking for? I have tons of stuff I wrote in BASIC years ago that I have just converted to FORTH in the last few

weeks. It does julian, gregorian, & jewish to/from julian day numbers. Thus, you could go back & forth. I haven't yet thoroughly tested them, but I will share. I would ask, however, that if you reverse engineer the jewish date algorithms, you don't share them with the world at large. They should work for secular years form 3761 BC to 4000 AD. but they could use some "beta-testing"

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Installing with Chapur and Outlook instead of Palm desktop

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Installing with Chapur and Outlook instead of Palm desktop



By [Jeff](#) on Saturday, December 29, 2001 - 08:11 pm: [Edit](#)

How the heck do I install Quartus Forth if I'm using syncing my palm to Outlook instead of the Palm desktop? I've tried importing the library.mpa into Palm desktop and then exporting that to Outlook with absolutely no luck.

Please advise.

Thanks,
Jeff



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, December 31, 2001 - 08:52 am: [Edit](#)

Jeff,

I also use Outlook - I use Chapura's PocketMirror program to synchronize the handheld to Outlook - and here is what I *think* I did (many moons ago, hopefully I'm recalling correctly) to get the quartus library files installed.

- 1) Do a full synchronization between the handheld and Outlook to start with all files in place both on your Palm and in Outlook.
- 2) Choose "Backup to Palm Desktop Files" from PocketMirror's 'Quick one-time action setup' synchronization setting and then Hotsync. This makes the Palm Desktop current to Outlook.
- 3) Import the library.mpa into the Palm Desktop.
- 4) Choose "Restore from Palm Desktop Files" from PocketMirror's 'Quick one-time action setup' synchronization setting and then Hotsync. This should place the library files into Outlook.
- 5) Do one last regular HotSync to ensure the handheld is current to Outlook and all of the Quartus library files are installed.

There may be an easier way, but I believe this is what I did and should work. No guarantees, though, so be sure and back everything up before you start! 😊

Hope this helps,

Barry Ekstrand



By [Chris Bucsko](#) on Wednesday, January 2, 2002 - 11:44 am: [Edit](#)

I also use outlook at work, but Palm desktop at home. You can choose which conduits you want to sync with outlook in PocketMirror. I suggest not syncing the memo pad with outlook, and using the Palm desktop instead. It'll probably be a lot easier for entering code. You may have to uninstall/reinstall PocketMirror to get this to work.

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How to Show 2nd Form

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): How to Show 2nd Form



By [Frank Lin](#) on Friday, December 28, 2001 - 12:56 am: [Edit](#)

Hi!!

In QuartusFORTH, if you want to show a form, just use [form-id] ShowForm
But how could I show up the second Form? (for the purpose to show up
setup preference... etc.)

I tried the method below:

```
[second form id] FrmInitForm  
FrmSetActiveForm  
FrmGetActiveForm  
FrmDrawForm
```

I was suprised, it works on Palm OS 3.5 without problem. But it doesn't
work on Palm OS 3.1

On OS3.1, I always get PalmOS error up "Form.c, Line:3744, No event
handler"

Does anyone have idea to avoid the error??
(or what's the more correct way to show up 2nd Form in QuartusFORTH?)

Please give some advise, thanks

Frank



By [Kris Johnson \(Kdj\)](#) on Friday, December 28, 2001 - 01:38 am: [Edit](#)

I haven't done much switching between forms, but I think you can use
ShowForm as much as you want. That is, you can use it to show the first
form, and then when you want to switch to a second form, just use
ShowForm again with the new form's ID.

-- Kris



By [Frank Lin](#) on Friday, December 28, 2001 - 04:42 am: [Edit](#)

Hi!! Kris,

Thanks for your feedback.

I just did some test following your suggestion.

```
[form id #2] ShowForm
```

Yes, It works!

But I found the background graphics on first form will be clean too. That's not good for me. I want to keep the all old graphics data on Form #1.

Any further suggestion?

Frank



By [Eli](#) on Friday, December 28, 2001 - 05:33 am: [Edit](#)

Use popupform.

Eli



By [Paul Randall \(Paul\)](#) on Friday, December 28, 2001 - 07:53 am: [Edit](#)

To add to Eli's suggestion;

use popupform to show the second form and frmReturnToForm to return to the first.

I have been setting the 'save behind' check box for the second form in RsrcEdit (so your program drawn screen stuff will be retained on the first form.)

Paul



By [John Newell](#) on Wednesday, January 2, 2002 - 08:35 am: [Edit](#)

Frank,

I had a similar problem back in April. I wanted an app to run on OS3.1 and 3.5. I tried

FrmInitForm

FrmSetActiveForm

FrmDrawForm

and got the error message. (I wanted to do this to prevent the "Flash" you get when rubbing out a form and re-showing it). I did try creating an event handler which worked in one way and failed in another. In the end I did a test for the OS version running on the Palm. For OS less than 3.5 I used PopupForm (and put up with the "Flash"). For OS 3.5 I used the above sequence.

Regards

John



By [Steve Graham \(Steve\)](#) on Thursday, January 31, 2002 - 12:36 am:

[Edit](#)

My situation is that I have 3 forms. The first is a "menu" form, which I invoke using `PopupForm`. When the user chooses the 3rd option, I use `PopupForm` to bring up a 2nd form. I then immediately bring up a 3rd smaller window with `PopupForm`, to obtain parameters, which I will display on the 2nd window. After the user selects Okay on the 3rd window, I try to return to the 2nd by using `frmReturnToForm`. However, the 3rd window is still visible and selected. Can't figure this out. Any ideas?

TIA, Steve



By [Christopher J. Smith \(Missilemax\)](#) on Wednesday, February 6, 2002 - 12:18 am: [Edit](#)

This is how I switch back and forth with multiple forms:

```
frmCloseAllForms  
FormID PopupForm
```

FormID is the ID of the form I want to open. I found that `PopupForm` and `frmShowForm` both tend to leave several copies of the form open (they close when you exit.)



By [Steve Bohrer \(Skb\)](#) on Wednesday, February 6, 2002 - 02:10 pm:

[Edit](#)

Does the Quartus `showForm` "leave several copies of the form open"? How do I test to see if this is happening? Why did you use `frmShowForm` rather than the Quartus version?

My app has three forms, and I change between them just by `showForm`-ing the one I want, and then running my init and event loop words for that form. When a form is done, it saves any necessary data before changing to the next form. I've assumed that `showForm` closes the current form before it opens the next.

I've only used `popupForm` when I've put up a partial screen dialog over another form, and in this case I have ended the popup with a `FrmReturnToForm` to the original form. Do I need to do anything to explicitly close the popped-up form?

What about `FrmUpdateEvents`? Does anyone handle these? On the OS 3.5 top issues page, Palm says

Quote:

Problem Symptom:

After a dialog is dismissed, areas of the screen are blank or elements aren't drawn properly.

Problem Cause:

Most likely, the `frmUpdateEvent` isn't being handled correctly. When a form handler receives a `frmUpdateEvent`, the application must make sure to call `FrmDrawForm` and then draw anything on the display that isn't drawn by the standard form objects (e.g. gadget contents).

Solution:

Add a handler for `frmUpdateEvent`, which calls `FrmDrawForm` and does any other necessary drawing, and then returns `True` indicating that it has done all the necessary drawing.

Additional Info:

Many pop-up windows and forms have set the "saveBehind" bit, which tells the system to save the contents of the screen that they are going to obscure. However, if the system doesn't have enough free memory to save the screen bits, it will send a `frmUpdateEvent` to the forms when the obscuring one is closed. To help applications make sure they properly handle this update event, the debug rom mimics a low-memory situation by saving but never restoring the bits, and sending the `frmUpdateEvent`.

I have only drawn my form content when I open the form, and when I know that it has changed from other events. I've never trapped `FrmUpdateEvents`. Palm suggests that this will work as long as I set "saveBehind" on pop-ups, and as long as there is enough memory for the save. Anyone have any experience with this? I imagine that all the buttons and lists and such will be redrawn by the system call, but that any text or graphics I've drawn directly with Quartus will need to be redone.

(I can't run Quartus with the OS 3.5 debug ROMs, so I have not tested this directly.)

 By [Christopher J. Smith \(Missilemax\)](#) on Friday, February 8, 2002 - 12:36 pm: [Edit](#)

`ShowForm`, `PopupForm`, and `FrmDrawForm` do not close the previous form, the only open up a new one.

To close forms, use `frmDeleteForm` or `frmCloseAllForms`.

I only discovered this after opening a few forms (3) over and over again in a long session of a board editor I wrote...when I exited the program I saw

several iterations of the previous forms flash by the screen...further investigation revealed that the images of the old forms were still behind everything. This may have something to do with the Save Behind bit, I don't know. But now I just close the old form before opening a new one. As a note, I'm using OS 3.1 .



By [Steve Bohrer \(Skb\)](#) on Tuesday, February 12, 2002 - 12:44 pm: [Edit](#)

Neal, is this really true for ShowForm?

Quote:

ShowForm, PopupForm, and FrmDrawForm do not close the previous form, they only open up a new one

Sounds hard to believe.

FrmPopupForm is specified to not close the current form, and FrmDrawForm doesn't deal with loading or closing forms, so it is not relevant.

But, I've always assumed that I can use showForm to switch between a series of forms an arbitrary number of times, as long as I draw each form when I switch to it, because it has been closed and reloaded.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, February 12, 2002 - 02:42 pm: [Edit](#)

I believe the current form is closed with ShowForm; I'll have to monitor the event queue to check it. It's never come up as an issue before.

Neal



By [Steve Bohrer \(Skb\)](#) on Thursday, February 14, 2002 - 10:37 am: [Edit](#)

I should have tested this myself before bothering you, but your post made me think of an easy test: I made one form sized to cover the top half of the screen, and one on the bottom, each with a button that showForms the other.

ShowForm does indeed close and erase the current form. It does not leave the old form behind.

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Resource editor for Linux ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Resource editor for Linux ?

 By [Leland Williams \(Leland\)](#) on Thursday, December 27, 2001 - 07:24 pm: [Edit](#)

Is there such a thing as a Palm Resource Editor for Linux. I've used the On-board one, but I prefer doing my programs on my Linux box and installing onto the palm, but the only resource editors I can find on the net are for Windows/Mac. Are resource editors easier to use than just creating your own resource file ?

 By [Kris Johnson \(Kdj\)](#) on Friday, December 28, 2001 - 01:34 am: [Edit](#)

PilRC, the resource compiler, will work on Linux. But if you are looking for a WYSIWYG editor like RsrcEdit or Constructor, then no, I don't think such a thing exists for Linux.

-- Kris

 By [Jim Hendricks \(Jimh\)](#) on Friday, December 28, 2001 - 09:10 am: [Edit](#)

There are tools written in Java that do some of what RsrcEdit do. If I recall, there was ptools which was pure java.

Jim

 By [Kris Johnson \(Kdj\)](#) on Saturday, December 29, 2001 - 10:28 am: [Edit](#)

Here are links for a couple of those Java-based tools:

<http://www.sra.co.jp/people/hoshi/ptools-e.html>

<http://www.wn.com.au/rnielsen/pilrcedit/>

-- Kris

 By [Leland Williams \(Leland\)](#) on Wednesday, January 2, 2002 - 01:37 pm: [Edit](#)

Thank you everybody for the links !

Now for a real newbie question:

I've never attempted GUI programming (except for HTML) and I don't understand the need for a resource file. Why not just have commands to make an alert box or menu bar as, say, a part of Quatus. Just something like 'button' and you get a button. It seems easier, but I;m sure there's something I'm missing here.



By [Joe Nasal \(Jsn\)](#) on Wednesday, January 2, 2002 - 01:48 pm: [Edit](#)

Leland:

There are many schools of thought on this & many different implementations. For sure, some GUI applications embed all "calls" to GUI element creation right inside of the program's code itself. Basic HTML does just this.

Since you're familiar with HTML, however, think of PalmOS resources as something like HTML "style sheets". Using these kinds of conventions the programmer can abstract GUI (Form) creation from the application logic and thus make an application more portable, easier to maintain, etc.

In your future PalmOS apps you'll want to change a button style, for example, and you'll be happy that you can do this by simply modifying resources as opposed to having to fiddle with application logic. Trust me...



Joe



By [Kris Johnson \(Kdj\)](#) on Wednesday, January 2, 2002 - 02:53 pm: [Edit](#)

Newer PalmOS versions (3.5 and higher, I think) do provide an API for creating forms and controls "on the fly" without needing to load them from resources. But it generally is a lot easier to just lay everything out with resources.

A few of us would like to be able to generate resources using Forth. Check out the ForthResourceCompiler topic in the wiki.

-- Kris



By [Ron Doerfler](#) on Wednesday, January 2, 2002 - 03:06 pm: [Edit](#)

This may become more important as the Palm OS evolves, as the makers of RsrcEdit have now abandoned support or evolution of their Palm products (<http://www.individeo.net>).

Ron



By [Julian Fondren](#) on Tuesday, January 8, 2002 - 04:56 pm: [Edit](#)

On resources:

I'm not sure why resources exist on the Palm OS, or what thought led the designers to them, but I rather like them -- with interface separate from code, it's easier to change messages (for instance, to translate a program from English to French, or fix spelling errors) and design (for instance, to change pictures used, to make this inputbox a little larger).

There's a game called SpaceWar which is pretty neat, except that I find the Star Trek theme to get in the way of enjoyment (I don't really want to be a Borg, even though I prefer their ships =) -- so I decided to de-trek it, which was very easy with RsrcEdit and the 'resource' design. I removed the Trek pictures and changed the messages and names of things, and now it's some other universe. I could also change the way forms look, the way ships look, and add my own pictures to deepen the theme. I can't change code this way, or how everything is used, but it's still nice to WYSIWYG the part you see =)

Also, this makes for a different style of designing apps: my first step might be to create all the menus, all the forms, all the 'help' information and documentation, and after all this actually program the thing. A possible (but not yet encountered by me) detriment might be poor factoring, like how VB is said to encourage 'button programming', but the benefit seems to me a clearer picture of the final program. Kind of like how sometimes I declare to myself, 'this word shall do X' in the middle of programming and define it later. Other benefits might be that you can get the code and basic interface in, and let more skilled people finish the latter; let artists make any pictures needed; let users complain so you fix something minor without having to recompile everything.

Anyway, this is my impression after *very little* programming on the Palm OS =) I got my first palm device last Christmas.



By [Kris Johnson \(Kdj\)](#) on Tuesday, January 8, 2002 - 06:41 pm: [Edit](#)

The Palm OS designers "stole" the resources idea from Apple (as did Microsoft). But separation of layout from back-end code is a good idea that has been around for a long time.

In addition to the design benefits you mention, a practical benefit is that a resource tends to be a lot smaller than the amount of code that would be required to create the same look, and the data for each resource can be easily loaded and unloaded as necessary. That was a big deal with the original 128K Mac.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Wednesday, January 9, 2002 - 05:09

pm: [Edit](#)

I used a C package called CXL (and later TCXL) in the late '80s that had all resources for an app in external files. Everything from strings to anything else. I wrote a NAFTA application package for a company that was multi-user (under NetWare) and multi-lingual (French, American, Mexican) with this resource package. The user started the app with appname -x, where x was the language they wanted to work in. The main() function opened and used the appropriate file, where each resource ID was the same, but in a different language for each item. It was a good idea then, and still is. I believe the QT people at trolltech are developing something similar to this for their internationalization stuff for QT and qtopia (for the Sharp linux/java PDA).

I'd like to be able to do that kind of thing under Quartus Forth as well, identify the appropriate resource file on startup.

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OS incompatibilites?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): OS incompatibilites?](#)



By [Mike Adams](#) on Wednesday, December 26, 2001 - 11:13 am: [Edit](#)

I am having a problem with programs compiled under OS 3.1.1 not working under OS 3.5 (and 3.5.2)

for example the definitions below return the correct value from 'compare' when run under the OS which they were compiled under.

But when compiled under 3.1.1 and beamed to a 3.5, 'compare' gives the wrong answer.

```
: goc ( -) s" aa" s" bb"  
2over type 2dup type .s  
compare . ;  
: go ( -) goc key drop bye ;
```



By [Kris Johnson \(Kdj\)](#) on Wednesday, December 26, 2001 - 03:01 pm:

[Edit](#)

This is a known bug. See

<http://sleepless-night.com/cgi-bin/twiki/view/Main/CompareBrokenInNewRom>

It is supposedly fixed in version 1.2.6R of Quartus. Or you can use the Palm OS StrNCompare function instead of COMPARE.

-- Kris



By [Mike Adams](#) on Thursday, December 27, 2001 - 03:28 pm: [Edit](#)

Thanks Kris. I am still using 1.2.5

I also had a problem with popSelectEvent not appearing under similar circumstances.

I see this is also a known bug.

--Mike

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Cryptos: new Quartus application

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Cryptos: new Quartus application](#)



By [Paul Randall \(Paul\)](#) on Monday, December 24, 2001 - 07:06 pm: [Edit](#)

I've posted my new Quartus application 'Cryptos' to Palmgear.

This is a cryptogram puzzle game featuring replaceable puzzle databases and a nice friendly interface to make the puzzle-solving process efficient and enjoyable. (or so says the brochure...)

I have to say, Neal, that the Quartus tool is an absolute gas! Thanks for putting Forth on the Palm. I never seriously considered buying a PDA until I Googled on "Forth" one day and found the Quartus site. I also want to say that Ron Doerfler's very detailed database tutorial helped me very much, as did the responses from everyone to my posted questions and problems.

My app is up there as a shareware and the source code is not in the download package. If anyone wants a look at the code please email me. It is a frightening, disorganized mess, but it runs (I think.)

<http://www.palmgear.com/software/showsoftware.cfm?sid=92052120011224154306&prodID=38099>

PS: Happy Holidays!



By [Ron Doerfler](#) on Monday, December 24, 2001 - 10:53 pm: [Edit](#)

Hi Paul,

Congratulations on a very clever app! I solved the first cryptogram (yooohoo!), and I'm going to have a try at the others over the holidays when I'm out of town. I appreciate your mention above of my tutorial, too--makes me feel good to know it was of some help. A good portion of that material was garnered from other folks on this forum as well.

Cheers,

Ron



By [Paul Randall \(Paul\)](#) on Wednesday, December 26, 2001 - 08:15 pm:

[Edit](#)

Thanks Ron. I am working on v1.1 now which will add a pop-up letter picker for those who don't use Palms often enough to know graffiti.

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FourTap 2.0

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): FourTap 2.0](#)



By [Kris Johnson \(Kdj\)](#) on Saturday, December 22, 2001 - 05:06 pm:

[Edit](#)

I just released version 2.0 of my FourTap game. This is like the old "Simon" game, where a set of buttons flashes and then the player has to tap back the sequence in the proper order.

Version 2.0 has 3x3 and 4x4 layouts in addition to the traditional 2x2 layout. It also allows up to 100 taps in the sequence. (I had people complain that 50 was too easy!)

Full source code is included. The package can be downloaded from <http://www.palmgear.com/software/showsoftware.cfm?prodID=14875>

Merry Christmas!

-- Kris

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Problems with Clie HiRes

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problems with Clie HiRes



By [John Newell](#) on Friday, December 21, 2001 - 04:31 am: [Edit](#)

One of my users of The Archery Suite reports that it works OK if HiRes is disabled on his Sony Clie but that it hangs the PDA if HiRes is enabled. Now I don't have a Clie so could someone tell me if you have to do anything special to make it work in HiRes? Can the program switch to LowRes and back to HiRes? Does the Clie require special programming?

Thank you.

Regards
John



By [David Kearns](#) on Friday, January 4, 2002 - 09:04 pm: [Edit](#)

Under Preferences on the Clie is a HiRes dialog. This allows you to enable/disable the High Resolution Assist and indicate particular apps that you wish to exclude from HiRes Assist.

I have found 1 app so far that greatly disagreed with the Clie HiRes mode, and checking the box here made it work 100%



By [John Newell](#) on Monday, January 7, 2002 - 07:18 am: [Edit](#)

Thanks David. I'll mention it to my user and see how he gets on.

Regards
John

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AG Connect and MSMount

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): AG Connect and MSMount

 By [Christopher J. Smith \(Missilemax\)](#) on Thursday, December 20, 2001 - 03:26 pm: [Edit](#)

I was wondering if any one had problems with AG Connect and Quartus Apps. I got a bug report on my FreeTris Game . The user said that with FreeTris installed, he is unable to hot-sync using AG Connect. Also as a note on MSMount, It was freezing my FreeTris game, but the newest version (of MSMount) , 1.02 seems to be working fine (tested on a m505).

BTW FreeTris is the #30 App on Palm Gear and #8 in the Fun and Games Catagory for the month and includes full Quartus Source! Is there some help info on posting it to the Wiki or should I just leave it on Palm Gear?

 By [Kris Johnson \(Kdj\)](#) on Thursday, December 20, 2001 - 05:58 pm: [Edit](#)

I'd prefer that you not have zillions of users downloading it from the wiki. I don't mind if you put it there, but please don't publish the wiki URL on PalmGear, Handango, etc.

Congratulations on the popularity of your game. My JacksOrBetter has just passed 20,000 downloads from the SourceForge site. It's always nice to see other people enjoying your work.

Thanks,
-- Kris

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, December 21, 2001 - 09:39 am: [Edit](#)

Christopher,

The incompatibility with MSMount has been reported before, it is perhaps a good sign if a new version appears to play better with QF apps. I haven't heard of a problem with AG Connect before, anyone else?

Barry

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Horse Race: new quartus forth app!

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Horse Race: new quartus forth app!



By [Dave Bennett \(Dbennett\)](#) on Monday, December 17, 2001 - 06:34

pm: [Edit](#)

Horse Race uses the random function to move six horses across the screen to towards the finish line. The Track Announcer keeps you advised as to the status of the race as it progresses. The random function also is used to select the Track Condition: Slow, Normal, or Fast.

I've not posted this to Palm Gear yet, it is available on my "page" at www.micoks.net/~dbennett.

Dave



By [John Newell](#) on Tuesday, December 18, 2001 - 05:26 am: [Edit](#)

Hmm. Seems to have some bugs. The announcements sometimes says things like:

Pete

Pete

Shadow

or

Shadow

Happy

Happy

Regards

John



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, December 18, 2001 -

09:45 am: [Edit](#)

Dave,

Congratulations for a fun little app. How about a "betting" option and score tally as an improvement idea? One other comment: I noticed the track lines don't get redrawn when the horse bitmap crosses them - is this due to their hooves tearing up the track 😊 or a small 'to do' for you?

Barry



By [Dave Bennett \(Dbennett\)](#) on Tuesday, December 18, 2001 - 05:54

pm: [Edit](#)

The issue of the Track Announcer saying Pete, Pete, Marvel is because the tracking is done from 3 -> 2 -> 1. It is entirely possible that Pete could move from 2 -> 1 at the time the track announcer comes into play and the program has not moved another horse into the 2 position. It's not a big deal for me at this time, but I am thinking about how to rewrite that particular portion of the code.

Barry: I'm working on an algorithm that will make betting realistic. Actually, the base work is on horse "performance" history. For instance, if we start with a virgin install. On the first race, on a "fast" track, Blackie wins. The next time a "fast" track is in use, Blackie gets two Bs in the string used for random selection. While it is true he is more likely to win, another horse that wins gets another letter for his name in the string the next time.

After several iterations, one could calculate the ratios of the horses' wins in a particular track condition and then allocate the appropriate number of each horse's initial letter to the random selection string.

This would make the race a little more "predictable" based on some "statistics" and hence, betting would become possible. As it is now, betting would be useless as it would be based on zero information.

The lines not redrawing was purposeful. It is just a visual tickler as to which horse has crossed which area of the track. Kind of a "Blackie" is two sections ahead of "Shadow" kind of thing. I think I'll use the "their hooves tearing up the track" line though in the future. 😊

Actually, I got the idea for this app while my wife and I were talking about the scene in the movie Popeye where Wimpy took the baby to the gaming ship and was betting on the mechanical horse races.

Glad you enjoyed the program Barry. My wife took it to work and could hardly get her Palm back from everyone playing with it.

It must be something a lot of people are enjoying as it's had over 430 downloads in the 22 hours it has been on palmgear.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, December 19, 2001 -

12:57 pm: [Edit](#)

Fun apps always get attention, so I'm not surprised at the interest. For betting, I am reminded of the game played at stadiums at halftime where fans pick one of 3 colored dots on the scoreboard to root for as they race

around the scoreboard track - a silly game really, with no winnings for guessing right, but to hear the whooping and hollering you would think the lottery is on the line. I think betting for fun (even just guessing against a random number generator) is something people like to do.

Something else: I did a search on PalmGear to look for your app and found it, but also found another game by the same name (version 1.1). The link to that one is:

<http://www.palmgear.com/software/showsoftware.cfm?&prodID=29346>

One more thought (plea?): have you considered making the game charitable shareware instead of freeware? A \$5-\$8 price where the money goes to charity could create some nice donations, it seems to me that people are more willing to pay when they know it is for a good cause. I would love to suggest the Juvenile Diabetes Research Foundation (the recipient of my Char-Ware efforts) if you don't have another favorite.

Congratulations again for the app,

Barry Ekstrand

 By [Dave Bennett \(Dbennett\)](#) on Wednesday, December 19, 2001 - 06:22 pm: [Edit](#)

I'll consider the charware thought. Maybe I'll do that if I get around to "Horse Race Pro". 😊

 By [Dave Bennett \(Dbennett\)](#) on Wednesday, December 19, 2001 - 06:40 pm: [Edit](#)

I didn't realize there was another app of that name. I've emailed the author that I'll change the name with the next release. (I did a search on "Horse Race" and Palm Gear didn't even return my app, let alone this guy's.)

 By [Paul Randall \(Paul\)](#) on Thursday, December 20, 2001 - 07:49 am: [Edit](#)

I was thinking maybe the announcer could be done as a "stock ticker" scrolling line across the bottom of the display... Just a thought.

Paul

 By [Dave Bennett \(Dbennett\)](#) on Thursday, December 20, 2001 - 05:38 pm: [Edit](#)

Well something is definitely funky with PalmGear's search. Half the time when I search I get "no matches" and half the time I see my app, the other guy's app, or both. I emailed with him and he's cool about the duplication.

I'm just extending the name of my app to "Horse Race at the 'Burg". (I live in Louisburg, KS and we locals refer to it as "the 'Burg".)



By [Kris Johnson \(Kdj\)](#) on Thursday, December 20, 2001 - 05:53 pm:

[Edit](#)

Yes, PalmGear's search is very hit-or-miss. It has been for a long time. But I guess we should consider ourselves lucky that PalmGear works at all.

BTW, "Horse Race at the 'Burg" might not fit underneath/next to the application icon in various launcher views.

-- Kris

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Accessing low memory

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Accessing low memory



By [John Newell](#) on Monday, December 17, 2001 - 12:41 pm: [Edit](#)

Neal,

A customer of The Archery Suite tells me that "Your Application is reading from memory location 0x00000002 and 0x00000000 wich is in low memory. The first 256 bytes. It is not recomended. "

Is this something that Quartus does?

Regards

John



By [Wade Carlson](#) on Monday, December 17, 2001 - 01:00 pm: [Edit](#)

John, this is likely a bug in your application. You may want to go over your code. Sometimes these can be hard to track down, but I've found in my case it has always been my fault (such as leaving something extra on the stack, etc).



By [Chris Bucsko](#) on Monday, December 17, 2001 - 02:00 pm: [Edit](#)

I always use the following the 'debugger' software in my code, and comment it out before making the final prc:

needs graphics

In my event loop I put:

```
0 0 at .s
```

This will show the stack contents in the upper left of the screen. I use this to make sure my code doesn't leave stuff on the stack. It's saved me a lot of time.



By [Joe Nasal \(Jsnn\)](#) on Monday, December 17, 2001 - 03:22 pm: [Edit](#)

What a great tip Chris -- thanks.

I've been plopping .s all around (including simply in the event loop at times) just to get a peek at the stack. This makes it nice and clean.

Joe



By [Paul Randall \(Paul\)](#) on Monday, December 17, 2001 - 06:31 pm: [Edit](#)

If for any reason you need to put your stack print at the bottom of your screen instead of the top I find that `.s` may cause the screen to scroll. I have been using

```
depth .
```

instead of `.s` at the bottom. It prints a "0" for an empty stack and it won't scroll your display. If I start seeing 1s or 2s etc. down there I can go back and use `.s` to see the values.



By [John Newell](#) on Tuesday, December 18, 2001 - 04:36 am: [Edit](#)

Thanks for the tips but all the modules in The Archery Suite check the depth of the stack every time around the event loop and prints out a message if it doesn't match.

```
begin
  depth G_depth !
  goChoice
  BEGIN
    depth
    G_depth @
    <> if
      ." Re Depth!" .s key (bye)
    then
      getvalue
      ATObu_Exit = \ Exit?
  until
  CleanUp
  G_dev @
until \ Loop if not Devt.
0 FrmReturnToForm \ To Quartus
```

I had a feeling that Quartus looked at low memory for some reason and wanted to check with Neal if that was true.

Regards
John



By [Steve Bohrer \(Skb\)](#) on Tuesday, December 18, 2001 - 09:14 am: [Edit](#)

The "classic" bug which causes access to address 0 is reading from a null pointer. In some resource limited situation, an OS call that normally returns a pointer to valid memory returns 0, and your code doesn't notice, and either fetches directly from this value, or passes it as a parameter to some other OS routine which fetches from it.

Tough to debug, because in the development environment, all the necessary resources are available.

I've loaded a bunch of large DOC files to create a low memory storage RAM situation for testing, but I'm not sure how you can test under low dynamic heap conditions. Perhaps POSE offers some more automatic method? Also, if you have any external files or resources that must exist, you can test how your app fares when they do not, e.g. if the user inadvertently managed to delete them.



By [Steve Bohrer \(Skb\)](#) on Tuesday, December 18, 2001 - 09:45 pm:

[Edit](#)

Is this "bug report" from a customer testing with POSE, or is this a real crash? If it is just POSE, and you using Chap's HardException module, you will probably get warnings when your program reads and replaces the hardware exception vectors (which I think are in low memory, but I'm not certain).

If so, and POSE will let them continue, all is well.

On the other hand, if your app is ticking along fine on a real device, and it dies with the above warning, then you very likely used a null pointer.



By [Chapman Flack](#) on Thursday, December 20, 2001 - 02:43 pm: [Edit](#)

Yes, they are in low memory. Maybe I should add a note about POSE on the HardException page. Thanks.

-Chap

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Needs help with double word math

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Needs help with double word math



By [ronald b. kopelman](#) on Monday, December 17, 2001 - 12:19 pm: [Edit](#)

With a double word on the stack, in the range of about 200-400, I do the following code snippet:

```
2dup 10000 dm* 306001. d/ 2swap 2over 306001. d* 10000 dm/ d- rot
2drop
```

It all runs ok from the console by hand & it runs ok as a colon definition when entered from the console. However, when I include this code in a file as part of a larger definition, I get a floating point stack underflow exception when I do a "NEEDS FILENAME". (Didn't even know I was using floats!) Why should this underflow before I do a calculation? After some fiddling around, the offending word seemed to be the d-. (All non-kernal words are used elsewhere & are bug free.)

I tried to patch around the problem by changing the code to

```
2dup 10000 dm* 306001. d/ rot 2drop tuck 0 306001. d* 10000 dm/ drop
-
```

I still get the exception when I include the file with the NEEDS command. What is going on here? The whole purpose of this algorithm is to avoid floats (the FORTHright thing to do). I could try other ways but I would like to know how this is failing when the file is included. I am running OS 3.5 on a III-c.

By the way, thanks for a wonderful alternative to C++.

ronald b. kopelman
ronald.kopelman@verizon.net



By [ronald b. kopelman](#) on Tuesday, December 18, 2001 - 07:25 am:
[Edit](#)

OK, I found the problem. I am sorry for having bothered everyone. One word of advice: Don't make input lines in a file too long.

ronald b. kopelman
ronald.kopelman@verizon.net



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, December 18, 2001 - 09:50 am: [Edit](#)

Ronald,

That is a good reminder - I've been bit by that also but don't remember if it is documented anywhere. Needs to get posted to the Wiki if it isn't already there.

Barry

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New quartus forth app

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New quartus forth app



By [Dave Bennett \(Dbennett\)](#) on Sunday, December 16, 2001 - 06:03

pm: [Edit](#)

I've posted CMiterS.zip to palm gear and to my own site (www.micoks.net/~dbennett). This allows the user to calculate compound miter settings for either table or radial arm saws. It requires MathLib. quartus forth source is included.

Dave

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Unusual behaviour in emulator 3.0 rom

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Unusual behaviour in emulator 3.0 rom



By [Paul Randall \(Paul\)](#) on Sunday, December 16, 2001 - 09:48 am: [Edit](#)

Just thought I'd throw this out there. The following code tests ok on my m500 and in the emulator with the 4.0 & 3.51 roms.

needs graphics

```
: drawpattern
  160  -15 145  0
  35  0 do
    2over 2over line
    5 + rot 5 + rot rot
  loop 2drop 2drop ;
```

It draws a band of diagonal lines across the bottom of the screen at 5 pixel intervals. In the POSE 3.0 however, at the 4th iteration of the loop the upper x coordinate gets "stuck" as if the first "5 +" stops getting executed. This strikes me as being a POSE quirk but if anyone has a 3.0 palm box out there and would like to run this for me it would clear up my doubts.

thanks, Paul



By [Paul Randall \(Paul\)](#) on Wednesday, December 19, 2001 - 09:39 am:

[Edit](#)

Our friend Hans Nordstrom ran the above on his P3 with PalmOS 3.0. He was kind enough to send me some screen shots.

The routine does in fact draw a different picture running under that OS. I have to conclude that the WinDrawLine function is choking on certain values passed to it. When I change the -15 to zero at the start (for vertical lines instead of diagonal) it goes ok in 3.0.

Unless there's something about my methods...?



By [Steve Bohrer \(Skb\)](#) on Wednesday, December 19, 2001 - 10:44 am:

[Edit](#)

The bottom pixel of the screen is 159, not 160. Your code works with OS 3.0 (in POSE, anyway) if your starting bounds are 159, -15, 144, 0 .

Looks like there is an off-by-one bug in OS 3.0's line clip. Your first three lines draw okay, because the x coord triggers clipping, but once the x is valid, the y to 160 is erroneously not clipped, and wraps in a funny way. In OS 3.1 and above, it appears that they clip at 159, so your code works. But, your lines were only 14 pixels high, not the 15 you apparently intended.



By [Paul Randall](#) on Wednesday, December 19, 2001 - 01:07 pm: [Edit](#)

I am enlightened. Thanks Steve.

- Paul



By [Hans Nordstrom](#) on Wednesday, December 19, 2001 - 05:22 pm: [Edit](#)

I can confirm, changing the values to Steve's recommendation, it also works on a P3 with PalmOS 3.0.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Getting output from SEE into a memo

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Getting output from SEE into a memo



By [Bryan Zimmer](#) on Saturday, December 15, 2001 - 09:33 pm: [Edit](#)

Hello,

I am trying to learn 68000 Assembler code to use with Quartus Forth. I have used the word SEE from the DISASM module numerous times to get an idea of what native Forth words look like in assembler.

Unfortunately, the output from SEE often scrolls off the screen of my Palm IIIxe. I am interested in writing code that would dump the output of SEE directly into a memo. Can anyone give me a pointer on how to do this, using asm code or Forth or both? My knowledge of Forth is fairly basic. I am just beginning to understand compiling words. Any clues on how to do this would be appreciated.

Bryan Zimmer



By [Neal Bridges \(Nbridges\)](#) on Saturday, December 15, 2001 - 09:52 pm: [Edit](#)

You'd need to go in and have at the disassembler, to make everything it outputs go elsewhere. Not a great deal of fun.

The quick way to stop it from scrolling:

```
true more drop  
see whatever
```

Neal



By [Chapman Flack](#) on Saturday, December 15, 2001 - 10:26 pm: [Edit](#)

You might be able to just sneak in your own definitions of EMIT TYPE . ." near the top of the disasm memo, after ALSO DISASSEMBLER DEFINITIONS.

Your definitions would be used within the disassembler but would not affect subsequent Forth compilation.

-Chap



By [Neal Bridges \(Nbridges\)](#) on Saturday, December 15, 2001 - 11:00 pm: [Edit](#)

That might indeed work, Chap.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Momentary messages

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Momentary messages

 By [Dave Bennett \(Dbennett\)](#) on Saturday, December 15, 2001 - 04:15 pm: [Edit](#)

I'm working on an app that has an extended processing time: 30 - 50 seconds at one point. I wanted to pop up a custom alert at differing points to let the user know how things were going. I got KJ's custom-alert stuff working fine (Thanks!) to pop up my message, but I can't get the alert boxes to disappear after X amount of time.

FrmCustomAlert
20. SysTaskWait DROP

...

This causes the alert box to appear, but the app stops at that point. I tap the silkscreened app icon and then the SysTaskWait kicks in, the processing continues, and upon completion the silkscreen tap happens, causing an exit.

Has anyone done this kind of thing before with intermittent messages to the user? Any ideas? Thanks.

Dave

 By [Chapman Flack](#) on Saturday, December 15, 2001 - 06:55 pm: [Edit](#)

Dave,

Have you read in the Palm OS docs about the Progress Manager: PrgStartDialog/PrgStopDialog/PrgUpdateDialog/PrgHandleEvent?

I think that's the way you'd want to do progress messages, if you wanted to look as much as possible like a familiar PalmOS-style app.

-Chap

 By [Kris Johnson \(Kdj\)](#) on Saturday, December 15, 2001 - 08:05 pm: [Edit](#)

The Progress Manager is the right way to do it, assuming you don't need to support pre-3.0 devices. But using it involves callbacks, which involve some minor voodoo in Quartus.

If you have some extra space on your form, a little text field that occasionally displays messages would be a simple solution, or you could just draw your own progress indication on top of your main form and then erase it when finished.

I don't think there is any way to use alerts to do what you want--they take over the handheld until the user dismisses them, and there isn't a way to get your own code to run while they are up (unless you do some really hacky low-level interrupt-handling kinds of things).

-- Kris

 By [Dave Bennett \(Dbennett\)](#) on Saturday, December 15, 2001 - 09:06 pm: [Edit](#)

The text will be pretty much fixed from a selection of six differing possibilities. What if I have a separate form of smaller size that I pop-up, put the text on it, then wait X amount of time and then dismiss it?

 By [Dave Bennett \(Dbennett\)](#) on Sunday, December 16, 2001 - 10:16 am: [Edit](#)

This worked out great. I just created a small form and use popupform to display it at the necessary time. I used string constants and just wrote them to the form, SysTaskWait'ed and them returned to the main form, causing the secondary form to disappear. It does exactly what I was looking for.

Dave

 By [Steve Bohrer \(Skb\)](#) on Sunday, December 16, 2001 - 03:02 pm: [Edit](#)

Rather than SysTaskWaiting, why not keep doing your lengthy processing while you show your message form?

 By [Dave Bennett \(Dbennett\)](#) on Sunday, December 16, 2001 - 03:13 pm: [Edit](#)

I'm just letting the user know that X has completed. It really isn't necessary to keep processing as a background task.

 By [Kris Johnson \(Kdj\)](#) on Monday, December 17, 2001 - 10:27 am: [Edit](#)

There's a wiki topic about FrmPopupForm:
<http://sleepless-night.com/cgi-bin/twiki/view/Main/UsingPopupForm>

If you have any tips to add, they would be appreciated.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Monday, December 17, 2001 - 06:36

pm: [Edit](#)

Well, my new app Horse Race shows how I did the momentary messaging thingie. It is the Track Announcer in Horse Race.

Dave



By [John Newell](#) on Tuesday, December 18, 2001 - 05:18 am: [Edit](#)

Dave,

I was just looking at HorseRace. Looks fine but my main comment might be that the race stops when an announcement is made. However, you seem to indicate in this Forum that that is what you wanted.

For other apps, when you want to continue processing while displaying messages, then, as Kris said, using the Progress Manager would be the way to go.

Regards

John



By [Dave Bennett \(Dbennett\)](#) on Tuesday, December 18, 2001 - 05:50

pm: [Edit](#)

I think the progress manager is "too hard" for my recreational programming efforts. 😊

Dave

Add a Message

This is a public posting area. If you do not have an account, enter your full

Username:

name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

EZUI

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): EZUI](#)



By [Joe Nasal \(Jsn\)](#) on Thursday, December 13, 2001 - 10:42 am: [Edit](#)

Travis:

I've been using some of the words from your EZUI package. They're nice -- thanks for the work.

It looks like you haven't implemented the "dirty" words (dirty words!) with respect to getting and setting the dirty flag on a field. I was wondering if this is in the works, or if I missed them somewhere...?

Thanks,

Joe



By [Travis Casey](#) on Saturday, December 15, 2001 - 08:58 pm: [Edit](#)

Whoops! You're right... I'm amazed no one noticed that sooner. Here's an updated version of ezUIbase:

```
\ ezUIbase 2001.12.15 TSC
```

```
needs toolkit
```

```
needs case
```

```
needs Fields
```

```
needs string2anyField
```

```
create stringbuf 80 chars allot
```

```
: string2dbl ( str u -- n. )
```

```
>r >r 0 0 r> r> ( str u -- 0 0 str u )
```

```
over c@ [char] - = if
```

```
1 >r 1- swap 1+ swap
```

```
else 0 >r then
```

```
>number
```

```
drop drop
```

```
r> if dnegate then
```

```
;
```

```
: dbl2string ( n. -- str u )
```

```
tuck dabs <# #s rot sign #>
```

```

;

: string2int ( str u -- n )
  string2dbl d>s
;

: int2string ( n -- str u )
  s>d dbl2string
;

: string2zstring ( str u -- str u )
  tuck
  stringbuf swap move
  stringbuf swap 2dup
  + 0 swap c! ;

: hideobject ( id -- )
  dup
  GetObjectPtr
  FrmGetActiveForm
  FrmHideObject
  CtlHideControl ( workaround for pre-3.2 bug )
;

: showobject ( id -- )
  GetObjectPtr
  FrmGetActiveForm
  FrmShowObject
;

: dirtyfield? ( id -- 0|1 )
  GetObjectPtr
  FldDirty ;

: dirtyfield ( 0|1 id -- )
  GetObjectPtr
  FldSetDirty ;

0 enum method
  method set
  method get
  method popup
  method initialize
  method hide
  method show
  method getid
  method dirty?

```

```
method dirty

: commonmethods ( ctlid method -- )
  case hide of
    hideobject endof
  show of
    showobject endof
  getid of
    ( ctlid is already on stack ) dup
endof
  dirty? of
    dirtyfield? endof
  dirty of
    dirtyfield endof
  endcase
;
```



By [Travis Casey](#) on Saturday, December 15, 2001 - 09:08 pm: [Edit](#)

The zipfile on my website (at <http://home.earthlink.net/~efindel/quartus/ezUI.zip>) now has the corrected version of ezUIbase.txt.

Neal, would you mind putting the updated version on the Quartus site as well? Thanks!

--Travis



By [Kris Johnson \(Kdj\)](#) on Sunday, December 16, 2001 - 01:06 am: [Edit](#)

And don't forget that you can put this in the wiki as well.

-- Kris



By [Travis Casey](#) on Wednesday, December 19, 2001 - 02:46 pm: [Edit](#)

Well, I've got my first bug report... I made a mistake in hideobject and showobject. In both of those, the "GetObjectPtr" call should be to "GetObjectIndex" instead. I'll update the zip file on my site again tonight, once I'm home.

--Travis



By [Joe Nasal \(Jsn\)](#) on Monday, December 31, 2001 - 10:22 am: [Edit](#)

Travis:

Here's another interesting one for you.

I discovered that I couldn't "get" or "set" on a text or number field in response to a `ctlRepeatEvent`. The trouble is in EZUI's use of the `FlushQueue` word from Neal's Fields module (specifically, in this case, as it is invoked in the `Field>string` word). When I "patched" `Field>string` so that it did not call `FlushQueue` I was able to use EZUI's get and set methods in response to `ctlRepeatEvents`.

This also cleared up a secondary issue for me: `ctl` events which occurred in rapid succession (a button press quickly followed by another button press) were getting dropped before I did away with `FlushQueue`. Now I'm handling all events and get'ing and set'ing fields without issue.

Everything seems to be working fine, but I'd be interested in your take on this.

Thanks,

Joe



By [Steve Bohrer \(Skb\)](#) on Monday, December 31, 2001 - 02:07 pm: [Edit](#)

The [Palm OS Reference](#) comments for `FldInsert` say

Quote:

This function sets the field's dirty attribute and posts a `fldChangedEvent` to the event queue. If you call this function repeatedly, you may overflow the event queue with `fldChangedEvents`. An alternative is to remove the text handle from the field, change the text, and then set the field's handle again. See `FldGetTextHandle` for a code example.

I suspect this is the reason for the `flushEvents` calls in Neal's original field code. If EasyUI does not use `FldInsert`, flushes are probably not needed. Or, if you never update a bunch of fields at once (without getting events in between) then you should be able to skip the flushes.



By [Steve Bohrer \(Skb\)](#) on Thursday, January 3, 2002 - 01:20 pm: [Edit](#)

EZUI uses Neal's word `Field>String`, which calls `FlushQueue` at the end. But, as far as I can see from the Palm OS docs, this flush is unnecessary, as the text was merely read via `FldGetTextPtr`, which does not generate any events.

I believe that `FieldFocus` also does not need `FlushQueue`. Thus, Neal's library module "Fields" should be modified so that only `string>Field` does

the flush.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Postpone

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Postpone



By [Chris Bucsko](#) on Thursday, December 13, 2001 - 10:13 am: [Edit](#)

I'm looking at the new serial manager (SRM) and trying to figure out this word -

```
: mkndrop ( n -- )
  dup 2 / 0 ?do postpone 2drop loop
  odd? if postpone drop then
; immediate
```

in a construct like '?do postpone 2drop' or 'if postpone drop' which word is postpone working on? the one preceding it, or after? I'm still a bit confused about Forth's innards, so any help with advanced topics (such as what this word actually does) is much appreciated.



By [Kris Johnson \(Kdj\)](#) on Thursday, December 13, 2001 - 10:20 am:

[Edit](#)

POSTPONE generally works on the word following it. More formally: it works on whatever word is next in the input stream.

There's some discussion of IMMEDIATE and POSTPONE in the wiki at <http://sleepless-night.com/cgi-bin/twiki/view/Main/ImmediateWord>

Feel free to add your own questions or comments there.

-- Kris



By [SamuelTardieu](#) on Thursday, December 13, 2001 - 11:02 am: [Edit](#)

To answer your question, mkndrop is an immediate word which builds a quite-optimized sequence of 2drop.

For example, if you do:

```
: c [ 5 ] mkndrop ;
```

it is strictly equivalent to:

```
: c 2drop 2drop drop ;
```

The loop could have been done at run-time, such as in:

```
: c 5 0 do drop loop ;
```

which has the same effect, but repeats the operation at run-time.

Incidentally, I will replace mkndrop by literal-drops (from Kris' "drops" module), which will be even more efficient on M68K platform.



By [Chris Bucsko](#) on Friday, December 14, 2001 - 09:41 am: [Edit](#)

Thanks, I'm going to study this. I like the WIKI explanation for postpone. Is there by any chance, a little more info about how to call the serial port systraps using the SRM code? I usually search the forum and the WIKI, but sometimes turn up empty, without knowing the exact keyword(s) to use.



By [SamuelTardieu](#) on Friday, December 14, 2001 - 10:01 am: [Edit](#)

Well, as for the other PalmOS calls, you should look for how to use them in the PalmOS Companion and the PalmOS Reference Manual.

Add a Message

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E-mail:

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Array of Strings

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Array of Strings](#)



By [Joe Nasal \(Jsn\)](#) on Wednesday, December 12, 2001 - 11:44 am: [Edit](#)

Hi folks:

Relative Forth newbie here who is having a blast with QF... 😊

Can someone point me in the right direction with respect to creating an array of string values? How do I push:

"foo"

"bar"

"baz"

onto array X and then retrieve "foo" from the list by passing the proper index to X? A bit of code (or a pointer to the right spot in the wiki) would be appreciated.

Thanks in advance,

Joe

Sorry for the double-post...



By [Joe Nasal \(Jsn\)](#) on Wednesday, December 12, 2001 - 11:54 am: [Edit](#)

Didn't get an email when I posted this, trying to generate one now...



By [Leland Williams \(Leland\)](#) on Thursday, December 13, 2001 - 12:43 am: [Edit](#)

I have been thinking about this too. I think that I would do this in two steps:

- 1) receive the string
- 2) paste the string address onto the array.

This is assuming that you already know about string addresses and how to use a 'normal' array.



By [Joe Nasal \(Jsn\)](#) on Thursday, December 13, 2001 - 08:46 am: [Edit](#)

Leland:

I accidentally posted this to the "general" forum as well and received a reply from Mark Beckman regarding some words he'd written to provide an interface to this.

In the interest of pedagogy, however, could you follow-up on your post with a bit of code? I'm a relative FORTH newbie & interested in learning as much as I can.

Thanks,

Joe

 By [Leland Williams \(Leland\)](#) on Friday, December 14, 2001 - 01:30 am: [Edit](#)

I'll take your challenge!

just give a me a couple of days to work it out, since it is Xmas season.

Leland

 By [Joe Nasal \(Jsn\)](#) on Friday, December 14, 2001 - 08:41 am: [Edit](#)

Hey, thanks Leland. Please don't hurry -- I implemented Mark Beckman's interface and it is working properly. I am interested in learning your technique, however.

Thanks,

Joe

 By [Leland Williams \(Leland\)](#) on Wednesday, December 26, 2001 - 05:22 pm: [Edit](#)

Finally! I have something working. I admit that I was so frustrated coding what should have been a simple thing that I almost resolved to switch to using the Perl language . I didn't really have a technique before, but I have a project idea running through my head - to automate scoring the office NCAA pool - which will require strings arrays, so your request gave this newbie a chance to work it out.

Hey all you veterans out there: feel free to add constructive criticism.

I made it simple, only one variable, one word to store into the array, one word to fetch, and one word to set the variable. No other libraries are

required.

Happy using,

Leland

```
\ $array 12-26-01 by Leland Williams
\ Written on the Jed word processor
\
\ provides words to put and retrieve string addresses and counts
\ from an array provided the array name and the index (element) number
\
\
\ To use, first make an array like this :
\ CREATE {array-name} {n} CELLS ALLOT
\ where n is the number of elements to place on the array X 2
\ X 2 because it puts both the string address and the count
\ into the array
\
\ Secondly, provide the address and the count by whatever means
necessary
\ I suggest s"
```

variable \$arrayAddress

```
\ used to remember which address of the array
\ contains the desired element of the array
```

```
: set$arrayAddress ( index# array_addr -- )
swap 2 * 1 - cells + $arrayAddress !
;
```

```
: $array! ( $addr c index# array_addr -- ) \ use after s"
set$arrayAddress
$arrayAddress @ cell+ !
$arrayAddress @ !
;
```

```
: $array@ ( index# array_addr -- $addr c)
set$arrayAddress
$arrayAddress @ @
$arrayAddress @ cell+ @
;
```



Leland:

Thanks. I'll check this out and get back to you with comments.

Joe

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

BLANK missing from dictionary.

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): BLANK missing from dictionary.



By [Paul Randall \(Paul\)](#) on Wednesday, December 12, 2001 - 10:05 am:

[Edit](#)

The word BLANK is in the Quartus Forth lexicon but is not defined in Quartus. I defined it:

```
: blank ( c-addr u --)
  dup 0> if
    0 do bl over i + c! loop drop
  else 2drop
  then ;
```

\ places u blanks (ascii 32) starting at c-addr.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, December 12, 2001 - 12:15 pm: [Edit](#)

It is defined -- in strings.txt. Your definition works well, but there's a faster way:

```
: BLANK  BL FILL ;
```

Neal



By [Paul Randall \(Paul\)](#) on Wednesday, December 12, 2001 - 03:15 pm:

[Edit](#)

Oh, much better.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Connection Manager

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Connection Manager



By [SamuelTardieu](#) on Wednesday, December 12, 2001 - 08:05 am: [Edit](#)

I have posted some code to interoperate with PalmOS connection manager [on the WikiWeb](#).

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Code not working at runtime

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Code not working at runtime

 By [Richard Chamberlain \(Rac\)](#) on Tuesday, December 11, 2001 - 10:43 am: [Edit](#)

Hi folks,

Can someone have a brief look over the mess of code below... I written this to have a registration system in my software - it works great when I run from the console but falls over at when I run the compiled version.

I've looked at the wiki but it isn't obvious where I'm going wrong. I believe my use of create / allot is ok because I'm using at compile time.

It's probably quite straightforward, but I've no idea where even to begin....

Thanks for any suggestions,

Richard

```
\ mn-username
needs arcfour
needs syncname
needs fields
```

```
create key 44 c, 49 c, 53 c, 54 c, 11 c,
create encryptword 6 chars allot
create password 30 chars allot
```

```
\ append string s to the end of t
: append ( at ut as us -- at ut+us ) dup >r 2over
chars + swap chars move r> + ;
```

```
: setkey( -- ) key 5 arcfourkey ;
```

```
: encryptname ( -- ) setkey encryptword 5 arcfour ;
```

```
: returnchar ( n -- c ) username rot swap mod chars + c@ ;
```

```
: copyname ( -- ) 6 0 do i returnchar encryptword i chars + c! loop
encryptname ;
```

```
: ':' [char] : hold ;
```

```

: number>Str ( n -- caddr u ) abs 0 ;

: getPassword ( -- caddr u ) copyname 0 6 0 do encryptword i chars + c@
number>Str append loop
1 - ;

: getRegFromUser ( -- ) userpassword fldReg field>String drop ;

: checkReg ( -- ) getPassword dup userpassword swap compare ;

: do-regPref ( -- ) event>abs itemid
case
ctlRegOK of getRegFromUser checkReg 0=
if altRegSuccess FrmAlert drop else
altRegFailure FrmAlert drop then true endof
false swap endcase ;

: handle-regEvent ( eventType -- )
ctlSelectEvent =
if do-regPref else false then ;

: goRegistration ( -- )
frmRegistration PopUpForm
begin
ekey handle-regEvent until myForm
FrmReturnToForm ;

```

 By [Kris Johnson \(Kdj\)](#) on Tuesday, December 11, 2001 - 12:23 pm: [Edit](#)

At what point does it "fall over"? Does the registration form pop up? Does it work until the user clicks OK?

Does it crash? Is there any error message given?

-- Kris

 By [Richard Chamberlain \(Rac\)](#) on Tuesday, December 11, 2001 - 01:24 pm: [Edit](#)

Sorry I should have mentioned that.

It fails when you click on OK.

I get a standard MemoryMgr.c NULL handle error.

Richard



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 11, 2001 - 02:23

pm: [Edit](#)

You'll need to divide-and-conquer. Find out what function is failing in the block of code that executes when the user clicks OK.

Neal



By [Richard Chamberlain \(Rac\)](#) on Tuesday, December 11, 2001 -

04:54 pm: [Edit](#)

Well I'm ashamed to admit that it was a simple case of not copying some alert resources in the makefile.

I was kind of expecting it to be elsewhere - but that just teaches me to look at the simple things first I guess.

sorry,

Richard



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, December 12, 2001 -

11:30 am: [Edit](#)

Richard,

I've made that same mistake many times and I finally learned to verify the resources first if a program craters like that. Trying to be an optimist, I figure it means one has made another step on the long path of learning ("....it really wasn't my code?!"). Congratulations must be in order, so let me be the first! 😊

Barry



By [Kris Johnson \(Kdj\)](#) on Wednesday, December 12, 2001 - 11:46 am:

[Edit](#)

You might want to take a look at the AutomatedMake topic in the wiki, which automatically copies all needed resources to the PRC.

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Thursday, December 13, 2001 -

10:31 am: [Edit](#)

Barry,

An eternal optimist! Some of my paths seem longer than others, my forth

path especially long....

Kris,

Thanks, I'll take a look at that.

Richard

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Newbie: Forms handling in Forth

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie: Forms handling in Forth



By [ok1fou](#) on Tuesday, December 11, 2001 - 09:15 am: [Edit](#)

Hello,

I have almost no experience with PalmOS programming, so I would be grateful for any kick in the right direction.

I tried some examples of GUI using RsrcEdit.
The forms consist of label and alert.

I would like to try some fields, but I don't know where to look for know-how. (I haven't find anything on internet, to be precise.)

When I just add a field to the resource, it crashes with an error message "Not in form". Similar things happend if I add any handling into

```
variable x
0 x !

( ... prepare and ShowForm ... )
begin
ekey
( ... some test of ekey here ... )
if
1 x !
then
again
```

What is the correct way of handling events?
Why is a variable a problem?



By [Kris Johnson \(Kdj\)](#) on Tuesday, December 11, 2001 - 09:21 am: [Edit](#)

First, I would suggest not trying any event-handling until you figure out why the "Not if form" error message happens. I suspect the variable has nothing to do with the problem.

At what point does the "Not in form" error occur? In RsrcEdit? When your

program loads the form? When your program tries to read/modify the field?

-- Kris



By [Steve Bohrer \(Skb\)](#) on Tuesday, December 11, 2001 - 10:15 am: [Edit](#)

If you load one of your forms, and then return to the Quartus console, you will get the "Not in form" error because your form does not have the field that Quartus uses for console i/o.

One option is to always end your test word with a call to "Mainform" before you return to the console.

Or, if you want to do more interactive testing with your form, copy the field resource from any of the Quartus built-in forms to your form. Then you can put up your form, and use the console.

"window-bounds" might be handy to keep the console text from overwriting your UI controls. This technique can work if you are just experimenting with a simple bit of UI, but once you start working on a complex form with an event loop, it is harder to work interactively from the console.



By [ok1fou](#) on Friday, December 14, 2001 - 04:53 am: [Edit](#)

- > At what point does the "Not in form" error
- > occur? In RsrcEdit? When your program loads the
- > form? When your program tries to read/modify
- > the field?

It occurs after the form is loaded and displayed.

In the meantime I tried to get some hints from Quartus Forth documentation. To me it seems that I should define an event handler word (e.g. using simple event handler from Quartus Forth library samples) and bind it somehow (?) to my form before I try to do anything with it.

Then, I should call MainForm before exiting the word in which I display my form.

It sounds to be a good start. Thanks, and if you could tell me anything about event handlers, it would be a very nice christmas gift 😊

But I could try to find out myself as well.

Jindra Vavruska



By [Kris Johnson \(Kdj\)](#) on Friday, December 14, 2001 - 06:31 am: [Edit](#)

You might want to look at some of the tutorials in the wiki, at <http://sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthTutorials>

TheDudlStory shows some of the basics of event handling.

You don't really need to "bind" an event handler to a form. Using the EKEY or (EKEY) words should be good enough for most uses.

-- Kris



By [Steve Bohrer \(Skb\)](#) on Saturday, December 15, 2001 - 11:02 pm:

[Edit](#)

Despite its appearance in the sample code, the simple-handler library is obsolete. Neal's [library page](#) of the on-line manual says,

"simple-handler: A menu handler used in the sample sources. No longer necessary, as menu events are now passed directly to the application via EKEY."

Instead, see the description of event handling with EKEY, in the manual at <http://www.quartus.net/products/forth/manual/events.htm>



By [Kris Johnson \(Kdj\)](#) on Sunday, December 16, 2001 - 12:40 am: [Edit](#)

Is there a simple tutorial out there that demonstrates basic form handling with EKEY? The examples that come with Quartus use the "old-fashioned" callback method.

-- Kris



By [Bill Crowl](#) on Thursday, February 7, 2002 - 11:08 pm: [Edit](#)

Where can I find RsrcEdit?

I've done some Forth programming in the past and I am very excited about the opportunity to put it to work on a Palm. But, when I go to look for RsrcEdit on the web site specified in the Quartus manual they refer you back to the Quartus web site and I can't find it there either. Where can I find RsrcEdit?



By [Neal Bridges \(Nbridges\)](#) on Friday, February 8, 2002 - 03:55 am:

[Edit](#)

Hi, Bill -- thanks for asking. RsrcEdit has recently been acquired by Quartus, and I'm just in the process of integrating it as a product offering. It'll be available again very shortly!

Neal



By [Joe Nasal \(Jsn\)](#) on Friday, February 8, 2002 - 08:47 am: [Edit](#)

Neal:

Wow -- that's great! I was worried for the fate of this fine tool. Nice match for Quartus...!

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Basic Forth problem

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Basic Forth problem



By [Sean](#) on Monday, December 10, 2001 - 10:00 pm: [Edit](#)

Hi,

I'm having a problem with my first Quartus program. I want to write a simple unit converter using a `create...does>` construct that works like

```
1e3 1 unit mm
```

where `unit` is defined to store `1` as a char and `1e3` as the conversion factor, to a structure `mm`. The `1` is just a tag meaning 'length' so nobody tries to convert `mm` to `kg` or whatever.

The idea is to be able to input something like `25.4e0 mm inch` convert to get `1.00e00`.

My question is: how do I store the floating point number to be part of the defined word during the `create` part of the definition. I would use `c`, for the character, but don't know how to store (or retrieve) the floating point number, as I have not used floating point in Forth before.

I'm sure it's easy, but will somebody give me a hint? Or if anyone can point me to some example code or a tutorial, that would be great too.



By [Kris Johnson \(Kdj\)](#) on Monday, December 10, 2001 - 10:37 pm: [Edit](#)

Hmm, I would expect to see a word `"f,"` that is similar to `"c,"` `"c,"`, and so on. But I don't see one. I think this will work as a definition:

```
: f, ( r -- )
  align here
  1 floats allot
  f! ;
```

For more information on using floats in Quartus, check out <http://sleepless-night.com/cgi-bin/twiki/view/Main/BasicFloatingPointTutorial>

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, December 10, 2001 - 10:50

pm: [Edit](#)

That'll work. But I wouldn't FALIGN first. That might move HERE unexpectedly, and you wouldn't know where your float wound up. I'd let the calling code perform the FALIGN.

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, December 11, 2001 - 05:42 am: [Edit](#)

I didn't want to solve Sean's problem for him, but I'm not sure I understand Neal's answer, so...

Here's how I would define the UNIT word Sean wants (after seeing Neal's comment):

```

: f, ( r -- )
  here [ 1 floats ] literal allot f! ;

: unit ( r tag "name" -- )
  falign create >r f, r> c,
does> ( -- r )
  f@ ;

: xt>unit-tag ( xt -- tag )
  >body float+ c@ ;

: tagof ( "name" -- tag )
  ' xt>unit-tag ;

```

Is that safe/correct?

-- Kris



By [sean](#) on Tuesday, December 11, 2001 - 08:12 am: [Edit](#)

Thanks Kris and Neal,

The code works and I can now convert between units using the following code...

\conv 10/12/01 SO
needs float-ext

```

: f, (F: r --) here 1 floats allot f! ;
: unit create ( c -- ) ( F: r -- )

```

```
align f, c,  
does> ( -- c ) ( F: -- r)  
dup f@ 4 + c@ ;
```

NB if I use falign instead of align, this does not work. Not sure why...

```
: conv ( c1 c2 --) (F: r1' r1 r2 -- r3)  
= if f/ f* f.  
else cr abort" unmatched units."  
then ;
```

The conversion factors can be defined using phrases like

```
1 1e-3 unit mm  
1 1e0 unit m  
1 2.54e-2 unit in  
2 1e0 unit kg  
2 4.535924e-1 unit lb : pound lb ;
```

Conversions can be performed using phrases like

```
25.4e0 mm in conv
```

All of this is very cool, at least to me...

But I now run into another problem. Some conversions are not simple multiplications. For example, a useful conversion for me is wavenumbers to nanometers, which involves dividing $1e7$ by the value in either scale to get the other.

I imagine that you could have
: conv1 ... ; and : conv2 ... ; and then use
' conv is conv 1 (at least in Forth 83)

but I'm not sure how to achieve this using the system I've outlined above. I'd like to have the user input transparent, such as

```
4.5e4 wavenumber nm conv
```

rather than having to remember
4.5e4 wavenumber nm conv2 or whatever for every exceptional case.

Conversion from fahrenheit to centigrade is another different exceptional case.

Can anyone give me a hint on how this might be achieved?

Sean.



By [Kris Johnson \(Kdj\)](#) on Tuesday, December 11, 2001 - 08:23 am: [Edit](#)

I think you need to use FALIGN before CREATE, not after.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 11, 2001 - 02:43 pm: [Edit](#)

Sean, you'll have this all wrapped in a user interface with pulldown lists, I presume? At which point, only the app itself needs to know what function is being used to convert what units.

Neal



By [sean](#) on Tuesday, December 11, 2001 - 06:26 pm: [Edit](#)

Thanks again, Kris and Neal.

I looked up falign and understand what's going on (I think) and have come up with a workaround for the alternative conversion methods.

Version 1 is all interactive Forth, the old-fashioned way. I'll wait until I can find out out how to implement menu and window calls before trying the pull-down menu interface for version 2!

Sean

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Return Stack Depth

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Return Stack Depth



By [Kris Johnson \(Kdj\)](#) on Monday, December 10, 2001 - 05:35 pm: [Edit](#)

Is there any way to determine the depth of the return stack in a Quartus app?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, December 10, 2001 - 05:41 pm: [Edit](#)

RP@ returns the 32-bit address. Save it initially, and then subtract the current value of RP@ to get the utilized depth in bytes.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, December 10, 2001 - 06:09 pm: [Edit](#)

I was hoping that there would be a global or register or something else I could peek at, without relying on the application to save it at startup. There's no such thing?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, December 10, 2001 - 06:11 pm: [Edit](#)

No such thing -- and rare that you'd want to do it for any reason. What's the application?

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, December 10, 2001 - 08:10 pm: [Edit](#)

Call stack dump. Basically, I'm thinking about looking at all the addresses on the return stack, and determining whether any of them point into Forth codespace. So I need to know how far down to go.

As you say, this is not something that an application would need. So it's no big deal if it's not available.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, December 10, 2001 - 08:22

pm: [Edit](#)

Sounds like you can manage it with RP@ in your initialization for the call stack dump routine.

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, December 11, 2001 - 06:43 am: [Edit](#)

A related question: is there any non-hacky way to find the bottom of codespace? I can use CSHERE to find the top.

One way I've thought about is to use "" noop" or "" (bye)" (thus getting the XTs of the oldest definitions in the kernel). But that might break if a future version of Quartus defines things in a different order, or if those words get redefined.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 11, 2001 - 01:22

pm: [Edit](#)

NOOP will always be the first definition.

Neal

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Ou sont les wordlists 2-15 d'antan?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Ou sont les wordlists 2-15 d'antan?



By [Chapman Flack](#) on Monday, December 10, 2001 - 02:54 pm: [Edit](#)

Neal,

I know what wordlists 0 and 1 are used for, but I notice the first wid I can get using WORDLIST is 16. I notice wordlists 2-15 don't have any named words, though.

Question: are you intentionally reserving wordlists 2-15 for some internal use that still needs them when the delivered Quartus Forth is run? Or is it more like you just used that many wordlists in the build process, and the wordlist counter just happens to still be at 16 in the delivered Quartus PRC? I notice MARKER doesn't retract the wordlist counter, so I can see how maybe the count would run up to 16 even if you just build in several phases that use a couple wordlists each, and forget in between.

I'm doing a WORDLIST that throws an exception when out of wordlists, and I also plan to make it MARKER-aware. If you haven't actually intended to reserve all the first 16 wordlists, I can also have it put the ones you don't need back into circulation, which could be up to about 29% increase in number of lists available to users. Let me know.

Thanks,
-Chap



By [Neal Bridges \(Nbridges\)](#) on Monday, December 10, 2001 - 03:04 pm: [Edit](#)

Chap,

They're reserved in case I need them. You're right, they could conceivably be returned to the pool -- but to what end? Are you working on something magnificent that needs all those wordlists? 😊

Neal



By [Chapman Flack](#) on Monday, December 10, 2001 - 03:46 pm: [Edit](#)

Neal,

As long as you intended to reserve them, never mind. I just wondered if

they were used up only because you used them in building QF itself and they didn't get returned.

For the something magnificent, see NamespaceManagement on the wiki. I expect 48 available wordlists won't be a problem--a developer can declare a bunch of modules to be in one bundle, and an app to run into trouble would have to include around 48 different modules in the worst case (every module its own bundle). So I don't think that's terribly likely. But you know, even more wordlists, even less likely. 😊

-Chap



By [Neal Bridges \(Nbridges\)](#) on Monday, December 10, 2001 - 04:05

pm: [Edit](#)

The number of available wordlists may increase in an upcoming build -- a side-effect of other internal dictionary-handling changes.

Neal

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Xt> name Stack Effect

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Xt> name Stack Effect](#)



By [Kris Johnson \(Kdj\)](#) on Monday, December 10, 2001 - 02:53 am: [Edit](#)

In the Quartus docs, the stack effect for XT>NAME is given as (xt -- 0 | cs-addr u -1), indicating that the XT is consumed by the word.

However, if I do this:

```
' execute xt>name .s
```

there are three values on the stack (-32337 7 -1). -32337 is the XT, apparently unconsumed.

If the XT is not found, then it is consumed as expected, and only a single zero cell on the stack.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, December 10, 2001 - 02:53 am: [Edit](#)

BTW, this is version 1.2.7R, Build 2001.01.06 10:01:55pm.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, December 10, 2001 - 02:56 am: [Edit](#)

Actually, never mind. xt>name works fine--I was confused.

-- Kris

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Text only label

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Text only label



By [Dave Bennett \(Dbennett\)](#) on Sunday, December 9, 2001 - 03:58 pm: [Edit](#)

I'm trying to set the text of a button with text only. I've done this before with numbers or numbers and text, but never just text. It isn't quite working. Can someone point out the error of my ways?

Thanks.

```
create btnBuffer 22 allot
```

```
: flipBT ( -- )  
\ build label string  
btnBuffer 0
```

```
flagBT @ 0 = IF  
s" Joint type: Butt "  
ELSE  
s" Joint type: Mitered "  
THEN
```

```
APPEND  
0  
APPEND  
>abs  
SWAP DROP >abs  
btnJoint SetLabel ;
```

Dave



By [Kris Johnson \(Kdj\)](#) on Sunday, December 9, 2001 - 06:13 pm: [Edit](#)

Does the button resource have a string that is as long as whatever you are trying to set it to?

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Sunday, December 9, 2001 - 07:06 pm: [Edit](#)

Yes. I set the initial string to "Joint type: mitered".



By [Kris Johnson \(Kdj\)](#) on Sunday, December 9, 2001 - 07:41 pm: [Edit](#)

I understand everything in the code up to and including the first APPEND. But what is "0 APPEND >abs" supposed to do. It seems like you are missing an argument to that second APPEND. And then you probably want to drop the length before >ABS.

Also, I think you need to use Z" (from the zstrings module) instead of S"--the string needs to be zero terminated.

What happens if you change your code to this:

```
create btnBuffer 22 allot

: flipBT ( -- )
  \ build label string
  btnBuffer 0

  flagBT @ 0 = IF
    z" Joint type: Butt "
  ELSE
    z" Joint type: Mitered "
  THEN

  1+ APPEND
  DROP >abs
  btnJoint SetLabel ;
```

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, December 9, 2001 - 07:45 pm: [Edit](#)

By the way, if those strings are static (that is, you don't need to "build" the strings at run-time), then you don't need that buffer. Something like this will work:

```
: flipBT ( -- )
  flagBT @ 0 = IF
    z" Joint type: Butt "
  ELSE
    z" Joint type: Mitered "
  THEN
  DROP >abs btnJoint SetLabel ;
```

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Sunday, December 9, 2001 - 08:22

pm: [Edit](#)

They were static strings so I tried your second example and it seems to work fine. I had something close to this earlier on, but kept getting overlapping strings in the button. I think I might have been trying to add a 0 termination to the zstrings, which didn't need it. (duh.)

I'll do a compile and give it whirl, since this was the last step.

Thanks.

Dave

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Float Extension words

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Float Extension words



By [Mark Norton \(Nortonmd\)](#) on Saturday, December 8, 2001 - 01:18

pm: [Edit](#)

There are some words listed in the ISO/ANSI document for floating point values that I cannot find in the wordlist on Quartus or in a library memo. In particular, I'm looking for F**. In lieu of that, I could use FLOG to do the same thing, but haven't had any luck with that either (I'm trying to implement x^y).

Do I need to look into the MathLib functions or write it myself? (or both?).



By [Mike Will](#) on Saturday, December 8, 2001 - 03:55 pm: [Edit](#)

Mark,

FX^Y is implemented in the FEL.TXT module in the library. Keep in mind that Quartus FP, as well as Palm single precision FP are both 32-bit. In advanced math, this can lead to significant rounding errors.

<http://www.quartus.net/files/PalmOS/Forth/Library/FEL.txt>

On the same topic, I'm wondering if anyone has implemented a Quartus library for the native Palm 64-bit FP, analogous to the library for MathLib.

Mike



By [Neal Bridges \(Nbridges\)](#) on Saturday, December 8, 2001 - 04:24

pm: [Edit](#)

DF** is available in the FloatLib package -- it's on the Wiki.

Neal



By [ChapmanFlack](#) on Sunday, December 9, 2001 - 10:53 pm: [Edit](#)

And in case that wasn't clear, yes, FloatLib is a Quartus library for the native 32- and 64-bit IEEE single and double floats. The MathLib interface is built on it.

-Chap



By [Mark Norton \(Nortonmd\)](#) on Monday, December 10, 2001 - 01:19

pm: [Edit](#)

Thanks. It sounds like FEL or the Mathlib hooks are what I need. I started tinkering with the Mathlib files this weekend, trying to find the best entry point.

Regards,
Mark Norton

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Record Size?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Record Size?](#)



By [Elan Goldman](#) on Thursday, December 6, 2001 - 01:27 pm: [Edit](#)

Hi.
Does anyone know how I can determine the (unknown) size of a record at runtime? I've looked at DMRecordInfo and it does not appear to return record sizes.

I need to be able to open a database, loop through the records contained in the database, and determine the size of each record at runtime. I know how to open the database, determine the number of undeleted records and loop, but how do I determine the size of each record?

TIA,

Elan



By [Matthew Burke \(Mmb\)](#) on Thursday, December 6, 2001 - 02:17 pm:

[Edit](#)

Use DmQueryRecord and MemHandleSize



By [Elan Goldman](#) on Thursday, December 6, 2001 - 02:30 pm: [Edit](#)

Will do. Thanks!

Elan

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Screenshots

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Screenshots](#)



By [chris bucsko](#) on Tuesday, December 4, 2001 - 09:51 am: [Edit](#)

Not exactly a QF related question, but can anyone recommend a way to get screen shots of a Palm application? I've seen some very good gif-file based ones, with animation, etc. I'd be interested in seeing how they're done.



By [eli](#) on Tuesday, December 4, 2001 - 09:59 am: [Edit](#)

You can use ScreenShot Hack. Here is the link
www.linkesoft.com
eli



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 4, 2001 - 11:23 am: [Edit](#)

I use the Palm OS Emulator; it has a screen-capture facility.

Animation has to be handled separately with GIF-animation tools.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, December 4, 2001 - 04:59 pm: [Edit](#)

I also use POSE to get a screen-shot. I then use Irfanview (a freeware graphics editor) to convert the screenshot to black and white since it shows up better that way on a web page (IMHO) and convert the file type from bmp to gif or jpg as needed. Animation needs to be handled by another program, however.

Barry



By [chris bucsko](#) on Wednesday, December 5, 2001 - 10:19 am: [Edit](#)

Thanks, everyone. I got ScreenshotHack and will give it a try. I really should start using POSE, I know. But QF is so easy to use on the Palm, I've pretty much relegated my PC to be a back up machine. Hopefully next project, I'll get serious with it.



By [Barak Shilo \(Barak\)](#) on Wednesday, December 5, 2001 - 11:15 am: [Edit](#)

Barry,

In case you didn't know, you can also set POSE to have a white background (instead of green) under the "Skins" menu.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, December 5, 2001 - 09:46 pm: [Edit](#)

Aha....didn't know that one. Thanks for the tip, Barak.

Barry

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Using search

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Using search](#)



By [eli](#) on Tuesday, December 4, 2001 - 08:47 am: [Edit](#)

I have problems using search and I don't know why.
Here is example that shows the problem.

needs events

```
: aa s" is that ok" ;  
: ab s" that" ;
```

```
: go ( -- )  
aa ab search .s  
begin ekey  
penDownEvent = if  
aa ab search .s  
then  
again ;
```

The first search gives positive result the second search gives negative result.

can someone explain why?

Thank you

Eli



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 4, 2001 - 11:24 am: [Edit](#)

1.2.5, Eli? There's a bug in Search. I'll send you the beta.

Neal



By [eli](#) on Tuesday, December 4, 2001 - 12:23 pm: [Edit](#)

Hi Neal,

If yo mean to ver 1.2.7R, I have it already. the problem is also on this version.

Eli



By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 4, 2001 - 12:41 pm: [Edit](#)

I was positive that it was fixed in 1.2.7; I'll check the build and let you

know what's what.

Neal



By [eli](#) on Tuesday, December 4, 2001 - 01:06 pm: [Edit](#)

Thank you.

Eli



By [eli](#) on Thursday, December 13, 2001 - 11:48 am: [Edit](#)

I made a word for search, that works, until the bug will be fixed.
Here it is:

```
variable adr1
variable len1
variable adr2
variable len2
variable c2
```

```
: newsearch ( c-addr1 u1 c-addr2 u2  -- c-addr3 u3 flag )
len2 ! adr2 ! 2dup len1 ! adr1 !
adr2 @ c@ c2 !
  bounds ?do i c@
  c2 @ = if
  i len2 @ adr2 @ len2 @ compare
  0 = if
  i
  len1 @ adr1 @ + i - -1
  leave
  then
then
  loop
;
```

Eli



By [Neal Bridges \(Nbridges\)](#) on Thursday, December 13, 2001 - 03:00 pm: [Edit](#)

Thanks, Eli!

Neal

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Using menu-command keys

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Using menu-command keys



By [Paul Randall \(Paul\)](#) on Tuesday, December 4, 2001 - 07:58 am: [Edit](#)

I'm using menu-keys in my menus and I find my code is writing text on top of the the menu command key box at the bottom of the screen before it disappears. When it does disappear it restores my screen to its state before I printed out the text, thereby erasing the changes made to that area of the screen.

If the system would inform me when it is through doing the menu-key dialog box, I could wait and then draw my text. Is there an eventcode to look for?

Thanks, Paul



By [Kris Johnson \(Kdj\)](#) on Tuesday, December 4, 2001 - 08:46 am: [Edit](#)

There's a Palm OS function called MenuEraseStatus that might fix your problem (I haven't used it myself).

See <http://www.quartus.net/discus/messages/23/1248.html?990822856>

-- Kris



By [Matthew Burke \(Mmb\)](#) on Tuesday, December 4, 2001 - 02:14 pm:

[Edit](#)

I had this problem and found that putting

```
0 MenuEraseStatus
```

after doing any screen updates related to the menu command took care of the problem.



By [Paul Randall \(Paul\)](#) on Wednesday, December 5, 2001 - 06:28 am:

[Edit](#)

Well that looks like it... A strange solution to a strange problem, don't you think?

Paul



By [Paul Randall \(Paul\)](#) on Wednesday, December 5, 2001 - 07:01 am:

[Edit](#)

Be advised that menuEraseStatus expects a double value on the stack.

```
0. menuEraseStatus
```

Paul



By [Matthew Burke \(Mmb\)](#) on Wednesday, December 5, 2001 - 10:27

am: [Edit](#)

Thanks for the correction. Now I need to look into why my code isn't crashing 😞



By [Steve Bohrer \(Skb\)](#) on Wednesday, December 5, 2001 - 11:53 am:

[Edit](#)

Actually, you should call MenuEraseStatus before you draw on the screen in response to a menu command. This call tells the system to clean up any stuff it has scribbled on your window, so that the contents of the window are as you left them before you draw.

If you draw first, the system will restore the previous contents of the window on top of your new stuff.



By [Paul Randall \(Paul\)](#) on Wednesday, December 5, 2001 - 07:25 pm:

[Edit](#)

I've also added a short delay prior to the menuEraseStatus call so the user has a chance to see which menu was actually selected before the box goes away. (My experience with grafiti is you don't always get what you want.)

So now it looks something like

```
menuItemX of
  1000 ms \ 1 sec delay
  0. menuEraseStatus
  drawMyStuff
endof
```

Thanks for the tips, everyone.

Paul

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Quartus App updated

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Quartus App updated



By [Dave Bennett \(Dbennett\)](#) on Monday, December 3, 2001 - 06:28 pm: [Edit](#)

I've updated my Wind Chill Factor program and loaded it, with the Q4th source, on my site. <http://www.micoks.net/~dbennett>. It is the file wcfg.zip.

This updated version allows the user to enter the temperature and windspeed in degrees C/kph or degrees F/mph. It displays the wind chill factor using the new formulae developed by the Canadian and US Weather services that went into use on 1 November 2001.

Whichever mode you input in, the program converts the temp, windspeed and wind chill factor to the other mode and displays it as well.

If someone would be so kind as to grab a screenshot of the app for me I'll get it uploaded to PalmGear.

Thanks.

Dave

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Music for Dummies

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Music for Dummies



By [Matthew Burke \(Mmb\)](#) on Monday, December 3, 2001 - 05:19 pm:

[Edit](#)

I imported the music module so that I could do some R2-D2 style debugging. It then took me almost 20 minutes of tearing out my hair to figure out why

```
(hex) DB rightcolor !
```

was causing a stack underflow. Gotta love forth! <g>.



By [Neal Bridges \(Nbridges\)](#) on Monday, December 3, 2001 - 05:21

pm: [Edit](#)

I take it DB was already defined?

For such cases, I try to make a practice of

```
(hex) 0DB
```

where I'll prefix all hex values with a 0.

Neal



By [Matthew Burke \(Mmb\)](#) on Monday, December 3, 2001 - 05:39 pm:

[Edit](#)

Neal, thanks for the tip, that slipped my mind and I just replaced the hex value with 219 (its decimal equivalent).

I'll leave as an exercise for the interested reader to discover why DB is defined in the music module . Of course case doesn't matter to Quartus, but for us humans, consider the following hint: in the music memo, it's typed Db.



By [Christopher J. Smith \(Missilemax\)](#) on Tuesday, December 4, 2001 - 01:38 am: [Edit](#)

That's what makes Quartus so fun! 😊

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Alternative Wiki access

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Alternative Wiki access



By [Neal Bridges \(Nbridges\)](#) on Monday, December 3, 2001 - 11:29

am: [Edit](#)

Here's something I've set up as an alternate access method for the Quartus Forth Wiki. Please don't use it unless you're having trouble getting to the Wiki with the usual <http://www.sleepless-night.com/wiki> link.

<http://quartus.net/cgi-bin/nph-proxy.cgi/000100A/http/sleepless-night.com/wiki>

NOTE: This is experimental, and may disappear at any time.

Neal



By [John Newell](#) on Tuesday, December 4, 2001 - 07:59 am: [Edit](#)

Works beautifully Neal. Please keep it if you can.

Regards
John

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Launcher III 3.05 / Quartus incompatibility?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Launcher III 3.05 / Quartus incompatibility?



By [Paul Randall \(Paul\)](#) on Sunday, December 2, 2001 - 06:57 pm: [Edit](#)

Has anyone had compatability problems with Launcher III 3.05? My app crashes on exit on an m505/OS 4.0. 2 Hacks installed TealLaunch & EasyLock managed by Xmaster.

I just posted my first app on palmgear and got my first bug report. Any ideas much appreciated.

TIA



By [Neal Bridges \(Nbridges\)](#) on Sunday, December 2, 2001 - 07:52 pm:

[Edit](#)

I'm not aware of any conflict. Have you reproduced this problem yourself? Does it manifest itself with only a simple test app?

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, December 2, 2001 - 07:53 pm: [Edit](#)

I'm using Launcher III 2.2 without any problems on my Visor.

-- Kris



By [Paul Randall \(Paul\)](#) on Monday, December 3, 2001 - 06:57 am: [Edit](#)

I picked up Launcher III and have played with it on my m500 and the POSE color 4.0 without incident. (X-master did hang the POSE once)

Thanks



By [Michael Rowe](#) on Monday, December 3, 2001 - 04:47 pm: [Edit](#)

I have noticed a problem between Quartus and Launch 'Em, which is a product quite similar to Launcher III. It seems that heap allocation errors which result when allocate returns an out of range block occur more frequently when the application in question is started from Launch'em.



By [Neal Bridges \(Nbridges\)](#) on Monday, December 3, 2001 - 07:13 pm: [Edit](#)

I'd guess that Launch'em either uses a whole whack of dynamic memory that it doesn't free, or that it fragments the dynamic area badly.

Neal

 By [Paul Randall \(Paul\)](#) on Tuesday, December 4, 2001 - 06:55 am: [Edit](#)

I don't imagine that would affect an app that does not allocate any handles, would it? Or would it? I guess the system is doing some of that behind the scenes?

Could there be something awry with using Launcher AND Teallaunch?

Paul

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, December 4, 2001 - 04:52 pm: [Edit](#)

Could be a coincidence, but I just had a report of a crash on exit of a copy of my WealthBuilder app that had expired and went into the self-exit. It was on a Palm Vx with OS 4.01; the user reports using Today as their launcher - I wasn't aware Today was a launcher program. Apparently the machine went into a flashing loop that finally was stopped after multiple attempts to paper clip reset. It may have been a one-of-a-kind freak deal, but I noticed that Paul's original post references OS 4.0....

By the way, I'm using Launcher III v1.52 and OS 3.3 on my Vx, no incompatibility here at all.

Barry

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, December 4, 2001 - 05:15 pm: [Edit](#)

Barry, it might be one-of-a-kind -- can you reproduce the problem yourself?

Neal

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, December 5, 2001 - 08:27 am: [Edit](#)

Neal,

I haven't yet - to duplicate the situation I need to go into my code to change the evaluation timer from 14 days to something that will expire in a shorter time frame. This is because the timer starts from scratch in each emulator session - 2 weeks might be a little long to run a session for... 😊
I'll dig into it and see what I find.

Barry

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Problem catching keyDownEvent ???

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problem catching keyDownEvent ???



By [Joe Nasal \(Jsn\)](#) on Friday, November 30, 2001 - 03:56 pm: [Edit](#)

I'm trying to catch keyDownEvents, specifically graffiti characters. I've tried using both 'ekey' and the extended technique for catching and handling *all* events beyond 'ekey'.

Using either of these methods I catch keyDownEvent successfully when I press a hardware button. However, entering a graffiti character seems to fail to produce this event on my machine...?

I'm working on a Handspring Visor Platinum, latest version of QF. I'm a newbie... Is this a newbie-goof...?

Thanks in advance,

Joe



By [Neal Bridges \(Nbridges\)](#) on Friday, November 30, 2001 - 04:00 pm:

[Edit](#)

Joe, EKEY definitely returns a keyDownEvent (4) when you enter a graffiti character.

Neal



By [Joe Nasal \(Jsn\)](#) on Friday, November 30, 2001 - 04:08 pm: [Edit](#)

Neal:

Let me preface by saying that I'm having a blast with QF. Lots of fun, and I'm almost finished with my first app...

Stuck on this one, though. I'm catching all kinds of other events, but I can't get things right with keyDownEvent.

I disable all of my 'hacks', thinking that maybe something was sneaking in before me. Hardware buttons produce the event just fine. But when I scribble a number in the numerical portion of the graffiti pad, nothing. Any suggestions? The test code is really simple -- just an event loop looking for keyDownEvents.

Joe



By [Neal Bridges \(Nbridges\)](#) on Friday, November 30, 2001 - 04:51 pm:

[Edit](#)

That EKEY gives back keyDownEvents is easy to demonstrate:

```
: go
  begin ekey . again ;
```

Enter a few graffiti characters while this loop is running, and you'll see '4's on the screen.

Are you, by chance, entering characters into an active field in a form? Those don't return keyDownEvents to your app.

Neal



By [Joe Nasal \(Jsn\)](#) on Friday, November 30, 2001 - 05:05 pm: [Edit](#)

Neal:

Eureka! That's what I'm doing -- entering characters into an active field in a form! Thanks for clearing this up.

What I'm trying to do is check the contents of several active fields for user-entered changes and then automatically (without requiring that the user press a button to do so, for example) use these values to update still another field. Take the value of FieldA, add to value of FieldB, place result in FieldC whenever the contents of Fields A or B change.

I though I'd use keyDownEvent to indicate that fields A and B had possibly changed values (in lieu of some regular poll for such change), but this won't work for the reasons you mention. Can you think of any example code which might be relevant?

Thanks again,

Joe



By [Neal Bridges \(Nbridges\)](#) on Friday, November 30, 2001 - 05:08 pm:

[Edit](#)

You want the FldDirty system call. It tells you if a field has been modified.

Neal



By [Joe Nasal \(Jsn\)](#) on Friday, November 30, 2001 - 05:12 pm: [Edit](#)

Neal:

Thanks.

Joe

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Another Quartus App!!

Quartus Handheld Software: Discussion Forum: [Quartus Forth \(PalmOS version\)](#): Another Quartus App!!



By [Chris Bucsko](#) on Friday, November 30, 2001 - 12:25 pm: [Edit](#)

After much huffing and puffing, and a lot of help from the forum, I've finally completed my first Palm App. It's at PalmGear, called MyTrainer. It's a simple exercise log, and it's freeware. Source code available to anyone interested. Just send me an email, and specify if you want Word doc or memo pad archive (mpa). Any and all feedback appreciated!



By [Paul Randall \(Paul\)](#) on Saturday, December 1, 2001 - 07:25 am: [Edit](#)

Hey Chris, nice application. It's really clean, straight-forward and with good looking GUI! I'd like to see your source (mpa format) I'm working on a game app (it's a pda version of the crypto-quote puzzle you find in some newspapers) and I haven't used the Data Manager yet. So I'm looking for example code for creating and reading and writing records to a DB. I assume your app uses the data manager to record all the exercise data???

Thanks, marxalot@earthlink.net



By [Ron Doerfler](#) on Saturday, December 1, 2001 - 10:42 pm: [Edit](#)

There's my Quartus database tutorial on the Quartus Wiki that might be of use:

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/DatabaseTutorial>

Ron



By [Paul Randall \(Paul\)](#) on Sunday, December 2, 2001 - 01:21 am: [Edit](#)

Ron, I downloaded your tutorial and gave it a quick look-see. I think it will be a great help.

What I need to do should be simpler than the application you present. I need to write a program to generate a db of string records which define individual puzzles available to the user of the game application. The game app just needs to read these records, one for each game.

I appreciate your taking the time to put together a tutorial like this. I keep getting bogged down in studying the Palm OS docs...



By [Chris Bucsko](#) on Monday, December 3, 2001 - 09:57 am: [Edit](#)

Much of my code is actually Ron's code. So it's similar looking. Mine is also a bit more confusing, because I use two methods: to read records, I used DmQueryRecord a lot because it takes less overhead than DmGetRecord. However, I also found that I could use Forth's 'long' pointers, @a, c@a and 2@a to get fields from records as well. So my later code has that method in it. I'll send you my mpa ASAP.



By [Christopher J. Smith \(Missilemax\)](#) on Saturday, December 8, 2001 - 02:46 am: [Edit](#)

Speaking of Quartus Apps...My latest version of FreeTris is now on Palm Gear at

<http://www.palmgear.com/software/showsoftware.cfm?sid=84631820011205222641&prodID=35444>

And I included my source code for those interested (.txt and .mpa format).

-Christopher

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Need help from Sony Clie users

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Need help from Sony Clie users



By [Wade Carlson](#) on Thursday, November 29, 2001 - 09:58 pm: [Edit](#)

I'm making a desktop 'conduit' type program for my palm application PregTrak. I need to know the default location where the Sony Clie installs it's desktop software.

For example, the Palm co. uses:
c:\Palm\ or c:\Program Files\Palm\

I think sony is something like:
c:\Program Files\Sony Handheld\

but I need someone to confirm that for me.

Thanks.



By [Kris Johnson \(Kdj\)](#) on Friday, November 30, 2001 - 01:21 am: [Edit](#)

The screenshots in the online manual at <ftp://ftp.ita.sel.sony.com/ccpg/handheld/docs/READN610C.PDF> do show "c:\Program Files\Sony Handheld\" as the default installation directory.

But I can't verify from actual experience.

-- Kris



By [Trevor Steele](#) on Friday, November 30, 2001 - 03:14 am: [Edit](#)

HI Wade

Have you tried using the User Manager API calls to find the information. On the Palm these interrogate the registry and the users.dat file to obtain system information. This works well on the Palm but I've no experience with the Sony. If you need some further information let me know.

Best regards

Trevor



By [Wade Carlson](#) on Friday, November 30, 2001 - 07:03 am: [Edit](#)

Thanks guys. From the manual, I'm comfortable assuming it's:

c:\Program Files\Sony Handheld\

Trevor, I am accessing the users.dat file, but I'm trying to find where it is. I can't use the user manager API because I'm not programming my desktop version in C++ (I'm using visual basic - at least I think I can't use the API.....)



By [Kris Johnson \(Kdj\)](#) on Friday, November 30, 2001 - 08:30 am: [Edit](#)

You can call functions in DLLs from Visual Basic. Look at the documentation for the DECLARE statement.

-- Kris



By [Ron Doerfler](#) on Saturday, December 1, 2001 - 10:54 pm: [Edit](#)

>For example, the Palm co. uses:
>c:\Palm\ or c:\Program Files\Palm\

Actually, older versions of the Palm Desktop or, it seems, older versions that are upgraded to newer versions, use C:\Pilot instead.

Ron



By [Trevor Steele](#) on Tuesday, December 4, 2001 - 03:28 am: [Edit](#)

Hi Wade

Sorry I missed your post over the weekend. Kris is quite correct, the users.dat can be accessed from Visual Basic using the UserData.dll library. I have used it with both VB and C programs. Palm recommend that you use this method to access users.dat as the format of the file may change in the future and this is the only way they can guarantee future access.

Best regards

Trevor

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Beyond Launch Event Codes: Returning a value

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Beyond Launch Event Codes: Returning a value



By [Elan Goldman](#) on Thursday, November 29, 2001 - 06:47 pm: [Edit](#)

Hi Neal.

Got 1.2.7 Thanks! That goes a long way towards providing better app integration into the PalmOS environment (i.e. being able to respond to Find and Goto launch codes). And thanks especially for the care you've taken in providing documentation and examples for the new features.

Looking at your todo list, do you expect that returning a result from a launched application (i.e. enabling the launching application to receive a useful value from the launched app in the result parameter passed to SysAppLaunch) may make it into the next "public" release of Quartus Forth? Or is that already supported and, if so, what does the launched application need to do to return that value?

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 29, 2001 - 06:57 pm: [Edit](#)

One way that comes to mind is to simply write the return value in the command parameter block -- though I should warn that I haven't tried this.

I'm sure there's a Palm-sanctioned way to communicate status back from the sub-app. I'll have a look.

Neal



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 29, 2001 - 07:01 pm: [Edit](#)

Looks as though I'm right -- results are returned in the same parameter block that you pass to the called app.

Neal

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japanies application?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): japanies application?



By [Arshiya](#) on Thursday, November 29, 2001 - 12:41 am: [Edit](#)

Hi All,

I want to develop a Palm application in Japanese.
How can I use japanese strings in my CodeWarrior and the constructor. so when i run the prc i get the japanese text in my application

-Arshiya



By [Steve Bohrer \(Skb\)](#) on Thursday, November 29, 2001 - 09:04 am:

[Edit](#)

Sorry, none of us use CodeWarrior or the Constructor, as this forum is about Quartus Forth.

Good Luck.



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 29, 2001 - 04:09 pm: [Edit](#)

Well, you could use Constructor to build resources for a Quartus Forth app. Unfortunately, I have no experience with Japanese internationalization; I will have to defer to the experts at Palm.

Try searching the Palm Knowledge Base. I know this type of question has come up repeatedly in the past.

Neal

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List (I am a UI newbie)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): List \(I am a UI newbie\)](#)



By [Chapman Flack](#) on Wednesday, November 28, 2001 - 11:47 pm: [Edit](#)

Hi,

I made a form with a list. The list is long, so it has to scroll. When I preview it in RsrcEdit the scrolling happens automagically if I tap the arrows in the list corners or if I drag off the bottom of the list.

In Forth I can show the form and do

```
evtWaitForever (ekey)
```

and all the basic stuff happens: the list is displayed (yay) and I can drag the selection bar up and down and select any of the visible items (on lifting the stylus I get a `lstSelectEvent`).

So far so good. But it doesn't scroll for me.

If I tap one of the scroll arrows, I get a `penUpEvent`. If I drag off the bottom of the list, I get a `lstExitEvent` on lifting the stylus.

What do I have to do to get scrolling to happen? How much work is it?

Thanks,

-Chap



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 29, 2001 - 12:56 am: [Edit](#)

Chap, using 1.2.5? You may need 1.2.6.

Neal



By [Steve Bohrer \(Skb\)](#) on Thursday, November 29, 2001 - 09:03 am: [Edit](#)

By "scroll arrows" do you mean the little black arrow the OS draws at the right edge of the top or bottom list item? Those should be handled automatically with no special events generated that you need to handle. Actually, I have not ever looked to see if the scroll buttons cause events that (`ekey`) passes to the system, or if they are totally handled within the list routine. (I am using 1.2.6, but I was not aware that scrolling did not happen with 1.2.5).

I did add code to have the list page up or down when I press the up or down hardware button.

What sort of list are you doing? Do you draw the items with a callback, or is it fixed text set in the resource, or do you pass a list of strings? (Not that this should effect the scrolling, I think, but certainly the simplest case is strings set in the resource.)



By [Steve Bohrer \(Skb\)](#) on Thursday, November 29, 2001 - 10:05 am:

[Edit](#)

A quick test with a list that has its items defined by the resource shows that it scrolls with no program interaction. For this type of list, it is not necessary to do any initialization calls; the list just works.

Calling EvtGetEvent and printing the events shows that a PenDown in the list generates a LstEnter event. When the LstEnter is passed to the system by handleEvent, then LstHandleEvent tracks the pen and scrolls the list and consumes events until you pick the pen up.

Thus, for a click on the scroll arrow, the event sequence is simply: penDown lstEnter penUp. If I click and drag to a different item, or click and select an item, I get penDown lstEnter lstSelect penUp.

If I penDown on a list item, and then drag off the item, I get a lstExit penUp. But, if I click on one of the list scroll arrows and drag out, I just get the penUp. Apparantly the lstExit is eaten by the internal scroll button handler.

Using (ekey) instead of EvtGetEvent hides the penDown, lstEnter, and lstExit events, so that I only see penUps and lstSelects.

It is hard to guess how this could be a problem with 1.2.5 vs 1.2.6.



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 29, 2001 - 12:17

pm: [Edit](#)

Swatch has such a list, and yes, it scrolls without program intervention -- I was thinking of something else regarding lists and 1.2.6.

Can you send me your resources, Chapman?

Neal



By [Chapman Flack](#) on Thursday, November 29, 2001 - 02:40 pm: [Edit](#)

Neal,

I don't have access to working hotsync here, so I just made a new, easily repeatable set of resources.

Using RsrcEdit v1.014 09/07/00, I created a new database:

Rosaleen
RDhu
rsrc

New form 1234
width 160 height 160 usable

New list 0
width 160 height 160 usable

and added "New Item 0" through "New Item 23".
(Each new item comes up with the text "New Item" so all I did was add consecutive numbers at the end.)

The database winds up with 1 record and a size of 586 bytes. The form previews just fine and scrolling works. In Quartus 1.2.5R I can do 1234 ShowForm -1 (ekey) MainForm . and I get a penUpEvent when I tap the displayed list scroll arrow; if I lift the stylus off the bottom of the list I get a lstExitEvent.

Any ideas?

Thanks,
-Chap

 By [Neal Bridges \(Nbridges\)](#) on Thursday, November 29, 2001 - 03:55 pm: [Edit](#)

Yes -- your test code there only allows for a single event. Scrolling is a multi-event activity.

Please try:

1234 ShowForm key MainForm

and see what happens.

Neal

 By [Chapman Flack](#) on Thursday, November 29, 2001 - 04:35 pm: [Edit](#)

Fantabuliferous! Now how do I get the `lstSelectEvent` (which I want)--`KEY` won't return it cos it isn't a `keyDown`.

Do I just write an event loop that repeats the `(ekey)` until I get a `lstSelectEvent`? Or is there some handler I need to pass the scroll-arrow `penUpEvent` so the scrolling happens? And btw, how does the drag-off-the-bottom scrolling work? I don't see an event until the pen is lifted, but scrolling happens while it is still down. Or doesn't happen, as the case may be.)

Please forgive the newbieness of the questions--I found the perfect excuse to try to throw together my first simple UI app but I need it tomorrow.

Thanks,
-Chap

 By [Neal Bridges \(Nbridges\)](#) on Thursday, November 29, 2001 - 04:54 pm: [Edit](#)

I only used `KEY` in my example as a quick-and-dirty method of waiting for additional events.

You should be able to monitor `lstSelectEvents` in your normal event-handling loop, and act accordingly. In Swatch, I read the current value directly from the list and do what's necessary, without waiting for a specific event (I think that's what I did, anyway -- not looking at the source at the moment).

Neal

 By [Steve Bohrer \(Skb\)](#) on Thursday, November 29, 2001 - 09:09 pm: [Edit](#)

`Ekey` and `(ekey)` call all the system routines for handling the automagic parts of the UI. `LstHandleEvent` does all the processing for list scrolling. When `LstHandleEvent` sees a pen down that it is within a list control it queues a `LstEnter` event. The next time through the loop, `(ekey)` reads the `LstEnter` event from the queue, and again calls `LstHandleEvent`. In response to a `LstEnter`, `LstHandleEvent` loops and reads events from the queue until it gets a `penUp`. If the `penMove` events (consumed by `LstHandleEvent`) show the pen dragging up or down out of the control, the system routine scrolls the list up or down. If you lift the pen on an item, `LstHandleEvent` queues a `LstSelect` event. If you click and release on one of the scroll arrows, `LstHandleEvent` scrolls the list.

This sequence is why you need to call `Ekey` or `(ekey)` repeatedly, even if you are just testing a bit of functionality. Hence the usual idiom "begin `ekey` process-events again".

This is can be annoying if you wind up exiting Quartus when you exit the event loop. For simple tests, you can wrap the above with a catch that restores the Quartus main form and then returns to the interpreter.

The key reference on this stuff is the [Programmer's Companion](#). Chapter 5, "User Interface" has the above outline of list event processing.



By [Chapman Flack](#) on Friday, November 30, 2001 - 01:30 pm: [Edit](#)

What was really confusing me was that the drag-scrolling didn't seem to work at first, because it all takes place without (ekey) ever returning--so how could it matter that (ekey) wasn't in a loop?

Things can get very confusing when the observations are wrong! I just tested again and the drag scrolling works fine even with a single (ekey) and no loop. I don't know why I thought it didn't before; I probably didn't drag the pen far enough out of the control. (The first thing that happens when the pen moves out of the list is the highlight bar disappears, but the pen has to move farther before scrolling starts.)

Scrolling with the arrow icons does require (ekey) in a loop. The first (ekey) will return a penUpEvent, without scrolling the list. The user program doesn't have to DO anything with the penUpEvent, and on the next call of (ekey) the list will be scrolled. So far so good.

Question: If I had an app that was interested in certain penUpEvents, what would be the best way to recognize and ignore these ignorable penUpEvents from list scrolling?

Table 5.14 in the POSC seems to leave off the details of the most interesting cases... ☹



By [Neal Bridges \(Nbridges\)](#) on Friday, November 30, 2001 - 01:39 pm:

[Edit](#)

Though I can't think of an application for it, if you wanted to see only certain penUpEvents, you'd need to watch for them and check the coordinates each of one to see if it falls within a certain rectangle on the screen.

Neal



By [Steve Bohrer \(Skb\)](#) on Friday, November 30, 2001 - 03:51 pm: [Edit](#)

It may help to call EvtGetEvent directly. This will expose the LstEnter events, which are otherwise consumed by (ekey). The first pen up after a

LstEnter cooresponds to the penDown in the list. HandleEvent is Neal's word that passes an event to all the usual system handlers.

A small test program that prints the type of each event returned makes it easier to see what is going with the UI.



By [Neal Bridges \(Nbridges\)](#) on Friday, November 30, 2001 - 06:42 pm:

[Edit](#)

I doubt you'd often need to go to that trouble, Steve. It's generally sufficient to read the current list value and act accordingly, and let the events fall where they may.

Neal

Add a Message

Username:

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Ekey vs. (ekey)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Ekey vs. \(ekey\)](#)

 By [Christopher J. Smith \(Missilemax\)](#) on Wednesday, November 28, 2001 - 06:25 pm: [Edit](#)

Is "ekey" the same as "50 0 (ekey)"? In other words, is the only difference between ekey and (ekey) the time the system waits for an event?

Consider the following:

```
: go ( -- )
begin
  1 0 ['] (ekey) catch
  -257 = if
    .s cr \ leaves 1 0 on stack
    ." Bye" 3000 ms
  bye
then
. cr \ display ekey
again
;
```

Here, using (ekey) the program leaves 1 and 0 on the stack, however, using ekey:

```
: go ( -- )
begin
  ['] ekey catch
  -257 = if
    .s cr \ leaves the stack empty
    ." Bye" 3000 ms
  bye
then
. cr \ display ekey
again
;
```

The stack is empty. Am I using (ekey) correctly?

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 28, 2001 - 06:37 pm: [Edit](#)

You're using them both correctly. Your first example, using (ekey), leaves 1

and 0 on the stack when CATCH returns because of the stack-depth-restoring action of CATCH itself.

```
: myEkey 1 0 (ekey) ;
```

```
: ... ['] myEkey catch ... ;
```

Will do what you're after.

Neal



By [Christopher J. Smith \(Missilemax\)](#) on Thursday, November 29, 2001 - 12:42 am: [Edit](#)

Ahhh! Got it.

Thanks Neal! 😊 My eyes have been opened.

Add a Message

Username:

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Newbie num entry question

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie num entry question



By [ronald b. kopelman](#) on Wednesday, November 28, 2001 - 04:48 pm:

[Edit](#)

Sometimes I need to enter 2 numbers on the stack, n and 0. I can do this via the sequence ... n 0 ..., or via ... n s>d ..., or ... 5. ... The last method seems more elegant (less primitives) while the 2nd seems more self-documenting. Is there a preferred method? Thanks for the advice.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 28, 2001 - 06:40 pm: [Edit](#)

It would depend on the reason why you have the two values on the stack. If it's a 32-bit double-cell value, then I'd use the '5.' notation.

If it's a count, followed by a zero for another purpose, then I'd separate them out as '5 0'.

S>D is useful when you have an unknown single-cell quantity on the stack, and need to ensure that it's a properly-signed double-cell value.

Neal

Add a Message

Username:

Password:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

E-mail:

Slow Wiki

Quartus Handheld Software: Discussion Forum: [Quartus Forth \(PalmOS version\)](#): Slow Wiki



By [Kris Johnson \(Kdj\)](#) on Wednesday, November 28, 2001 - 02:43 pm: [Edit](#)

The wiki has seemed pretty slow for me the past few days. Is anyone else noticing this?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 28, 2001 - 06:41 pm: [Edit](#)

Does seem to be a bit on the slow side -- and sometimes it doesn't connect for me here.

Neal



By [A.Schönfeld](#) on Friday, November 30, 2001 - 03:24 pm: [Edit](#)

I'am unable to connect to the Wiki-server for about a few days now (WWW-connected in france). I wonder why !



By [Kris Johnson \(Kdj\)](#) on Friday, November 30, 2001 - 04:10 pm: [Edit](#)

It seems to be working pretty well for me today.

Those people who are still having problems, please provide the following:

- Who is your ISP?
- What URL are you using? (Try <http://sleepless-night.com/cgi-bin/twiki/view/Main> if you haven't already.)
- What error message are you getting (or how long are you waiting while nothing happens before giving up)?
- Does <http://www.sleepless-night.com/> work?
- What output do you get from "ping sleepless-night.com" and "tracert sleepless-night.com" (UNIX users use "traceroute" rather than "tracert").

- Do you have problems with other web sites, or is Sleepless-Night.com the only one that doesn't work?

Thanks,
-- Kris

 By [Kris Johnson \(Kdj\)](#) on Sunday, December 2, 2001 - 03:26 pm: [Edit](#)

People having trouble getting to the wiki may also want to try using the Wayback Machine at <http://web.archive.org> to see old snapshots.

For example, see
<http://web.archive.org/web/20011202122222/http://sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthTopics>

-- Kris

 By [Kris Johnson \(Kdj\)](#) on Sunday, December 2, 2001 - 03:59 pm: [Edit](#)

Cached pages are available at <http://www.google.com> as well. These may be more up-to-date and complete than the Wayback Machine's pages, but you have to do a search for each topic you want to see.

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Monday, December 3, 2001 - 12:47 pm: [Edit](#)

Here's something I've set up as an alternate access method for the Quartus Forth Wiki. Please don't use it unless you're having trouble getting to the Wiki with the usual <http://www.sleepless-night.com/wiki> link.

<http://quartus.net/cgi-bin/nph-proxy.cgi/000100A/http/sleepless-night.com/wiki>

NOTE: This is experimental, and may disappear at any time.

Neal

 By [Kris Johnson \(Kdj\)](#) on Tuesday, December 4, 2001 - 01:54 am: [Edit](#)

Note that this won't do anything to make the wiki faster or more reliable. It simply provides proxy access for people who, for whatever reason, cannot connect directly to the site.

--- Kris

Add a Message

Username:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

I2C

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): I2C](#)

 By [Richard Chamberlain \(Rac\)](#) on Tuesday, November 27, 2001 - 07:31 am: [Edit](#)

Hi Folks,

Bit of a long shot really. I want to control an I2C clock does anyone know whether I could do that via the serial port of a palm. i.e. could I program the serial manager to send out the right bits?

Thanks for any suggestions,

Richard

 By [Chris Bucsko](#) on Tuesday, November 27, 2001 - 02:22 pm: [Edit](#)

An interesting question. The Palm description of the serial port can be found at :

<http://oasis.palm.com/dev/kb/manuals/1770.cfm>

I'd be curious to know if anyone else has been able to talk to the outside world via the serial port. As far as I can tell, QF only supports the SerReceiveISP call.

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 27, 2001 - 02:55 pm: [Edit](#)

Chris, you can certainly talk to the outside world via the serial port using Quartus Forth. There are two serial libraries available, one for the older serial subsystem, and one for the new.

Neal

 By [Steve Bohrer \(Skb\)](#) on Wednesday, November 28, 2001 - 09:27 am: [Edit](#)

I2C signals are also typically use 0 and 5 V logic levels, rather than the + and - voltage levels created by serial port drivers. I2C stands for Inter-Integrated-Circuit, thus, it is designed for devices that are closely connected at the circuit board level, rather than for noisy transmission lines. So, even if you can get the Palm's UART to deal with the I2C protocol, you will need to adapt the serial port i/o levels. However, nothing in the Palm serial docs suggests that their UART supports I2C. It is probably worth looking at Motorola's docs to see if the processor hardware supports I2C,

but as far as I know it does not.

I2C officially requires two bi-directional i/o pins. Typically, any device in the I2C line can pull a pin low, and the pin is only high when all devices have released it. This allows the protocol to support multiple master devices, and also to accomidate devices which operate at different speeds.

But, if you are only trying to read from a single device, you may be able to manage with one output and one input pin. Chris Bucko's link above says that the Palm serial connector has one general purpose input and one general purpose output, so maybe you can make it work by bit-banging. But, that document does not give any details about how to access these pins, nor does it say wether these pins are at logic or RS-232 voltage levels.



By [chris bucsko](#) on Wednesday, November 28, 2001 - 09:51 am: [Edit](#)

Certainly for I2C you would have to add some hardware, such as an RS-232 line rcvr to translate the bipolar voltages put out by the serial port to 0 to 5 volts req'd by the I2C devices. Also, I am wondering if I2C is synchronous (requires a clock for data xfer). If so, you would have to supply a clock somehow as well. In that case, I would look to the processor data sheet, and see if the UART can be configured for synchronous transfer, and, if so, can you get at all the signals you need via the serial connector. This sounds like a job for assembly language programming, as well.

But I'm still curious as to how you can send/recv bytes simply via the serial port. Does QF support the SRM function calls, such as SRMopen, SRMReceiveWait, etc? I don't see these in the list of supported PalmOS functions, so I'm not sure how to get at them.



By [Steve Bohrer \(Skb\)](#) on Wednesday, November 28, 2001 - 11:36 am: [Edit](#)

As Neal mentioned above, there are two library memos that supply the serial manager systraps. The "SRM" functions are the "new serial manager" calls. The file is in the contrib area:

<http://www.quartus.net/files/PalmOS/Forth/Contrib/srm.txt>



By [Richard Chamberlain \(Rac\)](#) on Wednesday, November 28, 2001 - 12:16 pm: [Edit](#)

Thanks for the information chaps.

I've managed to locate an rs232 to I2C converter ->

<http://www.emicros.com/i2c232.htm>

Which seems an ideal (and easy!) solution to me. So all I need to do now is

work out how to using the serial manager and I'll be away.

Thanks again,

Richard



By [Chris Bucsko](#) on Wednesday, November 28, 2001 - 04:38 pm: [Edit](#)

Yes, I also found the SRM.txt file, as well as the older serial.txt in the files section. So I'll study that and see what I can do. Thanks as well.

Add a Message

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1.2.7 Request received?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): 1.2.7 Request received?](#)



By [Elan Goldman](#) on Wednesday, November 21, 2001 - 05:08 pm: [Edit](#)

Hi Neal.

I sent you a request for 1.2.7 pre-release last week. Just wondering if you received my email?

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 21, 2001 - 06:08 pm: [Edit](#)

Elan, I sent it out; I'll try again.

Neal



By [Elan Goldman](#) on Wednesday, November 21, 2001 - 07:24 pm: [Edit](#)

Hi Neal.

Oh boy. Must be my email forwarding service. (Didn't arrive). Please email it directly to my email account icimjs@loop.com (this will skip the email forwarding). If you could also CC it to analytic@mailandnews.com I'll stand an even better chance of getting it (one or the other should make it ...).

Sorry about the additional trouble. You've probably got enough to do ...

TIA,

Elan



By [Austin Powers](#) on Friday, December 7, 2001 - 04:50 pm: [Edit](#)

I've sent you a request for 1.2.7 pre-release last week, too.
I'd really like to try out some launch code code
(Yeah ! baby !)

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

:NONAME

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): :NONAME



By [John Newell](#) on Wednesday, November 21, 2001 - 08:56 am: [Edit](#)

Neal,

Can you confirm that the xt returned by :NONAME is not useable in the compiled PRC (for the same reason that you can't use the xt returned by ' (tick)).

Given that, is there any way of converting the :NONAME compiletime xt to a runtime xt?

Thanks

Regards
Joar



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 21, 2001 - 11:31 am: [Edit](#)

Xts returned by :NONAME are usable via COMPILE, in another definiton, or by using Chapman Flack's module:
<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/XtLiterals>

Neal



By [John Newell](#) on Thursday, November 22, 2001 - 08:22 am: [Edit](#)

Neal,

I'm afraid that www.safeweb.com have stopped allowing free redirection so I can no longer access www.sleepless-night.co. Do you know of another secure gateway?

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 22, 2001 - 07:59 pm: [Edit](#)

I'll have to have a look around.

Neal



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 22, 2001 - 08:03

pm: [Edit](#)

I'll have to have a look around.

Neal



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 06:18

pm: [Edit](#)

John, do you have difficulty pinging that site?

Neal



By [John Newell](#) on Sunday, November 25, 2001 - 12:27 pm: [Edit](#)

I think my problems in accessing the Wiki from my NT at work has something to do with the company firewall. I am currently connected from home using a borrowed laptop and that works OK. I'll try the ping on Monday.

I already have xts which I downloaded when I loaded the floating point stuff. Is there any information on the Xtliteral words and how they are used?

Regards

John



By [Chapman Flack](#) on Monday, November 26, 2001 - 12:43 pm: [Edit](#)

Think of it as just like LITERAL only safe to use with an xt (and NOT safe to use with anything that ISN'T an xt).

xtliteral compilation= (xt --) execution= (-- xt)

If you didn't already have ['] you could define it in terms of ' and xtliteral:

```
: [' ]
  '
  POSTPONE xtliteral
;
```

You also have xtvalue and xtto if you want; use them just like VALUE and TO but they are safe for xts (and only xts); you can initialize an xtvalue at compile time and xtto it during execution, say to install a different handler

for something.

-Chap



By [John Newell](#) on Wednesday, November 28, 2001 - 07:59 am: [Edit](#)

What I really wanted was an Xtvariable. I'm not sure it's possible and I'm getting bogged down thinking about it. Can you help?

What I want is to do this:

```
100 cells array Noxts
: savext ( xt n -- ) \ Save xt of NONAME into array
cells Noxts + !
;

:NONAME \ Define code sequence 1
...
;
1 savext
:NONAME \ Define code sequence 2
...
;
2 savext
etc.
: runxt ( n -- ) \ Retrieve xt and execute it
cells Noxts + @ execute
;
: go
1 runxt \ Run code sequence 1
2 runxt \ Run code sequence 2
etc.
;
```

I don't want to have to create names for each of the xt's returned by :NONAME which is what would happen if I used Xtvalue. Any ideas? Thank you.

Regards
John



By [Chapman Flack](#) on Wednesday, November 28, 2001 - 02:45 pm: [Edit](#)

See [MultipleDataSpaces](#) on the wiki:

```
needs inifini
needs dspacer
```

```
dspace :relo constant Noxts
```

```
: savext ( xt n -- )
  cells \ convert to word offset
  [ Noxts :here ] literal \ save ORIGINAL :here
  + \ add to specified offset
  Noxts :!
;

: runxt ( i*x n -- j*x ) \ retrieve xt and execute
  cells [ Noxts :here ] literal +
  Noxts :@ execute
;
```

```
100 cells Noxts :allot \ NOW allot the space
\ now that original :here value is safely
\ literal'd into the two words above
```

```
:NONAME \ Define thing 0
```

```
...
```

```
;
0 savext \ note zero-based, you can adapt savext
\ and runxt if that's not what you want
```

```
:NONAME \ Define thing 1
```

```
...
```

```
;
1 savext
etc.
```

```
: go
  do-ini
  0 runxt
  1 runxt
  etc.
```

```
;
```

I haven't compiled and run this code, but that's the idea.

Regards,
-Chap



Note you could accomplish the same as above with `select/xt/end-select` as long as you only set up the code sequences at build time and fetch them at run time. You shouldn't need to use a `:relo` dataspace unless you need to be able to set up the xts at build time and also update some of them at run time:

```
:NONAME \ Define default code sequence 42
...
;
42 savext

: Alt42 \ Define alternate code sequence 42
...
;

: go
  do-ini
  MoonInSagittarius if ['] Alt42 42 savext then
  0 runxt
  1 runxt
  etc.
;
```

Does that make sense?

-Chap



By [Chapman Flack](#) on Wednesday, November 28, 2001 - 02:56 pm: [Edit](#)

Actually I guess maybe you couldn't use `select/xt/end-select` after all because YOU DON'T WANT NAMES! Teach me to forget what the original question was. Sorry.

-Chap



By [John Newell](#) on Thursday, November 29, 2001 - 08:32 am: [Edit](#)

Thank you Chap. I have `dspaces` but not `dspacer`. I will have to download it from the Wiki somehow.

Regards
John



By [John Newell](#) on Monday, December 3, 2001 - 04:28 am: [Edit](#)

OK, I've got dspacer but Quartus crashes (Fatal Exception) when trying to make the PRC file. (It makes a 29,286 byte file (which seems rather excessive for the size of the program) before crashing.)

```
\ Ev1 20-11-01 21:47 jrn
```

```
needs ids
needs events
needs case
\ needs xts
\ needs inifini
needs dspacer
\ csunused .
```

```
dspace :relo constant Noxts
```

```
: savext ( xt n -- )
cells
[ Noxts :here ] literal
+
Noxts :!
;
```

```
: runxt ( i*x n -- j*x )
cells [ Noxts :here ] literal
+
Noxts :@ execute
;
```

```
100 cells Noxts :allot
```

```
:noname ( -- )
." Hi there 1"
;
0 savext
```

```
:noname ( -- )
." Hi there 2"
;
1 savext
\
: n12 ( n -- )
case
  1 OF
    0 runxt
```

```

    endof
  2 OF
    1 runxt
  endof
drop
endcase
;

: go
do-ini
." x1" .s key drop
1 n12
." x2" .s key drop
2 n12
." x3" .s key drop
\ bye
;
\ true generate-symbols
' go (ID) Ev1a MakePRC Ev1

```

Any ideas?

Regards
John



By [Chapman Flack](#) on Monday, December 3, 2001 - 06:17 pm: [Edit](#)

John,

First idea (off the cuff, and I should have thought to say it before): at MakePRC time :relo thinks every cell of Noxts up to the current value of Noxts :here contains a valid xt. New allotments in dspaces are not set to any particular value (it's whatever was in that memory chunk last) so if you do 100 cells Noxts :allot and then only put real xts in the first couple cells, that leaves a lot of cells with random values that :relo will obediently treat as xts and try to relocate for you.

So the first thing I'd check is, does it work if you :allot just the number of cells you'll be putting real xts in?

The simplest thing (and what I did in my last program that used dspacer), as long as you can define your :NONAMEs in the order you want them, is:

```

:NONAME \ thing 0
...
; Noxts :,

```

```
:NONAME \ thing 1
```

```
...
```

```
; Noxts :,
```

and not bother with :allot at all. Then if you're the sort of person who can't pass up an optimization even if the code will only be run once, you could precede that with

```
100 DUP Noxts :allot NEGATE Noxts :allot
```

which pre-grows the dataspace (leaving :here back where you started) so it doesn't have to grow for every :, you use, and then the :, sequence bumps :here in the usual way and leaves it where it should be, just after the last xt you stored. But I can pass up optimizations like that, so I don't bother. 😊

Sorry I didn't make that bit clearer.

-Chap



By [John Newell](#) on Tuesday, December 4, 2001 - 03:47 am: [Edit](#)

That seems to have done the trick Chap. Thanks for all your help.

Regards
John

Add a Message

Username:

Password:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

E-mail:

Bitmaps

Quartus Handheld Software: Discussion Forum: [Quartus Forth \(PalmOS version\)](#): Bitmaps



By [Christopher J. Smith \(Missilemax\)](#) on Monday, November 19, 2001

- 01:55 am: [Edit](#)

Does anyone know of an easy way to get bitmaps from my pc into a resource I can copy and paste with RsrcEdit? i.e. I would like to draw a "Splash" screen on my pc and then add it to my Quartus app.

Thanks,
Chris

P.S. A free way would be better than an easy way. And anyone who has any ideas gets a free copy of my tetris clone!!!



By [Jim Hendricks \(Jimh\)](#) on Monday, November 19, 2001 - 07:18 am:

[Edit](#)

One way to do it would be to build it using Wes Cherry's PilRC. It is no longer maintained by Wes though, it's now maintained by Aaron Ardiri. It's now available at

<http://www.ardiri.com/index.php?redir=palm&cat=pilrc>

Oh, and it's free (GNU/GPL)

I also have a partially written java based resource manager, but sadly it's not up to speed yet for images, and I have been way to busy to continue it's development.

Jim



By [Paul Randall \(Paul\)](#) on Monday, November 19, 2001 - 08:13 am: [Edit](#)

This from the on-line documentation for RsrcEdit at Individeo.com:

>>The 'Options' menu provides for creating a new database, deleting the selected database, duplicating the selected database, viewing the AppInfo associated with a database and beaming the database to another Palm running OnBoard RsrcEdit (and that has infrared capability.)

If the selected database is a TealPaint (www.tealpoint.com) database (type 'Data', creator 'TIPT'), selecting 'Open TealPaint Database' from the 'Options' menu will display a list of the individual images from that database and allow the user to copy an image to the resource clipboard as a Bitmap resource.<<

I notice BTW that the individeo people are breaking up (per the announcement at their site)and there will be no future upgrades/support for RsrcEdit and their other products.



By [Paul Randall \(Paul\)](#) on Monday, November 19, 2001 - 08:36 am: [Edit](#)

Oh. I see you said you wanted to draw the splash image on your pc then import it to your apps resource db.

I looked at the docs for tealPaint and it looks like you can still do it by:

1. draw image on your pc and save as .BMP
2. import it into tealPaint as follows:

>>Adding a new image

To add an image to the current database, choose the Import .BMP menu item. The .BMP files must be Version 3 .BMP files (i.e. Windows95 or newer files, not Windows 2.x or 3.x files), and small enough to fit within TealPaint's work memory. For color images, you can fit about a 250 x 250 pixel image. Black and white images can be considerably larger. If you try to import too large of an image, the image manager will warn you if it detects a problem to keep you from creating a corrupted database. <<

3. open up the tealPaint db using RsrcEdit and copy&paste the bitmap.

I haven't tried this yet but I want to add a splash screen to my app as well. I just downloaded tealPaint so I'm going to give it a try.

Best wishes, Paul

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, November 19, 2001 - 10:14 am: [Edit](#)

Okay, trying to get my free copy of Tetris... 😊

The process Paul lists will work, but there are a few caveats that might not be obvious if you haven't tried it yet:

- 1) First, to import a .bmp into Tealpaint, use the Paintmgr.exe utility that comes with the Tealpaint package.
- 2) In Paintmgr, you first need to open a Tealpaint database. I believe Tealpaint defaults to a database named "Pictures", so that database should be in the Palm backup directory of all Tealpaint users.
- 3) Once the database is opened, choose Process/Import image from .BMP file from the menu.
- 4) Choose the .bmp file you want and import it. Note that (as near as I can tell) all pictures come into Paintmgr with a size of 160x160 or larger; large pictures can be resized to 160x160 or broken up into multiple pieces, each 160x160, but Paintmgr can't resize a picture to anything smaller. This means that if you want a 32x32 bitmap, you need to have done all the work in sizing it before importing into Paintmgr, where it will show up as a 160x160 pic having your image in the upper left 32x32 corner.
- 5) To save the new image in the database, you must choose File/Exit from the Paintmgr menu. Closing Paintmgr with the button in the upper right corner seems to exit without saving.
- 6) Once the database is saved, you still need to re-load it onto your Palm device; just HotSyncing won't update the database on the machine. Use the Palm Install program or InstallBuddy to load the database from your Palm Backup subdirectory onto your machine, then HotSync.
- 7) Once HotSync'd, open RsrcEdit and find the database you just loaded (e.g., "Pictures"). Highlight the database name, then choose Open as TealPaint DB from the Options menu in RsrcEdit. If you haven't highlighted a TealPaint database, nothing happens, but if you did, RsrcEdit gives you the list of pictures in that database to choose from. Choose the picture that has your image.
- 8) Note that the size of the picture is large, but that is okay. Tap the Copy as tBMP button, then tap Done.
- 9) Open the rsrc database for your program, then choose Paste from the RsrcEdit menu. A new Tbmp resource will appear. Almost done...
- 10) You need to resize the new Tbmp to your desired size. Open the Tbmp and choose Properties from the RsrcEdit menu. Change the Width and Height values to your desired values (like 32x32). What happens is you will be cropping off the blank portion of the Tbmp picture that you don't want. Tap OK and it is finished.

I hope this helps,

Barry

 By [Christopher J. Smith \(Missilemax\)](#) on Monday, November 19, 2001 - 12:43 pm: [Edit](#)

Thank you so much...I have been keeping a rsrc db with various bmps in it I have drawn in rsrcEdit so I can reuse them but I really wanted to get some nice graphics from Photo Shop into my Quartus Apps... I think it looks like this will do the trick! You can get your free Tetris game here ->

<http://www.palmgear.com/software/showsoftware.cfm?sid=23498020011030120847&prodID=35444>

P.S. Email me if anyone wants the source code, I'm not shy. But be warned, It's my first program and I did a bad job inserting remarks! Actually I'm sure there are a lot of things that could've/should've been better, faster, tighter etc!

 By [Greg Combaw \(Greg\)](#) on Tuesday, November 20, 2001 - 02:02 pm: [Edit](#)

artBMP. This is a freeware, on-board, color/greyscale bitmap editor. It has import and export

features, and it works on bit depths of up to 8 bits. It comes in two versions, one is a standalone, and the other is used with PocketC. I'm not sure if this is what your looking for (I'm a newbie), but it may be worth a try. I haven't messed with it to much, but it seems like a very nice program. You can find it at the address below.

<http://www.geocities.com/artosoft/sumbang.html>



By [Heather Risedorph \(Rise1525\)](#) on Wednesday, November 21, 2001
- 10:07 pm: [Edit](#)

Hey Christopher,

Just wondered if you got my email I sent to you.



By [Christopher J. Smith \(Missilemax\)](#) on Wednesday, November 21, 2001 - 10:16 pm: [Edit](#)

Got it, just busy... 😊
I'll send it soon...

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POSE 4.0 ROMs error

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): POSE 4.0 ROMs error



By [Paul Randall \(Paul\)](#) on Sunday, November 18, 2001 - 08:18 am: [Edit](#)

Im getting the following error when I run my app in the POSE with the 4.0 ROMS .

Godot (1.0) just changed the emulated program counter to 0x000080FF. This address is invalid because it's not even.

I believe it's happening after or during a call to

```
frmReturnToForm
```

when returning from a modal dialog box. This runs without problems on my m500.

The code fragment from the event loop where I return from the dialog is:

```
okBtn of
  setOutputPrefs
  saveForm @ FrmReturnToForm
  stateSave
endof
```

```
setOutputPrefs
```

makes 2 calls to `getControlValue` and

```
stateSave
```

is using the `appprefs` library module to record program states.

Any ideas?

TIA Paul



By [Paul Randall \(Paul\)](#) on Sunday, November 18, 2001 - 10:41 am: [Edit](#)

Let me add that I tried the color 4.0 ROM and the 3.5 ROM and I do not get this problem.



By [Kris Johnson \(Kdj\)](#) on Sunday, November 18, 2001 - 09:53 pm: [Edit](#)

Have you tried commenting out the stateSave or setOutputPrefs calls to see whether it still crashes when those are not called?

-- Kris



By [Paul Randall \(Paul\)](#) on Monday, November 19, 2001 - 07:54 am: [Edit](#)

Not yet. I will try that. Can you suggest a strategy for testing on the POSE? Do I need to down-load all the different rom sets and gremlin my app on each one? At what point do you say OK it's a crash free app? And what's up with the different versions of each rom release? I have 4 files for the 4.0 roms...?

I am going to post my application (it is now called Godot 1.0: it is a Dada text and poetry generator) to palmgear as a freebee and since I've never done this before I just want to assure myself that it won't go haywire on somebody else's box and munge up all their dbs and what not.

Also, to me, if the app screws up the program counter on only one of the four environments I've tried so far (POSE 3.5, 4.0, 4.0 color, and my m500) that suggests to me a problem with that POSE/rom combination... does it not? A screwed up program counter is such a fundamental catastrophe!

TIA for any thoughts, folks!

Paul



By [Paul Randall \(Paul\)](#) on Tuesday, November 20, 2001 - 08:15 am:

[Edit](#)

Kris, I tried commenting these out:

```
okBtn of
\ setOutputPrefs
saveForm @ FrmReturnToForm
\ stateSave
endof
```

but I still get the same error. I'm also getting the same error when exiting a modal alert called with frmAlert. (same bad program counter: 80ff)

Also this is only happening on the -dbg versions of the 4.0 roms. The en-v and color versions go ok.

I don't know what to make of it. If my app is truly causing this error it shouldn't run on any machine at all ...?

Thanks, Paul



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 20, 2001 - 09:25 am: [Edit](#)

Paul, the various debug ROMs have slightly different characteristics, and though they're generally very good, not every error they crow about is actually valid.

With the results you're reporting, I'd be very confident in the stability of your app.

Neal



By [Paul Randall \(Paul\)](#) on Tuesday, November 20, 2001 - 02:24 pm: [Edit](#)

Thanks for the feedback, Neal. I was inclined to come to that conclusion myself, but I'm way to new at this...

Best wishes

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FldGetAttributes ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): FldGetAttributes ?](#)



By [Dave Bennett \(Dbennett\)](#) on Friday, November 16, 2001 - 06:21

pm: [Edit](#)

I found this snippet in the discussion archives:

```
needs fields
variable attr
```

```
attr > abs
fieldID GetObjectPtr
FldGetAttributes
```

It executes OK. However, what do I have here?

What I'm after is the set a field from editable/underline to not-editable/not-underlined, or vice-versa.

I've got the information for the attribute structure, but how do I get it out of, or into, the above?

(Hmmm. hard returns don't seem to be working here.)



By [Dave Bennett \(Dbennett\)](#) on Friday, November 16, 2001 - 06:26

pm: [Edit](#)

Hmmm. Hard returns are not appearing in the Post/Preview message window, but do show up on the ultimate post, for me. This was not displaying this way the other day.



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 17, 2001 - 10:37

pm: [Edit](#)

Hi Dave. What FldGetAttributes returns is a value that's really a series of bit flags. You can puzzle out which bit is the editable/underline bit by simple experiment, or work backward from the C header file definition. You may find experiment more expedient.

Neal



By [John Newell](#) on Monday, November 19, 2001 - 08:09 am: [Edit](#)

FYI

```
usable          (hex) 8000
visible         (hex) 4000
editable        (hex) 2000
singleLine      (hex) 1000
hasFocus        (hex) 800
dynamicSize     (hex) 400
insPtVisible    (hex) 200
dirty           (hex) 100
underlined      (hex) C0    \ noUnderline | grayUnderline | solidUnderline
justification   (hex) 30    \ leftAlign | rightAlign
autoShift       (hex) 8
hasScrollBar    (hex) 4
numeric         (hex) 2
```

Use `FldSetAttributes` to set them.

You then have to `FldDrawFld` (or something that calls `FldDrawFld`) to see their effect.

Regards
John



By [Dave Bennett \(Dbennett\)](#) on Monday, November 19, 2001 - 05:18

pm: [Edit](#)

Yeah, today I looked at it again and slapped myself. I realized it was returning a pointer to a structure. duh!

Is the first value I see the first part of the 32bit address? In other words, do I have to calculate an offset to see each of the Words as defined in the C header for the field attribute structure?

Thanks.

Dave

(Returns are displaying correctly again.)



By [John Newell](#) on Tuesday, November 20, 2001 - 05:44 am: [Edit](#)

Slap yourself again. You pass a 32 bit address to `FldGetAttribute` and `FldGetAttribute` puts one words worth of field attributes at that location.

e.g.

needs fields

```
(hex) 2000 CONSTANT FieldEditable    \ Mask
```

```
(hex) 00C0 CONSTANT FieldUnderline   \ Mask
```

```
(hex) 0000 CONSTANT noUnderline      \ Underline code
```

```
(hex) 0040 CONSTANT grayUnderline
```

```
(hex) 0080 CONSTANT solidUnderline
```

```
(hex) 00C0 CONSTANT colorUnderline
```

```
variable attr
```

```
attr >abs
fieldID GetObjectPtr
FldGetAttributes
\
attr @ FieldEditable 2dup
and 0= if      \ If field not editable...
  or          \ ...set it editable
else          \ If field editable...
  invert and  \ ...set not editable
then
attr !
\
attr >abs
fieldID GetObjectPtr
FldSetAttributes
\
fieldID GetObjectPtr
FldDrawField
```

You can do similar things for FieldUnderline. It appears that the 2 bits of the mask (C0) are 00 for noUnderline, 01 for grayUnderline, 10 for solidUnderline, and 11 for colorUnderline.

I will put a disclaimer here to say that I haven't tested the above code myself.

Regards
John

 By [Dave Bennett \(Dbennett\)](#) on Tuesday, November 20, 2001 - 05:19 pm: [Edit](#)

I'll play with this; but this isn't like what I'm getting back in attr at all myself.

 By [Dave Bennett \(Dbennett\)](#) on Saturday, November 24, 2001 - 05:45 pm: [Edit](#)

OK, things are working better now. I've got it doing what I needed with the example from John. I'm not sure what was going wrong before with my attr value, but I think I had a source code problem. The source file was a doc file and it started behaving very erratically. I moved it to a memo file and it works fine. Copying the memo file to a new doc file causes errors again. I've never had a problem with doc files before so I'm not sure what's going on with it.

Thanks, John.

Dave

 By [John Newell](#) on Sunday, November 25, 2001 - 10:32 am: [Edit](#)

S'ok Dave. Glad you got it working.

I've never used doc files myself. I've always found that pedit and the memoDB work well together.

Regards
John

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Float Question

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Float Question



By [Mark Norton \(Nortonmd\)](#) on Friday, November 16, 2001 - 03:52

pm: [Edit](#)

Well I'm back to Forth after a 5 month hiatus caused by a crosscountry move (Colorado to California). I've started tinkering with floats because I haven't figured out a way to make integer arithmetic do what I want.

(BTW: What I'm trying to do is do some percentage calculations with powers. i.e. $100\% - X\% ^ N$. I tried a few things with double cell integers, but the numbers got very big very fast and the accuracy was off. I include this in case someone says "Hey why isn't that guy doing X, that'll work".)

Anyhow, while I'm learning new words, I tend to try them out at the console while I read through them. I'm stuck because I can't seem to get a floating point number to display.

For example, if I'm playing with the standard stack, I can type

```
1 2 3 ok
. 3 ok
. 2 ok
. 1 ok
```

And I get a feel that I understand the way the stack operates.

Is there some sort of analogue to the . word for floating point numbers? I have been reading through the FloatingPointTutorial on the WikiPage (which btw is a wonderful thing) and the method they're showing is using some rounding and the use of F>D. If that's the way I need to do it, I can probably create a F. word that will display to some level of precision. However, if there's an easier way, I haven't found it.

Do I need to write my own F. word, or is there a simpler way to do this?

Regards,
Mark Norton



By [Chapman Flack](#) on Friday, November 16, 2001 - 03:59 pm: [Edit](#)

Mark,

F. is already written. Just say "needs float-ext" first.

-Chap



By [Rick Flower \(Nrflower2\)](#) on Friday, November 16, 2001 - 04:09 pm:

[Edit](#)

Just as a side note.. I'm currently working (in my copious free time) on a infinite precision integer library that will do just the basics, but on a predefined "width" integer. I'm using Donald Knuth's algorithm found in his "Art of Computer Programming Volume 2", (page 266).. I've not had much time to devote to it lately, but should be getting back to it soon.. Once it's done, I'll let you all know...



By [Dave Bennett \(Dbennett\)](#) on Friday, November 16, 2001 - 06:24

pm: [Edit](#)

Rick,

You could just port REXX to the Palm OS... 😊



By [Rick Flower \(Nrflower2\)](#) on Friday, November 16, 2001 - 06:30 pm:

[Edit](#)

Dave,

Sure.. Right after I finish porting IBM's MVS over.. (: -o



By [Jamie Cairns \(Jamie\)](#) on Friday, November 16, 2001 - 11:50 pm:

[Edit](#)

I'd be interested in getting a copy of the MVS when you get it done.....



By [Dave Bennett \(Dbennett\)](#) on Saturday, November 17, 2001 - 06:15

am: [Edit](#)

I had met Mike Cowlshaw a couple of times at the ColoradOS/2 conference in the early 90s; when he was writing and refining PMglobe for OS/2. I spoke with him again at the Palm Developers Conference in 1998 and he mentioned he'd ported or was porting PMglobe to the Palm at that time. Perhaps there is a version (undocumented) of REXX floating around somewhere for the Palm OS already...

I sent him an email asking about this.



By [Dave Bennett \(Dbennett\)](#) on Saturday, November 17, 2001 - 05:43

pm: [Edit](#)

Well, Mike sent me a reply. He asked around and a couple of people said

they "might have a version of REXX available for the Palm OS". He suggested asking in comp.lang.rexx to see if they are willing to share.

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MemoryMgr.c Null Handle

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): MemoryMgr.c Null Handle



By [Heather Risedorph](#) on Friday, November 16, 2001 - 11:51 am: [Edit](#)

Ok, just a bit of background. I have been working with getting empowered with color. Maybe this is a bit ambitious for a first project, but I am a glutton for punishment. Actually my first project included messing with systraps until I turned my LCD screen off in the interpreter and had to do a hard reset, but that's another matter.

There is code out there for UIColor, color35, and color. I also found that I needed to change Ver so it had 3.5-features? in it. That's done. I did manually write in the color modules and changes to Ver. Then I copied Christopher's color test program (see that discussion). Then I tried to run it and I got Fatal Alert: MemoryMgr.c (line 4043 I think) Null handle (RESET) and you click on reset and nothing happens so you have to do the soft reset with the stylus. I get this everytime.

So then I tried putting in do-ini and all those related memos, but I am manually entering it (no hot sync available at this hour) and that's a lot of memos to type. I got through it and fixed some typos and now it fatally resets with no message of why. I don't care about the topcatch exception handling, I was hoping to get the color test program to run. I can't give you the source because of lack of hot sync, but I didn't know if anyone can tell me what a Null handle means?

I guess it'll help you to know I have a PalmIIIc 3.5OS. I also do not have the registered version of Forth yet, but I got paid today so that'll be soon, so I had to remove the makeprc code from the colortest. I also had a non existant db error and I'm not sure what to do about that. I mean...of course I wouldn't have one if I haven't ever run the program before! But I would have thought that'd be addressed by someone when they built their code and showed us the samples. Maybe I'm just supposed to know that but don't yet. 😊

Am I really far away from understanding this or is there something people can do to help me catch on as to what I'm doing wrong?



By [Chapman Flack](#) on Friday, November 16, 2001 - 12:13 pm: [Edit](#)

Hi,

First guess would be some Memory Manager systrap that takes a handle as

an argument is being passed a NULL value in that argument. So first I'd look through all the code you've written or modified to see any Memory Manager systraps that are called and make sure you're not passing NULL for any handle argument.

If that checks out, then what's happening is you're calling some OTHER systrap with incorrect arguments, and fooling it into calling a memory manager trap with null for some handle argument. You have to cast the net wider for something like that, but maybe it would help to try to guess what other PalmOS services you're using might call memory manager services under the hood. Of course almost any service might have a reason to call MemHandleLock on something.

A common Forthy debugging technique is to have your code factored into small words that you can test individually, and make sure each does what you expect before trying to test the whole shebang.

I feel your pain trying to load in library memos by hand--I hope you have a keyboard, at least? 😊

-Chap



By [Heather Risedorph](#) on Friday, November 16, 2001 - 12:39 pm: [Edit](#)

I have a cheap keyboard that doesn't allow []. I just can't bring myself to spend \$100 on a keyboard before I've spent \$70 on registering Forth and after that, my little toy is starting to get very expensive. I may be a hopeless cause in this language, but I can definitely see it's power and potential...especially after looking at all that Neal Bridges has accomplished with it.

So anyway, Chap. What's that little symbol thingy in inifini.txt at the end in the defn of marker' ? I couldn't figure out how to make it so I used some other symbol. It didn't complain when I included it so I thought maybe it was a defining symbol there. That's sort of irrelevant because I'm not using topcatch anymore. Was just wondering. 😊

Back to my code. It's copied mostly word for word from ColorTest, Color, Color35, UIColor, and Ver. No one but me seems to be having problems with it. I went through and changed all the drops to throw on ColorTest. Then I realized WinSet____Color is supposed to return a number so I changed those back to drops. Then I got the memorymgr error again, so it makes me think it might not be happening at the top level of the program? I don't think I have other apps running in the background unless the installed apps can run even if you don't tap on them. I don't have any special hacks or programs that alter the normal way the OS works.

I understand piece programming but I guess I was thinking it wouldn't be needed with this because it's entirely borrowed code.



By [Christopher Smith](#) on Friday, November 16, 2001 - 01:23 pm: [Edit](#)

The [and] around the ' are very important!

```
: Depth ( depth -- )  
SetTemp ['] color-depth catch      Check      ;
```

Also, The Color35 and UIColor posts I made are by no means to be taken as perfect. I am a newbie! And do not know what I am doing!!!!

UIColor seems to be working for me well, but that is not to say I won't find some horrible flaw in it.

The color35 is even less tested. WinPaintLine seems fine, as does winSetForeColor, ...backgroundColor and ...textColor.

The test program I wrote is a bubbled mess that I threw together to test stuff and experiment, I crashed several palms playing with color. The second post I did, called ColorTest seemed to work on several palms and I used some of the same techniques on my tetris game (all though I refined them significantly.) and it seems to be working.

Anyway, this is the theory on what the colortest program is doing, maybe this will clear up any confusion:

The action all happens in a word called entry, the go is just waiting for you to exit the program and runs a cleanup routine which does nothing. (I was using it to pop draw states and ui states, but that doesn't seem necessary.)

The first thing 'entry' does is clear the screen and attempt to make the device go into various screen depths. I did it this way so my same program would run on several OS and always be in the best possible screen depth.

The depth routine stores the resulting depth in a variable called CurrentDepth and the highest it got to in a variable called MaxDepth (These should be the same in this example.)

"['] color-depth catch" is in there because the depth may not work. And we don't want a palm to crash...then 'check' looks to see if the screen depth worked. (This sequence seems very buggy. and I think it leaves extra stuff

on the stack...so use at your own risk.)

The 'SetColor' is used to set the 'pen' color for drawing lines and boxes etc. it also sets the fore and back ground colors on pre-3.5 devices. Note: pre-3.5 uses the words in 'color' and post 3.5 uses the words in 'color35'.

The SetUpUITable is used to set the colors up for the forms, buttons, menus etc. This is needed for post 3.5 grayscale devices or the colors default to a very very light gray (Actually its a blue if you could see it.) (For some reason the UI stuff is not needed on color 3.5 devices.) (I think something is really messed up in the depth check routines, because if you don't set up a UIColorTable the palm should use the default one, not the light blue.

To end this post...If you "borrow" any of my code that's great and I hope it helps...but don't think is perfect and fully tested. I am new to the palm OS and am writing my first forth program now... 😊

Christopher

 By [Heather Risedorph \(Rise1525\)](#) on Friday, November 16, 2001 - 01:37 pm: [Edit](#)

Oh I use the [and], I just can't type them with the keyboard.

Well I guess it's time I threw in the towel and admitted that I'm in over my head. Back to writing little pansy programs to start off with. I'll get back here eventually!

Btw, like my new username? Spiffy, isn't it? I'm official!

 By [Chapman Flack](#) on Friday, November 16, 2001 - 01:44 pm: [Edit](#)

Heather,

The symbol thingy is my attempt at a word that's really unlikely to conflict with anything you might use in your program. The thing is the ANS definition of MARKER forces you to define a word for the marker even if all you need is a nice anonymous value that lets you forget back to that point. If instead they had made MARKER just give you a value on the stack you would always have the option of naming it if you wanted, but you could also use it in a way that guarantees you won't clobber any existing name. MARKER' is my attempt at the word ANS really should have provided. That rumble you just felt was me having a brainstorm of a better way to do it. But that'll be another story.

The little double-dagger symbol is number 87 (hex) in the PalmOS fonts. You can make it on your desktop if your editor has an "insert character code" option, or on the handheld you can write the memo with some other symbol, then edit the memo in RsrcEdit, find where you put your other symbol, and change it.

Can you put some logging or beeping into the code to get a better idea just between where and where the null handle is being detected? That and other suggestions are on the QuartusForthDebugging page on the wiki.

Another cast-the-net-wider possibility with PalmOS is, because the whole dynamic heap and OS global area has no write protection, it's possible that the right kind of bug anywhere in your code (say, write through a bogus pointer) can corrupt some internal PalmOS variables and then -that- causes your fatal error later. That possibility rises a little on the diagnostic scale because of the way the [Reset] button on the error alert doesn't work, suggesting the OS has been corrupted somehow.

Still, I'd say the most important first step is to try to localize where it's happening in the code. I often do that just by printing little progress messages at the top of the screen (where you can still see the last one when the error alert covers up the bottom of the screen).

I hope that helps some,
-Chap

 By [Heather Risedorph \(Rise1525\)](#) on Friday, November 16, 2001 - 02:38 pm: [Edit](#)

Ok.... here is a portion of it where I have isolated the problem...

```
\ ColorTest
needs color35 needs uicolor needs ver needs color needs forms needs
facility
```

```
3000 constant FormID
-257 constant Bye Throw
```

```
\ stuff
```

```
: Entry
." 1" \ page (commented out so bebugging shows)
." 6" SetUpUITable (removed depth functions but they didn't give me any
errors after all)
." 7" SetColors
." 8" FormID
." 9" ShowForm
```

```
." 10" 80 0 80 160 WinDrawLine
```

```
." 11" 3.5-features? if ." 12t" 100 0 100 160 WinPaintLine then ." 13" ;
```

: go Entry ;

I end up seeing 16789 FATAL ALERT.

Ok, I think this means that ShowForm has no form existing to show. How do I make it have a form to show? Maybe the use-resources thing does it? If so, do I have to create a database before I can call use-resources? How would I go about doing that?



By [Heather Risedorph \(Rise1525\)](#) on Friday, November 16, 2001 - 02:41 pm: [Edit](#)

Yeah, showform was the bugger. I commented it out and my program went: 16789101112t13 ok. What a lot of steps to take to have a program do absolutely nothing! I guess I'll go research up on resources and forms so that I can figure out in what ways I am a doofus.



By [Neal Bridges \(Nbridges\)](#) on Friday, November 16, 2001 - 02:53 pm: [Edit](#)

Heather -- the 3000-foot view: use RsrcEdit on the Palm to create a resource database, and in it create a form with an ID of 3000. Use use-resources to make that resource database accessible inside your app.

Feel free to drill down on either of those two steps. Once you're over the initial hurdle, it'll all seem obvious in retrospect.

Neal



By [Heather Risedorph \(Rise1525\)](#) on Friday, November 16, 2001 - 03:11 pm: [Edit](#)

Oh. That makes a lot of sense. Now I guess I have to go get RsrcEdit. Thanks a lot for the tip. 😊

I actually have it to where I can make some pretty blue lines and turn the "ok" blue. Just the form that's the problem until I do this RsrcEdit thing.

I guess this shouldn't surprise me too much. I use PocketC and I remember reading it does all that behind your back with the id that it has coded into it. Just another example of increased PDA Programming Power (tm) from using Forth!



By [Neal Bridges \(Nbridges\)](#) on Friday, November 16, 2001 - 04:16 pm: [Edit](#)

If you just need a simple form, use MainForm -- that's a complete command, it displays a blank form for you. It's the form that's active by default, while Quartus Forth is running.

Neal



By [Ron Doerfler](#) on Saturday, November 17, 2001 - 12:57 pm: [Edit](#)

A nice intro to using RsrcEdit and Quartus is at:

<http://www.quartus.net/files/PalmOS/Forth/Contrib/Tutorial-v1.02.zip>

which is also referenced among the tutorials on the Wiki site.

Ron



By [Steve Bohrer \(Skb\)](#) on Sunday, November 25, 2001 - 03:28 pm: [Edit](#)

AsciiChart is a small freeware utility that displays all the chars in the Palm fonts. It shows the height and width of each char, and it lets you copy and paste any character code.

This is quicker than hex-editing memos with RsrcEdit.

<http://astro.uchicago.edu/home/web/valdes/pilot/>

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2 Qs re: SysAppLaunch

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): 2 Qs re: SysAppLaunch



By [Elan Goldman](#) on Wednesday, November 14, 2001 - 03:22 am: [Edit](#)

Hi.

Finally had to factor out some code to a module that I call with SysAppLaunch. Tried to avoid pitfalls by reviewing previous posts. Left with two questions:

1. If I sandwich my SysAppLaunch between

```
2Variable ThisForm
FrmGetActiveForm ThisForm 2!
.... SysAppLaunch drop
ThisForm 2@ FrmSetActiveForm
```

the calling program crashes (Fatal Exception). (I also tried changing the IDs of the launching form and button, but that didn't work for me.)

Instead I use

```
... SysApplaunch drop
CallingForm ShowForm
```

and it doesn't crash. Apparently FrmSetActiveForm expects that the form has been previously loaded into memory and initialized using FrmInitForm.

a) Is it guaranteed that whatever initialization is required for FrmSetActiveForm persists over a SysAppLaunch call? Or could it be that FrmSetActiveForm crashes (in my case) because the Form I'm trying to set active is no longer initialized, or legal, after SysAppLaunch returns?

b) Should I expect any problems when I repeatedly call ShowForm after returning from SysAppLaunch (which could happen any number of times while the program is running)?

2. I pass a 2Variable called result as the first argument to SysAppLaunch

```
2Variable result
```

```
result >abs .... SysAppLaunch
```

a) Is 2Variable large enough?

b) What do I need to in the launched program in order to return some exit

value in result?

TIA,

Elan

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 02:48 pm: [Edit](#)

To answer a) -- I suspect the form is no longer valid once SysAppLaunch returns.

b) ShowForm can be run repeatedly. It handles the form initialization and loading.

If I recall correctly, 32-bits -- a 2variable -- should suffice for the result.

Off the cuff, and away from my docs at the moment, I don't recall how exit values are handled; perhaps one of the SysAppLaunch experts can jump in here.

Neal

 By [Elan Goldman](#) on Wednesday, November 14, 2001 - 04:30 pm: [Edit](#)

Thanks Neal.

Besides looking for instructions on how to return a value from a SysAppLaunch-ed application (i.e. how do I instruct QF to return a value when the launched application exits), I'd also be interested in any experience people may have had with passing custom (user defined) events via SysAppLaunch to a launched program.

TIA,

Elan

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 04:45 pm: [Edit](#)

The two programs aren't running concurrently -- control is transferred to the launched app -- so I'm guessing you're suggesting queuing up a custom event, and then receiving it in the launched sub-app. That's a curious way of conveying information to a sub-app, but it might work.

Neal

 By [Elan Goldman](#) on Wednesday, November 14, 2001 - 10:34 pm: [Edit](#)

Hi Neal.

What I'm looking for is the ability to intercept a sysAppLaunchCmdAddRecord and access its accompanying cmdPBP (which is a MemPtr type).

I suspect that that feature is part of the 1.2.7 (beta) release. Any idea how far away we are from a stable 1.2.7 release (don't want to appear like I'm pressing for a release date. Just need-to-know for my own planning approx, without guarantees)? Does the current beta allow us to compile standalone code? Is it significantly inflated with debugging information, or can it be used for production purposes? Are the generated standalone apps stable enough for production purposes (again with no guarantees, just a guesstimate)?

TIA,

Elan

 By [Neal Bridges \(Nbridges\)](#) on Thursday, November 15, 2001 - 04:54 am: [Edit](#)

1.2.7 is quite stable, from all reports. It's a normal build.

Neal

 By [John Newell](#) on Thursday, November 15, 2001 - 08:37 am: [Edit](#)

Neal,

Are you saying that Quartus Forth 1.2.7 is available for general use. The latest Download on the Quartus site and at Tucows appears to be 1.2.1.

John

 By [Neal Bridges \(Nbridges\)](#) on Thursday, November 15, 2001 - 10:07 am: [Edit](#)

No. 1.2.7 is in limited release, to test out the launch code features. If you'd like to test it, let me know.

Neal

 By [Christopher Smith](#) on Friday, November 16, 2001 - 12:41 pm: [Edit](#)

Neal,
I have 1.2.5

Can I get 1.2.6 and 1.2.7?



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 17, 2001 - 10:38 pm: [Edit](#)

Christopher -- I'll send you those. Sorry for the delay.

Neal



By [Elan Goldman](#) on Saturday, November 17, 2001 - 11:43 pm: [Edit](#)

Hi Neal.

Just checking to see if you received my emails on Thursday requesting 1.2.7.

TIA,

Elan

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Exception 99

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Exception 99](#)



By [Michel Pelletier](#) on Tuesday, November 13, 2001 - 06:46 pm: [Edit](#)

Hi, my code is throwing an exception 99, which isn't one of my predefined ones. It doesn't seem to be documented as a quartus exception. Any clues?

-Michel



By [Michel](#) on Wednesday, November 14, 2001 - 05:16 am: [Edit](#)

Ugh, sorry I was throwing 99 the whole time myself.

-Michel



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 02:08 pm: [Edit](#)

Glad you found it, Michel. I did a quick search of the Quartus Forth source, and no 99s are ever thrown.

Neal

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Create and Allot Standalone

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Create and Allot Standalone



By [Elan Goldman](#) on Monday, November 12, 2001 - 08:41 pm: [Edit](#)

Hi.

I've read the warnings on the Wiki (StandaloneVsQuartus) about using Create and Allot in a standalone app. The authors discourage the use of Create and Allot for a standalong app. They say:

"If you really know what you're doing, and are sure you are using these words correctly, then go ahead. But it is recommended that you not use them. "

Well, I don't really know what I'm doing ...

I don't have Create or Allot in functions. They are all executed during the compilation of the code, not during runtime. Does that render them harmless for a standalone app? Example:

\ example

```
CREATE dummy 10 cells ALLOT
: w s" something." dummy swap move ;
```

Would the above use of CREATE and ALLOT be considered safe for a standalone app?

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Monday, November 12, 2001 - 08:45 pm: [Edit](#)

You bet.

Neal



By [Elan Goldman](#) on Monday, November 12, 2001 - 09:00 pm: [Edit](#)

Thanks Neal.



By [Kris Johnson \(Kdj\)](#) on Monday, November 12, 2001 - 09:14 pm: [Edit](#)

Sorry, maybe we should re-word that wiki page.

You should not call CREATE or ALLOT at run-time in a standalone app. But it is certainly acceptable to use them at compile/build time.

-- Kris



By [Gary Wiese](#) on Tuesday, November 13, 2001 - 07:38 pm: [Edit](#)

What do you mean by run time and compile/build time?

Gary



By [Kris Johnson \(Kdj\)](#) on Tuesday, November 13, 2001 - 07:51 pm: [Edit](#)

"Compile/build" time is the time when your program is being compiled.
"Run-time" means the time when your program is running.

These terms don't completely fit well with Forth, as it is fundamentally an interpretive language. But when you build a standalone application with Quartus, you can consider everything up to and including MakePRC as "compile/build-time", and running the standalone app as "run-time".

For example, consider these definitions:

```
create buffer
  26 chars allot
: fill-buffer-with-alphabet ( -- )
  26 0 do
    i [char] a +
    buffer i chars +
    c!
  then ;
```

While you are typing these things into the Quartus console (or loading them from a memo), it is "compile/build-time". Later, if you have a standalone program that uses fill-buffer-with-alphabet, that would be "run-time".

CREATE and ALLOT are called at compile/build-time in this example. They are naming and allocating data space. When the standalone app is built, this data space will be copied into it. But the CREATE and ALLOT don't "do" anything when the standalone app is run.

-- Kris



By [Gary Wiese](#) on Tuesday, November 13, 2001 - 09:36 pm: [Edit](#)

So, once you have a standalone program it isn't used again, ever?

Could you give me an example of what to avoid in run-time?

Gary



By [Kris Johnson \(Kdj\)](#) on Wednesday, November 14, 2001 - 07:46 am:

[Edit](#)

For example, don't use something like this in a standalone program:

```
: UserName(Bad) ( -- c-addr u )
  0. 0.
  here dup >r 41 chars allot
  >abs 0. 0. 0.
  DlkGetSyncInfo drop
  >r dup >abs StrLen ;
```

This is a variant of the "GettingTheUserName" code from the wiki. Here, whenever `UserName(Bad)` is called, it uses `ALLOT` to reserve dictionary dataspace memory where the name will be stored. This is a no-no; it is better to `ALLOT` the space at build time (as in the original wiki code), or use `ALLOCATE` at run-time.

-- Kris



By [Steve Odendahl \(Steveo\)](#) on Saturday, December 1, 2001 - 12:46

pm: [Edit](#)

Can I expand on your previous example, Kris? What if I had the following in a standalone program -

```
create buffer
26 chars allot
: fill-buffer-with-alphabet ( -- )
26 0 do
i [char] a +
buffer i chars +
c!
then ;
fill-buffer-with-alphabet
```

In the interpreter, when I load the memo, `fill-buffer-with-alphabet` is called and the array is initialized. What about if I compile the above code into a standalone? Is `fill-buffer-with-alphabet` called

- at build time
- at application launch time
- or not at all

I have a personal interest in the answer, because the app I'm working on uses a large (5k) lookup table, which is too expensive to compute at launch. Right now I'm precomputing it and storing it in a database, but the code would be simpler if I could do the precomputing of the table during the build.



By [Neal Bridges \(Nbridges\)](#) on Saturday, December 1, 2001 - 12:57

pm: [Edit](#)

Steve, if I may --

Your example will work fine. 'fill-buffer-with-alphabet' is called when you load the memo, and the dataspace is compiled intact into your stand-alone app.

Precomputing tables like this is an excellent technique.

Neal



By [Steve Odendahl \(Steveo\)](#) on Sunday, December 2, 2001 - 09:52

am: [Edit](#)

Ah, I see. That makes sense - seems obvious in retrospect - but isn't that always the case?

Thanks, Neal!

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Use-resources cause Fatal Exception

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Use-resources cause Fatal Exception



By [krok](#) on Friday, November 9, 2001 - 08:24 pm: [Edit](#)

Hi!

I was experimenting with reading preferences and stuck with Fatal Exception. Narrowing it down I found that following simple code causes it:

```
needs ids
needs DataMgrneeds resources
```

```
ID pref ID psys
create buffer 40 allot
```

```
:test ( -- )
psys pref use-resources
```

\ all code here is commented out

```
DmCloseDatabase throw
beep
;
```

If I load and execute this code I got Fatal Error box and have to hard reset my Palm.

What is wrong with the code?



By [Neal Bridges \(Nbridges\)](#) on Friday, November 9, 2001 - 08:28 pm:

[Edit](#)

Yes, it'll crash. You're doing a DmCloseDatabase on nothing at all. DmCloseDatabase needs a double-cell database reference on the stack.

Neal



By [Neal Bridges \(Nbridges\)](#) on Friday, November 9, 2001 - 08:29 pm:

[Edit](#)

Second problem -- you're doing a use-resources from inside a definition. That won't work. Move that line up outside of the definition.

Neal



By [krok](#) on Friday, November 9, 2001 - 08:34 pm: [Edit](#)

Why use-resources have to be outside definition?

I am opening Preferences Database, not GUI resources DB. I want to read from it some data and when close it.



By [Neal Bridges \(Nbridges\)](#) on Friday, November 9, 2001 - 08:37 pm:

[Edit](#)

I see -- you're not using it to open a resource database. So--

use-resources is intended to open a resource database, and to discard the database reference completely. That's not what you want here. You want to explicitly open the database, and hang on to the database reference so that you can close it later.

Neal



By [krok](#) on Friday, November 9, 2001 - 09:04 pm: [Edit](#)

OK, using OpenResDB it works OK now.

Now, DmGet1Resource returns me some non-NULL resource handle, but attempt to use MemHandleLock on it causes Fatal Exception.



By [Neal Bridges \(Nbridges\)](#) on Friday, November 9, 2001 - 09:08 pm:

[Edit](#)

Are you sure that it's MemHandleLock that's giving you trouble? Not possibly that you're leaving extra data on the stack, and causing the DmCloseDatabase to fail?

Neal



By [krokodil](#) on Friday, November 9, 2001 - 10:23 pm: [Edit](#)

OK, it works now.

Here is code snippet I wrote today:

[hotsyncid](#)

It is word which fetch Palm user name and hotsync ID.



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 10, 2001 - 10:54

am: [Edit](#)

Glad you got it working. There is a much simpler way to get the HotSync ID, though:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/GettingTheUserName>

Neal



By [krok](#) on Sunday, November 11, 2001 - 12:35 am: [Edit](#)

Well, looks like there is 'user name' and 'hot sync ID'. First one is string, second is 16 bit number.

I am still have to figure out what's the difference, but my code fetch both 😊



By [Neal Bridges \(Nbridges\)](#) on Sunday, November 11, 2001 - 01:32

am: [Edit](#)

There is a number that goes along with the ID, but it's a changeable internal value, and isn't of any particular interest. The name is the only user-settable HotSync naming parameter.

Neal

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Menu problem on Clie

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Menu problem on Clie



By [krok](#) on Friday, November 9, 2001 - 06:12 pm: [Edit](#)

Hi!

I just got new PDA: Sony Clie N760C. It have colour and uses double screen resolution. For old programs it simulates somehow 160x160.

I noticed that menus of my BillSplitter application developed with Quartus Forth are messed up. Did anybody experienced something like this? Any suggestions where I have to look for the source of the problem?

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Problems with hex number input

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problems with hex number input



By [Elan Goldman](#) on Friday, November 9, 2001 - 02:45 pm: [Edit](#)

Hi.

QF's following interactive behavior is confusing me:

hex ok

00a0

.s

< 1> A0

ok

a0 ok

.s

< 3> A0 -65FB 2B

ok

Why does the stack display two new cells after I enter a0, whereas entering 00A0 produces the intended result, namely a0?

TIA,

Elan



By [Steve Odendahl \(Steveo\)](#) on Friday, November 9, 2001 - 03:15 pm:

[Edit](#)

a0 is a Quartus-specific word, which puts the current value in the 32-bit register A0 on the stack.

<http://www.quartus.net/products/forth/manual/specific.htm>



By [Neal Bridges \(Nbridges\)](#) on Friday, November 9, 2001 - 08:01 pm:

[Edit](#)

Good practice -- necessary in this specific case -- is to prefix all hex values with a '0' (zero) digit.

Neal

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Profiling?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Profiling?](#)



By [Steve Odendahl \(Steveo\)](#) on Friday, November 9, 2001 - 12:43 pm:

[Edit](#)

Is there a simple way to profile execution time for a word? Or would it be necessary to dig into the 68k reference to implement a way?

This is my last newbie question for a few days ... promise!



By [Neal Bridges \(Nbridges\)](#) on Friday, November 9, 2001 - 01:20 pm:

[Edit](#)

Simple -- no. But there's a way.

Use 'generate-symbols' to create a stand-alone PRC with symboling information in it, and then run a profile using the profiling version of the POSE emulator -- the text output from which will contain timing for your routine.

Neal



By [Steve Odendahl \(Steveo\)](#) on Friday, November 9, 2001 - 01:57 pm:

[Edit](#)

Thanks! I haven't played around with the emulator yet - I still have to sign up for the developer seeding program.



By [John Newell](#) on Monday, November 12, 2001 - 07:59 am: [Edit](#)

I am trying to use tracing on the POSE. The tracing says "PalmTrace.dll" not found. I have tried looking on the Palm site with no joy. Can someone help.

Regards

John



By [Neal Bridges \(Nbridges\)](#) on Monday, November 12, 2001 - 05:28 pm: [Edit](#)

John -- are you referring to profiling, or to some newer facility I haven't yet explored?

Neal



By [John Newell](#) on Tuesday, November 13, 2001 - 07:54 am: [Edit](#)

Neal,

In the emulator, if you select Settings and Tracing... then, at the bottom of the Tracing Options window, you get the message "PalmTrace.dll not found".

Can you also explain what sort of "symboling information" is put in the PRC. Does the programmer have to include other statements or is it automatically generated by the Quartus compiler? I tried compiling with generate-symbols and then running with profiling in the emulator and got a lot of output but it didn't make a lot of sense - I couldn't recognize anything from the program.

John

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 13, 2001 - 03:16 pm: [Edit](#)

I suspect the trace facility works hand-in-hand with Palm's debugger application. I haven't explored it.

The symbol information amounts to naming information for each discrete subroutine. The profiling output is indeed verbose, but you'll find your routines are listed in there, amongst all the others.

Neal

 By [Matthew Burke \(Mmb\)](#) on Wednesday, November 14, 2001 - 10:59 am: [Edit](#)

You can get PalmTrace.dll if you download the Palm Reporter program from palmas.com/dev/tech/tools/emulator/

Basically the way it works is that you call HostTraceInit/HostTraceClose at the beginning/end of your program and then you can use various HostTraceOutputXXX calls to write out tracing data.

As I understand it, it works by mapping those functions to traps that are only recognized by the emulator. You can get details from HostControl.h although be careful because the version that comes with the 3.5 sdk is incorrect. The correct version is included with the emulator download.

As far as doing simple profiling, can't you just wrap calls to your word in calls to TimGetTicks?

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 02:03 pm: [Edit](#)

Ah yes. Now that Matthew describes it, I am remotely familiar with that tracing facility. It's a kind of redirected output for debugging purposes.

I've never used it; normal debugging statements and stack displays have always sufficed. I can think of situations, such as HackMaster modules, where it might be of some value.

Neal



By [Steve Odendahl \(Steveo\)](#) on Friday, November 16, 2001 - 04:54 pm: [Edit](#)

Thanks for mentioning TimGetTicks, Matthew. It's slightly disappointing that it measures in 1/100 or 1/60 of a second and not anything finer.



By [Steve Bohrer \(Skb\)](#) on Friday, November 16, 2001 - 09:33 pm: [Edit](#)

If you have a specific bit of your algorithm that you are trying to optimize, you can run it in a loop a bunch of times and time that. This lets you compare versions, and see what you gain by implementing faster but possibly trickier methods, e.g. fixed point vs. floating point math.

But, it is not much use for finding the hotspots in the first place, if they are non-obvious.

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Array with bounds-checking

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Array with bounds-checking



By [Steve Odendahl \(Steveo\)](#) on Thursday, November 8, 2001 - 03:17

pm: [Edit](#)

Does anybody do something like this during development ...

needs toolkit

```
: array ( n "name" -- )
  create dup , cells 0allot
  does> ( i -- addr)
  \ check i < n (ugly - simpler way?)
  2dup @ - -1 > if -9 throw then
  \ check i >= 0
  swap dup 0< if -9 throw then
  \ return address, skipping stored size
  1 + cells + ;
```

... and then switch to the normal definition of array after the app is debugged? Or do people not use arrays that much? Or do people always use them with correct indices (unlike me :-) ?

-9 was the throw value I picked after a quick look - is there a better choice?



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 8, 2001 - 03:23

pm: [Edit](#)

You can get even fancier with that sort of thing, either using the assert library, or something like this:

```
\ The first definition of %dbg% is for
\ production, the second for testing:

\ : %dbg% postpone \ ; immediate
: %dbg% ; immediate

: array ( n "name" -- )
  create dup , cells 0allot
  does> ( i -- addr)
```

```
\ check i < n (ugly - simpler way?)
%dbg% 2dup @ - -1 > if -9 throw then
\ check i >= 0
%dbg% swap dup 0< if -9 throw then

\ return address, skipping stored size
1 + cells + ;
```

Neal

 By [Steve Odendahl \(Steveo\)](#) on Thursday, November 8, 2001 - 03:37 pm: [Edit](#)

Slick!! I'm just beginning to grok the power of POSTPONE ... IMMEDIATE. I'll check out the assert library tonight.

Next newbie question tomorrow ...

 By [Steve Odendahl \(Steveo\)](#) on Friday, November 9, 2001 - 11:06 am: [Edit](#)

Hi Neal -

I took a look at the assert module - some more neat use of POSTPONE ... IMMEDIATE. Thanks!

I had one question (and I tried to find the answer myself, but with no luck :-)) - is there a way to get the name of the word currently being compiled?

The reason I ask is, I was thinking about how to modify assert so the message on an assertion failure would look like this -

```
: foo assert( dup negate 0< ) ... ; ok
-1 foo Assertion failure in 'foo'!
```

The best approach I could come up with involved redefining : .

 By [John Newell](#) on Friday, November 9, 2001 - 02:19 pm: [Edit](#)

I have asked this question before. You can't find the name at compile time. You have to redefine : as you say.

needs toolkit

: array

create dup , cells 0allot

```
does> ( i -- addr )
2dup @ 0 swap within 0= -9 and throw
swap cells + cell+
;
```

John



By [Steve Odendahl \(Steveo\)](#) on Friday, November 9, 2001 - 02:27 pm:

[Edit](#)

Thanks John for the answer and the cleaner version of the code.

Steve O.

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Fatal exception

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Fatal exception



By [Jim Cook \(Jimrcook\)](#) on Thursday, November 8, 2001 - 02:23 pm:

[Edit](#)

I'm writing a first application which right now just has ten controls (the digits) and a field to output into. (Eventually, a calculator.)

When I "include" my program into Quartus and run it, it's just fine. I touch a control, and the field shows the result. When I make it (using ' go (ID) myid (ID) rsrc make progname) then try to run it, as soon as I touch one of the digit controls, I get the fatal exception saying object not in form.

What objects are required to build an application? Are some of the ID's fixed? Any idea why it would work from Quartus but not from Launcher?

My resource has the following, for those who want more data. (These cascaded when I typed them, but the leading spaces were removed during the preview.)

MBAR 2000

help

about 2001

Talt 3000

"string" w/OK button

tAIB 1000

1-bit, 4-bit, and 16-bit large icon

tAIB 1001

1-bit and 16-bit small icon

tFRM 1002

Title

Field 1200

Button4000-Button4009

tSTR 3001

"string"

tver 1



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 8, 2001 - 02:30

pm: [Edit](#)

Jim, do you have all the appropriate CopyRsrc commands in your source?

Neal



By [Jim Cook \(Jimrcook\)](#) on Thursday, November 8, 2001 - 03:31 pm:

[Edit](#)

What are the appropriate ones? Do I need copyrsrc for each control, or just for the form that contains the controls? When using rsrcedit, I see a small set of resources, then sub-resources within those (as the form and controls on the form). Which need to be in copyrsrc?

I'm using "\ make 08 Jun 2001 - 15:31 BobRyan" to build things, which I thought was supposed to pull in everything.

I'll be happy to use the standard makePRC and CopyRsrc if the simpler method doesn't work.

After I made sure I had a CopyRsrc for each ID in the main rsrcedit list, it seems to work in Quartus but give "Fatal Exception" from Launcher. No extra message, just "Fatal Exception."



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 8, 2001 - 03:35

pm: [Edit](#)

I don't recall BobRyan's code exactly. However, to answer your question -- you don't need to pull in each control, as controls are part of forms; you only need to pull in the forms. And the alerts, and the strings, and anything else you need from your resource database that shows up in the top-level listing in RsrcEdit.

Finding out what you missed requires debugging, putting in appropriate pauses in your code to see what it's trying to do when it fails.

Neal



By [Jim Cook \(Jimrcook\)](#) on Friday, November 9, 2001 - 09:36 am: [Edit](#)

I looked at rsrcedit and my resource file. My resource has MBAR 2000, Talt 3000, tAIB 1000, tAIB 1001, tFRM 1002, tSTR 3001 and tver 1. The prog-make memo says (well, I've expanded my constants into numbers here, and it's not cut-paste but retyped):

```
' go (ID) myid MakePRC myprog
1002 (ID) tFRM copyrsrc
1000 (ID) tAIB copyrsrc
1001 (ID) tAIB copyrsrc
1 (ID) tver copyrsrc
3000 (ID) Talt copyrsrc
3001 (ID) tSTR copyrsrc
2000 (ID) MBAR copyrsrc
```

So, I believe I'm copying everything over. When you say pauses in my code, what is the recommended word or method for that?



By [Jim Cook \(Jimrcook\)](#) on Friday, November 9, 2001 - 09:38 am: [Edit](#)

Additionally, when I run it in POSE I get a POSE lockup without any message. I have to use Win/2K task manager or ps/kill to get rid of it.



By [Jim Cook \(Jimrcook\)](#) on Friday, November 9, 2001 - 09:58 am: [Edit](#)

YIKE! I was just looking through the forum and saw somebody mention

<http://sleepless-night.com/cgi-bin/twiki/view/Main/StandaloneVsQuartus>

In there is the statement "An xt returned by ' (tick) during compilation will not work in a generated executable. " and also that CREATE shouldn't be used.

My program has a handler for controls that goes like this (simplified):

```
: dig0 ( -- ) 0 . ;  
: dig1 ( -- ) 1 . ;  
create xtCtl;  
' dig0 ,  
' dig1 ,
```

So, it seems maybe that is causing the trouble. What is the preferred way to create an array of xt's so I can index into it later? Does this look like a likely culprit?



By [Steve Odendahl \(Steveo\)](#) on Friday, November 9, 2001 - 10:12 am:

[Edit](#)

Hi Jim -

(Warning - there's nothing more dangerous than a newbie (me) trying to help.) Could you use :NONAME like this?

```
create xtCtl  
:NONAME 0 . ; ,  
:NONAME 1 . ; ,
```



By [Neal Bridges \(Nbridges\)](#) on Friday, November 9, 2001 - 11:25 am:

[Edit](#)

Jim, look into SELECT/XT/END-SELECT. It should be just what you need.

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, November 9, 2001 - 02:10 pm: [Edit](#)

SELECT/XT/END-SELECT probably is what you need. But if it's not, check out the XtLiterals topic in the wiki.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, November 9, 2001 - 03:55 pm:

[Edit](#)

Just to correct one point -- CREATE isn't a worry. But you can't define new Forth words at run-time, only at compile-time.

Neal

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4-bit screen depth problems

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): 4-bit screen depth problems](#)



By [Christopher Smith](#) on Wednesday, November 7, 2001 - 06:48 pm:

[Edit](#)

I have been using a Visor Deluxe to write a tetris clone. I beamed the prc to my m505 and added color with RsrcEdit... The game looked great and ran great. Then I beamed it to a friends palm V and the text color and form colors got very light. Barely readable. I figure it is some problem with the screen depth. Works on 1 bit, 2 bit, 8 bit, and 16 bit screens but flops strangly on 4 bit. I wrote systraps for WinPushDrawState, WinPopDrawState, WinRGBToIndex etc... and that seemed to fix the text color, but the labels, forms, alerts etc still are drawn very lightly on 4 bit displays. I think the problem is in the UITables? I wrote systraps for those also but to no avail... If anyone has had similiar problems please help!



By [Christopher Smith](#) on Thursday, November 8, 2001 - 01:17 am: [Edit](#)

Okay, maybe this will explain my problem:

```
\ added to ver ... saw in on th wiki
: 3.5-features? ( -- f )
  OSversion
  dup 3 > if
    2drop true exit
  then
  3 < if
    drop false exit
  then
  (hex) 50 < 0= ;
```

```
\ color35 11/7/01 8:16 CJS
\ Systraps for the 3.5 features
\ 3.1 Feature Set
```

```
: WinScreenMode ( -- ? )
  (hex) A33E systrap
  drop 2drop 2drop 2drop drop
  ;
```

```
\ 3.5 Feature Set
```

```
: WinPaintLine ( y2 x2 y1 x1 -- )
  (hex) A388 systrap
  2drop 2drop ;
```

```
: WinPushDrawState ( -- )
  (hex) A395 systrap ;
```

```
: WinPopDrawState ( -- )
  (hex) A396 systrap ;
```

```
: WinRGBToIndex ( *rgbP. -- index )
  (hex) A39E systrap
  2drop d0 drop >byte ;
```

```
: WinSetForeColor ( New -- Old )
```

```

(hex) A398 systrap
drop d0 drop ;

: WinSetBackColor ( New -- Old )
(hex) A399 systrap
drop d0 drop ;

: WinSetTextColor ( New -- Old )
(hex) A39A systrap
drop d0 drop ;

: UIColorSetTableEntryRGB
  ( *rgbP. which -- f )
(hex) A3A5 systrap
drop 2drop
d0 drop 255 and ;

: UIColorSetTableEntry
  ( *rgbP. which -- f )
(hex) A3A6 systrap
drop 2drop
d0 drop 255 and ;

\ Test 11/6/01 8:15 CJS

needs toolkit
needs ids
needs color
needs color35
needs resources
needs forms
needs facility
needs Ver      \ modified to check for features i.e. added 3.0-features? 3.1-features?
3.5-features? 4.0-features? etc...

-257 constant ByeThrow

variable CurrentDepth \ stores current screen depth
variable TempDepth   \ used to hold attempted depth
variable MaxDepth 1 MaxDepth ! \ store max depth
2variable frmP \ pointer to the form
2variable Black \ vars to store colors
2variable White

(hex) FFFFFFFF. White 2! \ pointer to hold white color
(hex) 000001. Black 2! \ pointer to hold black color

(ID) MXSR (ID) rsrc use-resources \ duh
: SetColors \ Set foreground and background colors
3.5-features? if \ check for 3.5 feature set
  15 >byte WinSetForeColor
  drop \ set fore color
  0 >byte WinSetBackColor
  drop \ set back color
  15 >byte WinSetTextColor
  drop \ set text color
else
  Black 2@ foreground
  \ set fore color
  White 2@ background
  \ set back color

```

```

then
;
: Check \ check to see if the screen mode worked.
0= if
  TempDepth @
  dup . ." depth ... ok" cr
  CurrentDepth !
  CurrentDepth @
  MaxDepth @ > if
    CurrentDepth @
    MaxDepth !
  then
else
  TempDepth @
  . ." depth ... failed" cr
  drop
then
;
: SetTemp \ Stores the attempted screen depth
dup TempDepth !
;
: Depth ( depth -- )
\ try the depth to see if the device supports it
SetTemp ['] color-depth catch
Check
;
: Entry ( -- )
page
\ try various depths
1 depth
2 depth
4 depth
8 depth \ could go on to 16...
SetColor
.s

." Load Form..." cr
\ loads the form structure from a resource
3000 FrmInitForm frmP 2!
SetColor \ sets the fore and back colors
." Draw Form..." cr

\ in the next step the form loads normal on OS 3.1 grayscale machines, 3.5 and 4.0
color machines and loads the form strangely on 3.5 and 4.0 grayscale machines.
frmP 2@ FrmDrawForm
SetColor
\ this next step is me trying to set a color in the UIColorSetEntry table...23 is for
modal forms...ignor this setion 😊
3.5-features? if
  ." Features..." cr
  Black >abs 23
  UIColorSetTableEntryRGB
  .
then
\ draw a line to test...it works
80 0 80 160 WinDrawLine
3.5-features? if
\ paint a line on 3.5 machines...it also works
100 0 100 160 WinPaintLine
then
." MORE TESTING."

```

```

;
: Cleanup ( -- )
\ free up the form
frmP 2@ FrmDeleteForm
;

: go \ main entry point
Entry \ do most things...
Begin \ wait for user to exit
  1 0 ['] (ekey) catch
  ByeThrow = if
    Cleanup \ free form
    (bye)
  0
  then
  drop
again
;

\ make the prc
' go (id) MTst MakePRC Test
\ copy the resources...
3000 (ID) tFRM CopyRsrc \ just a form with a title, and label.

```

This has been driving me crazy...I hope this post was not too long...

 By [Christopher Smith](#) on Thursday, November 8, 2001 - 02:15 pm: [Edit](#)

Nevermind, I found my error.

My UIColorTable systrips were the problem, (I forgot >byte) I completely re worked it all, and every thing is great.

 By [Neal Bridges \(Nbridges\)](#) on Thursday, November 8, 2001 - 02:31 pm: [Edit](#)

Great! 😊

Neal

 By [Christopher Smith](#) on Monday, November 12, 2001 - 12:46 am: [Edit](#)

Here is my UIColor stuff if anybody wants it... 😊

```
\ UIColor 11/8/01 8:12 CJS
```

```
needs ToolKit
```

```

0 enum UIColorTableEntry
  UIColorTableEntry UIObjectFrame
  UIColorTableEntry UIObjectFill
  UIColorTableEntry UIObjectForeground
  UIColorTableEntry UIObjectSelectedFill
  UIColorTableEntry UIObjectSelectedForeground
  UIColorTableEntry UIMenuFrame
  UIColorTableEntry UIMenuFill
  UIColorTableEntry UIMenuForeground
  UIColorTableEntry UIMenuSelectedFill
  UIColorTableEntry UIMenuSelectedForeground
  UIColorTableEntry UIFieldBackground
  UIColorTableEntry UIFieldText

```

```
UIColorTableEntry UITextFieldLines
UIColorTableEntry UITextFieldCaret
UIColorTableEntry UITextFieldHighlightBackground
UIColorTableEntry UITextFieldHighlightForeground
UIColorTableEntry UITextFieldFepRawText
UIColorTableEntry UITextFieldFepRawBackground
UIColorTableEntry UITextFieldFepConvertedText
UIColorTableEntry UITextFieldFepConvertedBackground
UIColorTableEntry UITextFieldFepUnderline
UIColorTableEntry UIFormFrame
UIColorTableEntry UIFormFill
UIColorTableEntry UIDialogFrame
UIColorTableEntry UIDialogFill
UIColorTableEntry UIAlertFrame
UIColorTableEntry UIAlertFill
UIColorTableEntry UIOK
UIColorTableEntry UICaution
UIColorTableEntry UIWarning
UIColorTableEntry UILastColorTableEntry
```

: UIColorInit (? -- ?) \ Don't know what this is for, but it gets you strange results...

```
(hex) A3A3 systrap ;
```

```
: UIColorGetTableEntryIndex
  ( which -- index )
```

```
>byte (hex) A3A4 systrap
drop d0 drop ;
```

```
: UIColorGetTableEntryRGB
  ( *rgbP. which -- )
```

```
>byte (hex) A3A5 systrap
drop 2drop ;
```

```
: UIColorSetTableEntry
  ( *rgbP. which -- f )
```

```
>byte (hex) A3A6 systrap
drop 2drop
d0 drop 255 and ;
```

\ For OS only?

```
: UIColorPushTable ( -- )
  (hex) A3A7 systrap ;
```

```
: UIColorPopTable ( -- )
  (hex) A3A8 systrap ;
```

Hope this was of value...



By [Ron Doerfler](#) on Monday, November 12, 2001 - 11:36 am: [Edit](#)

Thank you, Christopher! I am just starting to colorize an app of mine, and this helps me out.

Ron



By [John Newell](#) on Tuesday, November 13, 2001 - 10:11 am: [Edit](#)

Christopher,

I have been trying your Test program on my Palm Vx OS3.5 on a form that I have been having problems with. It has a 4 depth bitmap on it and a number of Button controls. Called from your program, it says that 4 depth is OK and it displays the form bitmap OK. However, the text in the Title and Controls are all very faint. (I have put >byte at the beginning of the UIColorSetTableEntry word.) Have you any suggestions for me? Thank you.

Regards
John



By [Christopher Smith](#) on Tuesday, November 13, 2001 - 02:58 pm: [Edit](#)

John, here is my "Test" program for playing around with color on various palm devices...I have not tested it on POSE, but it worked fine on 3 real palms...

First you need the UIColor memo I copied above. Then you need some new color 3.5 words...

```
\ color35 11/7/01 8:16 CJS
```

```
\ 3.1 Feature Set
```

```
: WinScreenMode ( -- ? )
  (hex) A33E systrap
  drop 2drop 2drop 2drop drop
  ;
```

```
\ 3.5 Feature Set
```

```
: WinPaintLine ( y2 x2 y1 x1 -- )
  (hex) A388 systrap
  2drop 2drop ;

: WinPushDrawState ( -- )
  (hex) A395 systrap ;

: WinPopDrawState ( -- )
  (hex) A396 systrap ;

: WinRGBToIndex ( *rgbP. -- index )
  (hex) A39E systrap
  2drop d0 drop ;

: WinSetForeColor ( New -- Old )
  >byte (hex) A398 systrap
  drop d0 drop ;

: WinSetBackColor ( New -- Old )
  >byte (hex) A399 systrap
  drop d0 drop ;

: WinSetTextColor ( New -- Old )
  >byte (hex) A39A systrap
  drop d0 drop ;
```

and then here is my test program:

```
\ ColorTest 11/13/01 11:13 CJS
```

```
needs color35
needs UIColor
needs ver
needs ids
needs color \ pre 3.5
needs resources
needs forms
needs facility

(ID) MXSR (ID) rsrc use-resources

3000 constant FormID
```

-257 constant ByeThrow

variable CurrentDepth

variable TempDepth

variable MaxDepth 1 MaxDepth !

\ Some Colors ... there must be a

\ better way...

2variable Black (hex) 0. Black 2!

2variable White (hex) FFFFFFFF. white 2!

2variable blue (hex) 0000FF. blue 2!

: 3.5-features? (-- f)

OSversion

dup 3 > if

2drop true exit

then

3 < if

drop false exit

then

(hex) 50 < 0=

;

: SetColors

3.5-features? if

Black >abs WinRGBToIndex

WinSetForeColor

drop

white >abs WinRGBToIndex

WinSetBackColor

drop

Black >abs WinRGBToIndex

WinSetTextColor

drop

else

Black 2@ foreground

White 2@ background

then

;

: Check (f --)

0= if

TempDepth @

CurrentDepth !

CurrentDepth @

MaxDepth @ > if

CurrentDepth @

MaxDepth !

then

else

drop

then

;

: SetTemp

dup TempDepth !

;

: Depth (depth --)

SetTemp ['] color-depth catch

Check

;

: SetUpUITable (--) \ Build UI table

3.5-features? if \ only for 3.5

Blue >abs

```

    UIObjectFrame
    UIColorSetTableEntry drop
    Black >abs
    UIObjectForeground
    UIColorSetTableEntry drop
    Blue >abs
    UIFormFrame
    UIColorSetTableEntry drop
    white >abs
    UIFormFill
    UIColorSetTableEntry drop
    blue >abs
    UIDialogFrame
    UIColorSetTableEntry drop
    white >abs
    UIDialogFill
    UIColorSetTableEntry drop
    blue >abs
    UIAlertFrame
    UIColorSetTableEntry drop
    white >abs
    UIAlertFill
    UIColorSetTableEntry drop
    black >abs
    UIMenuFrame
    UIColorSetTableEntry drop
    white >abs
    UIMenuFill
    UIColorSetTableEntry drop
    black >abs
    UIMenuForeground
    UIColorSetTableEntry drop
    blue >abs
    UIMenuSelectedFill
    UIColorSetTableEntry drop
    white >abs
    UIMenuSelectedForeground
    UIColorSetTableEntry drop
then
;
: Entry ( -- )
  page
  1 depth 2 depth 4 depth 8 depth
  SetUpUITable
  SetColors
  FormID ShowForm
  80 0 80 160 WinDrawLine
  3.5-features? if
    100 0 100 160 WinPaintLine
  then
;
: CleanUp ( -- )
  \ Put any clean-up stuff here
;
: go
  Entry Begin
    1 0 [''] (ekey) catch
    ByeThrow = if
      CleanUp (bye) 0
    then drop
again

```

```
i
\ Make into stand alone program
\ MTst is not registered...

' go (id) MTst  MakePRC ColorTest

\ Copy resources
3000 (ID) tFRM CopyRsrc
1200 (id) Tbmp CopyRsrc

\ This code was tested on:
\ Visor with OS 3.1H2    ... OK
\ m505 with OS 4.0     ... OK
\ m100 with OS 3.3.1   ... OK
```

I hope this helps... 😊

As a note, I am no expert. I only bought Quartus a few weeks ago; I have no forth programming experience, no palm programming experience...Actually the only language I have written in is basic. (That was my disclaimer)

Good luck!
Chistopher



By [John Newell](#) on Wednesday, November 14, 2001 - 09:39 am: [Edit](#)

Christopher,
THANK YOU VERY MUCH. After running your program and making a small addition to mine it now works just like I want it to. On my Palm Vx, at colour depth 2, the bitmap's display correctly and all the controls, menu items, and help appear and are readable. And after THEY told me it couldn't be done without a lot of changes to the program.

Thank you again.

Regards
John



By [Christopher Smith](#) on Wednesday, November 14, 2001 - 01:47 pm:

[Edit](#)

That's great!



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 -

02:30 pm: [Edit](#)

It's good to see one developer's solution be of use to another. Christopher's code should also help anyone who wants to deliberately alter the colour of GUI elements in their app.

Neal



By [Heather Risedorph](#) on Wednesday, November 14, 2001 - 08:47 pm:

[Edit](#)

Hey. I just "learned Forth" last weekend. I'm not a real programmer, actually I'm a CAD designer. Anyway, I found Forth from a website and came here and fell in love with it for the use of my Palm Pilot.

On to my thing. Anyone know of somewhere that I can go for an all-in-wonder on color? Lots of stuff from Christopher's postings will be helpful but I don't want to reinvent the wheel. I'm only programming for PalmIIIc because it's all about the hobby and I don't have enough money to register right now. 😞

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 08:53 pm: [Edit](#)

Welcome on-board, Heather. I hope you're having fun.

The Wiki has some information on color, I believe, and certainly we're here to address any specific questions you have.

The color library module provides a set of functions for manipulating color; that's a start.

Neal

 By [Heather Risedorph](#) on Wednesday, November 14, 2001 - 09:26 pm: [Edit](#)

Yeah, I already downloaded all matches to "color" on this site, and I checked out Wiki, but the only match to "color" in the title other than ColorForth was double buffering, which I understood but I think it's a bit beyond me at this early stage. I'm checking out the archives and when I get time I'll check out the non-title matches on Wiki. 😊 I guess I was thinking of something like Forth's version of an API for color.

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 09:39 pm: [Edit](#)

That's what the color library is meant to provide -- a way to select foreground/background colors. Pretty straightforward. There's also a colornames library that gives you a variety of colors by name.

Neal

 By [John Newell](#) on Thursday, November 15, 2001 - 04:41 am: [Edit](#)

I haven't a colour Palm but as I see it:

You would use Christopher's "UIColor" library to employ the UI Color List functions to set the colour attributes of the UI objects (Fields, Controls, Lists, Tables, etc.). (BTW, you have to do this before drawing the form on the window (FrmDrawForm)).

You would use Neal's "color" library and Christophers "color35" to apply colour when using the Windows functions to draw on the window (pixels, lines, rectangles, characters, fill, etc.).

Is that about right?

Regards

John

 By [Heather Risedorph](#) on Thursday, November 15, 2001 - 12:05 pm: [Edit](#)

Thanks a lot. I did try using Neal's "color" library, but I didn't understand and I ended up in the interpreter with either yellow background `rgb> (255 255 0 --)` and black text or I had black text with black background. I also drew lines all over the interpreter screen. That was fun, but they were black even if I had set the colors. I'm going to experiment with color, color35, and UIColor. I feel like a little kid scribbling on things, but as soon as it breaks through the understanding barrier, this will be cool.

Thanks to Christopher and Neal for posting their source so people like me could have a chance at results.

 By [Christopher J. Smith \(Missilemax\)](#) on Saturday, November 17, 2001 - 01:53 pm: [Edit](#)

FYI...

I have posted my first Quartus Forth program on palm gear...it's freeware.

<http://www.palmgear.com/software/showsoftware.cfm?sid=43336320011117100640&prodID=35444>

I'll be happy to answer any question about the game...

It features,
color
hardware button reading
high score table
user customization
sound effects
etc.



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 17, 2001 - 10:33

pm: [Edit](#)

Congratulations, Christopher!

Neal



By [Heather Risedorph \(Rise1525\)](#) on Sunday, November 18, 2001 -

02:52 pm: [Edit](#)

I just wanted to say this is the best Tetris game I've ever played. It goes a bit slow at first, but it is way cool that you can set the buttons and you rotate both ways. 😊 Keep up the good work!



By [Christopher Smith](#) on Monday, November 19, 2001 - 12:50 am: [Edit](#)

Thanks!

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POSE problems

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): POSE problems](#)



By [John Newell](#) on Wednesday, November 7, 2001 - 12:45 pm: [Edit](#)

I have just downloaded the latest POSE Emulator but am now getting this message:

"Archery(1.0) just called PalmOS routine "OldFplInit". Applications should not call this function because it is reserved for system use only."

The emulator lets me continue.

Any ideas why the message is occurring (and how to stop it)?

If I continue past this I can get (in one of the modules) the message: ArHistory(1.1) read from 0x80000014. App calling a Window Manager function without first establishing a valid DataWindow."

The emulator won't let me continue after this.

Any ideas on how to continue?

Thank you.

Regards

John



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 7, 2001 - 12:49 pm: [Edit](#)

Quartus itself calls FplInit for you; it's not what's causing your problem.

The error you're getting sounds like you're calling a window function before you have an active window -- but unhelpfully it doesn't say what call that is. Maybe Debuffer could tell you, in a stack trace.

Neal



By [Paul Randall \(Paul\)](#) on Wednesday, November 7, 2001 - 07:33 pm:

[Edit](#)

Neal, are you saying that

"Quartus just called PalmOS routine "OldFplInit". Applications should not call this function because it is reserved for system use only."

is not a problem? I'm getting that message too when I run Quartus and my compiled app.

I get it again at exit.

Thanks



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 8, 2001 - 02:32 pm: [Edit](#)

I am saying that. You'll get that at entry, and at exit. I believe you can disable the message through one of the debugging switches in POSE.

Neal



By [Paul Randall \(Paul\)](#) on Thursday, November 8, 2001 - 09:06 pm: [Edit](#)

Ok. Thanks. I may have more questions for you soon about Quartus and POSE with 4.0 roms. I just need to fool with it some more.

Thanks again,

Paul

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Exponents

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Exponents](#)



By [Dave Bennett \(Dbennett\)](#) on Tuesday, November 6, 2001 - 06:21

pm: [Edit](#)

I am updating my WindChillFactor application and have ran across an issue using exponents. (The new calculations use these whereas the old ones did not.) I need to get a value from the user than raise it to an exponent of .16. I can't figure out how to do this in forth.

I enter 10 1e.16 and get a "1e.16 undefined" message. Can someone point me along the correct path please? Thanks.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 6, 2001 - 06:40

pm: [Edit](#)

Dave, are you working with Quartus built-in floats?

Neal



By [Dave Bennett \(Dbennett\)](#) on Tuesday, November 6, 2001 - 06:48

pm: [Edit](#)

Yes I am.



By [Chapman Flack](#) on Tuesday, November 6, 2001 - 08:41 pm: [Edit](#)

The "e" in scientific notation isn't a general exponentiation function: it stands for "times ten to the" and is only used to indicate how many places to shift the decimal point left or right.

If you need to raise any x to some power where x is not ten, or if you need to raise anything at all to some power that isn't an integer (like .16 say), you need to use a function like DFEXP (which is available in MathLib for IEEE floats). I think there is also a "fel" module (floating exponents and logarithms) to let you do the same with the Quartus built-in floats, but I don't know its accuracy limits.

-Chap



By [Dave Bennett \(Dbennett\)](#) on Thursday, November 8, 2001 - 07:27

pm: [Edit](#)

Actually, it looks like FEL will provide what I need.



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 8, 2001 - 10:18

pm: [Edit](#)

Glad to hear it, Dave.

Neal

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Structs!

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Structs!](#)



By [Steve Odendahl \(Steveo\)](#) on Tuesday, November 6, 2001 - 02:53

pm: [Edit](#)

I've worked through how the 'struct' module does its thing (a good mini-course in CREATE DOES>, by the way). I've got one question - the 'end-struct' word CREATES a word that itself CREATES words, so code using 'struct' looks like this ...

```
struct
1 cells x
1 cells y
end-struct point
```

```
point foo
42 foo x !
```

... and so on

So every "instance" of 'point' that I create has to have an associated word such as 'foo'. But suppose I want instead to create an array of 'point' structs (for a drawing program, for example). Then I don't care if the "instances" of 'point' have an associated word.

So I might like the code to look like this -

```
10 array points
10 0 do
point i points !
loop
```

the idea being that the 'point' word would just leave the base address of the newly created "instance" of the struct on the stack.

This could be implemented (I think) by modifying 'end-struct' like this -

```
: end-struct ( s "structname" -- )
```

```
create ,
does> @ here swap 0allot ;
```

Then, if you wanted to create an "instance" of a struct that is associated with a word like the original definition, you could do

```
point constant foo
```

Are there disadvantages to my modification? Is there a way to create non-word "instances" of a struct using the original implementation? Would it be worth having two 'end-struct' like words, one for each use case?



By [Kris Johnson \(Kdj\)](#) on Tuesday, November 6, 2001 - 07:50 pm: [Edit](#)

With the original implementation, you can use the SIZEOF word to create arrays or to dynamically allocate memory.

For example,

```
struct
  1 cells x
  1 cells y
end-struct point
```

```
\ create array of 10 points
create points
  sizeof point 10 * allot
```

```
\ Return address of i'th element of points
: 'th-point ( i -- &point )
  sizeof point * points + ;
```

```
\ Dynamically allocate a point
: allocate-point ( -- &point ior )
  sizeof point allocate ;
```

-- Kris



By [Steve Odendahl \(Steveo\)](#) on Wednesday, November 7, 2001 - 10:06 am: [Edit](#)

Doh! Thanks Kris!

I see I made a mistake in my sample code - should have been -

```
struct
1 cells field x
1 cells field y
end-struct point
```

- wish I could cut-and-paste from my Palm to the message board :-)

One more thought - creation of arrays of structs could be made generics as follows -

```
: array-of-struct ( n "name" "structname" -- )
  create sizeof dup , * 0allot
  does> ( i -- &struct )
  dup >r @ * r> + 1 cells + ;
```

although I bet this definition wouldn't work if it were itself used in another definition (haven't grokked all the complexities of that yet).

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Where's the documentation for a field?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Where's the documentation for a field?



By [Jim Cook \(Jimrcook\)](#) on Tuesday, November 6, 2001 - 12:28 pm:

[Edit](#)

I found how to add a field in the resource editor, but haven't seen documentation on how to use QF to modify the field.

What's the next book / documentation that I should be reading?



By [Chris Bucsko](#) on Tuesday, November 6, 2001 - 12:47 pm: [Edit](#)

For putting text into a field, I usually use string>field from the Fields memo, part of the QF library. For clearing and changing the fields attributes, I would look at the FLD PalmOS calls in the Quartus Systraps documentation.

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Fatal Alert interactive but not after makePRC

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Fatal Alert interactive but not after makePRC



By [Jim Cook](#) on Tuesday, November 6, 2001 - 12:22 pm: [Edit](#)

I'm using "make" to build the PRC. When I include testhello from quartus then run it, after a brief (1/2 second?) pause, I get "Fatal Alert. Form.c, Line: 1728, Object not in form" and have to reset. My program has a ".S ABORT" in the message handler. If I run the .prc after building it, there is no such error.

What should I look at to fix this error?

What are predefined IDs for the .prc? For example, it looks like adding my own version resource with ID 1 overrides the default. Have I stomped on something else?

Are the answers to these questions in the QF documentation somewhere?

Thanks in advance.



By [Chris Bucsko](#) on Tuesday, November 6, 2001 - 12:37 pm: [Edit](#)

Interesting. I've had a similar experience. I have a tver resource with an ID of 1 in my application. I also added a tver with a resource ID of 1000, and I got a Null Handle error when I invoked MakePRC. Changing the ID from 1000 to 1010 got me a successful PRC compilation, but when I checked the version in the Palm menu, it gives 'v.1' even though I have 1.1 in both tver resources. My makePRC file has the following delrsrc commands:

```
\ delete unused resources
\ mainform titledform blankform
1000 (id) tFRM delrsrc drop
1001 (id) tFRM delrsrc drop
1002 (id) tFRM delrsrc drop
```

Does one need a tver with an ID of 1000 to be recognized by the PalmOS, like the taib icon?

I found this out in:

<http://www.quartus.net/discus/messages/23/1433.html?1004389078>



By [chris bucsko](#) on Thursday, November 8, 2001 - 02:59 pm: [Edit](#)

OK, I re-ran my make PRC memo, and fixed the following problems: I found that I was missing an ID for one of my resources. This accounts for my

'Object Not in Form' error. And I changed my tver resource to an ID of 1000. Now, when I look at versions in the Palm info menu, I get the correct version for my app. So that's my fix, use an ID of 1000 for anything you want Palm to see and make sure you have all of your resources accounted for in the app and make PRC memo.



By [Ron Doerfler](#) on Thursday, November 8, 2001 - 04:09 pm: [Edit](#)

I believe you want a tver of 1 as well as 1000, both with the same contents, to accomodate different versions of PalmOS. At least, I have both, based on a posting a long time ago.

Ron



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, November 8, 2001 - 06:22 pm: [Edit](#)

I also have both a tver of 1 and a tver of 1000. I think the original reason was for one of the launcher programs, but I won't swear that is right at this point. It's harder to remember why than to go ahead and duplicate the tver with the other id..... 😊

Barry

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Using a slider control

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Using a slider control



By [Radu Serban](#) on Tuesday, November 6, 2001 - 04:01 am: [Edit](#)

Hello!

I want to use a slider control and I don't know how to read the value of the control when I receive `ctlSelectEvent`. Can I find it in the event structure?

Radu Serban



By [Steve Bohrer \(Skb\)](#) on Tuesday, November 6, 2001 - 10:26 pm: [Edit](#)

Disclaimer: I've never used slider controls. But, the PalmOS Reference, available at <http://www.palmos.com/dev/tech/docs/> seems to make this pretty clear:

Quote:

`ctlSelectEvent`

The control routine `CtlHandleEvent` sends this event. When `CtlHandleEvent` receives a `ctlEnterEvent`, it tracks the pen until the pen is lifted. If the pen is lifted within the bounds of the same control it went down in, a `ctlSelectEvent` is added to the event queue; if not, a `ctlExitEvent` is added to the event queue.

For this event, the data field contains the following structure:

```
struct ctlSelect {  
  
    UInt16 controlID;  
    struct ControlType *pControl;  
    Boolean on;  
    UInt8 reserved1;  
    UInt16 value;  
} ctlSelect;
```

Field Descriptions

`controlID` Developer-defined ID of the control.

pControl Pointer to a control structure (ControlType).

on true when the control is depressed; otherwise, false.

reserved1 Unused.

value Current value if the control is a slider.

Compatibility

The value field is only present if 3.5 New Feature Set is present.

So, it looks like the value is indeed in the event structure. The "data field" of the event record is 8 bytes into the record, and the "value" field of the ctlSelect struct is 8 bytes into that, so you should find the value 16 bytes into your event record. If you are using the predefined event record, you should be able to get the value as follows:

```
event 16 + @
```



By [Radu Serban](#) on Wednesday, November 7, 2001 - 05:33 am: [Edit](#)

You're right, I can retrieve the value with

```
event 16 + @
```

but the value is in the upper bits and I have to

```
8 rshift
```

the value. I'm only interested in one byte - and I don't know where is the other byte. There seems to be some misalignment or I'm not doing something right, but anyway I got the value I'm after.



By [Mark Browne \(Markbrowne\)](#) on Wednesday, November 7, 2001 - 05:48 am: [Edit](#)

How about using

```
event 16 + c@ (or possible 17, I can't remember 😊)
```

This would save time and code, at the possible expense of clarity.

Mark Browne



By [Radu Serban](#) on Wednesday, November 7, 2001 - 06:06 am: [Edit](#)

Thanks Mark, this is the best idea (16 is ok btw). I'm still a newbie and it will take me some time before seeing the shortest solution ;-)



By [Steve Bohrer \(Skb\)](#) on Wednesday, November 7, 2001 - 02:03 pm:

[Edit](#)

Hmm. I don't see anything in the OS Docs to suggest that a slider value should be one byte rather than a UInt16. What does CtlGetValue return for your slider?



By [Radu Serban](#) on Monday, November 12, 2001 - 10:55 am: [Edit](#)

I didn't say that the slider value is one byte, I said that I only need the lower 8 bits and I don't care about the upper 8 bits. So the solution with c@ worked wonderfully for me.



By [Steve Bohrer \(Skb\)](#) on Monday, November 12, 2001 - 08:38 pm: [Edit](#)

A regular fetch with @ should not swap the lower and upper bytes of a 16-bit value, so it seems there might be something unexpected going on. I'm curious to see if CtlGetValue also gives the slider value scaled by 256. Although fetching only the upper byte seems to work, I wonder why the slider value is not as expected.



By [Steve Bohrer \(Skb\)](#) on Tuesday, November 13, 2001 - 09:18 am:

[Edit](#)

Radu, any chance you're using Palm OS 4.0 and a minimum value on your slider?

Palm's list of [OS 4.0 bugs fixed in OS 4.1](#) says "Sliders with non-zero minValues did not work properly."

Perhaps they don't work properly in that they swap the high and low bytes of their value.



By [Radu Serban](#) on Wednesday, November 14, 2001 - 03:29 am: [Edit](#)

I noticed something odd there (I use Palm OS 3.5.2). The min value was 1 and the max was 63 and the slider returned values from 0 to 62. When I tried to put a bigger max value (I tried with 16383, 32767) the slider behaved very strange, not showing the button. Unfortunately I don't have time to delve into the problem. And since using the slider is not the most important part of my application I just lived with the above 'hack'.

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Handera-Specific Words

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\):](#)

Handera-Specific Words



By [Jamie Cairns \(Jamie\)](#) on Monday, November 5, 2001 - 11:39 pm:

[Edit](#)

In a previous episode, now archived, someone asked about new words for the Handera 330 and was directed to the HSEXT module for inspiration. I have been able to implement a few new commands individually using information on the wiki (thanks Kris) but Neal's HSEXT looks much more elegant, and it also really bugs me that I can't figure it out... Could some kind soul take a minute and provide an english "play-by-play" for this - it might help me grok this well enough to write my own HEEXT module...

```
\ hsext 00.7.11 12:22 pm NAB
```

```
needs core-ext
```

```
needs toolkit
```

```
0 enum rettype
```

```
  rettype none
```

```
  rettype Err
```

```
  rettype DWord
```

```
  rettype Ptr
```

```
(hex) A349 constant HStrap#
```

```
: HStrap ( in out selector "name" -- )
```

```
  create , , ,
```

```
  does> ( i*x -- result )
```

```
    dup >r
```

```
    @ HStrap# systrap d0 a0
```

```
    r> cell+ 2@ >r
```

```
    0 ?do drop loop
```

```
    r@ Ptr <> if 2drop
```

```
      else 2swap 2drop then
```

```
    r@ Err = if drop then
```

```
    r> none = if 2drop then ;
```

```
4 DWord 0 HStrap HsInfo
```

```
( &paramP. paramSize item -- DWord. )
```

```
10 Err 4 HStrap HsDatabaseCopy
```

```
( &dstDbIDP. hsDbCopyFlags. &dstNameP. dstCardNo srcDbID. srcCardNo -- Err )
```

```
1 Err 5 HStrap HsExtKeyboardEnable
```

```
( enable -- Err )
```

```
... (all similar calls from here on down)
```

Thanks muchly

Jamie



By [Kris Johnson \(Kdj\)](#) on Tuesday, November 6, 2001 - 10:26 am: [Edit](#)

I'm not an expert on how the Handspring traps work, but here's a go at explaining this:

The trap A349 invokes the "OEM dispatch" function, meaning that it invokes a vendor-specific function. This is how Handspring, Handera, Sony, and others add their own customized routines to the Palm OS without needing to add new trap numbers. A "selector" argument passed to the routine determines exactly which vendor-specific function is to be called.

The HSTrap word takes three stack arguments: the number of input cells, the type of result (none, Err, DWord, or Ptr), and the selector. HSTrap uses CREATE to create an entry in the dictionary, and then saves those three arguments to the dictionary entry.

DOES> causes the following code to be called whenever the CREATED word is invoked. When it is invoked, the address of the dictionary entry will be on the stack. When it is invoked, "dup >r" saves the address to the return stack for later use.

Then "@ HSTrap# systrap" gets the selector number out of the dictionary entry and then invokes the OEMDispatch trap (see the SystemTrap topic in the wiki to understand how this works).

"d0 a0" then retrieve the contents of the D0 and A0 CPU registers, which is where results are returned.

"r> cell+ 2@" gets the in and out values out of the dictionary entry, and then ">r" pushes the out value onto the return stack, leaving the number of input cells on the stack.

"0 ?do drop loop" then drops the given number of cells. (This actually confuses me a bit, because it seems that the result of "d0 a0" would be on top of the stack at this point, so the drops would lose the result and leave the input arguments on the stack. Maybe Neal can clarify.)

Then, depending upon whether the output type is Ptr, Err, or none, the correct result is left on the stack. If the result is not a Ptr, then the two-cell result of A0 is dropped, leaving only D0. If the result is a Ptr, then "2swap 2drop" gets rid of D0, leaving only A0. Then, if the result is only a single-cell Err, we drop one cell, or if there is no result, we drop both cells.

The following definitions simply use the HSTrap word with the appropriate numbers of input cells and return types.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 6, 2001 - 01:47

pm: [Edit](#)

You might be right, Kris, about the error in my code's logic. Good eye. I'll have a closer look.

Neal

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Makeprc gives Fatal Exception 537

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Makeprc gives Fatal Exception 537



By [Paul Randall \(Paul\)](#) on Monday, November 5, 2001 - 11:39 am: [Edit](#)

I have tried to make a different version standalone of the program I'm working on by changing the id of the resource database and changing the creator id of the app.

Now I get Fatal exception 537 dialog box when I load my 'make program' memo.

The app goes ok from the console. I am befuddled. Am I correct in assuming the above changes to ids will accomplish the goal?

What is 537?



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 11:44 am: [Edit](#)

Same app name. Every app must not only have a different creator ID, but a different name. If you either change the name, or delete the old one first, you should be fine.

537 is DmErrAlreadyExists. Download errlist.zip from the File Area for a full list of PalmOS error codes.

Neal



By [Paul Randall \(Paul\)](#) on Monday, November 5, 2001 - 01:44 pm: [Edit](#)

Thanks. I will get that error list file.

I tried changing the name to 'Piffle' and got the error again. I changed it to 'something' and it compiled ok.

I changed all ids again and retried 'Piffle' and now I have two apps with the name Piffle. One has my custom icon the other has the default.

The Palm delete utility only lists one copy of 'Piffle'.

I was going to duplicate my rsrc db again and try to delete Piffle but RsrcEdit gave err 537 when I tried to dupe it.

Not sure what to do Neal!



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 01:50

pm: [Edit](#)

Rather than using the Palm delete utility, use RsrcEdit; sort all databases by name. Look for duplicates; delete/rename as required. Do the same by resource ID.

Reset, and re-try.

Neal



By [Paul Randall \(Paul\)](#) on Monday, November 5, 2001 - 02:19 pm: [Edit](#)

One copy of Piffle had a leading space in the name so it was separated from the other in the lists. Wonder how that could happen? makePRC eats up blanks preceding the program name (BL WORD) does it not? I think I've got it under control now ... ?

Also, I've had some other weird happenings I'd like to run past you.

On a fairly regular basis in my modify-recompile-test cycle I encounter the following:

I include my loader file and get the include error, "such&such file doesn't exist" and it will be a library file or one of my own. I simply step out of Quartus and step back in and reload and everything will be fine. Every hear of that?

Also how do I monitor the dadaspace memory as my program is getting beefy and I want to know when I'm brushing up to the limit. The app generates strange poetry using random numbers and lots of text lists. I am hard coding the text into the dictionary and it is bloating out pretty quick. Do I have a full 32k to use? Using:

```
here ( load everything) here swap - .
```

I'm at about 11k now.

Love to hear your thoughts on this.

Paul



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 03:00

pm: [Edit](#)

The only time I've seen file include errors like that is if you're typing ahead in the Graffiti area while the code is loading. For some reason I've never tracked down, typing while including will trip up the system.

You do have just under 32K of dataspace to use.

Neal



By [Paul Randall \(Paul\)](#) on Monday, November 5, 2001 - 03:41 pm: [Edit](#)

I see. I'm not graffitiing during loads. I have my files print numbers on the screen as they load so I can see where its at if it goes south. I just watch the screen. I wonder if I got a buggy machine. It's done some other strange things too.

It's a m500.

Thanks, Paul



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 03:48 pm: [Edit](#)

Are you running any sort of overclocker? Any Hackmaster extensions?

Neal



By [Paul Randall \(Paul\)](#) on Monday, November 5, 2001 - 05:33 pm: [Edit](#)

Just clearHack and shiftHack.



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 05:57 pm: [Edit](#)

Then you may indeed have a problem on the hardware side.

Neal

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Problem with MakePRC

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problem with MakePRC



By [Steve Graham \(Steve\)](#) on Monday, November 5, 2001 - 09:53 am:

[Edit](#)

Neal,

Just tried to make a standalone version of the program I've been working on and and could not. Quartus returns an error: makeprc? Invalid registration code. The line it errors out on is:

```
' go (ID) rach makeprc Rachel
```

When I boot Quartus, it displays the following info:

```
Quartus  
Welcome to Quartus Forth 1.2.5R  
Build: 1999.10.25 6:11:12pm  
(c) Neal Bridges, 1998, 1999.  
All rights reserved.
```

Thanks, Steve



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 09:55

am: [Edit](#)

Hi Steve. Is your startup.quartus memo still intact, with your 'registered ' line still in it?

Neal



By [Steve Graham \(Steve\)](#) on Monday, November 5, 2001 - 10:32 am:

[Edit](#)

Neal,

No, my startup.quartus memo is empty. I've had some problems recently and lost much of my Palm data. That could account for it.

What should be in it?

Steve



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 10:36

am: [Edit](#)

Steve, if you still have the email you were sent when you registered, the instructions are there. If you don't, let me know and I'll re-send it.

Neal



By [Steve Graham \(Steve\)](#) on Monday, November 5, 2001 - 10:52 am:

[Edit](#)

Neal,

I cannot find it. Sorry.

Steve



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 01:53

pm: [Edit](#)

I'll send it this evening, Steve. Sorry for the delay.

Neal



By [Steve Graham \(Steve\)](#) on Monday, November 5, 2001 - 03:00 pm:

[Edit](#)

Neal,

No problem. You can send it to the e-mail address in my profile.

Thanks.

Steve



By [Steve Graham \(Steve\)](#) on Monday, November 5, 2001 - 09:20 pm:

[Edit](#)

Neal,

Found the e-mail you sent me.

Thanks.

Steve



By [Neal Bridges \(Nbridges\)](#) on Monday, November 5, 2001 - 09:52

pm: [Edit](#)

You beat me to the punch. Thanks, Steve.

Neal



By [Steve Graham \(Steve\)](#) on Thursday, November 8, 2001 - 05:44 pm:

[Edit](#)

Neal,

Had to restore all of my data and am having a problem with compiling again. The error message is "makeprc? Invalid registration code" I did restore Quartus, my memo db, Rsrc and my Rsrc db. I checked to see that I have the startup.quartus memo with "registered" and the registration number: I do.

Any ideas?

Steve



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 8, 2001 - 05:47

pm: [Edit](#)

Steve, please confirm that your startup.quartus is being properly executed, by adding

.(Hello!)

to it, and seeing if you see 'Hello!' on the screen when you start Quartus Forth.

Was it working for you for awhile, before you did the restore?

Neal



By [Steve Graham \(Steve\)](#) on Thursday, November 8, 2001 - 05:52 pm:

[Edit](#)

Neal,

I put the .(Hello!) before and after the "registered..." line and it works fine. I was able to compile before I lost my data/apps and had to restore.

Steve



By [Steve Graham \(Steve\)](#) on Thursday, November 8, 2001 - 06:39 pm:

[Edit](#)

Neal,

I sent my registration number and owner name to support@quartus.net

Steve



By [Mark Browne \(Markbrowne\)](#) on Friday, November 9, 2001 - 05:17

am: [Edit](#)

This is not particularly to do with Quartus, but may be helpful. I was having problems with DateBk4 crashing at a particular screen, and I solved it by re-loading it from the original download. It had obviously been corrupted at some point.

Mark



By [Steve Graham \(Steve\)](#) on Friday, November 9, 2001 - 10:10 am: [Edit](#)

I did try restoring from what I believe is the original .zip file (after unzipping, of course) and am still getting the same problem. I even tried something as elementary as:

```
: go ." Hello, world" ;
```

```
needs ids
```

```
' go (id) test makeprc test
```

Still got the registered error. What's funny is that it was working a day or so ago.

I'm clueless and frustrated. Any more ideas?

Thanks, Steve



By [Steve Bohrer \(Skb\)](#) on Friday, November 9, 2001 - 03:24 pm: [Edit](#)

Any chance you changed your hotsync user name when you restored all your data?



By [Steve Graham \(Steve\)](#) on Friday, November 9, 2001 - 04:16 pm:

[Edit](#)

Steve,

I've been wondering about that. When I did a hard reset on my Palm, I entered in the owner name again. Is that the same thing as the hotsynch name? Does it matter if I put the name on the 2nd or 3rd line of that document in Prefs? And in startup.quartus, does it matter if I put the registered line on the 2nd or 3rd line?

Thanks.

Steve



By [Steve Bohrer \(Skb\)](#) on Friday, November 9, 2001 - 04:41 pm: [Edit](#)

The Owner in Prefs can be anything. In my POSE copy of Quartus, I don't have anything in Prefs, and it compiles fine when I set the POSE hotsync name to match my real handheld. The hotsync user name is what the desktop hotsync package uses to identify your Palm, and to get the correct host files to the correct handheld. From POSE, I know that Quartus uses this to determine a properly registered version, and that case matters. Also, a quick test with POSE confirms that the registration line can be anywhere in the startup.quartus memo. But, it is probably safest to put it before you include anything else, just in case some of the code you include mungs things up somehow.

As far as I know, when you first sync with a blank handheld, the hotsync software will give you a popup list of the user names it knows about, and ask if you want to restore one of them. If you choose a name from its list, the hotsync software presumably sets the Palm with exactly that user name. (But, I use BackupBuddy, so I can't really be sure if what I have described is standard, or is added by BackupBuddy.)

Your registration email from Neal should show the hotsync name he created a code for. In your Palm Desktop software, you should be able to determine the current hotsync name. In the Windows version of the Desktop software that I use, there is a popup control in the top right labeled "User:" which shows the current name. It has an option to rename a handheld, so maybe you could use this to adjust your Palm to match the registration memo.



By [Steve Graham \(Steve\)](#) on Friday, November 9, 2001 - 04:59 pm:

[Edit](#)

Steve,

My computer seizes when I try to use the Hotsynch s/w in Win98 (not sure why), so I use a Linux/KDE version. I'll try to implement your suggestions when I get home.

Thanks for all the help.

Steve



By [Steve Graham \(Steve\)](#) on Saturday, November 10, 2001 - 08:08 pm: [Edit](#)

Many thanks to all the individuals who posted suggestions. I did restore my hotsynch name, brought in a new version of the registered program, and recreated the startup.quartus memo, and voila I can compile again!!!

Now if I can just get rid of these stupid errors!!

One thing at a time.

Thanks again Neal for the product, discussion forum and your excellent support. You sure you're charging enough? Any ideas on supporting the future Palm devices with different OS and processors?

Steve



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 10, 2001 - 08:11 pm: [Edit](#)

Quartus Forth is inexpensive for a commercial Forth system, it's true. It's aimed at hobbyist developers, though -- any higher and hobbyists couldn't afford it.

I'm all set up for building an ARM version, whenever Palm sees fit to make appropriate emulators and documentation available.

Neal



By [Mike Will](#) on Sunday, November 11, 2001 - 12:19 am: [Edit](#)

I see that Microsoft has now officially dumped MIPS, SH and a few others in favour of only ARM (Intel variety, most likely) for PocketPC 2002. Now Palm and CE machines will have a common CPU.

Neal, are you beginning to feel the pull of the dark side (ie QuartusCE) ?

Mike



By [Neal Bridges \(Nbridges\)](#) on Sunday, November 11, 2001 - 01:39 am: [Edit](#)

I've toyed with CE development in the past -- I even have a first draft of a Forth written for it (not for release). The CE system isn't, though, what I'd call programmer-friendly, and I get the sense there isn't much of a market for on-board development tools for that platform at this point.

I get maybe one query about it every couple of months.

Neal

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, November 16, 2001 - 05:19 pm: [Edit](#)

Neal,

You might want to survey the Quartus user base to see how many would be interested in oneboard development for CE devices. I find the idea intriguing myself; there might be a fair number of others already familiar with QF on the Palm device that would be interested in a CE version. Might be a cheap way for you to do a market survey.

Barry

 By [Neal Bridges \(Nbridges\)](#) on Friday, November 16, 2001 - 07:21 pm: [Edit](#)

I'm happy to hear from such interest customers. It'd need to be a significant number, though, as everything -- hardware, software, development tools -- costs significantly more in the WinCE world than it does in the Palm world.

Neal

 By [Kris Johnson \(Kdj\)](#) on Thursday, November 22, 2001 - 01:57 am: [Edit](#)

I'd be willing to pay another registration fee to get Quartus for CE.

-- Kris

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Vocabulary missing?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Vocabulary missing?](#)



By [Elan Goldman](#) on Monday, November 5, 2001 - 02:43 am: [Edit](#)

Hi.
Quartus Forth apparently supports the Wordlist related words also, order, and previous.
However, apparently the word vocabulary is not supported?

Wil Baden includes the following word definition
: VOCABULARY ("name" --) CREATE WORDLIST ,
DOES>
@ >R GET-ORDER NIP R> SWAP SET-ORDER ;

Am I likely to run into trouble using it? Is it compatible with QF's implementations of also, previous, etc?

TIA,

Elan



By [Kris Johnson \(Kdj\)](#) on Monday, November 5, 2001 - 07:43 am: [Edit](#)

VOCABULARY is not a ANS Forth word.

I haven't tried Baden's version, but there's a version of VOCABULARY in the DPANS94 document which I have used with Quartus Forth.

See <http://sleepless-night.com/dpans/dpana16.htm>

-- Kris

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SHA-1 Hash Implementation?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): SHA-1 Hash Implementation?](#)



By [Elan Goldman](#) on Sunday, November 4, 2001 - 08:31 pm: [Edit](#)

Does anyone know of a SHA-1 implementation that is Quartus Forth compatible?

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Sunday, November 4, 2001 - 09:51 pm:

[Edit](#)

Elan, the one I know about is 32-bit, and would require a bit of work to run under Quartus Forth. It's Wil Baden's code, available here:

<http://home.earthlink.net/~neilbawd/sha1.html>

Neal



By [Elan Goldman](#) on Monday, November 5, 2001 - 02:30 am: [Edit](#)

Hi Neal.

Thanks for the prompt response. I copied that one off the Web a little earlier and I'm in the process of porting it.

Which leads me to a new conversation topic (see Vocabular missing?)

Thanks,

Elan

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Sony Clie problems

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Sony Clie problems



By [John Newell](#) on Saturday, November 3, 2001 - 05:34 pm: [Edit](#)

Has anyone had or heard of any problems running a Quartus app. on a Sony Clie OS3.5? I haven't got access to one but a customer using The Archery Suite says that the screen freezes up on loading and that he has to restart the Clie. Should the Clie run identically to the Palm Vx, the device I developed the Suite on? Thank you for any help.

Regards
John



By [Steve Bohrer \(Skb\)](#) on Saturday, November 3, 2001 - 11:51 pm: [Edit](#)

I just registered as a Clie developer to get their version of the emulator, which presumably will let me test out Quartus apps on a Clie. You can register for free from <https://www.us.sonypdadev.com/top.html>, but then it says it may take up to 10 days to get a user ID by email. I hope the actual processing is quicker.



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 3, 2001 - 11:57 pm: [Edit](#)

John, I haven't heard much from Clie users, save that LeftHack doesn't work properly on them -- but that's nothing to do with Quartus Forth, per se.

I suspect their implementation of the ROM has a number of incompatibilities; that's unfortunate. I'll be curious to know what you discover. The Clie emulator is certainly the place to start, if they've done a good job of it.

Neal

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Problem Related to UI in different OS versions and SysBinarySearch

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problem Related to UI in different OS versions and SysBinarySearch



By [Nikhil](#) on Saturday, November 3, 2001 - 05:41 am: [Edit](#)

I am using Palm OS API "UIBrightnessAdjust()"

On hardware that supports a brightness setting, this function displays a dialog that allows the user to change the brightness level.

On hardware that has a backlight, this function toggles the backlight. This is implemented only on Palm OS 3.5 or greater. For the Palm OS prior to 3.5 we are searching for the API. So If you have any idea pl'z let me know...

My second problem is related to the WinDrawBitmap API.

The PalmOS Docs says that this API automatically selects the nearest depth Bitmap available, if it does not find the proper depth Bitmap. I have tested on PalmOS 3.3 v series device (Default depth 2-Bit) It supports the 4-bit Color Display. Now I change the display mode to 4-bit programmatically using "WinScreenMode()" and tried to draw a bitmap from a bitmapFamily (having the bitmaps of different bit depth from the current display mode for example : Drawing 1-bit and 8-bit bitmaps in window with 4-bit display mode) Using WinDrawBitmap() it gives me Error. This function works properly with other PalmOS and device series.

Why is it so do you have any idea and how to convert bit depth of the Bitmap while Drawing in a window of different bit depth ?

My third Problem is related to the SysBinarySearch() API.

I am using this API for searching my records in sorted list as described in PalmOS Reference.

I am getting desired results but sometimes in the call back function "SearchF" the address of array element comes invalid causes the Bus Error. This problem comes in PalmOS 3.5.

What may be the reason of this problem and how to solve it...?

You can mail me at nikhil_suhane@yahoo.co.uk
nikhil_suhane@hotmail.com

Thanks

-Nikhil

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 02:18 pm: [Edit](#)

Did you get any responses to this, Nikhil?

Neal

 By [Steve Bohrer \(Skb\)](#) on Wednesday, November 14, 2001 - 10:11 pm: [Edit](#)

The trouble with SysBinarySearch may well be a problem with the callback compare routine. The callbacks module is required in many cases for callback routines to have a working data stack.

An example of the system sort routine, which uses a similar callback is on the wiki at

<http://sleepless-night.com/cgi-bin/twiki/view/Main/SysSortExample>

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64 bit integers

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): 64 bit integers



By [Rick Flower \(Nrflower2\)](#) on Wednesday, October 31, 2001 - 04:51

pm: [Edit](#)

Hi.. A while back someone was asking about whether Quartus could deal with 64 bit ints and Neal's reply was that it could and that with some modifications to the existing 32 bit Double' math routines, 64 bit versions could be made.. So, apparently nobody has taken this challenge, and I'm wondering where to start.. Any ideas would be great!

-- Rick



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 1, 2001 - 11:25

pm: [Edit](#)

Hi, Rick. If I were to start on that, I'd first study the 32-bit stuff and see how it works. Once you understand that, you'll see how to extend it to 64, or any number of bits.

Neal

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Calculator question..

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Calculator question..



By [Rick Flower \(Nrflower\)](#) on Monday, October 29, 2001 - 06:56 pm:

[Edit](#)

Ok.. My brain is doing a major brain fart today.. I, for some reason, just can't seem to remember the algorithm that a calculator uses to left shift the values when the numbers are being pressed.. I've done this before -- a long time ago, but can't seem to remember it anymore..

I've been playing around with left shifting the current value and then or'ing in the newly pressed value. Unfortunately, it is a bit off -- not good for a calculator..



By [Neal Bridges \(Nbridges\)](#) on Monday, October 29, 2001 - 06:58 pm:

[Edit](#)

For decimal values, multiply the old value by 10, and add the new digit.

Neal



By [Rick Flower \(Nrflower\)](#) on Monday, October 29, 2001 - 07:39 pm:

[Edit](#)

Thanks for the reply.. That did the trick.. I guess my brain is getting a little rusty!

Another question.. Someone mentioned in the archives that they might implement a 64 bit double, since I gather the current one is 32 bits.. Are you aware of anyone that has done this, or is this something that the PalmOS native libraries would be better with than just forth double cells?

Thanks!

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No doodles on menu and control bars of doodling form

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): No doodles on menu and control bars of doodling form



By [Alexandre Rousseau](#) on Monday, October 29, 2001 - 05:55 pm: [Edit](#)

Hi.

I am writing a doodle-like application and am trying to constrain the doodling to that area of my form lying between the menu bar on top and the control bar at the bottom. Other than checking for values of x and y pen events, is there a way to ensure that? So far, I have tried to create a new window (with limited bounds) and make it both my draw and active window. Rough code is:

```
\ show form
MyForm showForm

\ set bounds for up and coming doodling window
20 20 160 100 bounds!

\ create the doodling window
error > abs true false 0 bounds > abs
WinCreateWindow
doodleWin 2!

\ and set it as both current and active
doodleWin 2dup
WinSetActiveWindow
WinSetDrawWindow 2drop

\ event processing...
: DoPenDown
current@ lastX ! lastY ! ;

: DoPenMove
current@ 2dup
lastY @ lastX @ WinDrawLine
lastX ! lastY ! ;

===
```

That doesn't seem to work however. I am still able to draw all over my

form. A call to WinSetClip hasn't helped either.

Thanks in advance,
Alex



By [Kris Johnson \(Kdj\)](#) on Monday, October 29, 2001 - 08:22 pm: [Edit](#)

bounds! affects the current draw window, I believe, so I think you need to make your call to bounds! *after* you create the window and set it to be the current draw window.

But I'm not sure that will automatically clip the drawn lines. (Let us know if it does.)

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, October 29, 2001 - 08:31 pm: [Edit](#)

Actually, I wasn't paying attention. Ignore my message.

-- Kris

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Ondo module causing extra "stuff" on stack..

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Ondo module causing extra "stuff" on stack..



By [Rick Flower \(Nrflower\)](#) on Monday, October 29, 2001 - 01:09 pm:

[Edit](#)

Hi all.. I just started using the "ondo" module that I ran across on the Wiki webpage for Quartus.. It seems like it would really shorten my code.. However, I'm noticing that it seems to have a strange stack effect of leaving the number "9" on the stack for each time the on:/do: pair is used. Below is my code example -- perhaps I'm using it in a naughty manner? Perhaps with my using it in a nested manner, I'm getting bad side effects?

```
.
.
.
needs ondo

.
.
.
1100 constant Main.F
1150 constant Main.F.M
1170 constant Main.F.M.Opt.Prefs
1171 constant Main.F.M.Opt.About
1200 constant Key-0
1201 constant Key-1

.
.
.
\ Initialize the display & setup the initial list items
: init-display ( -- )
  Main.F ShowForm ( )
  ; ( )

: do-menu ( -- )
  event >abs itemid cond ( menuitem )
  dup Main.F.M.Opt.Prefs = if ( menuitem )
    \ Edit prefs ( menuitem )
  else dup Main.F.M.Opt.About = if ( menuitem )
```

```

    \ Put up about box                ( menuitem )
    thens drop ;                      ( )

: process-number ;

\ Handle general GUI controls
: do-cont ( -- )
  event >abs itemid
  on: Key-0 do: process-number      ( )
  on: Key-1 do: process-number      ( )
  drop ;
\   on: Key-2 do: 2 process-number  ( )
\   on: Key-3 do: 3 process-number  ( )
\   on: Key-4 do: 4 process-number  ( )
\   on: Key-5 do: 5 process-number  ( )
\   on: Key-6 do: 6 process-number  ( )
\   on: Key-7 do: 7 process-number  ( )
\   on: Key-8 do: 8 process-number  ( )
\   on: Key-9 do: 9 process-number ; ( )

: handle-event ( ekey -- ekey )
  on: menuEvent      do: do-menu      ( )
  on: ctlSelectEvent do: do-cont ;    ( )

\ Main entry point
: (go) ( -- )
  get-preferences      ( )
  init-display        ( )
  begin
    ekey handle-event drop ( )
    0 0 at-xy .s
  again ;

: go
  ['] (go) catch
  byeThrow = if      ( exception )
    set-preferences  ( )
    (bye)            ( )
  then ;

```



By [Eric Idema \(Eki\)](#) on Monday, October 29, 2001 - 01:53 pm: [Edit](#)

```

event >abs itemid
on: Key-0 do: process-number      ( )
on: Key-1 do: process-number      ( )
drop

```

The problem is that your drop is never getting executed. Basically once you jump to the word in a do: you'll never come back. That's probably not the best explanation of it, but if you check the docs on the wiki this behavior is mentioned. Anyway, I had this exact bug in my code several weeks ago and I fixed it by restructuring things so that the drop was in the words called by do:. In my most recent program I just didn't use ondo to check itemids (I still used it to check event ids, though). It'd be nice if there was a word that would mark the end of an ondo structure so you could still place the drop at the end of your do-cont word. I don't know forth well enough to make such a modification to the ondo module, though.



By [Kris Johnson \(Kdj\)](#) on Monday, October 29, 2001 - 02:55 pm: [Edit](#)

The whole point of on:do: was to take advantage of tail-call elimination and reduce the amount of code. Adding the means to branch to the end of the on-do's would cause the code to be just as bloated as a normal if..else..then.

The best way to make sure a drop is done at the end is to factor the on:do: stuff out into its own word, and then put the drop after the call to that word, like so:

```
: dispatch ( ekey -- ekey )
  on: 1 do: foo
  on: 2 do: bar
  on: 3 do: baz ;

: handle-event ( -- )
  begin
    ekey dispatch drop
  again ;
```

-- Kris



By [Rick Flower \(Nrflower\)](#) on Monday, October 29, 2001 - 03:36 pm:

[Edit](#)

Thanks for the prompt reply.. I guess I should have read closer just how this thing works.. Oh well.. I do believe that I've got it working now -- finally! I take it that doing something like the following with the ondo module would be considered naughty then?

```
\ Handle general GUI controls
: do-cont ( -- itemid )
```

```

event >abs itemid
on: Key-0 do: 0 process-number      ( )
on: Key-1 do: 1 process-number      ( )
on: Key-2 do: 2 process-number      ( )
on: Key-3 do: 3 process-number      ( )
on: Key-4 do: 4 process-number      ( )
on: Key-5 do: 5 process-number      ( )
on: Key-6 do: 6 process-number      ( )
on: Key-7 do: 7 process-number      ( )
on: Key-8 do: 8 process-number      ( )
on: Key-9 do: 9 process-number ;    ( )

```

 By [Rick Flower \(Nrflower\)](#) on Monday, October 29, 2001 - 03:37 pm:
[Edit](#)

I forgot to add that IF I do the above "0 process number" and friends, that I get a fatal exception the first time that the above "do-cont" word is executed.. However, If I remove the "0" and just let ondo call process-number, the problem disappears.. I'm pretty sure that I can guess your answer..

Thanks again!

 By [Rick Flower \(Nrflower\)](#) on Monday, October 29, 2001 - 04:16 pm:
[Edit](#)

Just a little footnote.. For some reason, with my fix in place, it works fine in Quartus when I run it directly. However, IF I have Quartus generate a PRC, I get an exception prior to building the PRC.. Interestingly enough, if I replace the "needs ondo" with "needs ondo-ans" and use the slower alternative, it works fine with generating a PRC and runs fine -- though probably not as fast..

-- Rick

 By [Kris Johnson \(Kdj\)](#) on Monday, October 29, 2001 - 08:18 pm: [Edit](#)

Your "considered naughty" example is basically equivalent to this:

```

: do-conf ( -- itemid )
  event >abs itemid
  dup Key-0 = if 0 exit then
  process-number
  dup Key-1 = if 1 exit then
  process-number
  dup Key-2 = if 2 exit then
  \ ...
  dup Key-9 = if 9 exit then

```

```
process-number ;
```

So if process-number consumes any stack arguments, I would expect a stack underflow.

I'd suggest writing your code like this:

```
: itemid>number ( itemid -- n )
  on: Key-0 do: 0
  on: Key-1 do: 1
  \ ...
  on: Key-9 do: 9
  abort" Unknown itemid" ;

: do-cont ( -- itemid )
  event >abs itemid
  itemid>number process-number ;
```

I'm not sure about the difference in Quartus vs. standalone behavior. ondo-ans is subtly different from ondo, in that it uses IF..THEN instead of the optimized M68K instructions.

-- Kris



By [Steve Bohrer \(Skb\)](#) on Monday, October 29, 2001 - 08:39 pm: [Edit](#)

Another tack: It seems you have a set of 10 constant values (Key-0 thru Key-9) that you are trying to translate into the values 0 thru 9. You can get from the constants to the values with simple math.

From your first example, it looks like these constants are the values 1200 thru 1209. So, if the incoming itemId is \geq Key-0 and \leq Key-9, your value is the itemId - 1200.

This should be smaller and faster than any 10-way compare.



By [Rick Flower \(Nrflower\)](#) on Tuesday, October 30, 2001 - 11:39 am: [Edit](#)

Yeah, but the problem is that this particular routine will later be checking for LOTS of other itemId's also.. Although I suppose I could break it up more such that one routine deals with the pure numbers and another routines deals with the non-numeric itemId's..

Thanks for the reply!



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 30, 2001 - 05:23 pm: [Edit](#)

Breaking it up is probably a good idea. Having ten calls to process-number is wasteful, as is having ten comparisons.

-- Kris



By [Mark Browne \(Markbrowne\)](#) on Thursday, November 1, 2001 - 10:06 am: [Edit](#)

For things like this, where the answer cannot be easily calculated, I often find that a look-up table is a good method. They are fast, easy to add to and can take up less space than than other methods



By [Steve Bohrer \(Skb\)](#) on Thursday, November 1, 2001 - 02:37 pm: [Edit](#)

A lookup table is certainly a compact way to deal with an arbitrary set of data. But, sometimes you can make the data less arbitrary. You can often use the high bits of your ids to group the different sorts of controls. Then, you can use a simple AND with a mask to decide how to handle an item, rather than explicitly testing the id against the low and high bounds of an arbitrary range.

So, rather than having your number key ids start at 1200, start them at 64 (assuming there are less than 64 keys in any one group), and have your next group of keys start at 128, then 256, and so on.

You might want to define constants for the various masks, but the basic first-level dispatch structure could be something like:

```
event >abs itemId
conds
dup 64 and if
  process-number
else dup 128 and if
  process-other-group-of-keys
else dup 256 and if
  process-others-etc-etc
thens drop
```

Within each "process keys" word, you could use 63 AND to get the value of the specific key within the group.

Obviously, this technique runs out if you have more groups than there are bits in the id, but you can have some groups be sub-divided with lower order bits. In this case, it may help if you invert the order of the tests, so that you divide based on the highest bits first.

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Errant Bitmaps when making PRC

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Errant Bitmaps when making PRC



By [Chris Bucsko](#) on Monday, October 29, 2001 - 11:11 am: [Edit](#)

I made my first PRC last nite, after some trial and error (and a few fatal exceptions)!! It seems to work perfectly, but I have two tAIB resources which seem to want to be the default icon for the program. One has an ID of 1000 and is an inverse video picture of the bits "101 011" on two lines, and the other is an id of 1001 and is a small circle. If I delete them via rsrcedit, my own tAIB resource, (id= 1500) doesn't display. I have the lines:

```
1500 constant mtlogo
```

```
' go (ID) MTrs MakePRC MyTrainer
```

```
mtlogo (id)tAIB copyrsrc
```

as the first 3 lines after the 'needs' lines. I also noticed that I needed 2 spaces between MakePRC and MyTrainer, otherwise I get a Fatal Exception. The resulting compiled DB is `_MyTrainer` (with a leading space, but no character there), which shows up at the very top of the database list. Has anyone else ever seen this? Should I just delete these tAIB's with DelRsrc?



By [Eric Idema \(Eki\)](#) on Monday, October 29, 2001 - 01:59 pm: [Edit](#)

```
tAIB 1000 should be your large icon
```

```
tAIB 1001 should be your small icon
```

Just change the id of your tAIB to one of those (and use CopyRsrc to put it into your PRC) and it will be used as your app's icon. Note that CopyRsrc will overwrite the Quartus default tAIBs with those ids, so you don't need to explicitly use DelRsrc.

I'm not sure why you would get a crash unless you have two spaces following MakePRC since I've never encountered that behavior.



By [chris bucsko](#) on Monday, October 29, 2001 - 03:57 pm: [Edit](#)

Thanks!! I didn't realize you had to use 1000 and 1001 as the default tAIB ids, although every example I've seen uses them. I think my other problem is related to naming both my resource and records databases with the same name, a small oversight on my part.

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[HowTo] Determine Owner Name?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): \[HowTo\] Determine Owner Name?](#)



By [Elan Goldman](#) on Sunday, October 28, 2001 - 10:24 pm: [Edit](#)

Hi.

Many copy protection schemes are based on the Palm owner name. How do I determine the owner name programmatically? I thought I can do it using PrefGetPreference with some value for "Owner", but PrefGetPreference does not appear to support retrieving the owner's name.

TIA,

Elan



By [Eric Idema \(Eki\)](#) on Sunday, October 28, 2001 - 10:35 pm: [Edit](#)

If you look on the wiki (under user contributions) you'll find code to get the hotsync username.



By [Kris Johnson \(Kdj\)](#) on Sunday, October 28, 2001 - 11:13 pm: [Edit](#)

It's addressed in the wiki's FAQ:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthFaq>

-- Kris



By [Elan Goldman](#) on Monday, October 29, 2001 - 02:04 am: [Edit](#)

Thanks. Must've overlooked it when I searched for it on the Wiki (I ran a search on the page for "owner"). Sorry about the unnecessary noise.

Elan

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E-mail:

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Creating Pop-up Triggers

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Creating Pop-up Triggers](#)



By [Paul Randall \(Paul\)](#) on Sunday, October 28, 2001 - 10:01 am: [Edit](#)

I am trying to do a pop-up trigger list in my app and I could use some help in:

Setting up the resources using RsrcEdit...

and -

Handling it in my event loop.

Is there some example code somewhere that I could study?

Thanks



By [Neal Bridges \(Nbridges\)](#) on Sunday, October 28, 2001 - 08:43 pm:

[Edit](#)

Swatch does that. The sources are in the File Area. Let me know if I can shed any additional light!

Neal



By [Paul Randall \(Paul\)](#) on Tuesday, October 30, 2001 - 08:09 am: [Edit](#)

I loaded up the Swatch app and looked at it in RsrcEdit. So far so good. I've got the pop-up working in preview mode. Is the source for Swatch available? I only found the app and the readmes.

Does ctlSelectEvent report popup trigger hits?



By [Steve Bohrer \(Skb\)](#) on Tuesday, October 30, 2001 - 12:15 pm: [Edit](#)

The swatch source is posted to the [contrib area](#).



By [Paul Randall \(Paul\)](#) on Thursday, November 1, 2001 - 08:04 am: [Edit](#)

Thanks for the tips. I've got my category trigger working, though not in the way I had originally planned. I was trying to catch the control event when the user changed his selection in the pop-up and then store that in a variable - and I still haven't figured out how to do that. My solution is: when I need to know what category is selected I just assume that it HAS

changed and use:

```
: currentCategory ( -- u )  
  catList getObjectPtr lstGetSelection ;
```

where catList is the resource id of my pop-up list. This works just as well so... great!

Thanks once again for the help, folks.

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Creating Bitmap Families in RsrcEdit

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Creating Bitmap Families in RsrcEdit



By [Ron Doerfler](#) on Tuesday, October 23, 2001 - 11:34 pm: [Edit](#)

Hi everyone,

I have a lot of bitmaps in 1-bit depth for an app of mine that I would like to colorize. When I go to create an 8-bit version of one in RsrcEdit, I find that I have to create this from scratch--it doesn't allow me to copy and paste between bitmaps in a family (or at least I was getting crashes, etc.). I would like to have my 1-bit version duplicated as the start for the 8-bit version, so I can just change the colors without having to record the one version by hand on paper (or printing screen captures) and then creating the new version from scratch. Is there any way of doing this?

Also, just to check, I assume that for any particular model, the Palm OS automatically picks the highest-depth bitmap it can of the ones I populate--right?

Thanks,

Ron

(who may be back with more color questions)



By [Eric Idema \(Eki\)](#) on Wednesday, October 24, 2001 - 09:11 am: [Edit](#)

I've used RsrcEdit to copy and paste to and from different depths in the same bitmap family quite a bit. Generally, I've not had any crashes. I have crashed it on a copy/paste operation before though. Unfortunately, I don't remember the exact circumstances that led to the crash but I do remember that I was copying from another database's bitmaps into one of my database's bitmaps. So it's unlikely your experiencing the same crash, anyway.

However, I have done lots of copy/pastes from 1bpp to 8bpp and from 8bpp down to 2bpp and 4bpp without any real problems.

As for your other question, each palm has a default color depth. For instance, on my IIIc it's 8 bit. So it will use the 8bpp bitmaps when they are available, otherwise it will (I believe) use the next best available depth bitmap. On most, (perhaps all) non-color devices the default depth is 1bpp. Meaning that if you want grayscale you have to set the depth yourself when your program loads.



By [Ron Doerfler](#) on Wednesday, October 24, 2001 - 12:17 pm: [Edit](#)

Thanks, Eric! I'll give the copy/paste another try. Also, I appreciate the tip on grayscale.

By the way, I tried your Memory app, was very impressed, and had looked at your database to see your bitmap families--I figured there had to be some way of copying them, since you have many bitmaps and they have the same basic layout within families.

Cheers,

Ron

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Development Tool Selection for Upcoming Project

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Development Tool Selection for Upcoming Project



By [Eric Cole](#) on Tuesday, October 23, 2001 - 11:23 pm: [Edit](#)

I am interested in what folks here have to say about preferred development tools. My experience with Forth is so far limited but it appears to be what we need. (Been busy learning!)

The product we are developing will eventually need to be portable to other handheld type platforms (commercially available and custom built hardware). We like Forth for this reason. As our initial platform looks to be Palm/Handspring, Quartus looks very appealing.

Some of our specs:

Primary purpose is data gathering via a GUI (our audience is highly intelligent yet potentially illiterate).

A simple script language will be implemented to allow custom creation of decision trees for data gathering.

We need maximum reliability and the ability to be used in harsh field conditions (at least for one segment of our market.)

Tools for development of the GUI seems to be my sticking point at the moment. We would have multiple screens to represent different aspects of the scripting language.

Cost will not be a factor in a very likely funding scenario but just in case I am curious about tools in both ends of the price spectrum.

Any suggestions or tips will be greatly appreciated.

Thanks

Eric



By [Elan Goldman](#) on Sunday, November 4, 2001 - 08:26 pm: [Edit](#)

IMHO: Quartus Forth and OnBoard RsrcEdit should give you all you need for Palm Development. With respect to portability I can't give you any recommendations.

Elan



By [Eric Cole \(Eric\)](#) on Wednesday, November 28, 2001 - 11:17 am: [Edit](#)

Thanks Elan.

I have been getting into Quartus and OnBoard RsrcEdit. You are right they should work great.

Eric



By [John Newell](#) on Wednesday, November 28, 2001 - 12:04 pm: [Edit](#)

Eric,

Just a small word of caution. If you want multiple screens you may find that you will have to split your application into modules of 2 or 3 screens. The modules would then call each other. It depends on how much processing you do to display each screen. Quartus can run out of DICTIONARY space when COMPILING large applications.

Regards

John



By [Kris Johnson \(Kdj\)](#) on Wednesday, November 28, 2001 - 02:42 pm:

[Edit](#)

Another caution: if you need to handle launch codes (for synchronization of data with desktop, for example), be aware that Quartus's launch code support is still new and considered "beta". That doesn't mean it's bad or doesn't work: just be aware that it hasn't been exercised by a lot of people.

-- Kris

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Persistency of WinGetDrawWindow contents

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Persistency of WinGetDrawWindow contents



By [Alexandre Rousseau](#) on Tuesday, October 23, 2001 - 08:17 pm: [Edit](#)

Hi,

Newbie alert! :}

Can anyone give me the high level stuff on saving the contents of my current draw window for later (read cross session) retrieval and displaying? I am guessing that I should use the WinGetBitmap API call but QF 1.2.1 can't find that call. In other words: help !

Thanks in advance,
Alex



By [Kris Johnson \(Kdj\)](#) on Wednesday, October 24, 2001 - 06:47 am:

[Edit](#)

WinGetBitmap can be defined like this:

```
: WinGetBitmap ( WinHandle. -- BitmapPtr. )  
  (hex) a3a2 systrap 2drop a0 ;
```

Note that this will only work with OS 3.5 and higher.

Take a look at

<http://sleepless-night.com/cgi-bin/twiki/view/Main/SystemTrap> to see how to define any other system calls that might be missing.

You may want to look at this as well:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/BitmapMgrModule>

-- Kris



By [Alexandre Rousseau](#) on Wednesday, October 24, 2001 - 11:21 am:

[Edit](#)

Thanks Kris! I'll try this tonight. I guess saving the bitmaps (I plan on having up to about 200 of those, each corresponding to an offscreen buffer - I'm writing an animation program BTW) will just require that I create a Db and add&write one record for each bitmap. Thanks again. More news later...



By [Steve Bohrer \(Skb\)](#) on Wednesday, October 24, 2001 - 02:10 pm:

[Edit](#)

You have no doubt already planned that most of those 200 offscreen buffers will need to be small sections of the screen, or else you will use up the dynamic heap pretty fast.

In black and white (1 bpp), a full 160x160 screen is at least 3200 bytes. Thus, 10 or 20 full screen images make a significant dent in available RAM.

In 8-bit color, everything is eight times as big, or at least 25,600 bytes for a full screen bitmap.

Palm devices with OS 3.5 seem to have either 128K or 256K of dynamic heap, with color devices having 256K.



By [Alexandre Rousseau](#) on Wednesday, October 24, 2001 - 03:02 pm:

[Edit](#)

Hi Steve,

I would like to set the ceiling on the number of frames to 100, with each being app. 133 X 100. I plan on letting the user define subsets of these frames that he can then repeat at will and in any order upon playback.

So... all this to say that I had not thought of that and damn do I feel like a newbie !

I need the user to have access to any frame in as short time as possible so compression and storage to & retrieval from the db on a per request basis is not my preferred option.

Is there no way of requesting an increase in the amount of dynamic heap on the fly (i.e. with a syscall)?

Alex



By [Steve Bohrer \(Skb\)](#) on Thursday, October 25, 2001 - 10:58 pm: [Edit](#)

As far as I know, you can not get more dynamic heap. And, you are probably correct that decompression in real-time while animating will not be very speedy. But, since the OS provides compression for bitmaps, you can certainly try it out without much effort, and see how slow it is.

I have not worked with any graphics on the Palm, but the OS docs say that it is possible to copy a bitmap into the storage heap, although you can not create it there directly. This suggests that there is some use for bitmaps in

the storage heap.

In OS 3.5, the docs say that the preferred way to draw an offscreen bitmap to the screen is with the WinDrawBitmap call, rather than the previous OS method of attaching the bitmap to an offscreen window, and then using WinCopyRectangle to copy from window to window.

So, it may well be the case that WinDrawBitmap will work directly with a pointer to a bitmap in the storage heap. If so, you can playback your frames from the storage heap, and move them to a window with a dynamic heap bitmap only when you edit them.

For some types of animation, it saves lots of space (and bit copy time, at the expense of a more complex animation structure and playback engine) if you only animate small rectangles within a full screen background image. This obviously works only when some details in a largely static picture move, such as blinking eyes and flickering flames. It is not so handy if a large shape moves across the frame. If you include the ability to have a simple script to give the sequence of the frames for each small rectangle, you can get a lot of different motion with relatively small number of small frames.

Try some simple test programs and see what you can get working.



By [Alexandre Rousseau](#) on Friday, October 26, 2001 - 12:18 pm: [Edit](#)

Hi Steve,

Would you mind writing the code for that?

;))

You have been more than helpful. Thanks again! I look forward to having something to show in (knock on wood) a few weeks. I will BTW follow your good advice and test the WinDrawBitmap mechanism to see how much mileage I can get out of that.

But before I can proceed, I still have to resolve some - I am sure minor - display vs. form vs. draw window issues, i.e. my menu and widget areas getting erased at showform time and my doodling pen being able to doodle in those same areas (not a good thing). That + my trying to constrain doodling and refreshes to a 133 by 100 area. Silly stuff I am sure but a mountain for a newbie.

Take care,
Alex

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FloatLib problems

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): FloatLib problems](#)



By [John Newell](#) on Monday, October 22, 2001 - 07:03 am: [Edit](#)

I've downloaded the FloadLib files. However, when I use them them access word (2>r) which isn't defined anywhere. Can anybody help?

Regards
John



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, October 22, 2001 - 08:48 am: [Edit](#)

John,

The 2>r word is in the core-ext library and is defined as:

```
: 2>r swap >r >r ; inline
```

Barry



By [Eric Idema \(Eki\)](#) on Monday, October 22, 2001 - 08:56 am: [Edit](#)

I haven't used floatlib, but it looks like it depends on a new core-ext file. It's on the wiki and it defines the (2>r) and (2r>) words you need.



By [John Newell](#) on Monday, October 22, 2001 - 10:48 am: [Edit](#)

Barry - I am looking for (2>r), not just 2>r.

I have never successfully accessed the wiki from my PC at work - I think it must be something to do with the firewall.

If FloatLib is in the Quartus file area then all the NEEDED files should also be there. I think these include:

the new core-ext (whatever that is)

XTLiterals

dspaces

ans+loop

inifini

None of which I can find in the file area.

Regards
John



By [Richard Chamberlain \(Rac\)](#) on Monday, October 22, 2001 - 11:28 am: [Edit](#)

John,

I've never been able to get to the wiki from home, however Neal gave me the link to www.safeweb.com - try going there and get to the wiki through that.

Richard



By [Kris Johnson \(Kdj\)](#) on Monday, October 22, 2001 - 12:10 pm: [Edit](#)

You might consider downloading the WikiBackup, and using that from work if you can't get to the wiki when you need to. (Of course, you have to be able to access the wiki to initially get the WikiBackup...)

<http://sleepless-night.com/wiki/WikiBackup>

-- Kris



By [John Newell](#) on Monday, October 22, 2001 - 12:46 pm: [Edit](#)

Thanks for the clue Richard. Worked fine though a bit slow.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Monday, October 22, 2001 - 04:04 pm: [Edit](#)

John, sorry for the confusion. I'll have to update the version in the File Area.

Neal



By [Neal Bridges \(Nbridges\)](#) on Monday, October 22, 2001 - 04:12 pm: [Edit](#)

Floatlib in the Contrib file area is now a redirect to the Wiki page. Let me know if there's anything else that would benefit from a similar redirect.

Neal



By [Gary Wiese](#) on Monday, October 22, 2001 - 06:48 pm: [Edit](#)

You may need to contact Chapman Flag about a version issue. I had the same problem, my version of Quartus was not working with the new version of Mathlib.

Gary



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, October 23, 2001 - 08:18 am: [Edit](#)

John,

Sorry for mis-reading your posting - too quick to respond I guess. Apparently the old adage about "haste makes waste" still fits, even on the discussion forum!

Barry



By [Chapman Flack](#) on Tuesday, October 23, 2001 - 10:59 am: [Edit](#)

The version issue was with the inifini module--the one on the wiki works with 1.2.1U and 1.2.5R which, last I knew, was the official released version. Two lines need to be changed to make it work with 1.2.6--I'll put the changes on the wiki when I get around to it, or sooner if somebody needs it.

When Neal does an official release of the next Quartus, I'll do an official upload of a version that supports it.

-Chap



By [John Newell](#) on Tuesday, October 23, 2001 - 12:04 pm: [Edit](#)

Thanks all for the help. I've never needed float before so haven't looked into it.

Chap is correct. I've got 1.2.6R and MathLib promptly failed to load - something about (not) patching (bye).

Anyway, it turns out that I don't currently need MathLib, just the FloatLib stuff so can get bye (NPI).

I have a calculated DF (range 0-->100) which I want to round (to nearest integer) then convert to a single cell number. I have:

DF>SF SF>F FROUND F>D D>S

It works but do I have to say all that (if I don't want to use MathLib which has a DFROUND)?

Regards
John



By [Chapman Flack](#) on Tuesday, October 23, 2001 - 06:43 pm: [Edit](#)

Since your range is nonnegative, you can get behavior equivalent to Quartus FROUND (which is almost the same as DPANS Round to nearest 12.3.2) just using

```
(dfloat) 0.5 DF+ DF>D D>S
```

which looks equally long but involves a lot less bit bashing.

By the way, I just uploaded a QF 1.2.6-specific version of inifini to the wiki at the InitializationAndFinalization topic. That should get you going if you're using 1.2.6 and need the mathlib functions.

-Chap



By [John Newell](#) on Wednesday, October 24, 2001 - 04:19 am: [Edit](#)

Thank you Chap.

New inifini works (loads) OK.

John

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Arcfour

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Arcfour](#)



By [Richard Chamberlain \(Rac\)](#) on Friday, October 19, 2001 - 06:03

pm: [Edit](#)

Hi,

Can someone show me a simple example of how to use the arcfour module.

Thanks,

Richard

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New Serial Manager

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): New Serial Manager](#)



By [Ronny Svensson](#) on Thursday, October 18, 2001 - 04:33 am: [Edit](#)

Anyone got some example code on using srm.txt?
Some stack comments on the srm-functions in srm.txt would be appreciated too.
What does the:
(hex) 7400 + cs,
in srmTrap do?

Ronny



By [Kris Johnson \(Kdj\)](#) on Thursday, October 18, 2001 - 01:31 pm: [Edit](#)

I don't think you have to know how srmTrap works; it is used to define the other words at the bottom of the file.

-- Kris



By [Chapman Flack](#) on Thursday, October 18, 2001 - 01:48 pm: [Edit](#)

But if you want to know what it's doing anyway, check out the SystemTraps topic on the wiki.

-Chap



By [Ronny Svensson](#) on Friday, October 19, 2001 - 05:56 am: [Edit](#)

To check if the new serial manager is present the doc has this code:
err = FtrGet(sysFileCSerialMgr, NewSerialPresent, &value);
Where do I find the values for the arguments?

Ronny



By [Kris Johnson \(Kdj\)](#) on Friday, October 19, 2001 - 10:36 am: [Edit](#)

They are defined in SystemResources.h and SerialMgr.h in the Palm OS SDK.

The values are

```
needs ids  
(id) smgr 2constant sysFileCSerialMgr
```

1 constant sysFtrNewSerialPresent

-- Kris

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Format of PRC

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Format of PRC](#)



By [John Newell](#) on Wednesday, October 17, 2001 - 06:13 am: [Edit](#)

Does anyone know of documentation that describes what Quartus Forth puts into the DATA 1, code 0, code 1, data 0, p4ap 1, and pref 1 resources of the generated PRC file? Thank you.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Wednesday, October 17, 2001 - 09:24 am:

[Edit](#)

There's a little bit of information here:

<http://www.quartus.net/products/forth/manual/structur.htm>

It's not very detailed.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 17, 2001 - 09:49 am: [Edit](#)

John, those are internal formats, subject to change. What exactly are you looking for?

Neal



By [John Newell](#) on Wednesday, October 17, 2001 - 12:15 pm: [Edit](#)

I'm not exactly sure at the moment. I was looking for ways of extending the compile time dictionary space (which I am forever running out of) by using Multiple Code Resources (<http://oasis.palm.com/dev/kb/papers/1143.cfm>).

In a big app I do:

NEEDS Libraries

NEEDS General Support Words

NEEDS Application Support Words

NEEDS Application code

By the time I get to the Application code there are many words in the dictionary that I no longer need.

I thought that perhaps after:
NEEDS Libraries
NEEDS General Support Words
NEEDS Application Support Words
I could do a dummy MakePRC at that point.

Then for the main app:
NEEDS Libraries
NEEDS Application Support Links (file that loads the resources for and gives access to the required Application Support Words)
NEEDS Application code
Main MakePRC
CopyRsrc from the dummy PRC to the main PRC file.

Sounds a bit complicated now I've written it down.

The alternative may be to make a Shared Library of the Application Support Words.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Wednesday, October 17, 2001 - 12:55 pm:

[Edit](#)

I've thought about something along these lines as well. My half-baked idea is:

- define a MARKER word
- compile a bunch of definitions
- somehow copy all the code from the marker to the current CSHERE to a code resource (maybe via MakePRC?)
- execute the MARKER word (to clear the dictionary of the code)
- redefine the necessary words such that they run from the code resource

Shared libraries make sense if multiple applications use them. But if the code is only used by a single application, then I think use of multiple code resources makes more sense.

-- Kris



By [Chapman Flack](#) on Wednesday, October 17, 2001 - 02:50 pm: [Edit](#)

The trick is to resolve branch, jump, and call destinations in multiple code resources without using more than one hardware register as a CS pointer. I've done some work toward that in `QuartusForthExtensions` on the wiki,

but so far all I'm putting in the extra code resources is hand-coded assembly. I have a notion for PICifying arbitrary compiled Forth into another code space, and the :relo flavor of MultipleDataSpaces (also on wiki) solves one of the problems ... that stuff is there if anybody wants to run with it, but I don't have time right now to put the pieces together into something nice and automagic.

I think Neal is also working on multiple code segment support for a later release.

-Chap



By [John Newell](#) on Tuesday, October 23, 2001 - 12:42 pm: [Edit](#)

Neal,

Can you say why this gives "Exception 102 raised." when MCR2 doesn't exist (although it does create MCR2) and "Fatal Exception" when it does exist. Problem occurs on the second MakePRC? Thank you.

```
\ MCR1 18-10-01 21:59 jrn
needs zstrings

variable WorldXt
Marker DropMe
: world
." World!"
;
: init
['] world WorldXt !
;
true generate-symbols
' init 12345. MakePRC MCR1
\
DropMe
: hw
page ." Hello " WorldXt @ execute
;
: go
\ init
hw
begin key [char] x = until (bye)
;

\ true generate-symbols
.( 1)
' go 12345. MakePRC MCR2
.( 2)
```

(I know it the program won't work yet - just experimenting with creating resources.)

Regards
John



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 23, 2001 - 02:36 pm: [Edit](#)

Does the problem go away if you use different creator IDs for the two PRCs?

-- Kris



By [John Newell](#) on Wednesday, October 24, 2001 - 04:04 am: [Edit](#)

Yes thank you. I should have thought of that since I've had a similar problem before.

John



By [Neal Bridges \(Nbridges\)](#) on Saturday, October 27, 2001 - 02:31 pm: [Edit](#)

Glad Kris could help, John. I seem to have missed seeing your question the first time around.

Neal

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Saving program state between launches

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Saving program state between launches



By [Paul Randall \(Paul\)](#) on Sunday, October 14, 2001 - 02:55 pm: [Edit](#)

How can you save some private info about your program's state so you can restore it on the next launch? I know this is a common task because most every game I've seen does it. Can you stick things in resources or write files? Is there a discussion somewhere on this?

Thanks, Paul



By [Matthew Burke \(Mmb\)](#) on Sunday, October 14, 2001 - 06:06 pm:

[Edit](#)

There are several ways you can do this. Perhaps the easiest is to take a look at the AppPrefsModule on the wiki (<http://sleepless-night.com/cgi-bin/twiki/view/Main/AppPrefsModule>).



By [Paul Randall \(Paul\)](#) on Sunday, October 14, 2001 - 07:20 pm: [Edit](#)

Thanks. That looks like just what I need.

- Paul

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Scared to use Forth?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Scared to use Forth?



By [wilson dobson](#) on Sunday, October 14, 2001 - 10:35 am: [Edit](#)

I have been teaching myself Forth over the last few weeks, using a Palm IIIc. Last night I was working on a simple application employing some looping and variables. My program had been working fine and I had run it several times, until I increased the range of one of my loops. I re-ran the program and it continued to run fine, until the Palm froze. No key would work, not even the on/off button. I did a soft reset, and when the Palm came back to life it was in its original (fresh from the factory) state. EVERYTHING I had put on the device since the day I bought it over a year ago was gone. Fortunately, hotsync restored everything but one application, and I did lose all the programming I had done in the last 48 hours since the last hotsync, but the initial shock of seeing everything disappear has not been good for my life expectancy.

It seems extraordinarily easy to crash Quartus Forth and the Palm compared to other programming environments I've dealt with and I'm beginning to have second thoughts about programming with this combination.

Any thoughts or guidance for a newbie to Palm programming on how to avoid these programming pitfalls?



By [Neal Bridges \(Nbridges\)](#) on Sunday, October 14, 2001 - 01:14 pm:

[Edit](#)

A good backup is always required. However, in the years I've been using Quartus Forth to develop apps, I've only ever managed to wipe memory a couple of times, and always because I was radically over-filling the stack.

Storage RAM can't be overwritten that way -- but when the low-memory areas of the Palm are completely overwritten, the PalmOS won't recover and the device comes up in a clean state.

You can achieve the same sort of crash with C, or assembler, but of course it isn't as quick and easy -- you need to compile and upload your app each time.

The safe module works to protect you against a number of crash conditions, and DEPTH can be monitored inside your main loop to ensure that you're not unbalancing the stack. Both techniques are useful, especially to novices.

As your skills advance, you'll find that learning to factor well will prevent most such situations from occurring. Aim for small, well-factored definitions, easily tested and confirmed correct.

Neal



By [Paul Randall \(Paul\)](#) on Sunday, October 14, 2001 - 01:38 pm: [Edit](#)

I've been working with Quartus for a few weeks now and have hung my m500 more times than I can remember already. Being careless and not thinking things through is to blame. I haven't lost any files though and I'm sorry that happened to you.

What Neal said about small well-factored definitions is truly sage. If I think I need to do THIS and THIS and THIS I'll write the word THINGY that does all three, and it works, but later when other things need to change I'll find I have to go back and factor that stuff out anyway.

With small words you can tell at a glance if they might do something BAD.

Good luck, hang in there.

- Paul



By [Jim Hendricks \(Jimh\)](#) on Sunday, October 14, 2001 - 01:56 pm: [Edit](#)

Crashing the device and wiping out memory is the price we pay for having a development environment that runs on the device itself, and producing the tightest and fastest executables.

I would give up neither. I love the fact that I can be sitting at a gas station getting a fill up, and I can whip out my palm and code a few. I for one also appreciate a program that is coded as tightly as possible since I have everything but the kitchen sink on my palm. Why should I want a program that takes 150k on my palm when the competing program takes 40k and they are functionally the same? The 40k one gives me 110k for other programs or data, thus greatly expanding the capabilities of my handheld.

Coding in C may trap many things for you that would otherwise crash the device, but do you want the overhead? Do you want to develop on the PC and have to test in POSE, or keep syncing with the device?

Then there's assembler. Arguably the smallest footprint and best performer, but you have more ways to crash the device in assembler, also have to cross assemble, and in the end it will take the average programmer more than 2-3 times longer to code than a higher level like C.

Quartus gives me the best of it all IMHO. I can code on the device, code quickly cause the compile happens behind the scenes and very quickly, I can code tightly and efficiently, and I don't crash near as often as I did at the beginning.

Forth may not be for the squeamish, but I think the rewards far outweigh coding without a safety net (although frequent backups have saved my neck often enough to engrain it in my programming process)

Just my 2 dollars worth.

Jim

 By [Kris Johnson \(Kdj\)](#) on Sunday, October 14, 2001 - 08:24 pm: [Edit](#)

Frequent backups are definitely the way to go. The Handspring Visor has a nifty little flash backup module that can re-establish your system without the pain of going through a HotSync. I think something similar is available for the newer Palm handhelds with that secure-memory-slot-thingee.

-- Kris

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Sunday, October 14, 2001 - 08:32 pm: [Edit](#)

As one who thinks he has graduated from newbie to novice - others can debate that if they want - I've had more than my share of crashes, including a couple of major wipeouts. I've survived all without any real difficulty by heeding the following:

- 1) Use a good backup program. I've always used BackupBuddy but the Palm desktop backup may cover everything about as well these days.
- 2) Hotsync regularly, and more often when working on a new program. From my perspective, a complete meltdown is no problem if everything was backed up within the last couple of hours.
- 3) Back up your code file and resource file at various points along the development path. This doesn't have anything to do with the issue you brought up, but if you have made several changes to your program and then it crashes, you may find it easier to drop back to the last version that compiled and ran as expected.

I suppose crashes are going to occur (at least in my case), so preparing for them is the order of the day. The above rules have kept me from having any real consequences (other than frustration) when the bugs creep in.

Barry

 By [Steve Bohrer \(Skb\)](#) on Sunday, October 14, 2001 - 11:45 pm: [Edit](#)

I started out my Palm development efforts by using POSE. This let me use the PC keyboard to type in big chunks of code until I got both smaller at Forth and faster at graffiti. Plus, I was using a "toy" environment, with none of my schedule or other data, just Quartus, RsrcEdit, and Pedit.

Of course, the big downside is that you can't take it with you. After a few months, I made the transfer to on-board development, and now I just use POSE for final checks with the debug ROM (which I still find to be necessary, as it usually finds something subtle) and for hunting difficult bugs with the help of Debuffer.

But, I found POSE helped me through the steepest parts of the learning curve with out killing my real Palm.

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Coords@ and grafitti area

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Coords@ and grafitti area



By [Richard Chamberlain \(Rac\)](#) on Saturday, October 13, 2001 - 03:14

am: [Edit](#)

Hi,

I'm adding a tap tempo feature to my metronome - and originally I was going to use a gadget, get pendownevents and then use coords@ to check the position.

However when I played with coords@ with in quartus I noticed that it displayed co-ordinates within the grafitti area. That's a perfect solution as far as I concerned because I'm not using real estate in the displayable area.

So my question is about the positions of graffiti areas and whether they are different from device to device. I.e. on high resolution devices is it at different place?

I would like to just use the number area - so that users can still use menu short cuts.

thanks for any advice,

Richard



By [Kris Johnson \(Kdj\)](#) on Saturday, October 13, 2001 - 07:54 pm: [Edit](#)

I think you can use EvtGetSilkscreenAreaList:

<http://www.palmos.com/dev/tech/docs/palmos/SystemEventManager.html#938460>

This only works for Palm OS 3.5 and up. You can probably just use a hardcoded value for previous versions of the OS.

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Sunday, October 14, 2001 - 10:56

am: [Edit](#)

Thanks Kris,

I'll check that out,

Richard

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UIpickcolor

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): UIpickcolor](#)



By [A.Schönfeld](#) on Friday, October 12, 2001 - 05:54 pm: [Edit](#)

How do i call the UIpickcolor function ?
Is there a list of systrap N°'s (ID's) on the web ?



By [Kris Johnson \(Kdj\)](#) on Friday, October 12, 2001 - 10:46 pm: [Edit](#)

There's a header file called CoreTraps.h in the Palm OS SDK that lists all the system trap numbers.

I believe you can define the function something like this in Quartus Forth:

```
\ Use one of these two values for the 'start' parameter
0 constant UIPickColorStartPalette
1 constant UIPickColorStartRGB

: UIPickColor ( tipP. titleP. start rgbP. indexP. -- Boolean )
  (hex) A3AC systrap          \ invoke trap
  2drop 2drop drop 2drop 2drop \ drop arguments
  d0 drop (hex) FF and ;      \ Boolean result
```

(I haven't tested this -- use at your own risk.)

Check out <http://sleepless-night.com/cgi-bin/twiki/view/Main/SystemTrap> for more details on how to define things like this.

-- Kris



By [Steve Bohrer \(Skb\)](#) on Sunday, October 14, 2001 - 11:54 pm: [Edit](#)

Seeing all these systrap definitions makes me wonder if it is worth having a special case assembly addq-to-sp-then-fix-TOS word to clean up after systraps. How are the "built in" Quartus traps done? Do they do a bunch of drops and 2drops, or do they just change the stack pointer the required amount?



By [Kris Johnson \(Kdj\)](#) on Monday, October 15, 2001 - 12:02 am: [Edit](#)

They change the stack pointer. Basically, they increment the stack pointer by $((\#cells - 1) * 2)$, and then do a DROP so that the new TOS goes into

the D7 register.

I've considered defining some words to handle this, but haven't quite gotten around to it. It shouldn't be too hard.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, October 15, 2001 - 12:45 am: [Edit](#)

Well, I decided I wouldn't be able to sleep until I went ahead and did it, so here it is:

```
\ ndrop 2001/10/15 KDJ

: ndrop ( x1 x2 ... xN u -- x )
  for drop next ;

: nnip ( x1 x2 ... xN x u -- x )
  for nip next ;

: literal-nnip ( u -- )
  cells
  (hex) 49ec cs, cs, \ lea n(a4),a4
; immediate

: literal-ndrop ( u -- )
  dup 2 u< invert if
    dup 1- postpone literal-nnip
  then
  if postpone drop then
; immediate
|
```

Use it like this:

```
needs ndrop
\ Use one of these two values for the 'start' parameter
0 constant UIPickColorStartPalette
1 constant UIPickColorStartRGB
: UIPickColor ( tipP. titleP. start rgbP. indexP. -- Boolean )
  (hex) A3AC systrap \ invoke trap
  [ 7 ] literal-ndrop \ drop 7 cells
  d0 drop (hex) FF and ; \ Boolean result
```

This compiles code like this:

```
DUP
move.w #41900,d7      \ (hex) A3AC
jsr 76(a5)           \ systrap
lea 12(a4),a4        \ Add 12 to stack pointer
DROP                 \ Drop seventh cell
jsr -29058(a2) = d0
\ etc.
```

If you disassemble usage of built-in systraps, you'll see the same pattern.

I'll add this to the wiki after some testing and comments from others.

-- Kris



By [Steve Bohrer \(Skb\)](#) on Monday, October 15, 2001 - 10:14 am: [Edit](#)

Pretty nifty, Kris. Seems you could trim a few more bytes for systraps that return an int if you skipped the last DROP and moved d0.w to TOS. But, maybe that is too much of a special case.



By [Kris Johnson \(Kdj\)](#) on Monday, October 15, 2001 - 11:05 am: [Edit](#)

I'll leave the definition of literal-ndrop-d0-drop as an exercise for the reader.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, October 15, 2001 - 05:26 pm: [Edit](#)

BTW, the m68k-util module in the wiki has a word that will copy the low word of D0 to TOS.

<http://sleepless-night.com/cgi-bin/twiki/view/Main/M68kUtilModule>

-- Kris



By [A.Schönfeld](#) on Saturday, October 20, 2001 - 05:04 pm: [Edit](#)

Thank you very much for your help and your comments.

UIPickColor works fine in POSE.

I'll check the CoreTraps.h in the SDK, thank you !

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Error 778 on M505 - IR?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Error 778 on M505 - IR?](#)



By [Ronny Svensson](#) on Friday, October 12, 2001 - 04:32 am: [Edit](#)

I have a customer that gets error 778 serErrNotSupported (I display error numbers and exit using catch) with m505. The application is using IR-redirection (serCtlIrDAEnable) - could this be a problem on m505? Or is there something else that's changed which would render error 778? Appreciate any hints as I don't have an m505. The app is made with 1.2.5R.

Ronny



By [Harry Chou](#) on Monday, October 15, 2001 - 04:25 am: [Edit](#)

You need new serial manager 😊

The old serial library can not be redirected to IR in Palm OS 4.0 environment.

harry



By [Ronny Svensson](#) on Monday, October 15, 2001 - 05:45 am: [Edit](#)

Where do I find some info on using the new serial manager?

Ronny



By [Steve Bohrer \(Skb\)](#) on Monday, October 15, 2001 - 10:11 am: [Edit](#)

You may well have already checked the obvious, but <http://www.palmos.com/dev/tech/docs/palmos/> has the on-line version PalmOS programmer's companion and reference. The latest edition of the companion is in two volumes, with the second volume titled "Communications".

Downloadable versions of the above are at <http://www.palmos.com/dev/tech/docs/>

The only difficult part about the new Companion is that Palm OS 4.0 adds a lot of stuff, so it there is more to wade through to find the basics. But, the 4.0 only stuff is clearly marked, and it seems that all the more core stuff is still there as well.



By [Harry Chou](#) on Tuesday, October 16, 2001 - 02:16 am: [Edit](#)

The library can be found at

<http://www.quartus.net/files/PalmOS/Forth/Contrib/>

srm.txt

harry

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Use-resources fails to find db

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Use-resources fails to find db



By [Paul Randall \(Paul\)](#) on Wednesday, October 10, 2001 - 09:33 pm:

[Edit](#)

I can't figure it out...

(ID) egbo (ID) rsrc use-resources

aborts with "can't find resource database"
SOMETIMES.

I have used Steve Donahue's tutorial for Rsrcedit and I copied that rsrc db to use with my project, making some changes including the creator field. I load up my project then load the event loop code from Steve's tutorial and I get the error message.

If I leave out my project code and substitute a dummy line of code in the event loop everything loads and works fine. So its my code doing something but I can't imagine what. It compiles and runs fine from the console.

Sound familiar to anyone?

I am using my own defining word to create a bunch of english word lists which in turn are used in various combinations to generate text.



By [Kris Johnson \(Kdj\)](#) on Wednesday, October 10, 2001 - 11:31 pm:

[Edit](#)

A few questions:

- 1) Do you actually have a resource database with the creator 'egbo' and type 'rsrc'?
- 2) Are you invoking that use-resources line multiple times? I think I remember some sort of problem about that.
- 3) Do you get the error when you "load" the event loop code (with include or needs), or when you run the event loop code?
- 4) Does the "event loop code" you're loading have any use-resources usages?

5) What is the dummy line in the event loop that fixes everything, and what is the code that it replaces?

-- Kris



By [Paul Randall \(Paul\)](#) on Thursday, October 11, 2001 - 06:43 am: [Edit](#)

To answer your questions,

1) Do you actually have a resource database with the creator 'egbo' and type 'rsrc'? -- Yes - my alternate test version loads and uses it.

2) Are you invoking that use-resources line multiple times? I think I remember some sort of problem about that.

-- No. it occurs once in my 'test' memo which loads everything.

3) Do you get the error when you "load" the event loop code (with include or needs), or when you run the event loop code? -- When I load. My event loop never gets compiled because everything halts at the 'can't find rsrc db' error.

4) Does the "event loop code" you're loading have any use-resources usages? NOPE.

5) What is the dummy line in the event loop that fixes everything, and what is the code that it replaces?

The dummy line is ." This is a test."

The code it replaces is fairly involved but has the effect of printing five lines to the screen. But the problem is in the loading. The only code of mine that is being executed before the error is in my defining words, which all compile and run ok at the Forth console and do nothing with resources. They manipulate the dictionary data space - no handles, no direct use of sys traps by me.

I am doing 'needs ids' and 'needs events' in more than one place.

Thanks for the ideas - I'll keep looking. It's usually something obvious in retrospect, isn't it?

Paul



By [Paul Randall \(Paul\)](#) on Thursday, October 11, 2001 - 07:08 am: [Edit](#)

This just in - If I load my code AFTER the use-resources statement everything loads and runs as expected. It's still a mystery though isn't it?.

-- Paul



By [Kris Johnson \(Kdj\)](#) on Thursday, October 11, 2001 - 07:45 am: [Edit](#)

Are you saying that something like this works:

```
(ID) egbo (ID) rsrc use-resources  
needs mycode  
needs eventloopcode
```

and so does this:

```
needs eventloopcode-withdummyline  
(ID) egbo (ID) rsrc use-resources
```

but this does not:

```
needs mycode  
needs eventloopcode  
(ID) egbo (ID) rsrc use-resources
```

(failing with "Can't find resource database")?

-- Kris



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, October 11, 2001 - 08:38 am: [Edit](#)

Paul,

This probably isn't the issue, but I'll chime in just to be sure. You didn't by chance get the program to compile properly the first time, and then delete it with a Memory/Launcher delete tool by any chance?

I learned the hard way long ago that when doing that the program deletion also takes out the resource file, which then gives you the missing resource database error on next compilation attempt. I have found that the best way to delete a program during the testing period is to use RsrcEdit to delete the app itself and not touch the resource file.

Again, maybe not what you are seeing, but I toss it out there just in case....

Barry



By [Paul Randall \(Paul\)](#) on Thursday, October 11, 2001 - 09:58 am: [Edit](#)

Chris,

```
needs mycode
(ID) egbo (ID) rsrc use-resources
```

- gives the error

```
(ID) egbo (ID) rsrc use-resources
needs mycode
```

- does not.

In both cases my event loop code appears after these statements.

```
: doit
60 160 60 0 erase-rectangle
60 0 at
newtext poem print ;

: doEvent ( ekey -- )
case
  menuEvent of
    event >abs itemid
      aboutMenuItem = if
        aboutBox frmAlert drop then
      endof
  ctlSelectEvent of
    event >abs itemid
      4001 = if doit else sa then
  endof
endcase ;

: show-panel
helloForm showForm ;

: go show-panel
doit
\ 35 0 at (the dummy lines)
\ ." this is a test."
begin ekey doEvent again ;
```

But there are a lot of other 'needs' for library and my own files as well.

Barry - thanks for the note. I haven't deleted anything anywhere lately. I will keep that in mind though.

Thanks, Best Wishes
Paul



By [Steve Bohrer \(Skb\)](#) on Friday, October 12, 2001 - 08:59 am: [Edit](#)

Barry notes that deleting an app using the normal launcher delete command also removes all the files that have the same creator as the app. The PalmOS is trying to avoid having a bunch of orphan data files lying around after the app that created them has been removed, because the typical user would have no way to find and remove these files.

For this reason, I think it is best to give my resource files a different creator ID than the app they go with, as I may create and delete the app various times during development. I have been using 'p4ap', which is the registered type for PilotForth, which I don't have installed, so it will not be a conflict. I use my app ID as the Type of the resource database. (This is the scheme Neal uses in some of the sample code.)

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FrmReturnToForm

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): FrmReturnToForm](#)



By [Eric Idema \(Eki\)](#) on Wednesday, October 10, 2001 - 10:10 am: [Edit](#)

I'm debugging the program I'm writing and I'm seeing garbage on the stack periodically. I think the culprit is FrmReturnToForm. Here's a chunk of my code:

```
depth 2 <> if 31 . .s then
ScoreForm FrmReturnToForm
depth 2 <> if 32 . .s then
```

I'm expecting there to be 2 cells on the stack, a ctlSelectEvent and the ctlID. During execution of my program I'm getting the following:

```
32 <3> 9 4040 4
```

The 9 is the ctlSelectEvent and the 4040 is the id of the control. It looks like FrmReturnToForm is leaving the 4 which throws off the rest of my program (it's getting dropped where the 4040 is supposed to be dropped, so on).

The problem is that all the documentation for FrmReturnToForm indicates that it doesn't leave anything on the stack. I suspect that the documentation is wrong; that it leaves an error code on the stack. But before I just throw in a drop after FrmReturnToForm, I thought I'd ask if anybody else has noticed this behavior. Well?



By [Kris Johnson \(Kdj\)](#) on Wednesday, October 10, 2001 - 02:25 pm:

[Edit](#)

Are you sure that ScoreForm puts a single-cell value on the stack?

If I try this:

```
: foo
  BlankFormID ShowForm
  MainFormID FrmReturnToForm
.s ;
```

Then the .s shows "stack empty", so I think FrmReturnToForm is consuming the right number of arguments.

Note: the above crashes with a Fatal Exception right after printing "stack empty". I think this is due to misuse of FrmReturnToForm. I just wanted to see whether a value was left on the stack.

-- Kris



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, October 10, 2001 - 02:46 pm: [Edit](#)

Eric,

FrmReturnToForm should not need a drop after it. It will consume the ID of a form (a single cell value) and puts nothing else on the stack. So, if you have 2 values on the stack when you use FrmReturnToForm, you will be left with one afterward.

I've never had any strange behavior with FrmReturnToForm, and I've never needed a drop after it.

Can you expand on the code snippet you posted? I don't think FrmReturnToForm is the problem.

Barry



By [Eric Idema \(Eki\)](#) on Wednesday, October 10, 2001 - 08:49 pm: [Edit](#)

Thanks guys, I've figured it out. I thought because I wasn't seeing any output from the debug statement before the call to FrmReturnToForm that it was the culprit. As it turns out, the debug statement was actually printing out that the stack was already messed up, but I wasn't seeing the message because FrmReturnToForm would bring up the other form, obscuring the debug print out. At any rate, the preceding word was leaving the 4 on the stack.

I figured it all out by writing a word that would check the stack depth and, if it wasn't correct, use .s to print the stack and then pause for 10 seconds. In the future I'm going to use a word like that in my event-loop word so I can pick up on these programmer errors as they happen. I probably could have saved myself a couple hours of work had I had such a mechanism in place from the start.

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Word Wrap

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Word Wrap



By [Mike Will](#) on Tuesday, October 9, 2001 - 03:22 pm: [Edit](#)

Neal,

Forgive me if this has been covered, I couldn't see anything with a search. I just want to know how to wrap output text (in MainForm).

If I type in:

```
: go
  s" The quick red fox jumped over the lazy brown dog."
  type ;
1 wrap drop
go
```

I don't get any wrapping.

TIA

Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 9, 2001 - 03:33 pm:

[Edit](#)

Wrapping isn't a word-by-word thing, it's a string-by-string thing. Try this:

```
: go
  ." The "
  ." quick "
  ." red "
  ." fox "
  ." jumped "
  ." over "
  ." the "
  ." lazy "
  ." brown "
  ." dog."
;

1 wrap drop
go
```

Given that, if you write a short routine that will display a string a word at a time, you'll have word-by-word word-wrap.

Neal



By [Mike Will](#) on Wednesday, October 10, 2001 - 04:57 pm: [Edit](#)

Thanks for explaining, Neal. I'll get around to doing a string word wrap as you suggested in a bit. As it turns out, I'd rather have character wrapping at the moment anyway. I'm just trying to format some reports that have 132 column width so I'll use character wrapping with a fixed-width font. Here's a simple method of character wrapping a string:

```
\ WrapType
```

```
needs core-ext
```

```
30 constant MAXCOL
```

```
variable col
```

```
: newline ( --) cr 0 col ! ;
```

```
: wraptype ( caddr u --)
```

```
  newline
```

```
  0 ?do
```

```
    dup i + c@ emit
```

```
    1 col +!
```

```
    col @ MAXCOL > if newline then
```

```
  loop drop ;
```

```
: go
```

```
  s" The quick red fox jumped over the lazy brown dog." wraptype ;
```

BTW I just had a long conversation with the nice folks at handspring. They assure me they're not going under. That's good, since I'm awaiting a Visor Pro that's paid for but not here yet!

Cheers

Mike

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Bitmaps, palm and linux

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Bitmaps, palm and linux



By [Richard Chamberlain \(Rac\)](#) on Tuesday, October 9, 2001 - 07:15 am: [Edit](#)

Hi,

Does anyone know a convenient way of inserting a bitmap into a pdb/prc on Linux?

At the moment I imagine I'm going to have to use pilrc and compile an empty project with gcc - but something simpler would be much more handy.

Thanks,

Richard



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 9, 2001 - 04:04 pm: [Edit](#)

I know the GNU Palm toolchain provides something called, as I recall, buildprc, that might do what you're after. I confess to a lack of expertise with that set of tools, however.

Neal



By [Richard Chamberlain \(Rac\)](#) on Wednesday, October 10, 2001 - 08:53 am: [Edit](#)

Thanks Neal,

I don't exactly what buildprc does - although I have used it.

I believe it combines the object file that gcc creates and the bin file that pilrc generates.

Whether it can do anything else I'm not sure - I'll have a look,

Richard

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Stack underflow at ; on m505

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Stack underflow at ; on m505



By [Jay Maynard](#) on Monday, October 8, 2001 - 07:08 pm: [Edit](#)

I'm picking up Quartus after a while of not playing with it. I'm using 1.2.1R on a Palm m505 (which looks like it's still the current version), and trying to define the following word:

```
( Sum the hex digits in a value. )
: digitsum ( value -- sum )
  0 SWAP ( initialize sum )
  DUP 0> WHILE ( if more to add, )
    DUP 15 AND ( get last digit )
    ROT + SWAP ( update sum )
    4 RSHIFT ( shift off low digit )
  REPEAT ( go back for more )
  DROP ( discard leftover zero )
;
```

I get

```
;? stack underflow
```

I'm pretty sure it's something I'm doing, but passing by a Forth programmer I know didn't reveal anything weird...



By [Neal Bridges \(Nbridges\)](#) on Monday, October 8, 2001 - 07:10 pm:

[Edit](#)

You're missing a BEGIN at the start of your loop.

Neal

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FATAL EXCEPTION in PRC only

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): FATAL EXCEPTION in PRC only](#)



By [John Newell](#) on Monday, October 8, 2001 - 01:27 pm: [Edit](#)

Hi everyone,

I have this problem. Running the PRC of an application produces a FATAL EXCEPTION where running it from Quartus it works fine.

I have spent some time trying to track down the problem to no avail (yet). Has anyone any idea what could cause this sort of thing to happen.

(I have similar PRC's that work OK. In fact, this one is a clone of another one but with some stuff taken out and other stuff put in. The basic event handling is the same and the other one works OK.)

I look forwards to some fresh ideas to help me.

Regards

John



By [Daryl Lee \(Daryl\)](#) on Monday, October 8, 2001 - 01:37 pm: [Edit](#)

With no more clues than what you've given, I'd look for usage of resources that are not included in your app. Some resources are available from Quartus, but if they're not "copysrc'd", they're not there standalone. More clues would be good, though. For instance, do you get any kind of error message before it croaks?



By [Kris Johnson \(Kdj\)](#) on Monday, October 8, 2001 - 01:56 pm: [Edit](#)

I'd agree that missing resources are a likely culprit. Also check out this topic in the wiki for other tips:

<http://www.sleepless-night.com/wiki/StandaloneVsQuartus>

-- Kris



By [John Newell](#) on Tuesday, October 9, 2001 - 04:41 am: [Edit](#)

Thanks for the clues. They haven't lead anywhere yet - I just can't track down where the problem is.

The app only has one window that is initialised correctly - the dropdowns get populated from a database. That is similar to the app that this one is cloned from. Upon selecting a checkbox a new function is called which

populates some field in the window after reading a different database. That is where the problem appears to be - populating three fields with numbers. However, I can't pin it down - when I put in debug lines I find that one function is calling another but FROM BETWEEN TWO WORDS THAT PUT CONSTANTS onto the stack.

I'll keep at it.

Regards
John



By [John Newell](#) on Tuesday, October 9, 2001 - 09:34 am: [Edit](#)

OK. I've got it going. If anyone can tell me why it works I'd like to know.

I had used RsrcEdit to build the resource file. One field I gave a resource ID of 4660. In my app I defined a constant called APBfi_Golds with a value of 4660. Whenever I used the APBfi_Golds I got FATAL EXCEPTION. I changed the resource ID to 4665. Also the value of the constant. (i.e. Just changed the 0 to 5 in both cases.) IT NOW WORKS FINE.

(I have tried changing it back to 4660 and it still goes wrong. And no, there isn't another label called APBfi_Golds nor another number of 4660 anywhere on the Palm.)

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 9, 2001 - 09:36 am:

[Edit](#)

Perhaps you have two resources with the same number?

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 9, 2001 - 10:11 am: [Edit](#)

4665 is an odd number. If you inadvertently tried using that as an address and used @ or !, then that would cause a fatal exception. 4660 is even, and so wouldn't have that problem.

So maybe you should check for any accidental uses of APBfi_Golds as a variable, rather than as a constant.

-- Kris



By [John Newell](#) on Tuesday, October 9, 2001 - 10:35 am: [Edit](#)

No. You try it.

This fails but works when the number is 4665.

```
\ Hello
```

```
4660 constant APBfi_Golds
: go page ." Hello World!"
APBfi_Golds .s .
begin key drop again ;
true generate-symbols

' go 12345. MakePRC Hello
```

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 9, 2001 - 10:39 am:

[Edit](#)

John, there's no CopyRsrc in your example. Are you copying the resource across appropriately into your target PRC?

Neal



By [John Newell](#) on Tuesday, October 9, 2001 - 11:03 am: [Edit](#)

It's not a resource. Just a constant which is printed out. 4650 works. 4661 works. 4665 works. 4660 fails.

4660 decimal is 1234 hex. Virus?

Just having

```
4660 .
```

in Hello fails.

John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 9, 2001 - 11:10 am:

[Edit](#)

My apologies, John. That's a compiler bug -- a rare and unusual one. It shouldn't be doing that; I'll fix it.

Neal



By [John Newell](#) on Tuesday, October 9, 2001 - 11:14 am: [Edit](#)

I was getting a bit paranoid there - I thought I was going mad.....
Do I get a prize for "rare and unusual"?

John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 9, 2001 - 11:17 am:

[Edit](#)

☺ The insanity is mine, I assure you. The prize -- you'll be the first to verify the fix!

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 9, 2001 - 11:59 am: [Edit](#)

Can we get any more details on what the bug is, and under what conditions it manifests itself?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 9, 2001 - 12:40 pm:

[Edit](#)

It's to do with the 'end-of-function' marker that the compiler lays down. It should only recognize it in certain circumstances, but evidently is recognizing it with a bit too much vim and vigor.

The marker is hex 1234 -- if it's encountered as part of the binary of a function, it may be incorrectly identified as the end of the function. I'll fix it so it doesn't.

Neal

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Has anyone created an Internet Function Call Library yet?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Has anyone created an Internet Function Call Library yet?



By [Don Golding](#) on Monday, October 8, 2001 - 12:47 pm: [Edit](#)

I want to communicate with servers like google so I at least need to establish a connection, get and receive data/text.

Looking at mathlib and serial doesn't help much, I am not a C programmer, Forth I have been programming in for over 10 years....

Any help would be appreciated



By [Neal Bridges \(Nbridges\)](#) on Monday, October 8, 2001 - 07:11 pm: [Edit](#)

Don, have you perused the archives? I remember some efforts along these lines, but I haven't gone searching of late.

I'd be happy to assist anyone undertaking such a library.

Neal



By [Don Golding](#) on Monday, October 8, 2001 - 10:29 pm: [Edit](#)

Yes, I need help with calling the functions...they are in the network api's.



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 9, 2001 - 10:20 am: [Edit](#)

This wiki topic describes how system calls work in Quartus:

<http://sleepless-night/wiki/SystemTrap>

Is this the kind of information you are looking for? If not, can you be more specific about what you want to know?

-- Kris



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 9, 2001 - 10:22 am: [Edit](#)

That URL should be <http://sleepless-night.com/wiki/SystemTrap>

-- Kris



By [Don Golding](#) on Wednesday, October 10, 2001 - 04:55 pm: [Edit](#)

I will compile the specific network functions needed and will post them here. Thanks for the help!



By [M Anderson](#) on Saturday, March 16, 2002 - 06:40 pm: [Edit](#)

I'm also attempting something along these lines as an exercise to learn more about Forth, however I seem to find myself a bit stuck.

My incomplete memo for accessing the net library looks like this:

```
\ net.lib
needs zstrings

0 constant addrRaw
2 constant addrINET

1 constant typeStream
2 constant typeDatagram
3 constant typeRaw
4 constant typeReliableMsg

4608 constant netErrorClass

variable NetLib#
variable ErrP

: findNetLib ( -- err )
  NetLib# >abs
  z" Net.lib" drop >abs
  SysLibFind ;

: stNetLibOpen ( &err lib# -- err )
  43009 sysstrap drop drop drop
  d0 swap drop ;

: stNetLibClose ( imm? lib# -- err )
  43010 sysstrap drop d0 drop ;

: openNetLib ( -- err )
  ErrP >abs NetLib# @
  stNetLibOpen ;
```

```

: closeNetLib ( imm? -- )
  NetLib# @ stNetLibClose ;

: stNetLibAddrAToIN
  ( &a lib# -- .d || -1 )
  43014 sysstrap drop drop drop d0 ;

: addrAsciiToNBO ( &a -- .d || -1 )
  NetLib# @ stNetLibAddrAToIN ;

: stNetLibSocketOpen
  ( &err .d u u u lib# -- err )
  43015 sysstrap
  drop drop drop drop
  drop drop drop drop
  d0 ;

: sockCreateTCP ( -- )
  errP >abs 4096. 0
  typeStream addrINET
  NetLib# @
  stNetLibSocketOpen ;

```

I've also built a wee test program, below.

```

\ net.test
needs net.lib

: errchk ( ? -- )
  dup 0= if ." okay. " drop else
  ." failed, err: " . then cr ;

: go ( -- )
  page

  ." Finding net library... " findNetlib
  errchk

  ." Opening library ... " openNetlib
  dup 4609 = if
  ." already open" drop cr
  else errchk then

```

```
. " Interface check ... " errP @ errchk

. " Create sock ... " sockCreateTCP
0= if ." okay. " drop else
. " failed, err: " errP @ . then cr

. " Closing library ... " closeNetlib
errchk ;
```

Running this program returns:

```
Finding net library ... okay
Opening library ... okay
Interface check ... okay
Create sock ... failed, err: 4612
Closing library ... okay
```

I assume that opening the net library itself works, because once I've done so I can then make successful calls to the NetLibAddrAToIN sysstrap.

However, trying to create a socket using my sockCreateTCP word returns 4612 aka netErrParamErr.

According to the SDK, the NetLibSocketOpen parameters in C are: (UInt16 libRefnum, NetSocketAddrEnum domain, NetSocketTypeEnum type, Int16 protocol, Int32 timeout, Err *errP)

Obviously I've screwed up someplace with the data I'm passing to NetLibSocketOpen, but I can't figure out where. If anyone could help it would be appreciated.



By [Neal Bridges \(Nbridges\)](#) on Saturday, March 16, 2002 - 09:58 pm:

[Edit](#)

I'm not set up to try that at the moment, but you may need >BYTE:

```
: sockCreateTCP ( -- )
  errP >abs 4096. 0
  typeStream >BYTE  addrINET
  NetLib# @
  stNetLibSocketOpen ;
```

Neal



By [M Anderson](#) on Monday, March 18, 2002 - 06:04 am: [Edit](#)

Thanks Neal, I've added >byte after the two enum values and it's no longer barfing up error codes at me 😊

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Tutorials

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Tutorials](#)



By [tacroy](#) on Friday, October 5, 2001 - 06:40 pm: [Edit](#)

are there any good tutorials for this programming language? I am totally new to it, but have programmed in C++ before. (though its been awhile) where can i get tutorials?



By [Chapman Flack](#) on Friday, October 5, 2001 - 07:39 pm: [Edit](#)

Look in the left-hand frame: you should see links to the Quartus Forth Wiki. Many tutorials are there.

Enjoy!

-Chap



By [Kris Johnson \(Kdj\)](#) on Friday, October 5, 2001 - 09:42 pm: [Edit](#)

The list of Forth tutorials is available here:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/ForthTutorials>

Tutorials for Quartus are available here:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthTutorials>

-- Kris

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FldSetTextPtr

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): FldSetTextPtr](#)



By [Eric Idema \(Eki\)](#) on Thursday, October 4, 2001 - 08:09 pm: [Edit](#)

FldSetTextPtr -- does anybody have any experience with this function? I want to programmatically set the text of a non-editable field. According to the API docs this is the function to do it. Also the API docs says a call to FldDrawField is needed to see the change. So here's my word for putting a zstring into a field:

needs Forms

```
: zstr>Field ( fieldID c-addr -- )
  >abs rot GetObjectPtr 2dup 2>r
  FldSetTextPtr 2r> FldDrawField ;
```

I've checked that the buffer I pass into it actually contains a zero terminated string. I've also double checked that the fieldID I'm passing in is correct.

This code doesn't throw any exceptions or crash--it doesn't do anything, muchless put my zstrings into their fields.

Originally I wrote my code to use Neil's string>Field word from Fields. I got that to work, but I don't want the fields I'm going to be setting to be editable, which is why I'm switching. Basically, the only changes I've made from the working code is to change my strings into zstrings and to use the above word instead of string>Field.

Any ideas?



By [Neal Bridges \(Nbridges\)](#) on Thursday, October 4, 2001 - 11:58 pm:

[Edit](#)

Try string2anyfield.txt from the Contrib library; it should do what you need.

Neal



By [Eric Idema \(Eki\)](#) on Friday, October 5, 2001 - 09:51 am: [Edit](#)

Thanks Neal. It works now using string>anyField.

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3-D Animation

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): 3-D Animation](#)



By [Mike Will](#) on Monday, October 1, 2001 - 11:09 am: [Edit](#)

One of favorite demos is the timeless classic of a 3-D rotating cube. I dug up an ancient version written by Ludwig Richter-Abraham. This one is cute because it allows you to control the 3 degrees of freedom individually. I converted it to Quartus but it still needs work. His original version ran on a PC, which had paged video memory allowing drawing to be done behind the scenes for smoother animation. Also, he may have used a screen co-ordinate system that had (0,0) at some other corner than upper left as in Quartus. It appears that the cube sometimes 'hyperjumps' which seems to indicate I have problems with the Y co-ordinates.

Anyway, I don't have any more time to play with this right now, and graphics are definitely not my forté, so if someone else wants to continue refinement, please do. The original was in German, I have the its source and some translation notes too if anyone wants them. Also, the original allowed for more elaborate control of the cube while the animation ran. I just statically set up the params and run.

Sorry about all the upper case. I didn't bother to re-write a lot of Ludwig's original code -- blame him!

Cheers
Mike

```
\ cube          09.30.2001  MRW
\ a rotating 3-D object
\ originally created in 1987 by
\ Ludwig Richter-Abraham
```

```
needs core-ext
needs trig
needs graphics
```

```
\ extensions to graphics
false value draw  \ draw/erase flg
: EraseLine ( y2 x2 y1 x1 --)
  WinEraseLine ;
```

```
\ 3-D object
\ consists of 12 points in space (XYZ)
\ you can do a full cube, but you'll
\ have to adjust the P1 routine to
\ handle more points
```

```
: CUBE
20      20      20
120     20      20
120     20      120
20      20      120
20      20      20
20      120     20
120     120     20
120     120     120
20      120     120
20      120     20
40      120     20
40      120     120 ;
```

```
\ Palm screen is 160x160
80 CONSTANT MIDX
80 CONSTANT MIDY
0 value xx \ current gfx cursor x
0 value yy \ current gfx cursor y
0 value (X)
0 value (Y)
0 value (Z)
```

```
\ draw line from current to x2 y2
: XY ( x2 y2 -- )
  swap 2dup yy xx
  draw if Line else EraseLine then
  to xx to yy ;
```

```
\ value * angle
: SIN* ( n n - n ) SIN 10000 */ ;
: COS* ( n n - n ) COS 10000 */ ;
```

```
\ 3D variables
1 value Xtheta
1 value Ytheta
1 value Ztheta
1 value Xscale
1 value Yscale
1 value Zscale
0 value X--
0 value Y--
```

\ 3D Translations:

```
: ZROT ( -)
(X) Ztheta COS*
(Y) Ztheta SIN* - to X--
(X) Ztheta SIN*
(Y) Ztheta COS* + to (Y)
X-- to (X) ;
```

```
: YROT ( -)
(X) Ytheta COS*
(Z) Ytheta SIN* + to X--
(X) Ytheta SIN* NEGATE
(Z) Ytheta COS* + to (Z)
X-- to (X) ;
```

```
: XROT ( -)
(Y) Xtheta COS*
(Z) Xtheta SIN* - to Y--
(Y) Xtheta SIN*
(Z) Xtheta COS* + to (Z)
Y-- to (Y) ;
```

```
: Scale ( -)
(X) Xscale 100 */ to (X)
(Y) Yscale 100 */ to (Y)
(Z) Zscale 100 */ to (Z) ;
```

\ 3D --> 2D Parallel Projection:

```
: XYZ>XY ( x y z --)
(X) (Z) 2/ + MIDX + \ x
(Y) (Z) 2/ + MIDY SWAP - \ y
XY ;
```

```
: GETCOR ( nx ny nz - )
70 - to (Z)
70 - to (Y)
70 - to (X) ;
```

\ set graphics cursor position

```
: XYZ>xyy ( x y z -)
(X) (Z) 2/ + MIDX + \ x
(Y) (Z) 2/ + MIDY SWAP - \ y
to yy to xx ;
```

```

\ 3-D main

: P1 ( -)
  CUBE GETCOR
    ZROT YROT XROT Scale
    XYZ>xxyy
    11 0 DO GETCOR
      ZROT YROT XROT Scale
      XYZ>XY
    LOOP ;

: Delay ( n --)
  0 DO 100 0 DO I DROP LOOP LOOP ;

: Demo ( -)
  50 \ scaling factor
  dup to Xscale dup to Yscale to Zscale
  5 \ theta increment
  BEGIN
    true to draw P1 \ draw object
    200 Delay \ persist a bit
    false to draw P1 \ erase object
    \ uncomment any axis to allow
    \ rotation in that dimension
    Ztheta over + to Ztheta
    \ Ytheta over + to Ytheta
    Xtheta over + to Xtheta
    ekey?
  UNTIL DROP ;

```

Demo

Das end

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Manipulating bytes or char-sized memory units

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Manipulating bytes or char-sized memory units



By [Paul Randall \(Paul\)](#) on Monday, October 1, 2001 - 08:41 am: [Edit](#)

I am doing a text buffer in which I need to manipulate chunks of text, and I think I need CMOVE and CMOVE> which are in the Forth Lexicon but not in my libraries.

Or do I need them? I note that PLACE, defined in toolkit uses MOVE rather than CMOVE but I think it can presume an aligned address while compiling within a definition.

Am I correct in assuming that strings store ascii chars in consecutive bytes and not 16 bit words?

Thanks for any help, Paul



By [Neal Bridges \(Nbridges\)](#) on Monday, October 1, 2001 - 09:03 am:

[Edit](#)

You are correct; chars are 8-bit values. MOVE will work fine to manipulate them, even at non-aligned addresses.

Neal



By [Paul Randall \(Paul\)](#) on Monday, October 1, 2001 - 07:56 pm: [Edit](#)

Thanks. I've worked out my routines and everything works as expected!

I just wanted to work up a little program to see how I liked Quartus and I am pleased. I just processed my purchase of the registered version. Quartus and the support available through this site are both impressive. If 20 years ago you told me that one day I'd be using a calculator size computer running a full ansi Forth, I'd have been sceptical to say the least.

Thank you Neal



By [Neal Bridges \(Nbridges\)](#) on Monday, October 1, 2001 - 08:26 pm:

[Edit](#)

Thanks for your registration, Paul, and for the kind words. Glad my work is of interest!

Neal

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Encryption

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Encryption](#)



By [Dave Ruske](#) on Wednesday, September 26, 2001 - 06:24 pm: [Edit](#)

Two quick questions:

- 1) Is the RC4 cipher as encoded in arcfour.txt commercially usable without a license from RSA?
- 2) Has anyone taken a crack at implementing Blowfish using QF? Any pitfalls to watch out for?

Thanks!



By [William Tanksley](#) on Wednesday, September 26, 2001 - 07:17 pm:

[Edit](#)

- 1) Yes, but you shouldn't claim that it's RC4 or RSA will sue (stupid situation, but that's how it is). You should be okay in stating that it's compatible with RC4.
- 2) I seem to recall seeing something about that. Why don't you ask on comp.lang.forth?

-Billy



By [Dave Ruske](#) on Thursday, September 27, 2001 - 11:12 am: [Edit](#)

Thanks! I found some source code --- in 32-bit Forth and other languages --- at <http://www.counterpane.com/blowfish-download.html>. That should be enough to guide me if I decide to go that route.

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Delay Loop

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Delay Loop](#)



By [Leland Williams \(Leland\)](#) on Tuesday, September 25, 2001 - 09:50

am: [Edit](#)

I thought I saw something on the wiki about how to do a delay statement, (besides the power wasting do-loop) but now that I have a need for it I can't find it. Can someone tell me how to do it?



By [Samuel Tardieu](#) on Tuesday, September 25, 2001 - 10:22 am: [Edit](#)

ms (n --)

must be what you are looking for. It takes a number of milliseconds, and uses PalmOS systrap to put the processor in doze mode.



By [Daryl Lee \(Daryl\)](#) on Tuesday, September 25, 2001 - 02:23 pm: [Edit](#)

But whatever you do, make sure the number of milliseconds is evenly divisible by 10.

<http://sleepless-night.com/cgi-bin/twiki/view/Main/MsOnlyWorksForMultiplesOfTen>



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 25, 2001 - 02:33

pm: [Edit](#)

There's a fix for that problem at the same link.

Neal

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E-mail:

Documentation Idea

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Documentation Idea

 By [Leland Williams \(Leland\)](#) on Tuesday, September 25, 2001 - 09:30 am: [Edit](#)

I often wish that there was just a list of all the words that are part of standard Quartus, then probably separate lists for all the libraries, together with a not lengthy discription of what they do.

I thought about doing that by typing 'words' on my palm and writing by hand every word it lists, then figuring them all out; but hten I thought maybe someone else had done it, or maybe several somebodies would do it, since I don't know all the words.

 By [Daryl Lee \(Daryl\)](#) on Tuesday, September 25, 2001 - 02:15 pm: [Edit](#)

If you have a document reader (I use QED) and an 8MB Palm, you can save the ISO/ANSI Forth Standard on your Palm and have searchable access to it. Most of Neal's documentation is also available in Doc format. I have the ISO/ANSI Forth Standard, the Quartus Forth Word List, the PalmOS System calls in Forth stack diagram format, and the Palm OS Error list in this format. I refer to them often. The libraries are reasonably well documented, and normally need no other help.

 By [Barry Marks](#) on Tuesday, September 25, 2001 - 04:42 pm: [Edit](#)

While that might amount to complete documention, it's scattered, large and difficult to know where to look first. This seems to be the norm in Forth. If anything, Quartus documentation is better than average for Forth.

But nearly every other language system would consider this totally inadequate.

The ideal would be context sensitive help. Double tap on a word and quick help pops up for it and offers an option for more detailed help. Also each word might have a selectable "see also" list.

I don't expect to see this in Quartus or any other reasonably priced Forth. But wouldn't it be nice.

Barry

 By [Daryl Lee \(Daryl\)](#) on Tuesday, September 25, 2001 - 05:10 pm: [Edit](#)

Yes, it would be nice. And when I want that, I turn to Win32For (\$0) on my PC, and get that. All 48.5 MB of it. I recall the subtitle to Dr. Dobb's Journal in the good ol' days: How to run light without overbyte. Quartus and Palm are all about running light without overbyte.



By [Hans Nordstrom](#) on Tuesday, September 25, 2001 - 05:59 pm: [Edit](#)

Leland,
depending on your PDA you might have space for a glossary from the libraries. Have a look at:

[About Forth and libraries](#)

Yes, you also need a MobileDB Lite application. Taking a total around 90 KB.

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Return stack words

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Return stack words



By [Leland Williams \(Leland\)](#) on Tuesday, September 25, 2001 - 09:22

am: [Edit](#)

I am finally getting the knack of using the return stack for data in formulae, but I noticed that I was often using the sequence

```
r> drop
```

in my if-blocks; so I figured maybe I ought to make the common sequence into a word. But, the problem is that if I call a word, that action would likely stuff the return address onto the return stack. Therefore I would have to pull the address off of the return stack first, then put it back; which means my word would end up looking like :

```
: word-name r> r> r> drop >r >r ;
```

and a word to add to the return stack would be:

```
: r+ r> r> r> 4 pick + >r >r ;
```

- or -

```
: r+ r> r> rot r> + >r >r ;
```

((or should it be -rot, I can never remember and I'm not near my reference book))

All the above is very cumbersome, and doesn't seem to be worth the time.

Yet, how do the existing words do it ?

R@ could be defined as:

```
: r@ I ;
```

but what about r> and >r ? How are they defined ?

It this where you would use that 'inline' word ?

- Lee



By [Kris Johnson \(Kdj\)](#) on Tuesday, September 25, 2001 - 11:02 am:

[Edit](#)

>r and r> are predefined in the Quartus kernel, using assembly-language level definitions.

See <http://sleepless-night.com/cgi-bin/twiki/view/Main/ReturnstackModule> for some additional return-stack-manipulation words.

It is generally not a good idea for words to pick stuff off the return stack that they did not put there themselves. This is generally only done when implementing a Forth kernel or for other low-level manipulations.

Words that manipulate the return stack usually need to be either IMMEDIATE or INLINE. If, for example, you wanted to define a word RDROP that had the effect of "R> DROP", you would define it like this:

```
: RDROP POSTPONE R> POSTPONE DROP ; IMMEDIATE
```

or like this

```
: RDROP R> DROP ; INLINE
```

The INLINE form is easier to use in Quartus Forth, but is not compliant with the ANS Forth standard.

-- Kris



By [chris bucsko](#) on Wednesday, September 26, 2001 - 12:46 pm: [Edit](#)

Hey, while we're on the subject of the return stack, is there a way to use r>, >r 2r> and 2>r in terminal mode? I keep getting fatal errors if I try testing words with these commands in them. Even with 'include core-ext'.



By [Samuel Tardieu](#) on Wednesday, September 26, 2001 - 12:51 pm: [Edit](#)

Why not give a precise example that fails?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 26, 2001 - 01:28 pm: [Edit](#)

Chris, unless you've re-defined >R and R> and so on, core-ext will include without any errors whatsoever. Please let me know what it is you're experiencing.

Neal



By [chris bucsko](#) on Wednesday, September 26, 2001 - 02:08 pm: [Edit](#)

If I go into Quartus (1.2.5r), and type 'include core-ext' I get OK. But now if

I type '4 >r' I get a fatal exception. In other words, I can't execute return stack words in the terminal mode. Of course, I use the return stack a lot in execution mode, and everything's fine when my programs run. I usually work around this problem, but I'll be diving into callbacks soon, so I'm just trying to educate myself as much as possible about QFs' innards.



By [Chapman Flack](#) on Wednesday, September 26, 2001 - 02:28 pm: [Edit](#)

You're at the console and Forth is executing the read-evaluate loop: it reads a line from you, evaluates it, and when the evaluation returns, reads another line, and so on.

So the line it reads from you is "4 >r". It evaluates that. That puts the value 4 on the return stack. That's the end of the string to be evaluated, so evaluate now returns. Where does it return to? Not to the read-evaluate loop, because that address isn't on the top of the return stack any more. Instead, it returns to some funky location in memory whose high word is 4 and whose low word is the old high word of the read-eval loop return address. Kaboom.

When you use return stack words, be careful to take off everything you put on before you return.



By [Chris Bucsko](#) on Wednesday, September 26, 2001 - 05:37 pm: [Edit](#)

ah, but if I type '4 >r r>' and hit return I get the same fatal exception error, so it seems the read-evaluate loop never gets to the r> word to clean up. It seems that the return stack just shouldn't be used in console mode. I've been able to work around this for some time now. There was only one other instance where I couldn't use the return stack (I think it was a nested begin..while loop). In general, I'm a real fan of stack usage vs. storing and retrieving variables, but sometimes, better safe than sorry. BTW, I just tried this without typing 'include core-ext', and I got the same fatal exception error, not even an >r? warning. So now I'm a bit confused....



By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 26, 2001 - 05:41 pm: [Edit](#)

Chris, each word at the console is interpreted as it is read -- not all at once at the end of the line.

>R and R> are built into the kernel, so it's no surprise you don't need core-ext to use them.

Neal



By [Chapman Flack](#) on Wednesday, September 26, 2001 - 10:55 pm: [Edit](#)

i.e. not that Forth begins evaluating the line buffer before you've ended the line, but once it begins evaluating, each word involves a call and return.

-Chap



By [kdj](#) on Friday, September 28, 2001 - 08:44 pm: [Edit](#)

If you want to "play" with >r and r> from the command line, you might want to define your own "virtual return stack" that is separate from the system return stack. For example,

```
needs stacks
32 stack fake-rs
: >r fake-rs push ;
: r> fake-rs pop ;
```

(The stacks module is available in the Quartus File Area.)

This works if you are using the return stack as a place for temporary values. If you really are trying to manipulate return addresses, then don't do this.

-- Kris



By [chris Bucsko](#) on Monday, October 1, 2001 - 05:46 pm: [Edit](#)

That's a great idea!! I already have stacks in my Palm, and I've been looking for a way to put it to use. I can even write an 'r@' word as well -- :r@ r> dup >r; Thanks for help.

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Password:

name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

E-mail:

Dictionary Overflow

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Dictionary Overflow



By [Elan Goldman](#) on Monday, September 24, 2001 - 05:54 pm: [Edit](#)

Hi.

During compilation I get a "Dictionary Overflow" error. What are my options?

1. Can reducing the number of characters I use for words help at all? (i.e. instead of

```
: this_is_a_very_long_word
```

```
;
```

```
use
```

```
: sw
```

```
;
```

2. Will reducing the number of instructions in words, by implementing words for repeated instruction groups (a good idea anyway ;-) help to correct this error?

3. Is it possible to enlarge the dictionary space?

TIA,

Elan



By [Kris Johnson \(Kdj\)](#) on Monday, September 24, 2001 - 10:20 pm: [Edit](#)

Which version of Quartus are you running? The registered version allows more dictionary space than the unregistered version.

And refactoring repeated instructions will help.

If there's no way to reduce the size of the program, you may need to split it into multiple programs. See

<http://www.quartus.net/discus/messages/23/1278.html>

-- Kris



By [Elan Goldman](#) on Tuesday, September 25, 2001 - 04:01 am: [Edit](#)

Hi Kris,

thanks for the response. I should have mentioned that I am using the 1.2.6R (registered) version. I've started refactoring (I like this word - more than what it entails).

I'm going to wait a bit with splitting it into multiple programs for now.

Take Care,

Elan



By [Ronny Svensson](#) on Tuesday, September 25, 2001 - 04:07 am: [Edit](#)

Doesn't it help a bit to remove unused words from library files? Tedious, but...

Ronny



By [Kris Johnson \(Kdj\)](#) on Tuesday, September 25, 2001 - 07:13 am:

[Edit](#)

Rather than changing the library modules, I'd suggest copying only the words you need out of the modules into your app's code and then not using the modules.

BTW, you can use the CSUNUSED word to help figure out how much code space is used by each module. For example:

```
csunused
needs toolkit
csunused - . \ Prints "1412"
```

You might try redefining NEEDS or INCLUDE so that they display how much space is used by each module as they are included.

-- Kris



By [Steve Bohrer \(Skb\)](#) on Tuesday, September 25, 2001 - 11:39 am:

[Edit](#)

From the forum before (sorry, I'm not sure who posted it), here is a re-def of needs that prints csunused as it goes.

```
\ needsSpace
\ show code space for each file
\ needed

: NEEDS ( -- )
>IN @ >R PARSE-WORD TYPE
```

SPACE csunused . R> >IN ! NEEDS

;

 By [Samuel Tardieu](#) on Wednesday, September 26, 2001 - 12:55 pm: [Edit](#)

It looks like >r and r> are useless here, aren't they?

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 26, 2001 - 01:27 pm: [Edit](#)

They're needed. You want to keep the stack empty during the NEEDS operation, as what is being included by NEEDS may expect the stack to be empty (tests, etc.).

Neal

 By [Chapman Flack](#) on Wednesday, September 26, 2001 - 02:33 pm: [Edit](#)

I'm feeling suddenly dysforthic. Isn't the stuff that's been put on the stack gone before the old NEEDS executes anyway?

-Chap

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 26, 2001 - 02:36 pm: [Edit](#)

It stays there. NEEDS (and INCLUDE, and so on) don't clear the stack when they execute.

Neal

 By [Chapman Flack](#) on Wednesday, September 26, 2001 - 10:51 pm: [Edit](#)

but the NEEDS comes after the stuff put on the stack by >IN @ has been consumed by >IN !

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 26, 2001 - 10:52 pm: [Edit](#)

Oh. So it does. My mistake, Chapman; I didn't look at the code closely enough.

Neal

 By [Samuel Tardieu](#) on Thursday, September 27, 2001 - 05:21 am: [Edit](#)

Well, even if I was the one who wrote that >r and r> were useless and some people agreed, I want to withdraw my statement :-). Included file can

put stuff on the stack, even if this is a pathological case; however, in this case precisely >r and r> will be needed.



By [Samuel Tardieu](#) on Thursday, September 27, 2001 - 06:05 am: [Edit](#)

Forget my latest post just above. It is plain wrong, and Chapman is right, the real needs is executed last.

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Sony Clie version PEG-N610C Color

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Sony Clie version PEG-N610C Color



By [Ken Samson](#) on Monday, September 24, 2001 - 10:28 am: [Edit](#)

Has anyone had any experience using Quartus on a color Sony display with 320x320 resolution?

If I want to draw on the screen, can I easily select colors, etc? One of the things that amazed me about Quartus was the integration with the screen; drawing a circle was so easy!



By [Jim Hendricks \(Jimh\)](#) on Tuesday, April 30, 2002 - 10:01 am: [Edit](#)

I made the plunge and purchased a t615c, awesome machine!

So, has anyone yet done 320x320 in Quartus?



By [Neal Bridges \(Nbridges\)](#) on Monday, December 9, 2002 - 04:06 pm: [Edit](#)

Ken, sorry; must have missed this. There are device-specific sysstraps for dropping into a higher resolution; there should be no trouble doing so. At that juncture, the standard functions are available for colour selection, drawing on the screen, etc. Quartus Forth doesn't apply any restrictions to the parameters -- that is, it doesn't police the range of any given data item.

Neal

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not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

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RFH: Palm text and backspace

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): RFH: Palm text and backspace



By [Lee Williams](#) on Sunday, September 23, 2001 - 12:51 pm: [Edit](#)

I have written a word wrap text-input that is more selective than ACCEPT as far as what kind of input it will take, so that I don't have to accept, interpret, then reaccept. This just won't put up with certain characters.

Unfortunately, I just realized I want to support a backspace character, in case I make a mistake (I always make a mistake). So, to handle the screen I tried the following sequence :

8 emit. But instead of doing a backspace, it puts a square on the screen. Why is this, and how can I get the cursor to backspace ?

PS I hope 8 is the right code. I obtained by doing a key . command then doing a graffiti backstroke.

Thanks,

Lee



By [Kris Johnson \(Kdj\)](#) on Sunday, September 23, 2001 - 01:10 pm: [Edit](#)

The square is being shown because EMIT simply tries to print the character with the given ASCII code to the screen. As there is no glyph for the 8 character, Palm OS displays the "missing character glyph", which is a square in most character sets.

The Quartus "console" is not a full terminal emulator. Control characters don't have their special meanings.

Also note that, unlike other Forths, TYPE is the basic character output operator. EMIT is implemented in terms of TYPE.

Neal will have to answer how to handle a backspace, but I imagine you need to subtract the width of the last character from CURRENTX, and erase the last character.

-- Kris



By [Travis Casey](#) on Sunday, September 23, 2001 - 02:46 pm: [Edit](#)

How's this going to be used? It's pretty easy to set up a form with a text

entry area to use, and that way, you'll be able to backspace, tab, or use any of the other special characters.

--Travis

 By [Leland Williams \(Leland\)](#) on Sunday, September 23, 2001 - 11:43 pm: [Edit](#)

I'm using it to enter numbers. I haven't figured out any GUI stuff so I figured I'd do the whole program text style, then do an 'enhanced' version later.

But, how do you make said text entry area ?

-- Lee

 By [Travis Casey](#) on Monday, September 24, 2001 - 09:56 am: [Edit](#)

Making a form is a bit more than I can cover in a quick post -- check out [Steven Donahue's tutorial](#) for full details on that. Once you've got a form, you can use my own [ezUI](#) to either do the number getting (if it's an integer) or to see how you'd do it.

The current copy doesn't support floats. At the time I wrote it, adding that support would have been difficult for me, but now, using Neil's stringtofloat and float-ext packages, it should be trivial to add. Don't have time right this minute, but I'll probably release an updated version this weekend.

--Travis

 By [Leland Williams \(Leland\)](#) on Thursday, October 4, 2001 - 11:40 pm: [Edit](#)

I looked at the tutorial and noticed it requires a separate program which costs money. Is it worth it, or is there any other way to handle objects ?

 By [Neal Bridges \(Nbridges\)](#) on Friday, October 5, 2001 - 12:04 am: [Edit](#)

Leland, RsrcEdit is a shareware app. It's fully functional whether or not you buy it -- of course I recommend buying it, but you can use it in the meantime.

The other way of creating GUI resources is to use PilRC on the desktop side; works, and it's free, but it's a bit cumbersome and doesn't travel in your Palm.

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, October 5, 2001 - 02:05 am: [Edit](#)

RsrcEdit is only \$15. It's well worth it.

See <http://www.individeo.net/RsrcEdit.html>

-- Kris

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FAQ

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): FAQ](#)



By [Kris Johnson \(Kdj\)](#) on Friday, September 21, 2001 - 10:33 pm: [Edit](#)

To make the answers to common questions more easily findable, I've added an FAQ topic to the wiki:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthFaq>

Whenever you see a common question asked here, please add to the list. And refer newbies to this page when FAQ's are asked.

-- Kris

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General misunderstanding of resources

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): General misunderstanding of resources



By [Daryl Lee \(Daryl\)](#) on Friday, September 21, 2001 - 02:10 pm: [Edit](#)

I think I must have gotten lucky on my first couple of apps, but now I am totally discombobulated in the area of resources. I have the uneasy feeling that at "make" time, all of Quartus's resources are included as well as the resources I created for myself. And what happens if one of my resources has the same id and type as one of Quartus's?

Is there somewhere a good general discussion of resource creation, and how to know what to "copysrc" and what to "delsrc"?

On a related note, what about some recommendations for assigning creatorid and type to resource files, so they don't get deleted when I delete an app (and all its data)?



By [Neal Bridges \(Nbridges\)](#) on Friday, September 21, 2001 - 04:25 pm: [Edit](#)

To answer your first query -- If you have a copysrc of the same id and type as one of the defaults that Quartus Forth includes in a stand-alone app, your copysrc will overwrite it.

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, September 21, 2001 - 06:15 pm: [Edit](#)

If you haven't yet, see

<http://sleepless-night.com/cgi-bin/twiki/view/Main/RemoveUnneededResources>

-- Kris



By [Daryl Lee \(Daryl\)](#) on Sunday, September 23, 2001 - 07:47 am: [Edit](#)

Thanks to both of you guys. I also notice a slew of other resources (DATA 1, code 0, code 1, pref 1, tver 1, ...). What's up with those?



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 23, 2001 - 09:45 am: [Edit](#)

This section of the manual should help:

<http://www.quartus.net/products/forth/manual/structur.htm>

Neal



By [Daryl Lee \(Daryl\)](#) on Monday, September 24, 2001 - 08:33 am: [Edit](#)

Not only does that help, but it is highly suggestive that spending some quality time with what you've already published would be to my advantage. I think I'll cozy up to the fire tonight and do some reading!

Let me just add that for the pittance you charge for your code, you sure provide great support!



By [Neal Bridges \(Nbridges\)](#) on Monday, September 24, 2001 - 12:53 pm: [Edit](#)

That's good to hear, Daryl, thanks. 😊

Neal



By [ceri evans](#) on Tuesday, December 11, 2001 - 04:44 am: [Edit](#)

Hi

I'm just thinking of buying a Handspring Visor, and was wondering if anyone had any opinions on which model was the best for an aspiring FORTH developer. I'm interested in writing apps that solve day-to-day working problems, eg one off mathematical problems like equation solvers. At the moment, The Visor Pro and Prism look attractive. Are there any real advantages one way or the other of any particular model?

Thnaks in advance for your comments
Ceri Evans



By [Kris Johnson \(Kdj\)](#) on Tuesday, December 11, 2001 - 05:33 am: [Edit](#)

All the Visors, and all other Palm OS handhelds, are pretty much the same as far as Forth development is concerned. Make sure you get one with at least 8 MB of RAM. Beyond that, the only real concerns are speed, color, and any accessories you want to get.

-- Kris



By [Christopher J. Smith \(Missilemax\)](#) on Tuesday, December 11, 2001 - 11:48 pm: [Edit](#)

I have a Visor Deluxe (second one now...my first one broke) and a m505.

I do all my Quartus stuff on the Visor because I found the screen is much more sensitive than the 505's.

The biggest difference you'll find is the screen depth. Visor Deluxe's only go to 2 bit (4 shades of gray) , where the newer ones goto 4bits (16 shades of gray).

Of course the color visors are 16 or 24 bit color.

-Chris

(I do have a program called GrayPaint on my Visor Deluxe that goes to 16 shades but I haven't figured out how they do it.)



By [Ceri Evans](#) on Thursday, December 13, 2001 - 08:05 am: [Edit](#)

Thanks for the info. It will certainly help in making up my mind in choosing a Visor. Does anyone know the maximum size that a FORTH prog can take up? Many of the Visors have 8MB RAM so presumably the room for apps is a quite a bit less than this. But it would be interesting to know, in ballpark terms, the max size that a Quartus Forth app could take up, eg 2-4MB..or maybe more ?

Ceri



By [Kris Johnson \(Kdj\)](#) on Thursday, December 13, 2001 - 08:16 am:

[Edit](#)

Quartus has a limit of about 40K of code, and about 30K of data. But resources and extra databases can add to this.

FWIW, my JacksOrBetter game uses 15K, FourTap uses 4K, and FlashNome uses 5K.

The Quartus Forth environment itself uses a little more than 100K.

You could probably get by with a 2 MB handheld. But I recommend 8 MB so that you can put all the Palm OS documentation onboard.

-- Kris

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Repeating Button Control Repeat Rate

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Repeating Button Control Repeat Rate



By [Steve Bohrer \(Skb\)](#) on Thursday, September 20, 2001 - 05:29 pm:

[Edit](#)

Is there an easy way to set the rate at which a repeating button control generates `ctlRepeatEvents`?

In OS3.5, my repeating buttons repeat too fast to be usable. They are fine with OS3.1, and apparently this is because the system "click" sound slows them down, but with the newer OS the sounds are async.

After some digging (I should have asked here first!) I found a work-around, but it is messy for such a simple issue. Instead of `ekey` I had to get all events with `evtGetEvent`, and then set the "time" field of `ctlRepeatEvents` to the time for the next event. I wrote this up on the [RepeatingButtonRate](#) page of the wiki, but it seems a bit much for a basic function.

Have I missed something obvious? Has anyone else messed with repeating buttons? Is there some system call that sets this rate? I have not found anything useful in the OS docs.

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Redefining words

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Redefining words



By [Daryl Lee \(Daryl\)](#) on Thursday, September 20, 2001 - 02:01 pm: [Edit](#)

Neal, what is the chance of getting an enhancement into the "safe" module (or wherever appropriate) that will warn you if you define a word that is already in the dictionary? Last night I pulled out most of what little hair I have left before I finally found a variable I had copy/pasted from one place to another instead of cut/pasted.



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 20, 2001 - 02:04 pm: [Edit](#)

Here's what you want:

<http://www.quartus.net/files/PalmOS/Forth/Library/redefine.txt>

Neal



By [Daryl Lee \(Daryl\)](#) on Thursday, September 20, 2001 - 02:57 pm: [Edit](#)

Wow. Thanks for the feedback.

I got a VERY long list. The test word I put in was there, as were words like < > 0< 0<> (mostly in asm68k) and then DO, LOOP, +LOOP, and WITHIN. I think I want to insert a .() marker that will bracket my code from all the system redefinitions.



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 20, 2001 - 04:01 pm: [Edit](#)

Alternatively, you could disable safe and just include redefine after the other includes in your code.

Neal



By [Daryl Lee \(Daryl\)](#) on Thursday, September 20, 2001 - 04:09 pm: [Edit](#)

I'll play around with it a bit. I'm just glad to find the basic tool.

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Type to off screen window

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Type to off screen window



By [Ronny Svensson](#) on Thursday, September 20, 2001 - 01:23 pm: [Edit](#)

Must I use WinDrawChars or what's needed to make type at etc. work on an off screen window.

Ronny



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 20, 2001 - 01:57 pm: [Edit](#)

This should help:

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/TextModule>

Neal



By [Ronny Svensson](#) on Thursday, September 20, 2001 - 02:14 pm: [Edit](#)

Quick as always...

But what is it that keeps the normal Type from working in an off screen window?

Ronny



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 20, 2001 - 02:27 pm: [Edit](#)

That's discussed here:

<http://www.quartus.net/discus/messages/23/481.html#POST269>

Neal

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Underlined fields

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Underlined fields



By [Daryl Lee \(Daryl\)](#) on Thursday, September 20, 2001 - 09:52 am: [Edit](#)

I am at my wits' end. I have a small app with three fields, each of which SHOULD be underlined. The underlining does not actually appear until the user writes in the field. Filling the field programmatically does not produce the underline. I've compared fields and code from other, properly working apps, and I'm stumped. Any ideas?



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 20, 2001 - 10:00 am: [Edit](#)

Check the height. Have you made the fields sufficiently tall?

Are they single- or multi-line fields?

Also, are you running ClearHack?

Neal



By [Daryl Lee \(Daryl\)](#) on Thursday, September 20, 2001 - 10:12 am: [Edit](#)

It was the height. Thanks, Neal.



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 20, 2001 - 10:14 am: [Edit](#)

No problem; glad it's fixed. 😊

Neal

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Disasm module

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Disasm module



By [Bryan A. Zimmer](#) on Wednesday, September 19, 2001 - 09:10 am:

[Edit](#)

Hello,

About the only thing I know to do with the disasm module is to use the word "see" to disassemble a word definition.

Is there any way to capture the output of "see" into a memo so that it can be seen all at once?

What often happens is that the first few lines (or more than a few) scroll off the screen of the Quartus workspace, and there's no way to see complete disassembly.

Perhaps someone can give me a clue about how to capture this disassembly into a memo pad file. I would also be interested in what else can be done with the disasm module.

Thanks,

Bryan Zimmer



By [Matthew Burke \(Mmb\)](#) on Wednesday, September 19, 2001 - 09:34

am: [Edit](#)

I'm not aware of any method to route the disasm to a memo, but you can set Quartus to page the output rather than scroll without stopping.

true more drop

should do the trick. Tap twice to get the next screenful. Stroking a return seems to turn page mode off.



By [Kris Johnson \(Kdj\)](#) on Wednesday, September 19, 2001 - 03:54 pm:

[Edit](#)

Capturing output to a memo would be nice. I've thought about doing this a few times, but haven't actually tried anything. Has anyone else out there done something like this?

-- Kris

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List callback problems...

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): List callback problems...



By [Rick Flower \(Nrflower\)](#) on Thursday, September 13, 2001 - 02:04

pm: [Edit](#)

Hi.. I'm having some trouble with List callbacks on PalmOS 4 with Quartus 1.2.7R and was hoping that someone would be able to shed some light on what is wrong with my code..

I'm just posting some highlights of the code, since it's getting rather large.. Anyway, as far as I can tell, it's dying down in the (initList) word. I've tried inserting BRK's or other debug statements to dump the stack, but they almost always claim that the stack is empty.. Is that normal or am I missing something? It makes debugging those words rather difficult.. I've also inserted BRK's and other debug statements down in the "drawItem" word and they never get triggered.. This *appears* to mean that I'm never getting past the initList word..

I'm using Steve's pre-assembled "callbacks" module dated "01.3.17"

Here's some of the code for this app:

```
=====
```

```
\ DIYList-callbacks 2001-12-Sep 16:10 REF
```

```
2variable srcDBR
```

```
2variable rech
```

```
2variable objPtr
```

```
variable guiID
```

```
\ os rectangle components
```

```
\ rect struct is 0:x 2:y 4:wide 6:hi
```

```
: ->wide ( &rect. -- width )
```

```
4 m+ @a ;
```

```
: ->yx ( &rect. -- y x )
```

```
2@a ;
```

```
: numRecs ( -- numRecords )
```

```
srcDbr 2@ DmNumRecords ;
```

```
: queryRec ( id -- ptr. )
srcDbr 2@
DmQueryRecord throwNull
2dup rech 2! MemHandleLock ;
```

```
: closeQuery
\ unlock rec handle
rech 2@ MemHandleUnlock throw ;
```

```
: drawItem ( &rect. itemNum -- )
>R 2dup ->wide rot rot ->yx
R> queryRec
2dup StrLen rot rot
drawTruncChars closeQuery ;
```

```
: ListDrawCB ( &text. &rect. item )
\ CALLBACK for LstSetDrawFunction
\
installCbStack callback
\ insert code to draw an item here:
drawItem ( &rect. item -- )
0. 0 \ restore stack depth
end-callback removeCbStack ;
```

```
: (initList) ( 'listDraw num ListID -- )
0. rot GetObjectPtr 2dup objPtr 2!
LstSetListChoices
xt>abs objPtr 2@ LstSetDrawFunction
objPtr 2@ LstDrawList ;
```

```
: initList ( listID dbref. -- )
['] ListDrawCB numRecs 1106
(initList) ;
```

```
=====
=====
```

```
1100 constant Main.F
1106 constant Main.F.Table
```

```
: init-display ( -- )
Main.F ShowForm
DIYListNamesDBR srcDBR 2!
initList ; ( )
```

```
\ Main entry point
: (go) ( -- )
```

```
2048 allocCbStack
openDIYListDBs ( )
get-preferences ( )
init-display ( )
begin
ekey handle-event ( )
again ;

: go
['] (go) catch
byeThrow = if ( exception )
set-preferences ( )
closeDIYListDBs ( )
freeCbStack ( )
(bye) ( )
then ;
```



By [Steve Bohrer \(Skb\)](#) on Thursday, September 13, 2001 - 04:44 pm:

[Edit](#)

The Quartus setup for LstSetListChoices drops too many things off the stack, causing a stack underflow error. The work-around is to stuff an extra double zero (or any other value) on the stack. (However, this work-around will need to will leave extra stuff on the stack when Neal fixes the bug in Quartus.)

This is a known bug, but you have to know where to look to find out about it. I think the best place is the "[known bugs](#)" list on the wiki.

Coincidentally, this same bug is discussed in [another thread today](#) as well. I know from experience how frustrating it is to spend time debugging something that turns out to be known. Perhaps there needs to be some better pointers to known problems. Any ideas?



By [Rick Flower \(Nrflower\)](#) on Thursday, September 13, 2001 - 05:22

pm: [Edit](#)

Ok.. Thanks for that quick reply.. That was the problem.. I removed my modified version of (initList) and replaced it with the original that was posted a long time ago and then went to the Wiki server and got the fix for LstSetListChoices and the problem is GONE.. And, of course my code is working 100%.. Yeah! Now on with bigger & better things!

Thanks Mucho!



By [Steve Bohrer \(Skb\)](#) on Thursday, September 13, 2001 - 09:38 pm:

[Edit](#)

But, the bigger issue remains: how do we all avoid wasting our time re-discovering known bugs. We tried a forum topic a year ago, which was hard to search for, and is now archived. The wiki bug page is more visible, and, much, much, easier to keep current. Still, it is apparently hard to find, since people are not finding it until they give up on these bugs and turn to the forum for help.

 By [Neal Bridges \(Nbridges\)](#) on Thursday, September 13, 2001 - 09:41 pm: [Edit](#)

I can link to the known issues list in the forum menu, if that'd help.

However, some people turn to the forum first when they have a problem. Others will search all available sources before posting. Both approaches work.

Neal

 By [Steve Bohrer \(Skb\)](#) on Thursday, September 13, 2001 - 09:45 pm: [Edit](#)

Neal,

I fear that this is a pet peeve of mine. You are far more responsive and supportive than other compiler vendors I've dealt with in the past, so I don't want to seem to be complaining to loudly.

I'm not sure where the best spot for a pointer to the known bugs is. Perhaps in the release notes of the demo version?

 By [Kris Johnson \(Kdj\)](#) on Friday, September 14, 2001 - 12:30 am: [Edit](#)

I think links to the known issues list from the forum menu, the Quartus Forth product page, the search page, the online manual, and the release notes would all be good ideas.

-- Kris

 By nrflower@visto.com on Friday, September 14, 2001 - 01:02 am: [Edit](#)

Personally, I've got all of the archived message bases, but didn't think that a bug might be the problem down in Quartus. Also, I didn't know about the Wiki page with all the good stuff on it.. From now on, I'll know where to look!

Thanks for the great info base!

-- Rick



By [Rick Flower \(Nrflower\)](#) on Tuesday, September 18, 2001 - 09:02

pm: [Edit](#)

Ok.. I've got another problem.. I started getting strange callback errors when I tap on a list item.. I've already got the LstSetListChoicese fix in place, but using Debuffer, I find that I'm dying down in the guts of the Callback code..

```
: ListDrawCB ( &text. &rect. item )
\ CALLBACK for LstSetDrawFunction
  installCbStack callback
  \ insert code to draw an item here:
  drawItem ( &rect. item -- )
  0. 0 \ restore stack depth
  end-callback removeCbStack
;
```

I'm currently using Pose with the PalmOS 3.0 Debug ROMS and it complains about accessing an unused portion of the stack.. Here's the stack dump at that point in time :

```
ok> bt
ListDrawCB + $4fc60bb0
  + $1a74
  + $7342c7a0
PrvCallWithNewStack + $20bb44f6
SysAppLaunch + $bbca3acc
PilotMain + $60a0622a
__Startup__ + $8aa15f48
```

If I tell it to continue without breaking into the debugger, I get the Fatal error "MemoryMgrNew.c, Line:3970, Invalid Handle"

Any ideas on where to go from here?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 19, 2001 -

06:53 am: [Edit](#)

Rick, I haven't examined the code closely, but one question -- are you sure it's not an emulator artifact? Does the code work on the real device?

Neal



By [Rick Flower \(Nrflower\)](#) on Wednesday, September 19, 2001 - 11:05

am: [Edit](#)

Yeah, I'm sure because I get the same fatal error on my Palm M505 (PalmOS 4).. It's really strange.. I've tried narrowing down the code and in fact I all but commented out the ListDrawCB to be nothing at all (just a ";") and it still crashed. I'm just ramping up on using the "Debuffer" debugger (pretty slick), but haven't figured out an easy way to insert breakpoints in my code automagically by Quartus yet. If you've got any suggestions, let me know!

-- Rick



By [Steve Bohrer \(Skb\)](#) on Wednesday, September 19, 2001 - 11:58

am: [Edit](#)

Rick,

First, I've not yet tried my callbacks fix with OS 4.0, so maybe there is something new and strange there. Hard to imagine why, though.

New versions of POSE do report a problem with stack usage with the 01.3.17 version of the callbacks code, but as far as I know that did not lead to any trouble on the real device.

installCbStack copies A7 to A4 temporarily to have a data stack so that it can fetch the address of the callback stack. In the 01.3.17 version, I fetch, via the data stack pointer at A4, just above the current A7 position. POSE flags this because, in C, such an access would very likely be a reference to an expired automatic variable.

I posted a fix for this when it was reported in this forum in April, but I think this discussion is now archived. The fix is to decrement A7 before writing to the stack with A4. This newer version, dated 01.4.4 is on the wiki as [CallbacksModule](#), but is not yet updated in the files area here.

Again, however, as far as I know, this could not cause a problem on a real device. Please try the newer version of callbacks and report back. It should silence POSE about the stack usage, but the invalid handle may still be a problem.

Finally, trap 8 is a debugger break. As an opcode, it is

```
: dbTrap [ (hex) 4e48 cs, ] ; inline
```

Debuffer will be activated at the trap instruction. If you don't have debuffer running, POSE will warn that the application executed a debug trap. I'm not sure what happens when you run trap 8 on a real device.



By [Rick Flower \(Nrflower\)](#) on Wednesday, September 19, 2001 - 01:32

pm: [Edit](#)

Ok.. I snitched your latest version of the Callbacks module from the Wiki server -- I didn't know that was where the latest version was.. Oh well.. I know better now..

Anyway, the questionable stack usage warnings from Pose are gone, but now when I tap on a entry in the displayed list, I get the same offending "Invalid handle" memory error that I mentioned earlier. Interestingly enough, now that I'm making a full blown stand-alone executable, the problems appear to be a little different than when I run them from within the full Quartus environment. So, my next question is when I get this invalid memory handle and I'm down in the debugger (debuffer), if I do a backtrace I get the following :

```
ok> bt
  ErrDisplayFileLineMsg + $4ff40d68
  PrvHandleCheck + $6e8b74fa
  MemHandleLock + $bc986778
  FrmCustomAlert + $2606fa08
  FrmAlert + $4806f9ca
ok>
```

Is there any better way to tell exactly where the naughty stuff was done? Obviously the above information doesn't really tell me anything helpful.. Other than installing some breakpoint traps in various places and hoping for the best. I guess I could start looking at the event handling for that selection message (lstSelectEvent), but I know that it isn't even getting called since it will put up an "About" box when it triggers.. So, I guess that means that my code is dying down in the callback somewhere.. If you've got any pointers, let me know.. Otherwise I will do some more nosing around as time permits!

Thanks mucho!

-- Rick



By [Steve Bohrer \(Skb\)](#) on Wednesday, September 19, 2001 - 02:45

pm: [Edit](#)

Sorry that the current code was hard to find: I think I sent an update to Neal some while ago when this issue was in the forum, but I did not follow up to see that it made it to the file area. The wiki page used to point to the

file area here, but I recently put the new version there directly.

You may already have this, but you get more symbol information in your compiled app if you say

```
true generate-symbols
```

before you call makePRC. This lets debuffer know the names of your compiled words. BUT, within a callback, calls to forth words will not be named properly until you call Neal's callback word, which puts the proper value into A2 as the code pointer.

I don't have a clue directly about your problem, except that I am surprised that your callback would work to show the initial list items, but would crash when you select an item. Does the list work when you scroll it up and down with the little scroll arrows, without selecting anything? Or, does it always crash in the callback after the initial drawing of the list?

I found it handy to put a debug trap right at the start of my callback routine, so that I could see how often it was called. It was called for each item when the list is first drawn, and then to fill in the list after a scroll. (But, the existing items are "blitted" during a scroll, so the draw callback only gets called for the new lines.)

Under OS3.1, I don't think that the callback was called when a list item was selected: the OS just inverts the rectangle to highlight the item. This may be different on OS3.5 to deal with color highlighting, or perhaps I am remembering wrong.

Since it seems that the problem happens when you select an item from the list, you could try putting a breakpoint in your lstSelectEvent handler and tracing from there. This might show if the crash happens during the list redraw, or just after.



By [Rick Flower \(Nrflower\)](#) on Wednesday, September 19, 2001 - 09:08

pm: [Edit](#)

Ok.. I guess I will have to put things on hold a little bit.. I messed up my Pose and now can't get it to do a network hotsync.. I decided to make Pose look exactly like my M505's layout, so I could hotsync both my real M505 and Pose.. Unfortunately, the only ROM image I've got is PalmOS 3.0 Debug and since I've got the USB cradle, I can't fetch the Rom contents from my M505 (it can only be done with the serial cradle). So, I signed up at the Palm web site, but will have to wait for them to clear my NDA to get access to the ROM images area of their site.. So, I may not work on this for a few weeks..

-- Rick



By [Rick Flower \(Nrflower\)](#) on Friday, September 21, 2001 - 12:28 am:

[Edit](#)

Ok.. For now I was able to bring my Pose back to life with some tweaking here & there.. So, I was able to get back to the debugging. With Steve's help, I was able to set a breakpoint at the spot in the code where I was handing off control when the LstSelectEvent came in.. To make a long story short, it was the code that I was using to determine what even came in and what to do with it.. Apparently I got a little carried away with the cut-n-paste from some other event handling code I had.. I believe that I probably didn't have my cond/thens and the nested if/then inside that properly constructed. When I commented out that code altogether, my crashes disappeared completely! Go figure! Anyway, I'm back in business.. Thanks for the great help!

-- Rick

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New User to Forth and Quartus

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New User to Forth and Quartus



By [Steve Graham \(Steve\)](#) on Tuesday, September 11, 2001 - 11:59

pm: [Edit](#)

Thought I'd pass along a bit of a success story.

After having a Palm IIIx for about a year or so, a friend at work decided to invest in a Palm, too. Now he's decided to try his hand at coding some apps. And guess what tools he is using? Quartus Forth and RsrcEdt! About the same time another worker and I were discussing programming and he mentioned that he had worked in a firm that had utilized Forth and he gave me a number of books, including 2 editions of Starting Forth, Thinking Forth and more. Anyway, I've passed on the newer version of SF to my friend and he is progressing right along. Just hope my advice doesn't throw him off the track.

Neal, thanks again for such a fine tool.

Steve



By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 12, 2001 -

12:01 am: [Edit](#)

Thanks, Steve! A bit of bright news on an otherwise horrible day.

Always glad to have new Quartus Forth programmers on-board.

Neal

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Help with Windows

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Help with Windows



By [Steve Graham \(Steve\)](#) on Tuesday, September 11, 2001 - 09:29

pm: [Edit](#)

I've been designing an app and I need help with a windowing feature. Under certain conditions I would like to bring up a small window and write some few characters in it. Then when the conditions have passed, I want the window to disappear. I'm not real sure how to begin. Any ideas?

Thanks, Steve



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 11, 2001 - 11:27

pm: [Edit](#)

You'd need to manage that process yourself. Copy and save the area in question, clear it, draw a frame around it if you like, write your text. Time comes to remove it, you copy back the bit you saved.

Neal

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Appending strings

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Appending strings



By [Neal Bridges \(Nbridges\)](#) on Friday, September 7, 2001 - 01:43 pm:

[Edit](#)

From a discussion on [comp.lang.forth](#):

```
\ Append string s to the end of string t:
: append ( at ut as us -- at ut+us )
  dup >r 2over chars + swap chars move r> + ;

\ Append, but resize memory block t first:
: >> ( at ut as us -- at' ut+us )
  tuck 2>r over >r ( at ut us ) ( R: as us ut )
  + chars resize abort" No room for >>"
  r> 2r> ( at' ut as us )
  append ;
```

Neal

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Palm OS Emulator 3.3 is now available

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Palm OS Emulator 3.3 is now available



By [Neal Bridges \(Nbridges\)](#) on Saturday, September 8, 2001 - 03:35 pm: [Edit](#)

Palm OS Emulator 3.3 is now available on its download page:

<http://www.palmos.com/dev/tech/tools/emulator>

Neal



By [gwiese](#) on Saturday, September 8, 2001 - 07:47 pm: [Edit](#)

How do I transfer programs like quartus to the emulator? I have a rom image from the development section at Palm. When I bring up the emulator and hit hotsync on the emulator, it says its connecting to the desktop, but nothing happens.

Gary



By [Neal Bridges \(Nbridges\)](#) on Saturday, September 8, 2001 - 08:54 pm: [Edit](#)

It's possible to set up the Emulator to HotSync via a network connection, but for your immediate purposes, just right-click on the Emulator and load PRCs via the menu provided.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, September 8, 2001 - 09:34 pm: [Edit](#)

You can also install PRCs and PDBs by dragging the files onto the emulator window.

-- Kris



By [Kelly Janz](#) on Sunday, September 9, 2001 - 12:38 am: [Edit](#)

How do you get the Quartus memo files in there? They don't drag or go in through the menus. Ditto with the .MPA files. Do you cut and paste the whole library in there?



By [Kris Johnson \(Kdj\)](#) on Sunday, September 9, 2001 - 09:02 am: [Edit](#)

Compile trouble

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Compile trouble



By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, September 7, 2001 - 09:28

am: [Edit](#)

I am seeing some odd behavior when compiling a new program. The compiler runs to completion, but when I exit Quartus to try the app I get a crash (MemoryMgrNew.c, line 4257, Invalid chunk ptr). After resetting I find the new app has been compiled and seems to work fine. I am able to compile my older programs and exit without this problem occurring.

I figured this was pointing to either my code or the resource file of the current project but after rechecking both multiple times I could not find a problem. I then decided to create a test program:

```
\testb2

needs ids
needs resources

(ID) bar5 (ID) resrc use-resources

:main
begin ekey
drop
again ;
```

My make file code:

```
\ make-bar

needs ids
needs resources
needs testb2

(ID) bar5 (ID) rsrc
use-resources

' main (ID) bar5
makeprc barry2
```

I created a resource file with creator id bar5 that contains nothing but the default blank form, although I also tried with a defined blank form. In either case it made no difference: I get the same behavior of compilation and then the crash when I leave Quartus. I tried various other creator ids just to make sure I didn't have a conflict that I didn't see in RsrcEdit (not that there really could have been), but again, no difference.

Aside from the frustration of this behavior, I don't understand why I don't see it with my older program code.

Any ideas?

Barry



By [Ron Doerfler](#) on Friday, September 7, 2001 - 12:10 pm: [Edit](#)

Here's a few thoughts--don't know if they're worth much:

1. You don't need to open the resource DB in your make-bar, because it is opened and left open when you included testb2.
2. I assume that it is OK to use "main" rather than "go"?? Also, I assume that the missing space after the ":" in main is a typo, as well as the "resrc" rather than "rsrc".
3. Here's a long shot--do you have an existing database with the name barry2 but with a type other than appl? This happens to me when I have a multi-module Quartus app, where I rename the type of the modules that are not to be shown on the launcher screen to QMod (for Quartus Module). As has been discussed here, you will crash if you try to do a make on a non-appl program unless you delete it first.

Ron



By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, September 7, 2001 - 12:44 pm: [Edit](#)

Ron,

All of the typos you saw were correct in the actual code, I just did a bad job of transcribing it onto the forum.

It appears that your idea #1 is the culprit. I commented out the opening of the resource DB in the make file and no crash occurred upon exit; I then went back to my project code, did the same thing and it also exits cleanly now.

I looked back at my code from my other programs, and sure enough, there is only one call to open the resource DB. I'm not sure how I snuck a second one into my current project code, but when I tried to make a different simple compile test I did cut and paste the make file from the current project. Thus, the second call copied over again without me noticing it, though I didn't realize a second call to open the resource DB would cause a problem like this.

Ron, I appreciate your catching it. Sometimes another set of eyes are needed to see the forest in spite of the trees (or something like that). Many thanks.

Barry



By [Neal Bridges \(Nbridges\)](#) on Friday, September 7, 2001 - 01:52 pm:

[Edit](#)

Glad you have an answer, Barry.

Ron -- you can use any function as your entry point for MakePRC. I use 'go' out of habit, but there's no requirement for that particular name.

Neal

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LstSelectChoices

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): LstSelectChoices](#)



By [Elan Goldman](#) on Thursday, September 6, 2001 - 03:06 pm: [Edit](#)

Hi,

I'm reviewing Steve Bohrer's (I believe) List Tutorial. He includes a bug workaround for LstSetListChoices for Quartus 1.2.5 (see below).

I'm currently using Quartus 1.2.6. Is the workaround still needed?

```
\ Quartus 1.2.5 bug workaround :  
\ this systrap drops 2 extra cells  
\  
: LstSetListChoices  
2>R 2>R >R 0. R> 2R> 2R>  
LstSetListChoices ;
```

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Friday, September 7, 2001 - 01:44 pm:

[Edit](#)

Elan, I believe so, yes. I'll have a look at the sources to 1.2.6r this evening and confirm.

Neal



By [Steve Bohrer \(Skb\)](#) on Thursday, September 13, 2001 - 08:28 am:

[Edit](#)

This bug is still in the "[known bugs](#)" list on the wiki, and the work-around is still necessary with version 1.2.6R

Hopefully, there will be some closure of the feedback loop, if Neal checks the bugs list when he prepares a new release, and moves the fixed ones to the "Fixed bugs" part of the list. (I know, more work for Neal. But, hopefully this is easier than doing a full forum search for this sort of niggly little bug.)



By [Kris Johnson \(Kdj\)](#) on Thursday, September 13, 2001 - 09:30 am:

[Edit](#)

Note that when this is fixed, the workaround will be a bug. In other words, if you don't remove the workaround code, your program will be subject to stack overflow.

-- Kris

 By [Rick Flower \(Nrflower\)](#) on Thursday, September 13, 2001 - 04:57 pm: [Edit](#)

Neal,

Can you also check to see if it's in the 1.2.7R version of Quartus also?

Thanks!

-- Rick

 By [Neal Bridges \(Nbridges\)](#) on Thursday, September 13, 2001 - 05:02 pm: [Edit](#)

It will be, Rick; the 1.2.7 beta only added launchcode support.

Neal

 By [SamuelTardieu](#) on Wednesday, December 12, 2001 - 05:32 am: [Edit](#)

Note that I prefer the following workaround, which has the advantage of working even when Neal fixes the bug (in 1.2.8? 😊):

needs drops \ See wiki

```
: LstSetListChoices ( Count &Items. ListP. -- )  
  (hex) A1B8 systrap  
  [ 5 ] literal-drops ;
```

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Sorting database records

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Sorting database records](#)



By [chris bucsko](#) on Monday, September 3, 2001 - 07:07 pm: [Edit](#)

I'm interested in sorting records in a database by date. I have both the date (in short date format), and week and year number in each record, so I think I have all the info. I'd like to use DmQuickSort, but I can't figure out how to pass the structure into DmQuickSort. Does anyone have any ideas how to do this? I've looked here and in the WIKI page, and can't seem to find anything.



By [Kris Johnson \(Kdj\)](#) on Monday, September 3, 2001 - 09:54 pm: [Edit](#)

The archive file <http://www.quartus.net/files/PalmOS/Forth/Archive/archive9.pdf> contains a topic called "Sorting Databases" that has an example of using DmQuickSort. I don't know if this addresses your question or not.

-- Kris



By [Chris Bucsco](#) on Wednesday, September 5, 2001 - 05:46 pm: [Edit](#)

Thanks for the info. I downloaded the archive (whoa, that's big) and found the link. Looks like callbacks are used with the comparF function. I'm not sure if that's more complex than I want to get. I'm trying to understand the code now.



By [Steve Bohrer \(Skb\)](#) on Thursday, September 13, 2001 - 10:03 am:

[Edit](#)

Basically, the system sort routines call a compare routine, which you provide, when the sort needs to compare two records. Thus, the sort routine does not need to know anything about the structure of your db records; it just calls your compare routine. It passes your routine pointers to the data from the two records, a 2-byte value of other information that you can use as you wish, and, in PalmOS 2.0 and on, pointers to the attributes and unique IDs of the two records.

So, you need to write a compare word that can read the dates from your records, and return 0 if the records are equal, a positive int if the first record is greater than the second, or a negative int if the first is less. (the sort puts the lower values first, I think.)

You can test this compare word from regular code by passing it pointers to locked database records (and an extra value, if you use it).

For the actual sort routine, your compare word will be called by OS code, so it needs to be setup as a callback. That is, it must preserve the stack depth, it must return its result in D0 rather than on the stack, and it must begin with installCbStack callback and end with end-callback removeCbStack.

So, assuming that you have a compare word compareF that takes two pointers, and returns a signed 2-byte word which indicates the ordering of the data at the pointers, you could use it as a callback as follows (untested code!):

```
: compareF ( &rec2. &rec1. -- n )
  \ do your compare stuff here!
;

: callbackCompareF ( a1. a2. -- 0. 0. )
\ can not change stack depth!
installCbStack callback
compareF \ compare the records
>R      \ preserve result
0. 0.   \ restore stack depth
```

```
R> 0 d0! \ put result to d0
end-callback removeCbStack ;
```

Note that if your compare word uses and consumes the extra value, you would need to restore an additional word to the stack when you use it as a callback. Similarly for the `sortRecordInfo`, if you use that.

Or, you could write your compare word so that it does not consume its arguments, and then you would not need to restore them in the callback wrapper.

The main point is that the callback code needs to get the result to the low word of register D0, and it must leave the stack depth unchanged.

Finally, when you call the sort routine, you must use `xt>abs` to get the address of your callback word ready to pass to the system routine. Also, you must call `allocCbStack` to get memory for an extra stack before you use the callback routine.

e.g.
needs callbacks

```
\ [... other program stuff here... ]

2variable dbr \ ref to open db to sort

[... open the db, put its ref in dbr ...]

\ now you can sort the db:
2048 allocCbStack
0 \ "other" value
['] callbackCompareF xt>abs
dbr 2@ dmQuickSort throw
freeCbStack

[...]
```



By [Chris Bucsko](#) on Friday, September 14, 2001 - 11:00 am: [Edit](#)

Boy, talk about anticipation! I have just gone through the WIKI page, gotten the callbacks zip file, read through your `DmQuickSort` example, and poured over the Palm SDK trying to make sense of some of these Palm OS calls. Thanks for the info, I only have one question left. Do I provide the record pointers to the `comparF` function, or just assume that the PalmOS call puts them on the stack? According to the Palm SDK, for `DmInsertionSort`, the function itself provides the record pointers, starting with the second record. To me, it doesn't make sense to use these sort calls, if I have to write a loop which grabs record pointers from 0 to `DmNumRecords-1`. I may as well just write the insertion routine in Forth using `DmAttachRecord` (which supposedly moves records down when you insert a record in the middle of a DB). Actually, I was hoping to use `DmFindSortPosition` using a `comparF` function which assumed that I provide the `&NewRecord`. pointer on the stack, and `DmFindSortPosition` would provide the data base record pointers. Does this make any sense?? Once again, thanks for all the help!!



By [Steve Bohrer \(Skb\)](#) on Friday, September 14, 2001 - 09:32 pm: [Edit](#)

Yes, the system calls your callbacks with the function pointers and other parameters on the stack. It figures out which records need to be compared in the process of the sort, and calls your routine for each such pair of records.

The only case when you need to provide the pointers yourself is if you are testing the direct version of your compare word from the console, before using it in the callback. (Do not call the callback version of the word directly, as it expects its arguments on the return stack rather than the data stack.)

The C prototype for a dmComparF is

```
Int16 DmComparF (void* rec1, void* rec2, Int16 other, SortRecordInfoPtr rec1SortInfo,  
SortRecordInfoPtr rec2SortInfo, MemHandle appInfoH)
```

In C, all of these arguments are pushed on to the stack in reverse order. Thus, the top of the stack will have the pointer to rec1, with the pointer to rec2 under it, and the "other" value which you passed to dmQuickSort or dmInsertionSort under that, and so on.

If you need the record attributes or unique IDs, you can dig down to the pointers to the sort info for either record. If you don't need that stuff, you can just ignore it, and leave it buried on the stack.

With the dmComparF spec, the OS is declaring the characteristics of the function that you must provide. They say, "we will provide this list of stuff on the stack, use what you need of it." We just have to provide a word that deals with these parameters and returns the proper result. And, since the OS is based on C calling conventions, our word needs to act like a C routine, hence the need for the callback / end-callback words, and for preserving the stack depth, and for returning the result in D0.

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MSMount in Clie

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): MSMount in Clie](#)



By [Ed Faith](#) on Sunday, September 2, 2001 - 11:42 am: [Edit](#)

Hi,

I recently bought a Clie and have been using MSMount (an application whose main benefit is to allow ordinary Palm apps such as iSilo to store many and very large read-only databases in expansion cards without being individually rewritten to be "card-aware"). I noticed an incompatibility with Quartus which I didn't see with other apps. With MSMount running, when I exit Quartus by any route, very often I get a crash that requires a reset. I don't think it happens without exception, but almost always it happens when I try it. When I turn it off, I have no problem. This is probably something for the MSMount creator to look at, but I was wondering if Neal had any ideas about what was causing it. My on-board RAM is over 3 megabytes free, so I doubt it's a resource issue.

Thanks,
Ed Faith



By [Ed Faith](#) on Sunday, September 2, 2001 - 11:48 am: [Edit](#)

Hi,

Just noticed this had already been discussed 2 months ago. No change in status, apparently.

Thanks,
Ed Faith



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 2, 2001 - 01:36 pm: [Edit](#)

Hi Ed. I haven't fought with MsMount, as it's still in beta; I like to have a stable target to aim at.

Neal



By [Ed Faith](#) on Friday, September 21, 2001 - 02:14 am: [Edit](#)

Hi,

Update: A new product called PiDirect, which is almost identical in

functionality (and looks) to MSMount, seems to create no problems with Quartus Forth.

Ed Faith



By [Neal Bridges \(Nbridges\)](#) on Friday, September 21, 2001 - 10:38

am: [Edit](#)

Thanks for the news, Ed!

Neal

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Displaying part of a bitmap resource

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#):

Displaying part of a bitmap resource



By [Barry Ekstrand \(Ekstrandbb\)](#) on Saturday, September 1, 2001 - 12:42 am: [Edit](#)

I want to display a portion of a Tbmp resource, and I believe I am recalling correctly that it can be done. I can't find any notes on it and it isn't obvious to me after looking at the list as to which systrap will get me what I need. As an example, I have a Tbmp that is 100 x 100 pixels in size and I want to display a 15 x 15 pixel portion that begins (upper left corner) 10 pixels down from the top and 20 pixels in from the left edge. Can someone point me in the right direction as to which systrap I need to use and what the parameters are that it expects?

Thanks,

Barry



By [Neal Bridges \(Nbridges\)](#) on Saturday, September 1, 2001 - 01:50 am: [Edit](#)

From the depths of the Quartus archives:

"...use WinCreateOffscreenWindow, copy your image via WinCopyRectangle to its display-buffer, and likewise use WinCopyRectangle to bring an image on-screen..."

I haven't done this myself, but it sounds plausible to me. I'd guess you could use WinDrawBitmap to draw the bitmap on the offscreen window.

I know a couple of developers have done this before; hopefully one of them can provide further info.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Saturday, September 1, 2001 - 01:59 pm: [Edit](#)

Thanks, Neal. I searched the archive but missed that. I'll see if I can figure out the implementation of the technique, and if anybody has already done it and cares to share more info, I'll certainly appreciate the help.

Barry



By [Kris Johnson \(Kdj\)](#) on Saturday, September 1, 2001 - 07:33 pm: [Edit](#)

I haven't used Tbmp resources, but I have used a technique where I drew a set of images to an offscreen bitmap, and then used WinCopyRectangle to blit each one to the main screen when needed. There wasn't anything tricky about it--it just worked.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, September 1, 2001 - 08:07 pm: [Edit](#)

Kris' code looks like a good place to start, Barry:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/BlitModule>

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, September 2, 2001 - 09:45 am: [Edit](#)

Can anyone tell me how to programatically create Tbmp resources on a handheld? What I want to do is to draw a bunch of stuff to an offscreen window, and then write that window's bitmap as a Tbmp to a resource database.

From a quick scan of the Palm OS docs, I think this basic strategy will work:

- Use WinCreateOffscreenWindow with the 'genericFormat' parameter to create a window
- Draw my stuff to the window
- Using the 'bitmapP' member of the WindowType structure, copy the bitmap data to a new memory chunk
- Add the chunk to a resource database.

Will this work? Is there a better way?

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, September 2, 2001 - 11:57 am: [Edit](#)

I couldn't find the new OS 3.5 Bitmap Manager systraps defined anywhere, so I did the following myself. I'd appreciate it if someone could verify that I've defined them correctly.

I'll add it to the wiki if it is correct (and if no one else has already done something similar).

```
\ BitmapManager
\ Requires OS 3.5 or higher
```

```
base @ hex
```

```
: BmpCreate ( &error. &colortable. depth[>byte] height width -- BitmapPtr. )
a3dd systrap
2drop drop 2drop 2drop
d0 ;

: BmpDelete ( BitmapPtr. -- Err )
a3de systrap 2drop d0 drop ;

: BmpCompress ( compType[>byte] BitmapPtr. -- Err )
a3df systrap 2drop drop d0 drop ;

: BmpGetBits ( BitmapPtr. -- ptr. )
a376 systrap 2drop d0 ;
```

```
: BmpGetColortable ( BitmapPtr. -- ColorTableTypePtr. )
  a3e0 systrap 2drop d0 ;

: BmpSize ( BitmapPtr. -- size )
  a3e1 systrap 2drop d0 drop ;

: BmpBitsSize ( BitmapPtr. -- size )
  a3e2 systrap 2drop d0 drop ;

: BmpColortableSize ( BitmapPtr. -- size )
  a3e3 systrap 2drop d0 drop ;

: WinCreateBitmapWindow ( &error. BitmapPtr. -- WinHandle. )
  a3e4 systrap 2drop 2drop d0 ;
```

base !

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, September 2, 2001 - 12:41 pm: [Edit](#)

FWIW, my BmpCreate definition is apparently wrong. When I call it with reasonable values, I get a NULL return value, and the error contains 0. So I'm not doing something right. Maybe I need to use A0 rather than D0?

Where are the Palm OS calling conventions documented?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 2, 2001 - 01:34 pm: [Edit](#)

I don't know where it's formally documented, but address are returned in A0, other types of return values in D0.

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, September 2, 2001 - 03:14 pm: [Edit](#)

I've fixed the definitions and put them in the wiki:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/BitmapMgrModule>

-- Kris

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Delay / Timeout

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Delay / Timeout



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, August 30, 2001 - 04:09 pm: [Edit](#)

I know I've seen code with a delay or timeout for some number of ticks or milliseconds, but I can't seem to relocate it. What I want to do is draw a succession of bitmaps to the screen with a small delay in between each. Do I use SysTaskWait for this or another word, and what parameters are needed?

Thanks,

Barry



By [Chapman Flack](#) on Thursday, August 30, 2001 - 04:24 pm: [Edit](#)

I think you can use the Forth word MS. I seem to recall reports of a bug depending whether the argument is/isn't divisible by 10. Should be on the wiki.

-Chap



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 30, 2001 - 04:27 pm: [Edit](#)

It's here:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/MsOnlyWorksForMultiplesOfTen>

Neal

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Eventhandler word ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Eventhandler word ?



By [BobRyan](#) on Thursday, August 30, 2001 - 02:46 pm: [Edit](#)

Could someone give an example of how to use the eventhandler word?

TIA
Bob



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 30, 2001 - 02:52 pm:

[Edit](#)

Both Year and Duco, the sample apps provided with Quartus Forth, use eventhandler. However, it's a deprecated function; it was necessary to use it with an early version of Quartus Forth, but you can now write whole apps without ever bothering with it.

Neal

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Displaying Tbmp resources

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Displaying Tbmp resources

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, August 30, 2001 - 08:12 am: [Edit](#)

I am trying to display a Tbmp resource. From past threads in the archives I am trying to use this word:

```
needs graphics
needs resources
needs ids
```

```
(ID) MyID (ID) rsrc use-resources
```

```
: DrawBitmapResource ( y x id dtype - - )
DmGetResource 2dup >r >r
MemHandleLock
WinDrawBitmap
>r >r 2dup MemHandleUnlock drop
DmReleaseResource drop ;
```

All compiles fine with the above word included but not called. When I try to use the word through this code, it fails:

```
88 18 1106 (ID) Tbmp DrawBitmapResource
```

The error I get is:

```
Exception in file: make
Tbmp? undefined word
```

Am I missing a needs or include statement somewhere? I don't have any trouble with this line in my make file:

```
1106 (ID) Tbmp copyrsrc
```

Any help will be appreciated!

Thanks,

Barry



By [Ron Doerfler](#) on Thursday, August 30, 2001 - 12:59 pm: [Edit](#)

I don't have any problem with your code, running from the command line rather than in a make, although your second set of ">r >r" should be "r>r>". (I'm assuming that this was just mistyped, since it would generate a different error.)

Does it work ok when run from the command line? If so, there may be another Tbmp somewhere that's causing the problem.

Ron



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, August 30, 2001 - 02:16 pm: [Edit](#)

Ron,

Good catch on the >r >r; it was a typo actually in the code, but I never got an error since I am cratering before the DrawBitmapResource word is called.

I don't understand what the problem is. I've tried using another Tbmp number (my resource file has several in it, and all are brought in via copysrc), but I get the same error. It is not recognizing Tbmp the dtype (?).

It gives me the same error if I try to run it from the command line.

I've searched through all of the archives and I can't find anything that tells me I'm missing anything. I thought this one would be easy, but I'm lost.

Barry



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 30, 2001 - 02:49 pm: [Edit](#)

Barry, is (ID) inside a definition or outside? If inside, use [ID]. Using (ID) inside of a definiton will give exactly the result you describe.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, August 30, 2001 - 03:14 pm: [Edit](#)

Neal,

Bingo. My code is in the early formative stage, and I stuck the following line to my Main word, just before Begin ekey, to see how it worked:

```
{  
88 18 1106 (id) Tbmp DrawBitmapResource  
}
```

I've changed it to:

```
88 18 1106 [id] Tbmp DrawBitmapResource
```

and it works like a charm.

I much appreciate the help. Can you also give a quick understanding of the difference between (id) and [id], besides using the former outside of word definitions and the latter inside (maybe that is all I really need to know)?

Thanks again,

Barry



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 30, 2001 - 03:18 pm:

[Edit](#)

From a programmer's perspective, that's the most important item: (ID) outside of definitions, [ID] inside. It follows the same pattern as the Standard Forth functions CHAR and [CHAR].

Neal

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Possible Bug?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Possible Bug?



By [Elan Goldman](#) on Tuesday, August 28, 2001 - 08:02 pm: [Edit](#)

Hi.

I am using numerous selector triggers on a few forms in my app. I ran into a strange problem, found a workaround, and I'm wondering whether

- a) what I'm doing is legal;
- b) has anyone else encountered this problem;
- c) is it a Quartus Forth bug (if bug at all)?

1. The Problem - Part 1

A form contains 6 selector triggers and three buttons (as well as a few labels). I noticed that when I used one - and only this particular one - of the selector triggers, then the "Done" button no longer triggered an interceptable event, even though its visible behavior on the form appeared normal. The "Cancel" button continued to work.

Note: When the trigger is clicked a string is copied into the label of the selector trigger. Basically this code is:

```
\ Note that the Selector Trigger starts out with  
\ a label: 000000.00 whose length is the same  
\ as the length of the string contained in  
\ StringBuffer.
```

```
StringBuffer > abs  
SelectorID GetObjectPtr 2dup 2>r  
CtlGetLabel  
StrCpy  
2r> CtlSetLabel
```

2. Observation

I'm using the onboard RsrcEdit. I reviewed the resources for this form and noticed that the definition of the problematic selector trigger immediately precedes the definition of the "Done" button. I wondered whether there could be a connection, and commented out CtlSetLabel. No more problems. I figured that somehow CtlSetLabel overwrites a critical part of the "Done" button, and cut and pasted the selector trigger, which repositioned it at the end of the resource for this form.

3. Partial Success

Lo and behold, now the "Done" button works reliably after the problematic selector trigger is used.

4. Problem Part 2

Yes. The "Done" button works, the previous form pops up as it should, but now the buttons on the form I return to no longer work, nor do any of the hardbuttons on the Palm Vx I'm using, as a matter of fact the on/off switch does not work either. I have to do a soft reset to get the machine back to work. This behavior occurs consistently.

5. Useless

I guessed that perhaps the resource for this selector trigger is corrupted, so I deleted it from the resource file, saved the file, ran the application, returned to the resource file, and created a new, identical selector trigger. That did not help.

6. Workaround

I took another look at all the other selector triggers I use on the form, none of which caused any problems, and I noticed that they are all followed by labels.

I created a dummy label (that is not displayed on the form) immediately following the problematic selector trigger, and now everything works. To play it safe I reviewed all my forms and created dummy labels after every selector trigger that was not followed by a label anyway. I have not run into any more selector trigger related problems.

7. Conclusion

It appears to me that getting the selector trigger's label string using CtlGetLabel, copying a string (of appropriate length) to the string returned by CtlGetLabel, and then setting that string using CtlSetLabel is not safe, unless you provide for some additional buffer space in RAM using a non-active control, like a label.

Any ideas?

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 12:37

pm: [Edit](#)

I believe FrmCopyLabel is the correct function to use to change label names -- CtlGetLabel and CtlSetLabel are for controls (hence the Ctl). That's not to say it won't work, but since you're having trouble you might try

FrmCopyLabel and see if it improves your situation.

Neal

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 12:42 pm: [Edit](#)

By the way, when using FrmCopyLabel, make sure the new label length isn't longer than the length as defined in the original resource.

Neal

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 02:57 pm: [Edit](#)

Reading your post again, I see you're using CtlSetLabel to change a selector trigger. I believe that's correct, but perhaps the caveat about making sure the new label length isn't longer than the length as defined in the original resource is also good advice in this case.

Neal

 By [Elan Goldman](#) on Wednesday, August 29, 2001 - 04:45 pm: [Edit](#)

Hi Neal,

thanks for the responses.

1. The label lengths are guaranteed to be the same, since the Selector Triggers have their labels set to ten characters (7 digits, dot, 2 digits) in the resource editor, and the subsequent labels are all the exact same length.

2. It appears as though CtlSetLabel actually uses the char * passed as its argument as the Selector Trigger's memory buffer. When I passed a stringbuffer and later programmatically erased the contents of the same stringbuffer then - lo and behold - the label of the selector trigger was simultaneously erased as well, even though that selector trigger did not (otherwise) participate in the operations I was performing. I concluded that the string buffer I had passed to CtlSetLabel was being used by that specific selector trigger. Therefore I now first get the selector trigger's own memory buffer using CtlGetLabel and copy the string buffer's contents to it, and then reuse the trigger's original memory buffer by passing it CtlSetLabel.

Anyway, everything has been stable (so far) since I've added a few dummy labels to isolate the selector triggers memory buffers from other elements.

Thanks,

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Flood fill for Quartus

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Flood fill for Quartus



By [Kris Johnson \(Kdj\)](#) on Saturday, August 25, 2001 - 08:18 pm: [Edit](#)

I'm looking for a flood-fill implementation for Quartus. I found <http://www.quartus.net/files/PalmOS/Forth/Contrib/floodfill.txt>, but it requires OS 3.5 or higher.

Any other implementations out there?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 25, 2001 - 08:20 pm:

[Edit](#)

In order to do a floodfill, you need to be able to read pixels on the screen to see if you're at the edge or not. Palm OS 3.5 was the first version to offer this ability; you'd need to work up your own way of reading pixels for lower versions. Once you've got that, the floodfill I wrote can be adapted easily.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, August 25, 2001 - 08:33 pm: [Edit](#)

Yeah, that's what I've figured out. I'm looking into the format of the generic bitmap type. This format is apparently only "documented" in the form of some sample programs:

<http://oasis.palm.com/dev/kb/faq/1176.cfm>

<http://oasis.palm.com/dev/kb/samples/1159.cfm>

<http://oasis.palm.com/dev/kb/samples/1412.cfm>

But really, I may not need it. I'll probably just use it to generate some bitmaps and then store those as resources. So only the development handheld needs to support 3.5.

Thanks,

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, August 26, 2001 - 01:23 pm: [Edit](#)

It turns out that flood fill doesn't serve my needs. I have some polygons with sharp angles, and the flood fill sometimes doesn't fill in all the pixels at

the vertices. There are a few empty pixels that are surrounded by the pixels that make up the lines, and they don't get filled in by the flood.

Can anyone recommend any Forth implementations of general polygon-fill routines?

Alternatively, if I go with my "store everything as bitmap resources for later drawing" strategy, I guess I could fill in all the missing pixels by hand. I'd prefer to avoid that.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 26, 2001 - 07:37 pm:

[Edit](#)

You could specify the location of the isolated pixels and flood-fill them separately; that would keep the process automated.

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, August 26, 2001 - 08:43 pm: [Edit](#)

I'm drawing a polygon using line segments, and then filling from the center of the polygon. At certain angles, the fill doesn't make it all the way to the vertices. I don't know a way to automatically figure out where those isolated pixels are.

If you want a demonstration of what I mean, run the following:

```
\ rip-ship

needs core-ext
needs trig
needs graphics
needs floodfill

: scaled>screen ( y x -- y' x' )
  8 10000 */ 80 +
  swap 8 10000 */ 80 + swap ;

: polar>screen ( r angle -- y x )
  2dup 2>r
  sin 10000 */
  2r> cos 10000 */
  scaled>screen ;

: polar-line ( r2 a2 r1 a1 -- )
```

```

polar>screen 2>r polar>screen 2r>
line ;

: polar-poly ( r angle ... n -- )
  1- for
    2over 2swap polar-line
  next
  2drop ;

8000 value ship-nose
2000 value ship-tail
130 value ship-wing \ angle

: draw-ship ( -- )
  ship-nose 0
  10000 ship-wing
  ship-tail 180
  10000 ship-wing negate
  ship-nose 0
  5 polar-poly ;

: test ( -- )
  page draw-ship 80 80 floodfill ;

```

Note that the tips of the "wings" of the ship are not filled. (You may need a magnifying glass to notice.)

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, August 27, 2001 - 02:10 pm:

[Edit](#)

One way to automate that would be to figure out where the stray pixels are (the hard way) and hard-code little floodfills to fill them. Alternately, you might try drawing the same polygon outline just inside the first one; that might fill some of the strays.

Neal



By [Chapman Flack](#) on Monday, August 27, 2001 - 08:41 pm: [Edit](#)

Kris,

I confess I haven't tried your code, but I'm curious: do your polygon segments actually cross each other? How are you getting "empty pixels surrounded by the pixels that make up the lines"?

If you really want intersecting or complex polygons then flood fill must not be what you want. It's been ages since I took graphics but I bet there are some polygon fill algs in Newman and Sproull and they probably still work. ;) I don't know where I'd look for Forth implementations.

Or could it be you have simple polygons in mind but you're getting intersections in the rendering because of insufficient precision? In that case just working in higher precision might help.

HTH,
-Chap

 By [Kris Johnson \(Kdj\)](#) on Monday, August 27, 2001 - 09:50 pm: [Edit](#)

Some of the angles are very acute, and the aliasing leads to degenerate cases. I get shapes like this:

```
.....  
.XX.....  
.X.XX..... <-- Note isolated empty pixel  
..X..XX.....  
..X....XX.....  
..X.....XX.....  
...X.....XX.....  
...X.....XX...  
..XXXXXXXXXXXXX.  
.....
```

Flood-filling from the center of this shape leaves the isolated pixel unfilled.

I know the algorithms for filled-polygon drawing. I didn't want to have to translate them to Forth. I'll probably just do the double-thick outlines that Neal suggested.

I could probably futz with the shapes a little to make them behave with a flood fill. But I'd prefer not to change the problem to fit the solution.

-- Kris

 By [Barry Marks](#) on Tuesday, August 28, 2001 - 01:21 am: [Edit](#)

I think you're right that flood fill isn't the answer here. While you may have one polygon as far as your program is concerned you have 2 interiors (if you were playing Go you would say 2 eyes) and I think any floodfill algorithm would miss that pixel.

In a slightly different situation than the one you've diagrammed here where the isolated pixel is 2 pixels one above the other, which could happen, drawing the polygon inside itself, with the rightmost line essentially 2 pixels wide as it is, the exterior would be widened by 1 pixel at the top. So i don't think that's a complete solution to the problem.

Probably it won't be hard to find a way to prevent that with something similar to clipping.

Barry



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 29, 2001 - 05:40 pm: [Edit](#)

To do double-thick outlines, I would probably try bringing each vertex one pixel in toward the center and redrawing. But that may not work either, as it occurs to me that there might be stray uncolored pixels between the outer line and the inner line. (Which would make my problem worse than it is now.)

Why can't anything ever be easy? 😊

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 05:42 pm: [Edit](#)

Hehe. Another approach -- draw your polygons with double-thick lines. You'd need to write your own 'line' routine.

Neal

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Mathlib problem

Quartus Handheld Software: Discussion Forum: [Quartus Forth \(PalmOS version\)](#):
Mathlib problem



By [Dave Bennett \(Dbennett\)](#) on Friday, August 24, 2001 - 06:22 pm:

[Edit](#)

I took Neal's mathlibsample program and made a simple change.

```
\ mlt MathLibTest
```

```
needs fdot
needs MathLib
```

```
: go
MathLibInit
45 s>d d>f f>sf sf>df
dftan
dfs.
MathLibDone ;
```

It works, but it gives the wrong answer. The dfs. shows a value of 1.6197752e00. The answer should be 1. (Using EzCalc, which also uses MathLib, I get the correct answer.)

Am I doing something wrong here?

Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 06:24 pm:

[Edit](#)

That answer is correct -- for radians.

Neal



By [Dave Bennett \(Dbennett\)](#) on Friday, August 24, 2001 - 07:20 pm:

[Edit](#)

How do I get from "radians" to the answer I was expecting? Is there a "radians" converter?

The actual equation I was hoping to get programmed here is:

```
atan( ANS )
tanANS = 1 / (cosX * tan( 360 / 2Y))
```

If X = 30 and Y = 4 I am hoping to get 49.11 at the atan(ANS) point.

(This works beautifully in EzCalc, but I need a dedicated program for the trigometrically challenged. Which seems to include me. 😊)

Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 07:36 pm:

[Edit](#)

Here's a relevant link -- let me know if it's sufficient!

<http://www.quartus.net/discus/messages/23/459.html?ThursdayMay420000238pm#POST2982>

Neal



By [Dave Bennett \(Dbennett\)](#) on Friday, August 24, 2001 - 07:41 pm:

[Edit](#)

I've hoisted my cold Corona towards the Great White North! 😊



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 08:37 pm:

[Edit](#)

Glad it helped. For those who wonder -- the link doesn't work now because between when I posted it and now, I've archived that time-span of messages into a new PDF to be posted shortly!

Neal



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 11:10 pm:

[Edit](#)

Actually, now that I look at it, that message is already archived in archive9.

Neal



By [Chapman Flack](#) on Friday, August 24, 2001 - 11:18 pm: [Edit](#)

A couple tips:

45 s>d d>f f>sf sf>df is the long way around. It'll work OK for the value 45, but if you do that with an arbitrary value remember that you wind up with a DF (supposedly precise to one part in nine quadrillion) after a handful of separate conversions from a starting value that's only good to one part in 65536. Here's the recommended form of a DF constant:

(dfloat) 45

That way you'll also do more of the conversion work at compile time rather than run time.

Also, MathLibInit and MathLibDone are anachronisms. The latest FloatLib (on the wiki) doesn't need them.

-Chap



By [Dave Bennett \(Dbennett\)](#) on Saturday, August 25, 2001 - 02:38

am: [Edit](#)

The "45" was just a test to see if I could use MathLib to get to my intended destination. I'm still not getting correct rad>deg conversions, or even what I think is a valid starting point. Very inconsistent, but I'll work on it more in the morning.



By [Dave Bennett \(Dbennett\)](#) on Saturday, August 25, 2001 - 11:58

am: [Edit](#)

OK. I'm stopped again. I thought I had it licked and that the rad>deg stuff would solve my problem. It isn't helping with this particular situation.

$\tan\text{ANS} = 1 / (\cos X * \tan(360 / 2Y))$ is the problem.

I can work through this with Quartus and with EzCalc set to radians and get the same answer. Which is 4.002358643. However I cannot figure out how to get this number converted into the answer 49.10660544. (Which if I work through the problem manually or with EzCalc set to

degrees, I end up with 1.154700542 which I can atan(1.154700542) to get the correct answer.)

I cannot figure out how to get from 4.002358643 to either the correct answer or to 1.154700542.

I don't believe rad>deg is actually working correctly, but need someone else to verify this or show me that it is.

Thanks.

Dave

 By [Neal Bridges \(Nbridges\)](#) on Saturday, August 25, 2001 - 12:04 pm:
[Edit](#)

Dave, can you show your code?

Neal

 By [Neal Bridges \(Nbridges\)](#) on Saturday, August 25, 2001 - 12:13 pm:
[Edit](#)

rad>deg and deg>rad are simple functions, and can be verified easily. Degrees run from 0 to 360, and radians run from 0 to 2*PI; conversion between them is done by multiplying by the appropriate factor.

For your problem, you'd convert X and 360/2Y from degrees to radians, and go from there. My guess is that you're converting Y but not converting the entire term 360/2Y.

Neal

 By [Dave Bennett \(Dbennett\)](#) on Saturday, August 25, 2001 - 04:30 pm: [Edit](#)

I'll take a look at your suggestion. I can post the code, but it'll have to be later. I just installed a different Linux distribution on my machine today and don't have the pilot-link stuff up yet. ;)

Don't you mean from radians to degrees? Since the dfcos and dftan give back the results in radians?

Nevermind, I'll get the code up.

Dave

 By [Neal Bridges \(Nbridges\)](#) on Saturday, August 25, 2001 - 06:17 pm:
[Edit](#)

Cosine and tangent functions don't return angles; they each accept an angle and return a ratio. The arctangent function accepts a ratio and returns an angle. On the Palm, these functions work in radians, so to work with degrees you have to perform the appropriate conversion on either the input or the output.

For example, 45 degrees = 0.7854 radians. Thus,

$$\begin{aligned}\tan(45 \text{ degrees}) &= 1 \\ \tan(0.7854 \text{ radians}) &= 1\end{aligned}$$

$$\text{atan}(1) = 45 \text{ degrees}$$

$\text{atan}(1) = 0.7854$ radians

Neal



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 28, 2001 - 01:30 pm:

[Edit](#)

Did you get it sorted out, Dave?

Neal



By [Dave Bennett \(Dbennett\)](#) on Saturday, December 8, 2001 - 01:02

pm: [Edit](#)

Sorry it took so long to get back to this; I was sidetracked on a couple of other apps and some remodeling around the house.

I did get it sorted out, today. After a month spent in a refresher with a trig book. Now I actually know what I want to do, and have figured out how to do it with quartus forth. 😊

Should have a new app up in a couple of days.

Thanks for following up.

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No appinfoPtr ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): No appinfoPtr ?](#)



By [Amy](#) on Thursday, August 23, 2001 - 09:35 am: [Edit](#)

I detect a doubtful point after trial run quartus forth 1.27r .
Some launch mode for example sysAppLaunchCmdFind not initializes global data .
So (A5) not points appinfo block .
In those mode can use all systrap ?

Amy



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 23, 2001 - 05:33 pm:

[Edit](#)

With the 1.2.7 beta of Quartus Forth, you always have access to your globals no matter what launch code is used.

Neal



By [Amy](#) on Friday, August 24, 2001 - 08:20 am: [Edit](#)

Thank Neal,

But I attempt to understand code 1 .
I found below result .
The (A5) not points appinfo block except MOVE.L(A0), (A5) on
CmdNormalLaunch or sysAppLaunchCmdGoTo .
If (A5) don't influence some systrap , Is (A5) unnecessary ?

Amy



By [Amy](#) on Friday, August 24, 2001 - 08:20 am: [Edit](#)

Thank Neal,

But I attempt to understand code 1 .
I found below result .
The (A5) not points appinfo block except MOVE.L(A0), (A5) on
CmdNormalLaunch or sysAppLaunchCmdGoTo .
If (A5) don't influence some systrap , Is (A5) unnecessary ?

Amy



By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 08:30 am:

[Edit](#)

Oh, I understand. POSE is complaining about A5 being redirected to actual data during certain launch codes.

It's not an error in this case; Quartus Forth is deliberately redirecting A5 to point at real data. A5 is the system register used as a base pointer to data while an app is executing.

Neal

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Where is my Pen?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Where is my Pen?



By [Steve Graham \(Steve\)](#) on Wednesday, August 22, 2001 - 07:29 pm:

[Edit](#)

I need to be able to determine where my Pen touches the screen. After determining that the event was not `ctlSelectEvent`, I check for `penDownEvent`. However, it appears, after using `'event > abs itemid'` that only the x coordinate is returned.

Another challenge is that it seems that the returned x-coordinate is sometimes 1 behind. For example, if I touch the right part of the screen and then the middle, the touch in the middle returns, say, 159, and then another touch returns the middle x-coordinate.

Any help is appreciated.

Steve



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 22, 2001 - 07:31

pm: [Edit](#)

The Events library contains `coords@`, which returns X and Y. `itemid` isn't used for retrieving pen coordinates.

Neal

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Beaming an application

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Beaming an application



By [Jim Meadows](#) on Wednesday, August 22, 2001 - 06:07 pm: [Edit](#)

Does anyone have any examples/suggestions on a program beaming itself? Usually you have to have your application already on the receiving end to receive data. Since this would be beaming the application itself, do you have to do anything special to have the other Palm OS receive and accept the application?

Jim



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 22, 2001 - 06:36 pm: [Edit](#)

I remember seeing an example somewhere, but can't remember where. I think you can beam an application using the Application Launcher's creator ID, and the AppLauncher will then accept it just like another instance of the AppLauncher was beaming it.

-- Kris

Add a Message

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POSE Message

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): POSE Message](#)



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 20, 2001 - 02:25

pm: [Edit](#)

When I include the following code in my event processing code:

```
1900 = if
flag1 @ 1 = if
flag2 @ 0 = if
test @ 1 = if
  5001 FrmAlert drop
  else test @ 2 = if
  5002 FrmAlert drop
  else test @ 3 = if
  5004 FrmAlert drop
  else test @ 4 = if
  5003 FrmAlert drop
  then then then then
  else
  5005 FrmAlert drop
  then
  else
  4005 FrmAlert drop
then
then
```

Where 1900 is the id of a button tap, I get the following error message after just 67 events when running gremlins in POSE:

```
Program just read from memory location 0x00002BB2, which is in Memory Manager data structures
```

The error message goes on to give further description. If I comment out the above code, POSE runs gremlins without any problems.

I can't see anything wrong with the code itself - am I not seeing the forest for the trees, or is this an example of where I need to ignore the POSE error message and assume all is well?

Thanks,

Barry



By [Neal Bridges \(Nbridges\)](#) on Monday, August 20, 2001 - 02:31 pm:

[Edit](#)

Might be a stack imbalance problem. The code you shown is, I trust, incomplete --

```
1900 = if
```

isn't a complete comparison, and will lead to stack underflow.

Neal



By [Neal Bridges \(Nbridges\)](#) on Monday, August 20, 2001 - 02:38 pm:

[Edit](#)

Here's your conditional structure extracted from your posted code:

```
if
  if
    if
      if
        else
          if
            else
              if
                else
                  if
                    then
                  then
                then
              then
            then
          else
            then
        else
          then
      then
    then
```

Lengthy, to say the least. I recommend that you consider factoring whenever you find you have even as much as one conditional within another, let alone seven. The chance of becoming confused in a structure like the one above is pretty high; if even one branch of that nest of IF/ELSEs leaves something on the stack it shouldn't, or takes something away, you'll have problems, and the bug will be tough to find.

By factoring the conditionals into their own words, you can be sure by examination and testing that each subcomponent leaves the stack balanced.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 20, 2001 - 02:46

pm: [Edit](#)

Neal,

You are right, of course, but it just looks goofy because I cut and pasted it out of the event processing code and didn't show the whole thing. This is a better representation:

```
: do-event
event >abs itemid
cond
dup
1600 = if
drop
  FrmGetActiveFormID 1100 = 0= if
  1100 ShowForm then
else dup
1700 = if
drop
  FrmGetActiveFormID 1200 = 0= if
  1100 ShowForm then
```

```
else dup
<more of same>
else dup
<code shown earlier>
else
drop
thens
```

Sorry for the confusion in how I showed it. The program seems to run just fine on the Palm Vx, but when testing in POSE I got the error message I showed earlier, and have isolated it to the previously posted code. I don't see anything that should cause the program to try and read a part of memory that is illegal, but I thought another set of eyes ought to take a gander.

Thanks,

Barry



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, August 21, 2001 - 09:06

am: [Edit](#)

Well, it looks like I've found the culprit: I matched up an unneeded then in a cond-thens structure, i.e.:

```
: do-event
event >abs itemid
cond
dup
1100 = if
drop
<do some stuff>
else dup
1200 = if
drop
<do some other stuff>
else dup
<repeat for a number of different button taps>
else dup
1900 = if
drop
<test to see which alert to display>
then
else
drop
thens
```

The then following the test code was not needed since the then finishes off the if-else statements for me. Removing that unneeded then eliminates the error in POSE.

It does bring me to a question about cond-thens: can multiple cond-thens statements be nested? I seem to have found you cannot use one then statement to finish off if-else statements that are nested in another if-else structure, but I'm not certain I have that correct.

Barry



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 21, 2001 - 11:46 am:

[Edit](#)

You can indeed nest cond/thens, but again, I recommend factoring for a conditional structure this deep.

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, August 21, 2001 - 01:32 pm: [Edit](#)

Neal, can you give an example of what kind of factoring is appropriate for checking against a long list of IDs?

I tend to use COND..THENS or CASE statements for these things, but I'd like a better way (and I'd like for the whole thing to fit on one screen). If anyone has looked at the disassembly for this type of thing, they know just how bloated the code gets. Each IF statement generates a few instructions.

I've done some table-lookup things a few times. That's the best I can do. SELECT is nice if the IDs start at 0 and stay contiguous.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 21, 2001 - 03:53 pm:

[Edit](#)

I factor event handling along types -- buttons, menu items, etc. One definition for each. For only a few items each, I'd use a cond/thens structure; for lots, I'd use SELECT -- the IDs won't start at zero, of course, but you can subtract the required offset before feeding the item number to your SELECT structure.

Neal



By [Bob Ryan](#) on Tuesday, August 21, 2001 - 04:21 pm: [Edit](#)

You could do the same thing in your event handler, if you wanted to avoid COND/THENS and CASE:

```
: HandleEvent ( ekey -- )
  dup
  >r CntrlSelectEvent = 1 and
  r@ menuEvent = 2 and +
  r@ penDownEvent = 3 and +
  r> drop
  select
    xt noop
    xt DoCntrlSelect
    xt DoMenu
    xt DoPenDown
  end-select execute ;
```



By [Bob Ryan](#) on Tuesday, August 21, 2001 - 04:29 pm: [Edit](#)

And of course the third line should have read:

```
>r ctlSelectEvent = 1 and
```



By [Kelly Janz](#) on Wednesday, August 22, 2001 - 01:42 pm: [Edit](#)

Although it may be obvious to some of the more experienced in the crowd, would you mind walking through that code a little bit Bob? It seems to do exactly what I was having trouble with in my previous postings on Event loops.

Why do you move the event over to the return stack and then fetch it back again each time? What are the "and" & "+" doing? I'll read about the select function next, but I take it the xt word looks up the execution address of the following word? So you get the dispatch table created.

But what I am misunderstanding really is what the first part (with the return stack) is doing and why you can't integrate the first part and second parts? Is the first part populating the table with xt's and the second part is just dispatching them? But why couldn't the populating be done just once at compile time and not for every event?

Confused

Kelly



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 22, 2001 - 04:00 pm: [Edit](#)

Putting a value on the return stack and then using r@ to access it is a little like having a local variable. It just eliminates the need to have a lot of other stack manipulations to keep bringing that element to the top.

All the "ANDs and +'s" stuff in Bob's example is equivalent to this:

```
dup >r
ctlSelectEvent = if
  1
else r@ menuSelectEvent = if
  2
else r@ penDownEvent = if
  3
else
  0
then then then r> drop
```

In other words, the first part is just putting a 0, 1, 2, or 3 onto the stack, based upon what type of event it is. The "ANDs and +'s" technique Bob uses avoids the use of IF, making the code smaller and a little faster as long as the number of cases is small.

The second part just dispatches them. The SELECT word (which is not part of standard Forth--it is a Quartus-specific thing) consumes the element at the top of the stack and returns the i'th element of the table of XT's, which is then passed to EXECUTE.

This table-building is done at compile time. All that is being done at run-time is the conversion of an event code to a table index (0-3).

For sake of comparison with the different techniques discussed above, here's how I would have written Bob's word:

```
: HandleEvent ( ekey -- )
  cond dup >r ctlSelectEvent = if
    DoCtlSelect
  else r@ menuSelectEvent = if
    DoMenuSelect
  else r@ penDownEvent = if
    DoPenDown
  thens
  r> drop ;
```

-- Kris



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 22, 2001 - 04:33 pm: [Edit](#)

Actually, I would have done without the >R/R@ stuff, and just done it like this:

```
: HandleEvent ( ekey -- )
  cond dup ctlSelectEvent = if
    DoCtlSelect
  else dup menuSelectEvent = if
    DoMenuSelect
  else dup penDownEvent = if
    DoPenDown
  thens
  drop ;
```

-- Kris



By [Kelly Janz](#) on Wednesday, August 22, 2001 - 07:26 pm: [Edit](#)

Yes, that looks a lot like the code I borrowed from another Quartus app and that I was fighting with a bit. I've also seen the use of CASE functions.

What are the benefits of each of these? What is most efficient - readable - maintainable? Can I listen in to some discussion from my betters, please?

Thanks

Kelly



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 22, 2001 - 07:33 pm: [Edit](#)

I like Kris's last version; very clean, simple, and well-factored. A select/end-select structure might be faster; I haven't benched them, but I doubt it's much of a difference either way.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 22, 2001 - 08:42 pm: [Edit](#)

Bob's version is 102 bytes; mine is 90 bytes--not much of a difference.

Using SELECT would certainly be better if there was no need to translate the event types into an index.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 22, 2001 - 11:41 pm: [Edit](#)

Yes. If I were going full-out for speed, I'd go with Bob's approach, combined with a lookup table that translated events into index integers for the select/end-select.

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, August 23, 2001 - 12:28 am: [Edit](#)

I've been playing around with words for efficient event dispatch. I've come up with this syntax:

```
: HandleEvent ( ekey -- )
  dispatch
```

```
on: ctlSelectEvent do: DoCtlSelect
on: menuEvent      do: DoMenu
on: penDownEvent   do: DoPenDown
end-dispatch
drop ;
```

I've got this compiling to less than 40 bytes of code. Here's what I've got for implementation:

```
\ dispatch 2001/8/23 KDJ
```

```
needs m68k-conditions
needs m68k-moveq
needs asm68k
```

```
code (cmp) ( x1 x2 -- x1 x2 )
  sp ) tos .w cmp
end-code inline
```

```
\ Start dispatch table
: dispatch ( x -- x x )
  dup ; inline
```

```
\ Replace top-of-stack with
\ value of following word
: on: ( x1 "word" -- x2 )
  postpone [
  parse-word evaluate
  postpone ]
  postpone literal-change
; immediate
```

```
\ If X1=X2, jump to NAME
: do: ( x1 x2 "name" -- x1 x2 )
  postpone (cmp)
  postpone eq-if
  postpone drop
  parse-word evaluate
  postpone exit
  postpone then
; immediate
```

```
: end-dispatch ( x1 x2 -- x1 )
  drop ; inline
```

Any comments or suggestions?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 23, 2001 - 12:37 am:

[Edit](#)

Tidy syntax.

Neal



By [Steve Bohrer \(Skb\)](#) on Thursday, August 23, 2001 - 06:22 pm: [Edit](#)

Kris,

This looks pretty slick, as far as I can tell, and it is keen that your "Tidy syntax" also cut the code size in half for your event dispatcher.

But, can you write an explanation of what is going on here? I pretty much lose the train as soon as I hit a "postpone" or "parse-word". What happens at compile time? I can't follow the stack effect of "on:" Is it processing the event type, or making code that will process the event type.

I think this is (yet another) good topic for the wiki. I've read your wiki notes on [Immediate Words](#), but I still am pretty clueless here.

 By [Neal Bridges \(Nbridges\)](#) on Thursday, August 23, 2001 - 11:00 pm:
[Edit](#)

You can work it out via expansion. For instance,

on: ctlSelectEvent

becomes, effectively:

[parse-word ctlSelectEvent evaluate] literal-change

or, more simply:

[ctlSelectEvent] literal-change

Neal

 By [Kris Johnson \(Kdj\)](#) on Friday, August 24, 2001 - 08:13 am: [Edit](#)

I've improved on this idea a bit. I'll put it in the wiki. Look for the upcoming "OnDoModule" topic.

I'll also try to explain it. This is the first time I've done an interesting "control structure".

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Friday, August 24, 2001 - 02:26 pm:
[Edit](#)

Useful for educational purposes would be an implementation in high-level Standard Forth.

Neal

 By [Kelly Janz](#) on Friday, August 24, 2001 - 03:01 pm: [Edit](#)

I agree. This looks like great code that should become the "standard" way to do things. But I don't understand it either. The idea of being able to compare it to "verbose" Forth (What a non sequiter!) is a great idea.

Thanks

Kelly

 By [Kris Johnson \(Kdj\)](#) on Friday, August 24, 2001 - 04:31 pm: [Edit](#)

I'm going to attempt an ANS Forth implementation of it. I'm not sure how "high-level" it will be--anything involving parsing words and messing with the control stack tends to be yucky. And a standard Forth implementation won't provide the improved performance benefits--it's just nicer syntax for a complicated thing.

But you don't have to understand it in order to use it. "on: SOMEVALUE do: SOMETHING" is a

pretty easy concept.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, August 24, 2001 - 07:35 pm: [Edit](#)

OK, I've added an ANS Forth version of on:..do:. Check out <http://sleepless-night.com/cgi-bin/twiki/view/Main/OnDoModule> for all the details.

Along the way, I noticed that Quartus Forth's = (equals) word generates eight bytes of inline code. If you use = or words that use = (CASE, for example), and want to save four bytes per use, consider "de-inlining" it with a definition like this:

```
: = = ;
```

-- Kris

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Latest version number?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Latest version number?



By [Ed Faith](#) on Friday, August 17, 2001 - 04:15 pm: [Edit](#)

I have been running around the site in circles looking for the latest version number of Quartus Forth (registered). Is there a place where it is displayed?

Thanks,
Ed Faith



By [Neal Bridges \(Nbridges\)](#) on Friday, August 17, 2001 - 04:19 pm:

[Edit](#)

1.2.5r is presently shipping. There's a 1.2.6r available, and a 1.2.7 beta.

Neal



By [Ed Faith](#) on Friday, August 17, 2001 - 04:29 pm: [Edit](#)

Thanks. So there are two new versions after my version. Is 1.2.6R insufficiently exciting for you to "ship" it? (Is there some place where I can read up on this without bugging you?)

Ed Faith



By [Neal Bridges \(Nbridges\)](#) on Friday, August 17, 2001 - 04:36 pm:

[Edit](#)

1.2.7 is only a beta, not a release build. It adds launch code support.

1.2.6r only offers a fix for one bug -- a certain event type wasn't being properly transmitted in OS3.3 and beyond.

I don't have a page up with that info on it, but certainly bugging me is not a problem. 😊

Neal



By [Ed Faith](#) on Friday, August 17, 2001 - 04:44 pm: [Edit](#)

Thanks Neal. As I haven't had any problems and I don't even know what a launch code is, I guess I'll stick with 1.2.5R for now.

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Version Control

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Version Control](#)



By [Matthew Burke \(Mmb\)](#) on Thursday, August 16, 2001 - 12:37 pm:

[Edit](#)

A number of folks have mentioned interest in some sort of version control system for Quartus. I'd like to have one to use, so let's get the ball rolling....

Two thoughts:

Rather than having a memo being the object that is under control, what about doing it at the word level?

It would be nice to set up a conduit that would sync the version info with CVS on a desktop box or even across the web.



By [Brian Chirgwin \(Bchirgwin\)](#) on Thursday, August 16, 2001 - 05:26

pm: [Edit](#)

I thought of creating syncs with different version control systems (cvs, rational, perforce, etc...), personally, I think this is a low priority.

I hadn't thought of doing it by word. It is an interesting idea.

I was going to start with a simple utility allowing the programmer to select a root Forth application memo. The utility would then scan the code for included files and merged them into a single palm doc. This doc could contain the project, version, comments, etc... This could be copied to cf/sd cards or beamed. I figured it would be fairly simple but effective start.

Checking out code, unpacking a project, would change memo names to \ PRJ.File.Ver where PRJ is project name, file is the file name (double, bitmap, etc..) ver is the internal version of the file from VC. The memos would, of course, be modified to include the memo name changes. This would allow multiple checkouts of the same file for different projects.

A file diff option to display differences between in two project file. First list what files are different, clicking a file will display the actual file diff.



By [Chapman Flack](#) on Thursday, August 16, 2001 - 07:17 pm: [Edit](#)

Doing it at the word level is interesting but would put a heavy emphasis on configuration management (now just which combination of which versions

of all of these words resulted in a working instance of Program X?). CVS can indeed address that issue, but it might be more complicated than necessary to work at that level of granularity. Typically I keep closely related words in a module and a change to the module entails related changes to several words in it so they all still work as advertised. So keeping change control at the module level sort of shaves the first layer off the CM problem.

-Chap



By [Kris Johnson \(Kdj\)](#) on Thursday, August 16, 2001 - 07:46 pm: [Edit](#)

I'd advocate module-level management as well. People who need word-level can just put one word in each module.

For checking out the files, the PRJ prefix is not a bad idea, but I don't think I'd want the .Ver suffix. It seems that would force includers of a module to be changed whenever a new version of that module was checked in.

Syncing with a desktop or server CVS installation would be nice. I'd definitely go with CVS rather than the other version control systems, just because of its freeness and ubiquitousness (yes I coined two new words there).

-- Kris



By [Brian Chirgwin \(Bchirgwin\)](#) on Thursday, August 16, 2001 - 08:24 pm: [Edit](#)

I was thinking the ver naming so that if you are working on version 1.9 of your app and someone using your current release of 1.7 sends an email about a problem you can check out the 1.7 code, fix it, and check it back in without affecting your current work. The prj and ver naming should be optional settings when checking out a project.



By [Kris Johnson \(Kdj\)](#) on Thursday, August 16, 2001 - 08:56 pm: [Edit](#)

Would it also be smart enough to replace this:

needs mymodule

with this

needs myproject.mymodule.1.7

everywhere that 'mymodule' is used? If so, that would be cool. Otherwise, I'd hate to have to go fix all those references manually

To be more like desktop systems, I think it would make sense to embed all of the version information in the prefix:

```
needs myproject-1.7.mymodule  
needs myproject-1.7.myothermodule  
needs myproject-1.7.yetanothermodule
```

This makes 'myproject-1.7' sorta like a directory, which is how this sort of thing is done on desktop systems. A common prefix for all related modules also helps group them in sorted lists.

-- Kris



By [Brian Chirgwin \(Bchirgwin\)](#) on Thursday, August 16, 2001 - 10:06

pm: [Edit](#)

Yes, it definitely would change the code to update needs and other file reference as required. On check-in the opposite would of course happen.

Having 'myproject-1.7' (the ver before the module name) makes sense. I was sorting it the other way around. I guess to keep modules together of different versions so that it made it easy to go from one to the other, but, that would be a rare occurrence. I like you idea better.

I really need to get up to speed on Forth so I can develop this. I need to find the time.



By [Matthew Burke \(Mmb\)](#) on Friday, August 17, 2001 - 08:27 am: [Edit](#)

A conduit to cvs would be nice for programming collaboratively. I'm not sure what percentage of us Quartus programmers are lone wolves....

Vc at the word level just seemed to be in the Forth spirit but I haven't really had any good ideas of how it would work in practice.

The big problem with recursively snarfing up all the included files is that every project will then have its own copies of whatever "library" files are included and that doesn't seem to be what you would want.

I have two thoughts on this:

- 1) filter things by category, e.g. all my quartus library files are in a category "library", all the core files for my games toolkit are in a "games" category and the particular game I am working on is in a "working" category. If I run the vc on "shogi-main" it snarfs up all the included files only if they are in the "working" category.

(Ideally it would be nice to have one category per project but that would limit you to less than 16 projects at a time and who doesn't have 400 different concurrent projects? <g>)

2) We could agree upon a convention to fake a directory structure using memo titles. People who didn't like doing this don't have to use our vc system.



By [Kris Johnson \(Kdj\)](#) on Friday, August 17, 2001 - 08:41 am: [Edit](#)

Regarding CVS: I'm not so much interested in programming collaboratively as I am with unifying the stuff on my handheld (source memos) with the stuff on my desktop (documentation, web site, license files, etc.). It would also be nice to use Emacs or something like that on the desktop, commit everything to CVS, and then just do a HotSync to get the new files onto the handheld.

Another issue: do you want to manage just memos, or also Doc files, resource files, and whatever else might go into a Quartus app?

For resource files, might you want to manage things on a per-resource basis? I think not, because resources tend to have relationships/dependencies with one another.

For Doc files, would you want to store it in the compressed format, or might you want to expand it and only store the "diffs" between versions?

-- Kris



By [Brian Chirgwin \(Bchirgwin\)](#) on Friday, August 17, 2001 - 12:54 pm: [Edit](#)

Overall Process

Create a Project.

Name it: MyProj1

App Version: 1.0

Select the root module

Select Language (or none) <System scans root module and adds all modules it finds to the project>

Files are presented in a dialog with the following options

A drop down with:

Do not include (Just in case)

Project module (File used by this project only)

Library module (File shared between projects do not use myproj-1.0.mymodule prefix naming)

Category: What memo pad category the file belongs to.

FileType: Code (DOC Format), Code (memo pad), Resources, Other

Files can be manually added to the project not found by scanning source.

A module can be changed from library to project as needed. (creates a branch)

The source code scanning for modules can be provided for multiple languages. PocketC, etc... (not high on my priority list)

At any time a developer can add a new app version (Milestone). This records the current version of all the modules and allows comments and other details.

The second line of each module needs to have some coded string so vc knows what file it was. I was thinking \myproj-1.7-1.0-chksum Where 1.7 is the App version and 1.0 is the file version. Chksum would used to tell if the file changed (might not be necessary).

VC should manage all files related to a project. I don't see why not.

I have thought about saving differences. I don't know Forth that well, but it seems files are quite small. How would differences be saved? Full copy of the most current and differences going backward or full copy of the original and differences going forward. Either way would the palm handle the processing? The CVS conduit would have to recreate the full versions for import to CVS.



By [Kris Johnson \(Kdj\)](#) on Friday, August 17, 2001 - 01:07 pm: [Edit](#)

The CVS conduit could use the pserver protocol or another client-server protocol to exchange only diffs with the CVS server. This would speed up the HotSync process.

One question: would the version numbers have to be numbers, or could they just be any textual "tag". For individual files, a numeric version like CVS makes sense, but it seems like the "project version" is really more like a CVS tag or branch.

-- Kris



By [Brian Chirgwin \(Bchirgwin\)](#) on Saturday, August 18, 2001 - 01:11 am: [Edit](#)

A textual tag for project version makes sense to me. It will be more

meaningful too.

myproj-killerfeature.mymodule

I didn't know there was a protocol to exchange just diffs. It makes sense. Since it is available it does make sense to use it.

I don't know CVS. I have used other VC products. I should take a look at it.



By [Matthew Burke \(Mmb\)](#) on Sunday, August 19, 2001 - 07:20 pm: [Edit](#)

As far as an interface goes, I would prefer some sort of Hack so that the vc system can be invoked from within the memopad. The user should be able to commit the current memo, get diffs, revert, etc. without having to leave the memopad.



By [Brian Chirgwin \(Bchirgwin\)](#) on Sunday, August 19, 2001 - 08:03 pm: [Edit](#)

I agree a hack would be useful, but it should be an optional installation. Could the VC system be one app and a hack be a small addition that connects to it?

In addition, it should have some automatic functionality. If you modify a memo and exit memo pad it should automatically be added to VC if already in VC. If not, it should ask you.

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An article in Embedded.com slamming Forth

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): An article in Embedded.com slamming Forth



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 16, 2001 - 11:26 am:

[Edit](#)

Here's a recent article --

<http://www.embedded.com/story/OEG20010731S0028> -- from a fellow who apparently has a grudge against Forth developers.

The reader feedback at the bottom is interesting, and there's a place for you to provide your own feedback if you wish.

Neal

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Zstrings-ext

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Zstrings-ext](#)



By [Elan Goldman](#) on Monday, August 13, 2001 - 03:23 pm: [Edit](#)

Hi,

I downloaded Rick Flower's Categories example. The example needs a zstrings-ext module. Where can I find it?

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Monday, August 13, 2001 - 03:30 pm:

[Edit](#)

Do a keyword search here for "zstrings-ext" (including the quotes) and you'll turn it up.

Neal



By [Elan Goldman](#) on Wednesday, August 15, 2001 - 02:10 pm: [Edit](#)

Thanks Neal, that did it.

Elan



By [Rick Flower \(Nrflower\)](#) on Monday, September 10, 2001 - 09:04 pm: [Edit](#)

Elan,

Sorry for the late reply.. I was out of town for several weeks and away from network access.. I'm glad you found the source!

-- Rick

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Error Manager

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Error Manager



By [Kris Johnson \(Kdj\)](#) on Saturday, August 11, 2001 - 09:40 am: [Edit](#)

Has anyone developed any Quartus Forth words that are analogous to the C macros ErrDisplay, ErrDisplayFileLineMsg, ErrNonFatalDisplayIf, etc.?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 11, 2001 - 01:21 pm:

[Edit](#)

If you look at how those macros expand, you'll see you can replicate them directly if you desire.

Neal

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What palm for Quartus Forth?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): What palm for Quartus Forth?



By [Julian Robin Fondren \(Jfondren\)](#) on Friday, August 10, 2001 - 07:20 pm: [Edit](#)

Hi. I hope I'm not repeating a previous conversation, a quick search didn't show one like this. Perhaps I'm unique in my state.

I've been a Forth programmer for a little over a year now, and I do a great deal of avocational programming in that language, though I plan to do some vocationally perhaps when I finish HS.

Right now I'm in my Senior year, and I don't have a job -- or any convenient way to get one. I'm quite busy just handling my school work. The problem is, the increasingly annoying problem, is that five days out of a week I have only *FIVE* hours of wakeful opportunity with my computer to program, and mostly less than that.

I figured recently that, with a Palm Pilot and a Palm Pilot Forth, I can program whenever the time is available. To steal moments with Forth out of my dreary desolation, is my romantic characterisation =)

I've two big obstacles to this simple goal:

- 1) My income is \$10 a week. Most of the time.
- 2) I know NOTHING AT ALL about Palm Pilots.

Regarding #1, I figure that in twenty weeks I'll have \$200, enough perhaps for Quartus Forth and a low-grade Palm Pilot. Regarding #2... well... I'm not even sure if the terminology "Palm Pilot" is correct. I just want to have a Forth to carry around with me. Paper programming lacks something of Forth's interactivity =)

Well, given all the above, here's my question:

Does anyone recommend a type of Palm Pilot that'd be good for Quartus Forth? Is there a significant difference between them? Will some Palm Pilots /not/ support Quartus Forth? (I'd rather have a paper weight. Really.) Or are the breeds of Palm Pilot so similar that Quartus is fine on all them?

Thanks in advance for any answers and your patience. Incidentally, twenty months from now is Christmas =) Nice present for myself, you think?



By [Neal Bridges \(Nbridges\)](#) on Friday, August 10, 2001 - 07:24 pm:

[Edit](#)

Hi, Julian. I can't think of a better gift for a Forth programmer! 😊

There aren't any of the current Palm OS devices that won't run Quartus Forth, to my knowledge. Find one in your price range, come back and let us know which one you're looking at, and we can confirm that it runs.

I recommend you aim at an 8 megabyte version; the older 2 megabyte models will find you running out of space too frequently.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 13, 2001 - 08:33

am: [Edit](#)

Julian,

When I started my char-ware (charitable shareware) project, I chose Quartus Forth because I would be able to work on programs in odd available moments, wherever that happened to be. I can attest that this does indeed work well, although as a novice Forth and Palm OS programmer I had to carry around a bit of documentation as well. All in all it has worked out great for me.

With regard to which machine, I agree with Neal that an 8 meg machine is preferable, but I did my first couple of programs on a Palm III with 2 megs. If you aren't scared of used machines (and I'm not sure whether you should be or not), I've noticed a number of Palm machines on the auction sites like ebay and yahoo. It might be worth looking at.

Good luck with it!

Barry Ekstrand



By [chris bucsko](#) on Monday, August 13, 2001 - 02:24 pm: [Edit](#)

For new Palms, the Palm m100 costs \$129, and has only 2MB of RAM. It's still a pretty good PDA which will run QF just fine, but it has a small screen. At \$199, the Handspring Visor Deluxe has 8MB RAM, and a larger screen. If you're going to buy used, it might be wise to 'try before you buy'. Most people don't abuse their Palms, but on older units, the screens can get flaky over time. I also think Palm has a 'developer's discount' for selected models. Don't forget that the trial version of QF is free and works fine, except that you can't make executables. That might help you out with your payment schedule.



By [Kris Johnson \(Kdj\)](#) on Tuesday, August 14, 2001 - 10:31 pm: [Edit](#)

If you want to get your feet wet with Quartus, you could download POSE and start playing with it on your existing computer. This may be counter to your real objective (playing with Forth when you're not seated at a computer), but hey, it's free.

You'll need to join the Palm developer program to be able to download ROM images for use with POSE. You should do that as soon as possible, because it takes a few weeks to get accepted.

-- Kris



By [Steve Bohrer](#) on Wednesday, August 15, 2001 - 08:40 pm: [Edit](#)

I still have not "run out of space" on my 2 meg IIIe, with Quartus and an older, smaller, version of pEdit. But, I do not have room for the Palm OS Reference as a Doc file -- is that what you all use your 8 Megs for, or have you written LOTS more code than I do?



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 15, 2001 - 09:19 pm: [Edit](#)

Palm OS Reference, Palm OS Companion, DPANS, and Quartus manual are all essential, in my opinion.

I use iSilo rather than Doc.

-- Kris

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Handera APIs

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Handera APIs



By [Steffen Demuth](#) on Thursday, August 9, 2001 - 05:58 am: [Edit](#)

Hello all,

I hope I don't overload this forum with the following question: I'm trying to find out how to call Handera functions with Qforth. One of the simplest is probably SilkScreenMinimize.

What I found in the SDK files is:

```
*** In silk.h: ****
```

```
extern void SilkMinimizeWindow(void)
EXT_TRAP(trgEraseSilkWindow);
#define trgEraseSilkWindow (trgMinSilkFunction+ 4)
#define trgMinSilkFunction 0x0700
```

```
*** In trg.h ****
```

```
#ifdef BUILDING_EXTENSION
#define EXT_TRAP(x)
#else
#define EXT_TRAP(x) TRG_TRAP(x)
#endif
```

```
#define TRG_TRAP(sel) \
_TRG_CALL_WITH_16BIT_SELECTOR(_SYSTEM_TABLE,
sysTrapOEMDispatch, sel)
```

```
#ifdef __GNUC__
#define _TRG_CALL_WITH_16BIT_SELECTOR(table, vector, selector) \
__attribute__((__callseq__(\
"move.w #" _Str(selector) ",%%d2; "\
"trap #" _Str(table) "; dc.w " _Str(vector) )))
#elif defined (__MWERKS__)
#define _TRG_CALL_WITH_16BIT_SELECTOR(table, vector, selector) \
= { 0x343C, selector, 0x4E40 + table, vector }
#endif
```

```
*** in CoreTraps.h ****
#define sysTrapOEMDispatch 0xA349
```

```
*** in PalmTypes.h ****
```

```
#define _SYSTEM_TABLE 15
```

Any idea how to code this in Quartus Forth?

Steffen.



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 9, 2001 - 10:57 am:

[Edit](#)

Back of an envelope, here -- this is a quick translation (please test). The >D2 can be done without the assembler, using direct hex codes.

```
needs asm68k
```

```
code >d2
  prefix
  move .w TOS d2
  ] drop [
end-code inline
```

```
: SilkMinimizeWindow ( -- )
  (hex) 0704 >d2
  (hex) a349 systrap
;
```

Neal



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 9, 2001 - 10:59 am:

[Edit](#)

... you'd want to generalize the calling mechanism, as was done with the Handspring extensions.

Neal



By [Steffen Demuth](#) on Thursday, August 9, 2001 - 11:28 am: [Edit](#)

Hey, that works! This is the perfect basis for a Handera Library in Quartus Forth.

Thanks a lot - I didn't expect an answer anytime soon, and this was faster than light.

Regards,

Steffen.



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 9, 2001 - 11:33 am:

[Edit](#)

Great! It'll need factoring, as I said, but as a proof of concept I'm glad it's working.

Neal

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New Serial Manager support now available

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Serial Manager support now available



By [Neal Bridges \(Nbridges\)](#) on Monday, August 6, 2001 - 10:18 am:

[Edit](#)

Courtesy of Samuel Tardieu, there's library code for New Serial Manager support available in the File Area:

<http://www.quartus.net/files/PalmOS/Forth/Contrib/srm.txt>

Thanks Samuel!

Neal



By [Harry Winter](#) on Saturday, August 11, 2001 - 04:30 pm: [Edit](#)

Is there any explanation how this serial manager works? At what Baudrate is it running? How does one make it work for EMIT and KEY? Can it be used in Compile mode into the TIB?

HELP !!! HELP !!! HELP !!! HELP !!! HELP !!!

WinnY the Poo



By [Kris Johnson \(Kdj\)](#) on Saturday, August 11, 2001 - 04:40 pm: [Edit](#)

I'd suggest starting here:

<http://www.palmos.com/dev/tech/docs/palmos/SerialCommunication.html>

and here:

<http://www.palmos.com/dev/tech/docs/palmos/SerialManager.html>

As far as integrating it with EMIT, KEY, TIB, etc., you'll probably have to implement that yourself. This library module simply provides wrappers for the Palm OS system calls.

-- Kris

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Handera

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Handera](#)



By [Steffen Demuth](#) on Monday, August 6, 2001 - 08:19 am: [Edit](#)

Hello all,

I'd like to know whether Qforth has or will have support for the Handera330.

Or, has anyone been successful in calling the HE-specific APIs?

Thanks for any reply.

Steffen



By [Neal Bridges \(Nbridges\)](#) on Monday, August 6, 2001 - 10:13 am:

[Edit](#)

Hi Steffen. I haven't yet done any work on extending Quartus Forth toward the Handera. Certainly the Handera-specific APIs could be called from Quartus; that support can be added as library code as it was for the Handspring.

If you'd like to undertake that, I'd be happy to assist; otherwise it will have to wait its turn. The Handera, while an interesting gadget, makes up a rather small percentage of devices thus far, and I don't yet have one in the Quartus lab.

Neal



By [Steffen Demuth](#) on Tuesday, August 7, 2001 - 04:09 am: [Edit](#)

Thanks, Neal. I have just started digging into palm programming, but as soon as I'm a bit deeper in it, I'll try using Handera APIs. I'll have a look at the Handspring support and see if something similar can be done for the HandEra.

But my wish list is a bit longer. I would especially like to see the high screen resolution and smaller fonts inside the Forth environment. Qforth works perfectly on the HE btw.

I don't know how big HE's market share is, but I think with its superb screen and expandability it makes the perfect machine for a program like Qforth.

You don't need a Handera in your lab; POSE with the HE ROM (available on their web site) works just as well.

Qforth is great, and as soon as I'm having my first app running I'll register.

Steffen.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 7, 2001 - 02:56 pm:

[Edit](#)

Glad to hear it's working well. I have the Handera ROM, and have tested Quartus Forth under it, but it's always good to get confirmation that's running well on the real hardware.

Neal

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LatestRelease?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): LatestRelease?](#)



By [Elan Goldman](#) on Sunday, August 5, 2001 - 03:53 pm: [Edit](#)

Hi,

what is the latest Quartus Forth release and what is the correct procedure to obtain it? (I am running the 1.2.5R registered version, which I obtained earlier this year).

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 5, 2001 - 04:14 pm:

[Edit](#)

There's a 1.2.7 beta, supporting launch codes; let me know if you'd like a copy.

Neal



By [Bob Gibson \(Ragibson\)](#) on Monday, January 14, 2002 - 11:01 pm:

[Edit](#)

Q: Is 1.2.5R still the "most stable" version?

Q: Why are build numbers in the form that implies they were performed more than 2 years ago (i.e., 1999.10.25)? Has it really been 2+ years since you've updated the code?

Thanks

Bob



By [Bob Gibson \(Ragibson\)](#) on Monday, January 14, 2002 - 11:04 pm:

[Edit](#)

Sorry for the duplicate... the browser indicated an error on the first attempt to post...



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 15, 2002 - 02:36 pm:

[Edit](#)

Hi Bob. 1.2.5R is the shipping build. There's a 1.2.6R available on request,

and 1.2.7 beta also on-hand.

Neal



By [Greg Lisle](#) on Wednesday, March 6, 2002 - 12:07 pm: [Edit](#)

Neal,

What's the difference between 1.2.5 and 1.2.6?

Is there a reason for NOT getting 1.2.6?



By [Neal Bridges \(Nbridges\)](#) on Friday, March 8, 2002 - 02:58 pm: [Edit](#)

Hi Greg. 1.2.6r has a minor modification in it for handling a particular event type; I'm happy to send it out to registered users. Drop me a note.

Neal

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Changing Window Orientation

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\):](#)

Changing Window Orientation



By [Elan Goldman](#) on Sunday, August 5, 2001 - 02:45 am: [Edit](#)

Hi,

Is there a quick and easy way to implement landscape windows (i.e. switch the orientation of the display) under Quartus Forth?

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 5, 2001 - 04:33 pm:

[Edit](#)

There's no quick and easy way to do it. If I recall correctly, one of the newer devices allows screen rotation, but at the moment I don't recall which. However, if you're looking for platform independence, you'd need to draw your own landscape screen.

Neal



By [Kris Johnson](#) on Sunday, August 5, 2001 - 08:31 pm: [Edit](#)

There is free screen orientation software available for PalmOS. I can't remember the name, but it doesn't cost anything and I think the source code is provided, so you can look at how it is done.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 5, 2001 - 10:07 pm:

[Edit](#)

I've seen that somewhere too. I don't know how well it works. I suspect, however, that your program wouldn't be in control of the screen orientation -- it'd be controlled from a preferences panel.

Neal



By [Elan Goldman](#) on Monday, August 6, 2001 - 01:42 am: [Edit](#)

Thanks to everyone for the advice. I'll try to find the example software.

Elan



By [Bob Ryan](#) on Monday, August 6, 2001 - 01:45 am: [Edit](#)

FlipHack is available here:

<http://www.palmgear.com/software/showsoftware.cfm?sid=38542520010806004118&prodID=5755>

Source code is provided on the developers web site. I haven't tried it so I don't know how well it works.

It's a hack, with orientation controlled through Hackmaster.



By [Neal Bridges \(Nbridges\)](#) on Monday, August 6, 2001 - 10:22 am:

[Edit](#)

Thanks for that link, Bob!

Neal

 By [Dave Bennett \(Dbennett\)](#) on Thursday, August 9, 2001 - 10:07 am:
[Edit](#)

I've used FlipHack for about a year and it seems to work fine. I only use it on occasion and it is quite handy when you need it.

 By [Bob Ryan](#) on Thursday, August 9, 2001 - 04:13 pm: [Edit](#)

Another resource is CSpotRun, a DOC format reader. Source code is available. Get it here:

<http://www.32768.com/bill/palmos/cspotrun/>

 By [Kris Johnson \(Kdj\)](#) on Thursday, August 9, 2001 - 08:00 pm: [Edit](#)

Has anyone peeked at the source to these to see how it is done?

If I had to write an app that did this, I might draw everything to an offscreen bitmap, and then copy pixel-by-pixel to the screen with x and y reversed (or negated or whatever). But that's probably pretty slow.

I'd imagine that FlipHack patches all the system drawing traps to do its magic.

BTW, FlipHack comes with another hack that flips the Grafitti area as well, allowing one to write in the different orientation.

-- Kris

 By [Kris Johnson \(Kdj\)](#) on Saturday, August 11, 2001 - 09:31 am: [Edit](#)

I took a look at the source. FlipHack does indeed make all drawing happen in an offscreen buffer, and then it copies and rotates it to the LCD.

Most of the work is done by patching ScrDrawNotify. ScrDisplayMode is patched to keep track of anything the app may do that would affect double-buffering. WinScreenLock and WinScreenUnlock are patched to keep track of the lock count.

PenRawToScreen and PenScreenToRaw are patched so that pen taps on the screen are rotated. (Graffiti-area pen events are not affected).

For anyone who wants to implement screen rotation in their own app, I suggest looking at this code for ideas. But remember that it is GPL, so copying it into a non-GPL program is verboten.

-- Kris

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Using FldGet TextPtr

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Using FldGet TextPtr



By [Chris Bucsko](#) on Monday, July 30, 2001 - 05:48 pm: [Edit](#)

I'm trying to add some text to a record which the user enters into a field. The code is:

```
: AddMemo ( -- )
\ add memo to record
\ get memo text length & Charptr.
  MemoFld GetObjectPtr 2dup
  FldGetTextLength 2dup
  0> if
    memolen ! Reclen + s>d
    2swap FldGetTextPtr 2>r
\ get index & resize rec
  index @ dbp 2@
  DmResizeRecord
\ lock handle, get chars text ptr
\ & offset onto stack & write to rec
\ this should put len. Charptr. offset. Hand.
\ on stack
  2dup Recptr 2! MemHandleLock
  memolen @ s>d 2swap 2r>
  2swap Reclen s>d 2swap
  DmWrite throw UnLockRecord
else beep 2drop 2drop then ;
```

where Reclen is a constant, and the original length of the record. UnLock record simply fetches the Voidptr from recptr and unlocks it. FldGetTextlength and DMResizeRecord both seem to work. When I put text in the field, and look at the record in Rsrcedit, the length has been changed by the right amount, but the characters are garbage. Has anyone ever tried this? Any help would be appreciated, even simple debugging tips.



By [Ron Doerfler](#) on Tuesday, July 31, 2001 - 11:59 am: [Edit](#)

Hi Chris,

Without being able to try it out per se, I notice that FldGetTextLen should be followed by DUP DUP rather than 2DUP, as you really want two copies of the single word on the stack.

Ron



By [Chris Bucsko](#) on Tuesday, July 31, 2001 - 06:05 pm: [Edit](#)

I've said it before, and I'll say it again... DOH!!! Silly mistake. I'll try this and see if it fixes the problem. Thanks.



By [Chris Bucsko](#) on Thursday, August 2, 2001 - 09:34 am: [Edit](#)

Ron,

That did it!! Thanks for the help. I have one other question which I can't seem to answer myself: how can you get the Length of a record. I've looked through all the PalmOS DM calls, and it doesn't seem to be there. Does anyone know how to get a record's length??



By [Ron Doerfler](#) on Thursday, August 2, 2001 - 10:11 am: [Edit](#)

Here's how to do it. If it helps, there is a library memo of useful database/record routines such as this that's called database-routines.txt and is located on the Wiki page that contains my database tutorial:

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/DatabaseTutorial>

```
: size-record  
( index dbref. -- size )  
DmQueryRecord MemHandleSize d> s ;
```

Ron



By [Chris Bucsko](#) on Thursday, August 2, 2001 - 02:17 pm: [Edit](#)

Thanks again. I've downloaded the tutorial. It looks very useful.

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M505 issue

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): M505 issue](#)



By [Barry Ekstrand \(Ekstrandbb\)](#) on Sunday, July 29, 2001 - 06:03

pm: [Edit](#)

I am currently remote (out of state) and picked up an email from a user of 2 of my programs who says he is getting a fatal reset when he tries them on a m505, but no problem on a Vx. This is the first report I've ever received of fatal exceptions on any machine, and he reports it on 2 different programs.

Before I get back home next week and am able to start digging into it, I thought I'd ask here if anyone has any suspicion of what might be different on the m505 vs. a Vx. Does this sound like it might be an OS issue? I tested the programs with OS v2.0, v3.3, and (I think - holiday brain might be a bit foggy) v3.5. Doesn't the m505 use the new OS v4.0?

If anyone has any thoughts I'll appreciate them, otherwise I'll be digging in after I return home.

Thanks,

Barry



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 29, 2001 - 06:05 pm: [Edit](#)

The m505 does use OS4.0. From what you know so far, there isn't enough information to diagnose; it might be an OS issue, but then again it might be an unfavourable interaction with something else the user is running on the 505.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Sunday, July 29, 2001 - 06:18

pm: [Edit](#)

I agree, there isn't enough info to determine anything. Basically I'm fishing to see if anyone else has had the same kind of report and could point in a particular direction if so. I need to fire up POSE with OS 4.0 when I get home, then we'll see what we find.

Barry



By [John Newell](#) on Monday, July 30, 2001 - 07:19 am: [Edit](#)

I have had reports the The Archery Suite (posted last week) will not run on the m505. I am told that all the dropdown lists come up empty. The suite was developed and compiled on my Palm Vx with OS3.5. It does work on my Palm V OS3.3 and on a IIIe OS3.1.

I haven't got a OS4.0 ROM (I'm not an Alliance member) so can't try it out on POSE.

Regards

John



By [Neal Bridges \(Nbridges\)](#) on Monday, July 30, 2001 - 09:25 am: [Edit](#)

I'll have to try it out here, John. An additional data point -- all of my apps to date work fine on the m505.

Neal



By [Samuel Tardieu](#) on Monday, July 30, 2001 - 09:35 am: [Edit](#)

That's funny, I just got a report from a user saying he could not use PhoneTime (see <http://www.rfc1149.net/palm/>) on a Visor, he gets an immediate fatal exception too. I never had any report of this kind before.



By [Neal Bridges \(Nbridges\)](#) on Monday, July 30, 2001 - 09:37 am: [Edit](#)

What model of Visor, Samuel?

I get these reports sometimes; they are frequently attributable to various things -- corrupt PRCs, or conflicts with one thing or another. Each instance requires investigation.

Neal



By [Samuel Tardieu](#) on Monday, July 30, 2001 - 09:45 am: [Edit](#)

I was just told it is a Handspring Visor Deluxe (I do not own one). The program was beamed from a Palm Vx on which it works fine.

I was told that you do not need a phone to reproduce the bug: just ask to compute the time difference.

Mmm... I wonder whether I would not be using something which is only in PalmOS 3.5 (like the new serial manager, I have to check when it appeared, Visor devices are lagging behind in terms of OS version if I remember correctly). Never mind 😊



By [Neal Bridges \(Nbridges\)](#) on Monday, July 30, 2001 - 01:46 pm: [Edit](#)

Without actually checking, I seem to recall the Visor Deluxe has 3.11H on it (3.1, for all intents and purposes).

Neal



By [John Newell](#) on Tuesday, July 31, 2001 - 07:10 am: [Edit](#)

Neal,
It's very kind of you to try out The Archery Suite on an m505. I look forward to seeing the results.

Regards
John



By [Barry Ekstrand \(Ekstrandbb\)](#) on Sunday, August 5, 2001 - 06:04 pm: [Edit](#)

All,

I returned home from holiday to find a note from the user who reported the m505 problem, telling me that all is working fine now. They also subsequently registered 2 programs, so I suppose that is additional evidence that things are okay. I have asked them to let me know what the problem actually was, but apparently it was not related to my programs.

Could this be the best way to attack a problem - be away so you can't jump on it and wait

until it fixes itself before you get back??? ;)

Barry



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 5, 2001 - 08:01 pm:

[Edit](#)

A surprising number of problems are self-fixing; thank the appropriate gods and keep your fingers crossed against the future. 😊

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, August 7, 2001 - 08:36

am: [Edit](#)

I may have spoke too soon. I've received another note from the user that he got a crash on his m505 and now the program won't run again. Additionally, I received a report this morning from another m505 user that the program won't run on his machine.

I downloaded the OS 4.0 ROM for POSE and had it running overnight. After about 52,000 events there was a message saying the stack was close to overflowing and it listed a number of what looked like screen drawing parameters as being in use.

I'm really not sure what this message tells me - I assume the stack that is referred to is not the same as the Quartus data or return stack, as I doubt I would get 52,000 events before overflowing those if my Forth code was out of balance (and no problems appear under OS 3.xx).

Any thoughts on what I should be looking for?

Thanks,

Barry



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 7, 2001 - 10:15 am:

[Edit](#)

Is that the debug 4.0 ROM, or the normal one?

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, August 7, 2001 - 10:20

am: [Edit](#)

That is the normal one. Should it have been the other?

Barry



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 7, 2001 - 10:22 am:

[Edit](#)

You'll find the debug ROM will generate errors in situations that the normal ROM -- and real device -- won't, which can sometimes give you an indication of the point of failure.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, August 7, 2001 - 02:36

pm: [Edit](#)

Okay, I re-ran POSE with the 4.0 and 3.3 debug ROMs. Here is what happens:

First, when the program is started, the first thing that happens is each field is populated with a default value. For each field populate call I get an error saying:

```
Program called SysFatalAlert with the message, "Field.c, Line:2671, Ins Pt not visible but x/y still relative"
```

I get this message with the 3.3 debug ROM as well, but in both cases it goes away once the fields are populated. In the case of 3.3, things run fine until another screen is called which again includes the field populate calls; at that point I get the above message until all fields are populated, then it runs again. In other words, the above message seems to be benign and is only relevant when fields are being populated.

In the case of the 4.0 debug ROM, however, after populating the initial screen I immediately get another error:

```
Program just wrote to memory location 9x000027A4, which is an unlocked chunk of memory.
```

An unlocked chunk of memory is one that has been allocated with MemHandleNew but that has not been locked with MemHandleLock. Such an access usually means that an application allocated a buffer with MemHandleNew, locked it with MemHandleLock, unlocked it with MemHandleUnlock, and then used the pointer returned by MemHandleLock.

Attempting to continue, I immediately get another of the same message except the memory address is 0x000026A2; continuing once more yields this final error:

```
Program just changed the emulator program counter to 0x000080FF. This address is invalid because it is not even.
```

At this point I have to reset, no more events will run.

Any thoughts?

Barry



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 7, 2001 - 02:47 pm:

[Edit](#)

At this point, you need to isolate exactly what it is in your code that causes the error condition to trigger. Bear in mind that some errors will only occur on the debug ROM -- that is, there's no actual error condition when running on a real device or non-debug ROM. This means there are sometimes wild geese to chase.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, August 7, 2001 - 02:58

pm: [Edit](#)

Okay, but is there any significance to the fact that the non-populate errors only occur on the 4.0 debug ROM and not the 3.3 debug ROM?

It seems POSE doesn't necessarily clear the water.

Barry



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 7, 2001 - 03:07 pm:

[Edit](#)

Typically, the later version debug ROMs complain about more things, and (too often) things that don't actually occur on the real device.

You're right -- POSE doesn't clear the water. It's just another tool in the box.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, August 8, 2001 -

08:53 am: [Edit](#)

Problem solved for at least one of the users - he found that a program called MSMount is incompatible with my WealthBuilder program. If MSMount is enabled, when he taps "Calculate" in WealthBuilder he gets a crash. If MSMount is disabled WealthBuilder works fine. He determined that he doesn't need MSMount and has removed it from his m505, and all is well for him. I've sent a note to the other m505 user to see if MSMount is the source of his incompatibility as well - since the symptoms are exactly the same I have a suspicion this is the case.

I thought I remembered a previous posting about MSMount incompatibility and did a search to find it; in June it was reported that QF wouldn't run with MSMount on the machine. It appears that QF-compiled apps also don't like MSMount. I'm not sure what the problem is, but if I understand what MSMount is correctly, it is trying to fool the machine into thinking programs on an expansion card are actually in RAM. If this is right, I would assume that incompatibility issues will have to be solved by the author of MSMount. Do I understand the situation right, and have you had any correspondence with the MSMount author?

Barry



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 8, 2001 - 10:45

am: [Edit](#)

I haven't corresponded with the MsMount author. MsMount is beta code, and wobbles on its wheels quite a bit.

MsMount crashes under various circumstances, but I was able to run a number of Quartus Forth apps with it active. It appears there are just certain normal activities that cause MsMount to fall over.

Neal



By [John Newell](#) on Thursday, August 9, 2001 - 07:24 am: [Edit](#)

Neal,
Have you had a chance to try out The Archery Suite on your m505. I don't know anyone

else with one and can't try it myself. I would appreciate it if you would have a go when you get time. Perhaps MsMount is the problem there. Thank you.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 9, 2001 - 10:52 am:

[Edit](#)

John, sorry for the delay; I'll do that ASAP.

Neal



By [John Newell](#) on Monday, August 13, 2001 - 04:11 am: [Edit](#)

I don't know if Barry is going to add anything here but I received this e-mail from him which is relevant:

John,

Results are in from my m505 user and are attached. The same results as for my WealthBuilder: your Archery Suite works fine if MSMount is deleted but crashes if it is on the machine. Apparently the disable feature in MSMount doesn't prevent the crash for our Quartus-compiled apps.

Regards,

Barry Ekstrand

I'll let my m505 user know. Thanks for all your help Barry.

Regards
John

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Assembler Typos

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Assembler Typos](#)



By [Kris Johnson \(Kdj\)](#) on Sunday, July 29, 2001 - 01:22 am: [Edit](#)

I've found a couple of typos in the asm68k.part2 v1.21 sources for the "Set According to Condition" mnemonics:

- SGE (Set if greater than) is spelled "SSE"
- SHI (Set if high) is spelled "SNI"

Also, asm68k uses "SET" and "SNO" instead of "ST" (Set True) and "SF" (Set False). ST and SF are the official mnemonics given in the M68000 documentation.

The disassembler shows "sf" for the SNO/SF instruction, but shows "sra" for SET/ST.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 29, 2001 - 02:03 pm: [Edit](#)

Kris, thanks. The original materials for asm68k were an electronic copy somebody had, I believe, OCR'd in; there were typos all through it. Clearly I missed a couple!

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, July 29, 2001 - 04:37 pm: [Edit](#)

I was wondering if you Grafitti'ed them in. That would have been a lot of work.

-- Kris

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Example of "dump"

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Example of "dump"



By [Bryan Zimmer](#) on Saturday, July 28, 2001 - 10:09 am: [Edit](#)

I have developed a "dump" routine that I am contributing here, in case it will be of any use to anyone. The word "dump" takes two words off the stack, an address and a length. If you have a word defined, say

```
:greet ."Hello, I speak forth" ;
```

you can display memory starting at 'greet as follows: 'greet 20 dump.

You can specify any valid address in memory, for example:

```
1) here 200 - 40 dump
```

```
2) 34012 16 dump
```

The whole file should be included in order for the word dump to work properly. It displays a memory address, 4 hex bytes, followed by the ascii representation of those four bytes.

The number of bytes printed will always be rounded up to the next multiple of 4, so if you say:

```
'greet 9 dump
```

you will get 12 characters starting from 'greet.

\ dump
needs core-ext
needs util

```
variable rows 0 rows !  
variable cols 0 cols !
```

```
: not 0= ;  
: 0<> 0= not ;
```

```
\ "rc"  
\ given a length &  
\ num chars per row, returns
```

```

\ number of full rows &
\ number columns in last row
: rc ( l n -- l n rows ncols )
2dup /mod ;

: set ( a l -- a+1 a )
over + swap ;
: hnum c@ hex 3 u.r decimal ;
: tr ( a -- a ) dup 4 u.r ." : " ;
: data c@ emit space ;
: tab 4 spaces ;

: .row ( a n -- a+n )
\ prints out that many
\ chars starting at "a"
set over >r cr
tr 2dup
do i hnum loop
tab
do i data loop r> ;

: dump ( a l -- ) \ hex dump
4 rc rows ! cols !
nip over rows @ 0 do
over .row loop
nip
cols @ 0<> if
4 .row then
cr 2drop ;

```



By [Bryan A. Zimmer](#) on Saturday, July 28, 2001 - 10:11 am: [Edit](#)

You should delete the line that says "needs util". That refers to a file of utility routines I used while debugging.
-- Bryan Zimme5r



By [Bryan Zimmer](#) on Saturday, July 28, 2001 - 10:26 am: [Edit](#)

Here is the corrected version of "dump":
\ dump

needs core-ext

variable rows 0 rows !
variable cols 0 cols !

```
: not 0= ;
: 0<> 0= not ;
```

```
\ "rc"
\ given a length &
\ num chars per row, returns
\ number of full rows &
\ number columns in last row
: rc ( l n -- l n rows ncols )
2dup /mod ;
```

```
: set ( a l -- a+1 a )
over + swap ;
: hnum c@ hex 3 u.r decimal ;
: tr ( a -- a ) dup 4 u.r ." : " ;
: data c@ emit space ;
: tab 4 spaces ;
```

```
: .row ( a n -- a+n )
\ prints out that many
\ chars starting at "a"
set over >r cr
tr 2dup
do i hnum loop
tab
do i data loop r> ;
```

```
: dump ( a l -- ) \ hex dump
4 rc rows ! cols !
nip over rows @ 0 do
over .row loop
nip
cols @ 0<> if
4 .row then
cr 2drop ;
```



By [Kris Johnson \(Kdj\)](#) on Saturday, July 28, 2001 - 11:54 am: [Edit](#)

DUMP doesn't quite work as advertised. If you do this:

```
: greet ." Hello, world!" ;
' greet 20 dump ;
```

you don't see the characters of "Hello, world".

This is because word definitions go into codespace rather than into dataspace, and your DUMP word looks at dataspace. For example, this does

work:

```
: "greet" s" Hello, world!" ;  
"greet" dump
```

To dump things from codespace, you have to use `CSC@` instead of `C@`. So you might want to have a `CSDUMP` word in addition to `DUMP`.

FWIW, here's a `CSDUMP` word that I use. It prints things out one cell at a time, rather than one character at a time, and doesn't give an ASCII representation:

```
\ csdump 2001/7/28 KBJ  
  
: h. ( u -- )  
  base @ hex swap u. base ! ;  
  
\ Dump from code space  
: csdump ( a n -- ) \ N is number of cells  
  for  
    cr dup u. dup cs@ h.  
    cell+  
  next drop ;
```

-- Kris



By [Mike Will](#) on Saturday, July 28, 2001 - 12:03 pm: [Edit](#)

Huh, that's funny. I contributed `DUMP` and `DU` to the file section two or three years ago, but it doesn't seem to be there now. Maybe Neal removed some of the old stuff? I don't know.

Mike



By [Neal Bridges \(Nbridges\)](#) on Saturday, July 28, 2001 - 12:04 pm:

[Edit](#)

Not on purpose, Mike. Do you remember the filename?

Neal



By [Mike Will](#) on Saturday, July 28, 2001 - 03:05 pm: [Edit](#)

The file header was:

```
\ DUMP and DU 02.27.99
```

Neal, you actually fixed a bug in that code on March 4, 1999. It was something that I built out of Ed Beronet's earlier work and you got to run fast. Anyway, doesn't really matter. I'm sure Bryan's code is just as good or better.

I won't post my current library because my stuff is so heavily factored and modified now gets confusing knowing which of the standard libraries to include (the bane of Forth). The old code is still in the archived forum messages, of course. (I don't know how to embed a link to previous forum messages, sorry).

Mike



By [Chapman Flack](#) on Sunday, July 29, 2001 - 10:08 pm: [Edit](#)

A suggestion: "absdump" is really all you need to dump from dataspace, codespace, or anywhere else:

```
: dump swap >abs rot absdump ;
```

```
: csdump swap xt>abs rot absdump ;
```

So the most general word to sit down and write is absdump.

-Chap

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[STUMPED] Event Queue Full?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): [STUMPED] Event Queue Full?



By [Elan Goldman](#) on Thursday, July 26, 2001 - 02:28 am: [Edit](#)

Hi,

I have a form that consists of twelve fields. I can insert strings into ten of them, but as soon as I try to insert a string into the eleventh field I get a "Fatal Error Alert" informing me that in the file Event.c the line 283 caused an "Event queue full" error.

The code I use to insert the strings into the fields is standard, i.e.

```
GetObjectPtr FldInsert
```

Does this make any sense? Has anyone encountered this error before? Are there any known workarounds?

TIA,

Elan



By [chris bucsko](#) on Thursday, July 26, 2001 - 10:33 am: [Edit](#)

Yes, always add a FlushQueue word when doing multiple FLD palmOS calls. I had a similar experience until I did that.

```
: text>field
( numbytes a-addr. fieldID -- Err )
  GetObjectPtr
  FldInsert FlushQueue ;
```

It's buried in the docs somewhere. I'd like to know why this is , as well. (Neil?)



By [Bob Ryan](#) on Thursday, July 26, 2001 - 11:28 am: [Edit](#)

From the FldInsert entry in the SDK:

"This function sets the field's dirty attribute and posts a fldChangedEvent to the event queue. If you call this function repeatedly, you may overflow the event queue with fldChangedEvents"



By [Elan Goldman](#) on Thursday, July 26, 2001 - 05:08 pm: [Edit](#)

Yes! Thanks! That did it!

Elan

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Reading Form Structure

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Reading Form Structure



By [Alfred Salton](#) on Wednesday, July 25, 2001 - 11:22 am: [Edit](#)

Can anyone offer suggestions on a method to read the form resources present in a database, as well as the individual field definitions within each form? This must be done without prior knowledge of the forms present.



By [Bob Ryan](#) on Wednesday, July 25, 2001 - 12:03 pm: [Edit](#)

You can use `DmGetResourceType` to find all of the form resources in a database. Try looking here for a clue:

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/AutomatedMake>

For the fields use `FrmGetNumberOfObjects` to get the number of objects in each form. Then you can cycle through the objects and use `FrmGetObjectType` to see whether it is a field or not.

Then use `FrmGetObjectPtr` to get a pointer to the field structure.

Hope this helped,
Bob

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New App: The Archery Suite

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): New App: The Archery Suite](#)



By [John Newell](#) on Wednesday, July 25, 2001 - 08:52 am: [Edit](#)

Just to say that I have posted The Archery Suite (my first application), written in Quartus Forth using pedit and RsrcEdit, on PalmGear.

<http://www.palmgear.com/software/showsoftware.cfm?sid=16536520001201134144&prodID=20053>

Thank you to all those on this forum who helped me to get it there.

Regards
John



By [Barry Ekstrand \(Ekstrandbb\)](#) on Sunday, July 29, 2001 - 05:43 pm: [Edit](#)

John,

Congratulations on the new app!

Barry Ekstrand

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New App: PulleySpeed

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New App: PulleySpeed



By [Dave Bennett \(Dbennett\)](#) on Monday, July 23, 2001 - 07:14 pm: [Edit](#)

I have a new application available at my site (www.micoks.net/~dbennett) called PulleySpeed.

It is pretty useful in the furniture factory where I work where we have a lot of motor driven equipment. You can enter three of these fields:

Motor Pulley Size

Tool Pulley Size

Motor Pulley RPM

Tool Pulley RPM

and the app calculates the remaining value for you. Helps us to quickly see if a tool is operating within the recommended rotational speed range. It is also helpful when planning a new tool design or setup.

Would someone be so kind as to grab it and make me a screenshot? I'd like the values to be 3.5, 5, and 1800 from the top and then press calc. Thanks!

Dave



By [Barry Ekstrand \(Ekstrandbb\)](#) on Sunday, July 29, 2001 - 05:42 pm: [Edit](#)

Dave,

Congratulations on another app release. I am currently remote (out of state) so I can't help you on the screenshot request, but I thought it might be useful to share how I normally go about making a screenshot with a freeware approach. Using POSE, you can save a screen in bitmap (.bmp) format; the issue then is to convert the .bmp to .gif or .jpg formats. I've found IrfanView, a freeware (for individual, home users; I think there is a \$10 registration fee for business users) program to work well for making the conversion. Just open the .bmp file, then choose Save As from the menu and pick the new format you want. Seems to work fine.

I've also created an animated gif using a free web site, but I can't recall the address of that right now - hopefully a web search would turn it up.

Barry Ekstrand



By [Kris Johnson \(Kdj\)](#) on Sunday, July 29, 2001 - 07:35 pm: [Edit](#)

The version of Microsoft Paint included with Windows 98 can save bitmaps as JPEG.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Tuesday, July 31, 2001 - 05:47 pm:

[Edit](#)

Thanks, guys. I don't have a Windows machine and don't have POSE running on my Linux box. I don't use the desktop very often any more. I need a BMP to upload the app to PalmGear as that is the "industry standard" according to them. 😞 (I think that jpg is more an internet standard than an antiquated BMP myself.)



By [Dave Bennett \(Dbennett\)](#) on Wednesday, August 1, 2001 - 06:07

pm: [Edit](#)

Kelley sent me a file with the image so I'm set. I got it uploaded at PalmGear this afternoon.

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Trig Functions and Mathlib

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Trig Functions and Mathlib](#)



By [Gary Wiese](#) on Sunday, July 22, 2001 - 01:52 pm: [Edit](#)

Is there a way I can use mathlib for trig functions? Could someone show me a few lines of code that will do this? I am trying to write something to find compound angles for crown molding. I already know all the trig formulas needed.

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 22, 2001 - 02:32 pm: [Edit](#)

Yes, the MathLib extension will give you all the trig functions.

Neal



By [Bob Ryan](#) on Sunday, July 22, 2001 - 03:53 pm: [Edit](#)

You'll need the Float Library, available here:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/FloatLib>



By [Gary Wiese](#) on Sunday, July 22, 2001 - 05:00 pm: [Edit](#)

I have downloaded the files, but there are two NewFloatMgr's one with the date 2001.4.27 and 2001.4.4 that are very different. Not like an updated version, but an all together different version. Which one do I use or do I need both, however I will need to change the name to use both?

Gary



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 22, 2001 - 06:07 pm: [Edit](#)

I believe Chapman Flack's most current version is here:

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/FloatLib>

Neal



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 22, 2001 - 06:08 pm: [Edit](#)

That's not very helpful, is it. 😊 Same link as above.

I believe what you're seeing is NewFloatMgr and NewFloatMgr.2 -- they are

two separate files, both required.

Neal



By [Gary Wiese](#) on Sunday, July 22, 2001 - 07:58 pm: [Edit](#)

Thanks Neal, I kinda figured that so I renamed one NewFloatMgr.2.

Gary



By [Chapman Flack](#) on Monday, July 23, 2001 - 12:47 pm: [Edit](#)

I just downloaded floatlib.zip from the wiki and ran zipinfo on it:

```
Archive:  floatlib.zip   14474 bytes   11 files
-rw-----  2.2 unx    17337 tx defN 15-May-01 17:56 ReadMe
-rw-----  2.2 unx    1859  tx defN  4-Apr-01 10:49 sdfd
-rw-----  2.2 unx    1203  tx defN 13-Mar-01 22:42 fsfdf
-rw-----  2.2 unx    3192  tx defN 15-May-01 17:31 NewFlMgr
-rw-----  2.2 unx    3927  tx defN 15-May-01 17:31 NewFlMgr.2
-rw-----  2.2 unx     938  tx defN 15-May-01 17:31 fpround
-rw-----  2.2 unx     409  tx defN 13-Mar-01 22:42 fdot
-rw-----  2.2 unx    4005  tx defN 25-Apr-01 13:09 MathLib
-rw-----  2.2 unx     637  tx defN 13-Mar-01 22:42 float.h
-rw-----  2.2 unx     373  tx defN 13-Mar-01 22:42 fl-alias
-rw-r--r--  2.2 unx     885  tx defN 13-Mar-01 23:46 qhdf
```

The fourth and fifth entries have different names. Once sync'd to the handheld, their QF names are determined by their first lines:

```
\ NewFloatMgr 2001.4.27 JCF
\ NewFloatMgr.2 2001.4.4 JCF
```

What's the problem? What did you need to rename?

-Chap



By [Bob Ryan](#) on Monday, July 23, 2001 - 02:15 pm: [Edit](#)

Since none of the extracted files have extensions, I mistakenly renamed them all to "*.txt". That wiped out the ".2" and ".h" that were there previously.

It's possible that Gary did the same thing.



By [Chapman Flack](#) on Monday, July 23, 2001 - 04:16 pm: [Edit](#)

You mean, none but the ones that do? ;)

Isn't there a way in your OS to rename adding extensions only to the files that don't already have them, if you wanted to do that? Just wondering. From my vague memories of ancient DOS something like RENAME *. .TXT might have done the trick--but it's been a real long time.

-Chap



By [Bob Ryan](#) on Monday, July 23, 2001 - 04:59 pm: [Edit](#)

There probably is a way, I just didn't notice that two of the files had extensions.

The problem is really with Windows, it doesn't know what to do with files that don't have an extension. Or some odd extension like ".2". Renaming a group of files under Windows is no joy either ☹

Adding a ".mpa" (memo archive) file to the zip would help Windows users.

-Bob



By [Chapman Flack](#) on Monday, July 23, 2001 - 06:31 pm: [Edit](#)

I wouldn't mind doing that, but as a non-Win user I'm not sure how I would go about it. Has somebody worked out the .mpa format and made a portable program to build it? Maybe even a ZBoxZ mode that would run on the handheld ...

If some Win-ophile wanted to make a separate .mpa and attach it to the wiki page, I wouldn't yell too loudly.

-Chap



By [Bob Ryan](#) on Monday, July 23, 2001 - 09:13 pm: [Edit](#)

I attached my float.mpa to the web page. If anyone has any problems with the archive please let me know.

-Bob



By [Kris Johnson \(Kdj\)](#) on Tuesday, July 24, 2001 - 01:25 am: [Edit](#)

The .mpa format is described here:

<http://www.geocities.com/Heartland/Acres/3216/palmrecs.htm>. It is not

officially documented by Palm.

-- Kris

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Max size of floating point stack?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Max size of floating point stack?



By [Les Grundman](#) on Sunday, July 22, 2001 - 12:24 am: [Edit](#)

What is the maximum size of the floating point stack? Is there anyway to increase it if I run into trouble?

Thanks,
Les



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 22, 2001 - 12:27 am: [Edit](#)

It's 8 floats big. There's no magic way to increase it, but then again it's never come up as an issue. Let me know if you hit a wall, I'm sure there's a way out.

Neal



By [Chapman Flack](#) on Monday, July 23, 2001 - 12:36 pm: [Edit](#)

If you use FloatLib, the floats currently share the data stack. That has its own headaches but at least an arbitrary depth limit isn't one of them. If you want to write a truly portable ANS program you should endeavor to keep your float stack depth ≤ 6 .

-Chap

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Sloooooow Graphics

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\):](#)

Sloooooow Graphics



By [Matthew Burke \(Mmb\)](#) on Sunday, July 22, 2001 - 12:14 am: [Edit](#)

I've been working on a few different apps that use double-buffering to do the screen updates and am finding that they run unacceptably slow.

I can post other examples if necessary, but below is a fairly simple app which crawls when you run it. If you get rid of the double-buffering, it runs at a reasonable rate. I rewrote the same thing in C and it zips along quite nicely.

Any tips/suggestions on how I can get better performance are greatly appreciated.

Here's the Forth code (Note: I stripped out several pieces of the code that weren't relevant to this discussion):

```
\ solar

needs graphics
needs color
needs colornames
needs double-buffer

4 constant #planets

4 array x
4 array y
4 array dx
4 array dy

: init ( -- )   #planets 0 do
  -1 i dx ! 1 i dy !      loop
  15 0 x !   30 1 x !   40 2 x !   70 3 x ! ;
init

: update-positions
  #planets 0 do
  i x dup @ i dx @ + swap !
  i y dup @ i dy @ + swap !
  i x @ 0= if
    i dy @ -1 * i dy !
  then
  i y @ 0= if
    i dx @ -1 * i dx !
  then
  loop ;

: drawCircle ( y x -- )
  4 4 2swap 2 rounded-rectangle ;

: drawPlanet ( y x c. -- )
  foreground
  80 + swap 80 + swap drawCircle ;

: drawSun ( -- )
  0 0 yellow drawPlanet ;
```

```

: draw-system ( -- )
  drawToBuffer
  black background
  160 160 0 0 erase-rectangle
  drawSun
  #planets 0 do
i y @ i x @
limegreen drawPlanet
  loop
  drawToScreen showScreenArea ;

: xdraw-system      #planets 0 do
  i x @ . i y @ . 3 spaces loop cr ;

: main ( -- ) begin
  1. (ekey) drop update-positions
  draw-system again ;

: go ( -- ) createWindows
  ['] main catch throw ;

```



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 22, 2001 - 12:26 am: [Edit](#)

I can't see your C code, so I don't know what you're doing differently there, but 1. (ekey) is much slower than 0. (ekey) would be.

Can you narrow down where the delay is? Is it in actually drawing the offscreen graphics?

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, July 22, 2001 - 12:37 am: [Edit](#)

Can you show us your drawToBuffer and showScreenArea routines? Is it actually creating a whole new offscreen window on every draw? (I don't see many other places where you create the offscreen window, except maybe createWindows.)

There's no reason that Forth should be noticeably slower than C if you are primarily using the Palm OS system traps to do all the work.

-- Kris



By [Matthew Burke \(Mmb\)](#) on Sunday, July 22, 2001 - 01:55 pm: [Edit](#)

I'll take a stab at using Kris's replacements for TYPE, etc. so I can get some exact timing data printed out---as an aside, I swear at one point that . and ." were working fine with my double-buffered code, but they don't work now and one problem at a time <g>.

But I'm quite confident it's got something to do with the drawing code because if you comment out drawToBuffer, drawToScreen and showScreenArea, there is a noticeable difference in speed. I tried changing 1. (ekey) to 0. (ekey) but couldn't tell any difference.

The double buffer words are stripped right out of Jim Hendricks's analog clock. createWindows creates the offscreen buffer and drawToScreen and drawToBuffer just call WinSetDrawWindow.

And for comparison, here's my C code---don't laugh too hard...

```
#include <PalmOS.h>
```

```

#include <PalmCompatibility.h>

#include "solarRsc.h"

#define CID 'Solr'
#define APPREFID 1
#define YELLOW 0x6C
#define NUMPLANETS 4

typedef struct {
    UInt16 x[NUMPLANETS];
    UInt16 y[NUMPLANETS];
    UInt16 dx[NUMPLANETS];
    UInt16 dy[NUMPLANETS];
} AppPrefs;

AppPrefs myAppPrefs;

RectanglePtr myRect = NULL;

Boolean paused_p = false;

WinHandle screenHandle;
WinHandle bufferHandle;
WinHandle heavensHandle;

UInt16 radii[NUMPLANETS] = { 15, 30, 40, 70 };
UInt16 sizes[NUMPLANETS] = { 2, 6, 4, 1 };
IndexedColorType colors[NUMPLANETS] = { 0x7c, 0xa2, 0x38, 0x00 };
UInt16 dx[NUMPLANETS];
UInt16 dy[NUMPLANETS];
UInt16 x[NUMPLANETS];
UInt16 y[NUMPLANETS];

static void DrawCircle(UInt16 x, UInt16 y, UInt16 radius)
{
    RectangleType theRect;
    theRect.topLeft.x = x;
    theRect.topLeft.y = y;
    theRect.extent.x = radius;
    theRect.extent.y = radius;

    WinDrawRectangle(&theRect, radius/2);
}

static void DrawPlanet(UInt16 x, UInt16 y, UInt16 radius, IndexedColorType color)
{
    WinSetForeColor(color);
    DrawCircle(80+x, 80+y, radius);
}

static void DrawSun()
{
    DrawPlanet(0, 0, 8, YELLOW);
}

static void GetAppPrefs()
{

```

```

SWord prefsVersion = noPreferenceFound;
UInt16 prefsSize;
int i;

prefsSize = sizeof( AppPrefs );
prefsVersion = PrefGetAppPreferences( CID, APPREFID, &myAppPrefs, &prefsSize, true
);

if ( (prefsVersion==APPREFID) && (prefsSize == sizeof( AppPrefs ) ) ) {
    for (i=0; i < NUMPLANETS; i++) {
        x[i] = myAppPrefs.x[i];
        y[i] = myAppPrefs.y[i];
        dx[i] = myAppPrefs.dx[i];
        dy[i] = myAppPrefs.dy[i];
    }
}

static void SaveAppPrefs()
{
    int i;

    for (i=0; i < NUMPLANETS; i++) {
        myAppPrefs.x[i] = x[i];
        myAppPrefs.y[i] = y[i];
        myAppPrefs.dx[i] = dx[i];
        myAppPrefs.dy[i] = dy[i];
    }

    PrefSetAppPreferences( CID, APPREFID, APPREFID, &myAppPrefs, sizeof( AppPrefs ),
true );
}

static UInt16 StartApplication (void)
{
    UInt16 error;
    UInt16 r, c;
    int i;

    screenHandle = WinGetDrawWindow();
    bufferHandle = WinCreateOffscreenWindow(160, 160, screenFormat, &error);
    heavensHandle = WinCreateOffscreenWindow(160, 160, screenFormat, &error);
    ErrFatalDisplayIf(error, "Error loading images");

    for (i=0; i < NUMPLANETS; i++) {
        dx[i] = -1;
        dy[i] = 1;
        y[i] = 0;
        x[i] = radii[i];
    }

    GetAppPrefs();

    WinSetDrawWindow(heavensHandle);
    WinSetForeColor(0x00);
    WinSetBackColor(0xFF);

    WinGetWindowBounds(myRect);

    WinEraseRectangle(myRect, 0);
}

```

```

DrawSun();

for (i=0; i < 50; i++) {
    r = SysRandom(0) % 160;
    c = SysRandom(0) % 160;
    WinDrawPixel(r, c);
}

WinSetDrawWindow(screenHandle);

return 0; // no error
}

static void StopApplication (void)
{
    WinDeleteWindow(bufferHandle, false);
    FrmCloseAllForms ();

    SaveAppPrefs();
}

static void UpdatePositions() {
    int i;

    for (i=0; i < NUMPLANETS; i++) {
        x[i] += dx[i];
        y[i] += dy[i];

        if (x[i] == 0) dy[i] = -1 * dy[i];
        if (y[i] == 0) dx[i] = -1 * dx[i];
    }
}

static void RedrawSystem() {

    int i;

    WinSetDrawWindow(bufferHandle);

    WinCopyRectangle(heavensHandle, bufferHandle, myRect, 0, 0, winPaint);

    for (i=0; i < NUMPLANETS; i++) {
        DrawPlanet(x[i], y[i], sizes[i], colors[i]);
    }

    WinSetDrawWindow(screenHandle);
    WinCopyRectangle(bufferHandle, screenHandle, myRect, 0, 0, winPaint);
}

static Boolean BoardViewDoCommand(UInt16 command)
{
    switch (command)
    {
        case AboutItem:
            FrmAlert(AboutAlert);
            break;
    }
}

```

```

    }
    return true;
}

static Boolean BoardViewHandleEvent (EventPtr event)
{
    FormPtr frm;
    Boolean handled = false;

    if (event->eType == nilEvent)
    {
        if (!paused_p) {
UpdatePositions();
RedrawSystem();
        }
    }

    else if (event->eType == keyDownEvent)
    {
        return true;
    }

    else if (event->eType == menuEvent)
    {
        BoardViewDoCommand(event->data.menu.itemID);
        return true;
    }

    else if (event->eType == frmCloseEvent)
    {
    }

    else if (event->eType == frmOpenEvent)
    {
        frm = FrmGetActiveForm ();

        FrmDrawForm (frm);

        handled = true;
    }

    else if (event->eType == frmUpdateEvent)
    {
        frm = FrmGetFormPtr (BoardView);

        FrmDrawForm (frm);

        handled = true;
    }

    // Don't allow the command bar to come up as it interferes with game play.
    else if (event->eType == menuCmdBarOpenEvent)
        handled = true;

    return (handled);
}

static Boolean ApplicationHandleEvent (EventPtr event)
{
    UInt16 formId;

```

```

FormPtr frm;

if (event->eType == frmLoadEvent)
{
    formId = event->data.frmLoad.formID;
    frm = FrmInitForm (formId);
    FrmSetActiveForm (frm);

    switch (formId)
    {
case BoardView:
    FrmSetEventHandler (frm, BoardViewHandleEvent);
    break;

    }

    return (true);
}
return (false);
}

static void EventLoop (void)
{
    UInt16 error;
    EventType event;

    do
    {
        EvtGetEvent (&event, 1);

        if (event.eType == winExitEvent) {
if (event.data.winExit.exitWindow == (WinHandle) FrmGetFormPtr(BoardView)) {
    paused_p = true;
}
        } else if (event.eType == winEnterEvent) {
if (event.data.winEnter.enterWindow == (WinHandle) FrmGetFormPtr(BoardView) &&
    event.data.winEnter.enterWindow == (WinHandle) FrmGetFirstForm()) {
    paused_p = false;
}
        }

        if (! SysHandleEvent (&event))
if (! MenuHandleEvent (0, &event, &error))
    if (! ApplicationHandleEvent (&event))
        FrmDispatchEvent (&event);
    }

    while (event.eType != appStopEvent);
}

UInt32 PilotMain(UInt16 cmd, MemPtr cmdPBP, UInt16 launchFlags)
{
    UInt16 error;

    if (cmd == sysAppLaunchCmdNormalLaunch)
    {

```

```
error = StartApplication ();

FrmGotoForm (BoardView);

if (! error)
EventLoop ();

StopApplication ();
}

return 0;
}
```



By [Kris Johnson \(Kdj\)](#) on Sunday, July 22, 2001 - 09:26 pm: [Edit](#)

You might try removing the (ekey) call entirely, just to see what happens when you call your graphics code in a tight loop without any event checking. (ekey) can be kinda weird. (No offense intended, Neal!)

Without (ekey), you won't be able to stop your program and transfer control to another. So you may want to put a loop that runs a few hundred times and then quits.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 22, 2001 - 09:30 pm: [Edit](#)

No offense taken -- (ekey) does little more than call the Palm OS EvtGetEvent systrap, so if there's anything weird, it's in the systrap itself.

I can't hink of anything weird about EvtGetEvent, though -- what have you encountered?

Neal



By [Kris Johnson \(Kdj\)](#) on Sunday, July 22, 2001 - 10:54 pm: [Edit](#)

Doesn't (ekey) also pass the event through the standard sequence of event handling functions (system, menu, window, form, etc.) before returning the event to the Forth application?

I can't remember off-the-top-of-my-head what I found weird about it. It seems that there was some case where I wanted to override the event handling because (ekey) was doing something I didn't like.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, July 23, 2001 - 12:20 am: [Edit](#)

Indeed it does. I see what you mean now, but certainly it shouldn't introduce any practical delay into a graphics application of this sort. I am curious to see the results of Gary's timing exercise.

Neal



By [Matthew Burke \(Mmb\)](#) on Monday, July 23, 2001 - 02:13 pm: [Edit](#)

Ok, here's some timing data.

I made use of the following:

```
: t+ TimGetTicks ;
: t- TimGetTicks 2swap d- ;
```

And find that there is no difference between using a begin/again loop with 1. (ekey), or 0. (ekey), or

rewriting it as Kris suggested to get rid of the (ekey) altogether. In all three cases, the entire loop takes 39-41 ticks. This is using the double-buffering.

I've got the draw-system word modified as follows:

```
: draw-system ( -- )
  t+ drawToBuffer t-
  t+
  black background
  160 160 0 0 erase-rectangle
  drawSun
  #planets 0 do
  i y @ i x @
  limegreen drawPlanet
  loop t-
  t+ drawToScreen t- t+ showScreenArea t-
  thome t" showScreenArea " td.
  tcr t" drawToScreen " td.
  tcr t" draw " td.
  tcr t" drawToBuffer " td. ;
```

The timing is showScreenArea 2-3 ticks, drawToScreen 0 ticks, draw 30-31 ticks, drawToBuffer 0 ticks.

Now if I comment out drawToScreen, drawToBuffer and showScreenArea I find that the draw portion takes 10 ticks.

And just for comparison, my C program does the whole update-system in 5 ticks.

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 23, 2001 - 02:18 pm: [Edit](#)

So how does it break down: is it drawToScreen, drawToBuffer, or showScreenArea that's dragging you down?

Neal

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 23, 2001 - 02:20 pm: [Edit](#)

... my confusion stems from your numbers. You say that 'draw' takes 30-31 ticks, and that the rest take 3 ticks in total; then you say that when removing the parts that take 3 ticks, the remainder takes only 10. Somewhere in there I've lost 25 ticks.

Neal

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 23, 2001 - 02:23 pm: [Edit](#)

Or are you saying that 'draw' takes 10 ticks, but somehow takes 30 ticks when drawing to an offscreen window? That seems very strange indeed.

Neal

 By [Matthew Burke \(Mmb\)](#) on Monday, July 23, 2001 - 06:42 pm: [Edit](#)

Sorry for the confusion. When I say 'draw' takes 30 ticks, I'm referring to the bold portions of the draw-system word as follows:

```
: draw-system ( -- )
```

```
drawToBuffer
black background
160 160 0 0 erase-rectangle
drawSun
#planets 0 do
  i y @ i x @
  limegreen drawPlanet
loop
drawToScreen showScreenArea ;
```

So that takes 30 ticks when drawing to an offscreen window, but only 10 if drawing directly to the screen. And I am completely baffled as to why that is.

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 23, 2001 - 07:03 pm: [Edit](#)

I am equally baffled. Can you further isolate how long each sub-component takes?

Neal

 By [Kris Johnson \(Kdj\)](#) on Monday, July 23, 2001 - 07:09 pm: [Edit](#)

I can understand why it might take longer to draw to an offscreen window: the display system might be optimized to handle draws to screen memory, and do something different to offscreen memory.

However, I don't understand why C would be faster than Forth. The C compiler might be optimizing the array accesses better, but I would expect the drawing commands to dominate the time. And that wouldn't explain why offscreen is slower than onscreen.

The only other thing I can think of is some sort of alignment issue. Does the DragonBall handle memory accesses to four-byte boundaries better than two-byte boundaries? And if so, might this be a case where the C code is putting its data on better boundaries?

One more off-the-wall suggestion: maybe a C program has a different memory layout that allows WinCopyRectangle to run faster?

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 23, 2001 - 07:12 pm: [Edit](#)

I doubt it's an alignment issue -- there would have to be a huge number of memory accesses to cause a noticeable difference, even if certain alignments were slower.

Neal

 By [Kris Johnson \(Kdj\)](#) on Monday, July 23, 2001 - 11:47 pm: [Edit](#)

I wrote my own version of your program, based upon the C version. I removed all the color handling, as I don't have a color PDA. It keeps a count of updates and also displays the time per update.

This version seems to do each offscreen-draw-and-copy in one tick or less on my Visor Platinum.

Please give it a try on your machine. You also might want to reinstate the color stuff to see if that makes a difference.

-- Kris

\ solarkj

```

needs toolkit
needs text

4 constant #planets

#planets array x
#planets array y
#planets array dx
#planets array dy

2variable screenH
2variable bufferH

variable counter
0 counter !

create (radii)
  15 , 30 , 40 , 50 ,

: radii ( i -- a )
  cells (radii) + ;

create (sizes)
  4 , 12 , 6 , 2 ,

: sizes ( i -- a )
  cells (sizes) + ;

create screenRect
  0 , 0 , 160 , 160 ,

create rect
  4 cells allot

variable error

: DrawCircle ( r y x -- )
  rect !
  rect cell+ !
  dup rect [ 2 cells ] literal + !
  dup rect [ 3 cells ] literal + !
  2/ rect >abs WinDrawRectangle ;

: DrawPlanet ( r y x -- )
  80 + swap 80 + swap DrawCircle ;

: DrawSun ( -- )
  8 0 0 DrawPlanet ;

: CreateOffscreen ( -- h. )
  error >abs 0 160 160
  WinCreateOffscreenWindow ;

: StartApplication ( -- )
  WinGetDrawWindow screenH 2!
  CreateOffscreen bufferH 2!

#planets 0 do
  -1 i dx !
  1 i dy !

```

```

    0 i y !
    i radii @ i x !
loop ;

: StopApplication
  0 bufferH 2@ WinDeleteWindow ;

: AtEdge? ( n -- f )
  dup 0= swap 160 = or ;

: negate! ( a -- )
  dup @ negate swap ! ;

: UpdatePositions ( -- )
  #planets 0 do
    i dx @ i x +!
    i dy @ i y +!
    i x @ AtEdge? if
      i dy negate!
    then
    i y @ AtEdge? if
      i dx negate!
    then
  loop ;

: t+ TimGetTicks ;
: t- TimGetTicks 2swap d- ;

: RedrawSystem ( -- )
  t+
  bufferH 2@ WinSetDrawWindow

  WinEraseWindow

  #planets 0 do
    i sizes @ i y @ i x @ DrawPlanet
  loop

  0 0 at-xy counter @ t.
  1 counter +!

  WinSetDrawWindow 2drop

  0 0 0 screenRect >abs
  screenH 2@ bufferH 2@
  WinCopyRectangle

  t- tcr td. ;

: EventLoop ( -- )
  begin
    0. (ekey) drop
    UpdatePositions RedrawSystem
  again ;

: go ( -- )
  StartApplication
  EventLoop
  StopApplication ;

```



BTW, if I add DrawSun to RedrawSystem, then the timing occasionally flickers to 2 instead of 1.

-- Kris

 By [Matthew Burke \(Mmb\)](#) on Tuesday, July 24, 2001 - 02:02 pm: [Edit](#)

OK, you'll have to take my word that I'm not so inept at debugging database-backed web sites. Maybe it's the fact that it's been over a year and I still suck at graffiti <g>

Anyway, Kris I tried your app on my IIIc and it takes 5 ticks or so to do the drawing. If I add color to your app it takes about 30 ticks just like mine. If I remove the color from mine it takes 5 ticks like yours.

So there's some problem with color in conjunction with double buffering. So I'm going to start looking into that.

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 24, 2001 - 02:07 pm: [Edit](#)

Excellent -- getting closer all the time. Does the colour slow it down when it's not double-buffered?

Neal

 By [Kris Johnson \(Kdj\)](#) on Tuesday, July 24, 2001 - 08:35 pm: [Edit](#)

Is your C program is still a lot faster than my Forth version?

From my Macintosh programming days, I remember there were a few things you had to do to make a "CopyBits" call go as fast as possible:

- source and destination bitmaps had to be the same size and same color depth, and aligned on four-byte boundaries
- foreground and background colors had to be the same, and both windows have to have the same palette
- use the "copy" mode (not xor or other weird things)

I'm not sure how this translates to Palm OS. Try setting the foreground and background colors to be the same, and copy any other window attributes you can think of.

Finally, I'm not up on all this fancy color stuff, but is it possible that you should be using some of the new bitmap-related functions (WinPaintBitmap, etc.) to get best performance out of color systems?

-- Kris

 By [Kris Johnson \(Kdj\)](#) on Tuesday, July 24, 2001 - 10:37 pm: [Edit](#)

You might want to take a look here: <http://www.palmos.com/dev/tech/color/>

It says that on the IIIc, you can use WinScreenLock and WinScreenUnlock to make things fast. It uses VRAM rather than the dynamic heap.

-- Kris

 By [Matthew Burke \(Mmb\)](#) on Wednesday, July 25, 2001 - 06:55 pm: [Edit](#)

Ok, I've got it! Sort of.

First: Neal, no, when the program is not double-buffered, color does not slow it down.

Kris, my C program (in color) is the same speed as your (b&w) Forth program.

Now, I noticed that my C program calls WinSetForeColor and WinSetBackColor whereas the Forth words foreground and background make use of WinSetColors which is an obsolete call.

So I defined the following:

```
: myForeground ( n -- ) >byte (hex) a398
  systrap drop ;

: myBackground ( n -- ) >byte (hex) a399
  systrap drop ;
```

and substituted them into my Forth program---I had to change the color references from an rgb to a table index--and voila, my Forth program runs just as fast as my C program.

As an interesting aside, if I use foreground and background with white, black, light-gray, dark-gray, it doesn't slow the double-buffered program down at all, but the instant you throw in a non-grayscale color, it slows to a crawl.

 By [Matthew Burke \(Mmb\)](#) on Wednesday, July 25, 2001 - 06:58 pm: [Edit](#)

Whoops! Didn't quite finish before I hit post.

I say "sort of" got it, because I'm interested in figuring out why the WinSetColors behaves so oddly.

Anyway, Neal and Kris, I want to thank you for your help. It is greatly appreciated! I'll give you a day or two breather before I post the problems I'm having with menubars <g>

 By [Jim Hendricks \(Jimh\)](#) on Wednesday, July 25, 2001 - 07:52 pm: [Edit](#)

Seem to recall somewhere reading that setting colors by index is faster than setting colors by RGB. Seem to recall it had something to do with building a dynamic pallet to accept your RGB color. For colors not in the current pallet the recommendation was to define your own pallet then call by index in the new pallet.

Just my recollection, I could be totally off base on this.

Jim

PS Thanks for the vote of confidence in using my doublebuffering routines.

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 25, 2001 - 08:20 pm: [Edit](#)

I think you've got it, Jim. The colour routines I initially provided do the RGB conversion; this is a slow process, and it seems even slower in offscreen windows, for some reason.

Neal

 By [Kris Johnson \(Kdj\)](#) on Thursday, July 26, 2001 - 07:20 pm: [Edit](#)

It would be nice if one of you would summarize these findings in the wiki. (I'd do it myself, but I'm not sure I understand what's going on.)

-- Kris

 By [Matthew Burke \(Mmb\)](#) on Sunday, July 29, 2001 - 05:16 pm: [Edit](#)

I'll make a stab at it over the next couple of days.



By [Tod Wulff \(Todwulff\)](#) on Thursday, March 27, 2003 - 09:06 pm: [Edit](#)

For a newbie, this was an informative thread. Can someone please point me in the direction regarding learning what double buffering is and it's intended useage? Thanks in advance.

-Tod



By [Jim Hendricks \(Jimh\)](#) on Thursday, March 27, 2003 - 09:20 pm: [Edit](#)

double buffering is a technique for eliminating screen flashing and on some platforms to improve the performance of your graphics. Graphics without double buffering usually relies on drawing the background for the area you need to redraw followed by drawing the foreground pictures/text. This causes a slight flash because you are effectively clearing the screen then redrawing. Double buffering in it's most simple form is to "draw" the screen to an off-screen memory area. Since you are drawing to memory rather than to the screen, it tends to be real fast. Then you copy the off-screen image to the screen. Flicker is eliminated because you will not clear any pixels just to reset them, but over lay all existing pixels with their new value.

Jim



By [Tod Wulff \(Todwulff\)](#) on Thursday, March 27, 2003 - 11:21 pm: [Edit](#)

Jim,

Thanks for the feedback so quickly on this old thread. 'Tis appreciated. I keep forgetting about the Wiki being a good resource (Sorry Kris 😊) and found some more information there. Is there a DoubleBuffering Library somewhere? Matthew made reference to stripping it out of some code that you wrote.

Thanks again!

-Tod



By [Jim Hendricks \(Jimh\)](#) on Friday, March 28, 2003 - 08:16 am: [Edit](#)

Yes, in the files section of this forum there should still be a zip/sit with my sources for an analog clock. It uses doublebuffering and if I factored it correctly, the words for doublebuffering should be easy enough to rip out. I seem to remember someone else also had a doublebuffering lib floating around. Maybe it's on the Wiki.

Jim



By [Jim Hendricks \(Jimh\)](#) on Friday, March 28, 2003 - 08:33 am: [Edit](#)

Just reread the thread to remember what it was all about. I haven't had the chance to look over the wiki to see what's there for doublebuffering.

Just wanted to add that if you are investigating doublebuffering for the first time, remeber that it does not need to be an all or nothing thing. For my analog clock, screen drawing was basically the only function of the app and only redraws 3 or 4 times a second. I would also have had a real problem in figuring out what box portion of the screen needed updating so full screen double buffering was easiest. I had also considered using 2 buffers, 1 buffer with the clock face etc drawn to it once at the beginning, then the second buffer to transfer the face buffer and then paint the hands before painting to the screen. Since I wasn't having any perfomance problems I decided to stay with the simpler method of drawing the whole screen over again on each refresh.

All this to say that double buffering can be done with just an defined box area of the screen. Say you are working on a checkers game where your screen is divided into a defined grid. Each move of a checker involves a box comprising of the cell you are leaving and the cell you are entering. By double buffering and just redrawing this portion of the screen you enhance the performance of your

graphics so you can leave more CPU time for more challenging problems. Then again, in the checkers example double buffering may be overkill since you will be clearing the old cell and drawing your checker in the new cell, there is no flicker, just a fraction of a second where the checker is not on the screen (time between clearing the old cell and setting the new cell).

Jim



By [Jim Hendricks \(Jimh\)](#) on Friday, March 28, 2003 - 08:38 am: [Edit](#)

Oh, and one last thing, if you look at my routines and have questions, feel free to ask away either here, or e-mail me. E-mail me at jimATbizcomputingincDOTcom.



By [Kris Johnson \(Kdj\)](#) on Friday, March 28, 2003 - 10:51 am: [Edit](#)

The OffscreenModule, BlitModule, and ShowModule in the wiki were my attempts to create generic double-buffering support. They may be a little daunting for a newbie, but the examples for ShowModule may not be too bad.

-- Kris



By [Tod Wulff \(Todwulff\)](#) on Tuesday, April 1, 2003 - 02:08 pm: [Edit](#)

Thanks guys!

Is there a guide somewhere regarding graphic geometry (basic 2d stuff as well as 3d)?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, April 1, 2003 - 08:51 pm: [Edit](#)

Try this:

<http://www.faqs.org/faqs/graphics/algorithms-faq/>

Neal



By [Tod Wulff \(Todwulff\)](#) on Wednesday, April 2, 2003 - 10:51 am: [Edit](#)

Thank you! -Tod

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Why no word: see?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Why no word: see?



By [Kevin Carney](#) on Friday, July 20, 2001 - 10:59 am: [Edit](#)

Why is the WORD SEE not included with quartus forth? To my understanding, it is a ANS-83/94 Forth word. It would help out with just starting to learn Forth. By the way, great product!!!



By [Neal Bridges \(Nbridges\)](#) on Friday, July 20, 2001 - 11:01 am: [Edit](#)

Thanks!

SEE is provided. It's in the disasm module.

Neal



By [Harry Winter](#) on Saturday, July 21, 2001 - 02:31 am: [Edit](#)

Why is the WORD "DUMP" not included with quartus forth? To my understanding, it is a ANS-83/94 Forth word.

Harry



By [Neal Bridges \(Nbridges\)](#) on Saturday, July 21, 2001 - 02:32 am: [Edit](#)

DUMP is available; there are a number of incarnations of it in the File Area and Forum archives. You can write a simple version of DUMP with just a few lines of code; give it a shot.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, July 21, 2001 - 02:38 am: [Edit](#)

DUMP is part of the ANS Programming-Tools wordset. That wordset is not required (but does have some cool stuff).

DUMP is pretty trivial to implement on your own:

```
: dump ( addr u -- )
  for dup @ . cell+ next drop ;
```

It could be a little more sophisticated. But I'd prefer that Neal spend his time on stuff within the Forth kernel that can't be done by users.

-- Kris

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Launching app on MMC / SD Card

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Launching app on MMC / SD Card



By [A.Schönfeld](#) on Thursday, July 19, 2001 - 06:35 pm: [Edit](#)

Is there a way to launch an app from the MMC / SD Card on a palm m50x ?
Launch memopad demo with cardnumber 1 doesn't seem to do the trick
(app not found).



By [Neal Bridges \(Nbridges\)](#) on Monday, July 23, 2001 - 01:55 pm: [Edit](#)

The MMC/SD card isn't a memory card, as such -- more like a tiny disk.
There's a way to launch apps from it under Palm OS 4; I'll look it up later
when I'm in front of the docs.

Neal

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Using Assembly language in Quartus Forth

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Using Assembly language in Quartus Forth



By [Bryan Zimmer](#) on Thursday, July 19, 2001 - 10:31 am: [Edit](#)

Hello,

I am interested in writing some routines in assembler for Quartus Forth on my Palm III xe. I am having a hard time finding any examples to follow. Could someone point me in the right direction for some examples?

In particular, I am trying to emulate some of the of routines that modern Forth no longer seems to support, routines that might, for example, display the name field address of a colon-defined word, or convert cfa>pfa on a non-CREATED word.

Any help you can offer would be appreciated.

I also am trying to learn gforth, so if anyone has examples that might work on both systems, I'd appreciate it.

Thanks,

Bryan Zimmer
baz@baz-tech.com



By [Chapman Flack](#) on Thursday, July 19, 2001 - 02:12 pm: [Edit](#)

Hi,

Help and examples are available in and linked from:
<http://www.sleepless-night.com/wiki/Asm68KModule>

-Chap



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 19, 2001 - 04:18 pm:

[Edit](#)

From Chapman Flack (the forum software has decided not to display the original msg):

Quote:

Hi,

Help and examples are available in and linked from:
<http://www.sleepless-night.com/wiki/Asm68KModule>

-Chap

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Support requests

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Support requests



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 18, 2001 - 11:08 am:

[Edit](#)

Of late I've been dealing with a number of support requests via email. That's fine, of course, but I do encourage the use of the forum; a question asked here garners many more responses.

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, July 19, 2001 - 09:49 am: [Edit](#)

The discussion forum's Last Day and Last Week links aren't working for me. I see "This forum awaits your messages" even though I and others have posted a few things.

Is anyone else seeing this?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 19, 2001 - 11:15 am:

[Edit](#)

Kris -- thanks for the heads up. I thought everybody was just being really quiet this week!

Neal

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New Quartus App: BJStrategy

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Quartus App: BJStrategy



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, July 16, 2001 - 06:43

pm: [Edit](#)

FYI - I released my newest app over the weekend: BJStrategy. This is a program to study, learn, and test knowledge of the basic strategy for the card game Blackjack, aka 21. This is not a Blackjack game simulator, but rather is a Blackjack strategy reference and tutor program.

BJStrategy has reference screens showing the right action for the various dealer upcard / player hand combinations - presented in a form my father used and which is a lot easier to follow than the 'standard' matrix most books use. The program also has a Blackjack Strategy Challenge, a game / drill that shows random dealer / player combinations and asks you to input the right action, keeping track of # right and wrong. You can check the right answer after your guess, if you desire to do so.

Barry



By [Kris Johnson \(Kdj\)](#) on Saturday, July 21, 2001 - 05:59 pm: [Edit](#)

I'm planning to play with this as soon as I have a couple of spare hours.

Here's the PalmGear link for those who are interested:

<http://www.palmgear.com/software/showsoftware.cfm?prodID=16457>

-- Kris



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 1, 2001 - 10:26 am: [Edit](#)

I finally got around to using it. It's a nice little program.

A couple of suggestions:

- It would be nice if there was a "Reveal" button on the form. I found myself using that menu option quite a bit. In fact, I'd like the correct answer (and the appropriate chart) to automatically pop-up whenever I answer incorrectly.

- The buttons are a little small. I'm not sure how to re-layout the form to let them be bigger, but larger buttons would be nice.

Don't forget to add a BJStrategy page to the wiki. 😊

-- Kris



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 6, 2001 - 01:26 pm: [Edit](#)

Kris,

I appreciate the suggestions. I agree with your thoughts and will work to implement them, although I'm not sure I can increase the button sizes much.

I'll update the wiki asap. Thanks again for the input.

Barry

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Exit and inline question

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Exit and inline question



By [Barak Shilo \(Barak\)](#) on Thursday, July 12, 2001 - 12:37 pm: [Edit](#)

Does an inlined word do more than simply "paste" it's definition into the calling word? I tried the following:

```
: a exit ; inline
```

```
: b 1 . a 2 . ;
```

When I execute b, "1 2" is printed, instead of just "1"
What's going on?



By [Mark Beckman \(Mbeckman\)](#) on Thursday, July 12, 2001 - 04:23 pm: [Edit](#)

It looks like what you are trying to do is use inline like a macro pre-processor. Try this:

```
: a s" exit" evaluate ; immediate
```

```
: b 1 . a 2 . ;
```



By [Barak Shilo \(Barak\)](#) on Thursday, July 12, 2001 - 05:14 pm: [Edit](#)

Thanks, that works nicely. Can you explain why my definitions don't work?



By [Mark Beckman \(Mbeckman\)](#) on Thursday, July 12, 2001 - 06:19 pm: [Edit](#)

Well I don't know exactly what inline does. It may be just a hint to the compiler (Neal?). However:

by using SEE (from the disasm module) the A in your definition B does not show up at all. My guess is that EXIT compiles to the assembly instruction RTN and the compiler moves inline code from a definition up to but not including the RTN.

This is a not that easy to "see" because the optimizer seems to turn a sequence like

```
JSR "word" RTN ...
```

into

JMP "word" ...

try the \ disasm module and "see" for your self.



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 12, 2001 - 07:22 pm:

[Edit](#)

INLINE works nicely unless the INLINED word contains EXIT; you've tripped over the one caveat in the system. I had a look for that info in the manual and can't find it -- but it's in the discussion forum archives in several places.

I'll amend the manual.

Neal



By [Barak Shilo \(Barak\)](#) on Thursday, July 12, 2001 - 07:34 pm: [Edit](#)

Ah, that makes sense since exit is another way to end a word's execution. Thanks.



By [Chris Bucsko](#) on Friday, July 13, 2001 - 12:27 pm: [Edit](#)

So does 'inline' simply paste its' definition into the calling word? Or is there more going on here? Sorry but the manual simply states that inline 'flags the previous word as an inline word' in the manual.



By [Neal Bridges \(Nbridges\)](#) on Friday, July 13, 2001 - 12:38 pm: [Edit](#)

INLINE does just that -- it flags the previous definition as 'inline'. The compiler will then code-copy that definition into the calling definition at compile-time.

Neal

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IR Support ???

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): IR Support ???](#)



By [Randy Young](#) on Thursday, July 12, 2001 - 09:03 am: [Edit](#)

Sir(s)

Just a quick note to inquire about using Quartus Forth with IR. I'm using a Handspring Visor @ Palm OS 3.0x, but I understand there is a patch to make the IR I/O more like the serial port...

I did check this subject on the forum but I wasn't sure of meaning of the topics listed visa vi this question.

Thanks



By [Barak Shilo \(Barak\)](#) on Thursday, July 12, 2001 - 05:39 pm: [Edit](#)

It depends what sort of device you want to communicate with. If it's another IrDA device, you can certainly access the IrDA port with the same functions you'd use to send/receive data on the serial port. This [thread](#) is one of several that mention doing this.

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Setting Field Attributes

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Setting Field Attributes



By [Elan Goldman](#) on Tuesday, July 10, 2001 - 07:14 pm: [Edit](#)

I am trying to create a word that will set a field's attributes to editable. Originally the field is not editable. The following code does not work. Any ideas?

In the Palm sdk the field attributes type is defined as a UInt16 bit field. The third bit is supposed to control the editable attribute.

The FldGetAttributes and FldSetAttributes both apparently take two arguments: &attribP. and &fld.

create attributes 1 cells allot

```
: >editable ( field_id -- )
\ save the field_id and prepare the
\ attributes address
>r attributes >abs
\ Get the field_id's object ptr value
r> GetObjectPtr
\ Save the Object pointer for later use
2dup 2>r
\ Get the current attributes
FldGetAttributes
\ set the enable attribute to true
attributes @ 4 or attributes !
\ Set the field's attributes to the new value
attributes >abs 2r@ FldSetAttributes
\ now redraw the field so that the attribute
\ settings take effect
2r> FldDrawField
;
```

I can write to the field when I set it editable usign the resource editor. I cannot write to the field if I do not set the field resource editable, and instead try to set it editable using the >editable function.

I also tried using until-drawn in the calling function to ensure that I was not writing to the field before FldDrawField had finished executing. Any ideas?

TIA,

Elan



By [John Newell](#) on Friday, July 13, 2001 - 06:30 pm: [Edit](#)

I haven` t tried your code but I think you` ll find that the editable bit mask is (hex) 2000.

Regards

John

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&list vs. &plist

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): &list vs. &plist](#)



By [Elan Goldman](#) on Monday, July 9, 2001 - 08:05 pm: [Edit](#)

Hi,

in the documentation the word `LstGetSelection` is reported to take an argument referred to as `&list`. The word `LstGetNumberOfItems`'s argument is documented as `&plist`.

I am using `GetObjectPtr` to create the argument `&list` for the `LstGetSelection` (`ListID GetObjectPtr`). What do I do to create the `&plist` argument `&plist` for `LstGetNumberOfItems`?

TIA,

Elan



By [Steve Bohrer \(Skb\)](#) on Sunday, July 15, 2001 - 10:27 pm: [Edit](#)

The best answers for this sort of question come from the "Palm OS SDK Reference", which you can download for free from <http://www.palmos.com/dev/tech/docs/>.

Here are the C prototypes for the two functions you mention:

```
Int16 LstGetSelection (const ListType *listP)
```

```
Int16 LstGetNumberOfItems (const ListType *listP)
```

Thus, both take a pointer to a `ListType` structure, so `GetObjectPtr` works for both.

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What's the opposite of popup form?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): What's the opposite of popup form?



By [Chris Bucsko](#) on Monday, July 9, 2001 - 06:26 pm: [Edit](#)

Perhaps this is a silly question, but if I use the `PopupForm` command to show a form, how do I close it? Do I just use `ShowForm` with the previous form ID to close the popup?



By [Mark Beckman \(Mbeckman\)](#) on Monday, July 9, 2001 - 07:23 pm:

[Edit](#)

Chris,
Try `FrmReturnToForm`

Example:

```
: ShowAboutBox ( -- )
  \ save current state
  cursor-position 2>r
  FrmGetActiveFormID >r
  \ draw form
  AboutFormID  PopupForm
  \ Loop until a button pressed:
  begin
    ekey ctlSelectEvent = if
      event >abs itemid if
        r> FrmReturnToForm
        2r> at exit
      then
    then
  again ;
```

This assumes that `AboutFormID` is a constant with the ID of some popup form and the form has at least 1 control (like an (OK) button)



By [Wade Carlson](#) on Tuesday, July 10, 2001 - 06:33 am: [Edit](#)

Yes, you must use `FrmReturnToForm` as Mark described. I found out the hard way that a number of popup forms without a `FrmReturnToForm` will eventually crash your program (greater than about 50 or so)



By [Chris Bucsko](#) on Wednesday, July 11, 2001 - 05:08 pm: [Edit](#)

Thanks, `FrmReturnToForm` works well. I also found that you can do some

'read-only' popup stuff by defining a Talt resource in rsrcedit. These 'popup' by themselves and disappear when you tap an included button. But read/write access requires PopupForm.



By [John Newell](#) on Monday, July 16, 2001 - 08:04 am: [Edit](#)

This is how I understand forms usage.

The three functions:

`FrmInitForm`

`FrmSetActiveForm`

`FrmDrawForm`

open (and activate) a form (seems to be equivalent to `FrmPopupForm`)

The two functions:

`FrmEraseForm`

`FrmDeleteForm`

release a form

The function:

`FrmPopupForm`

does NOT release the current form but opens a new form

The function:

`FrmReturnToForm`

releases the current form and returns to the existing inactive one

The function:

`FrmGotoForm`

releases the current form and opens a new one

Using the functions `FrmInitForm` and `FrmDrawForm` allows controls to be set usable/not usable/enabled/disabled before the form is drawn so that they don't appear/disappear when a form is displayed.

Regards
John

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Double Cell Values & Rounding

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Double Cell Values & Rounding



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, July 9, 2001 - 01:56 pm:

[Edit](#)

I am using single and double cell values in a program and need to display final answers. Using the approach that I used with floats, I convert all values to double cells and then process for display. For rounding, I previously (using floats) added $5e-1$ before converting to double cells so when the display truncated the value it would show up as rounded up or down as appropriate; however, using all doubles I don't seem to be able to make it work the same way.

Here are snippets of what I have:

```
variable r1
variable t1
2variable r2
2variable w2

: d>### ( d -- c-addr u )
\ formatting routine to give 0
\ decimal places on output
tuck dabs
<# #s sign #> ;

r1 @ s>d 100. D* t1 @ s>d d/ 2dup r2 2! 100. 2swap d- w2 2!
r2 2@ d>### type
w2 2@ d>### type
```

The above code takes r1 and multiplies by 100, then divides by t1. $r1/t1$ is always less than 1; I had to multiply by 100 to get d/ (from dbl-mult) to work right - that is okay because I'm wanting to display as a percentage anyway. I store the result as r2, then subtract it from 100 to get the w2 percentage.

When I display, without any rounding, it truncates as expected: if $r1=2$ and $t1=3$ r2 will display as 66 and w2 as 34. I then modified the code to try to round:

```
...  
r2 2@ 0.5 d+ d>### type  
w2 2@ 0.5 d+ d>### type
```

Now the display shows r2 as 71 and w2 as 39. Obviously I got 5 added to the result instead of 0.5. All my attempts to correct this have not been successful.

I guess this is my punishment for being used to using floats instead of fixed width. What am I missing?

Barry

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 9, 2001 - 03:29 pm: [Edit](#)

0.5 isn't 1/2 -- it's 5, expressed as a double-cell integer. That's why you're getting that result.

There's no fractional part to an integer, so there's nothing to round -- it's already rounded. You need to round during the calculation. Try adding 5 to the value after you multiply it by 100, and before you divide it.

Neal

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, July 9, 2001 - 04:33 pm: [Edit](#)

Thanks, Neal, I was stuck in the paradigm of fractional parts. I made the adjustment - just a little more complicated since the 5 is being divided by t1 also - and all is working properly now. Thanks for the reminder.

Barry

 By [Neal Bridges \(Nbridges\)](#) on Monday, July 9, 2001 - 04:37 pm: [Edit](#)

No problem, Barry. Glad it helped.

Neal

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New Database Tutorial on the Wiki

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): New Database Tutorial on the Wiki



By [Ron Doerfler](#) on Friday, July 6, 2001 - 01:56 am: [Edit](#)

Hi everyone,

Well, believe it or not, I've finally completed a Quartus Database Tutorial and posted it on the Wiki website at:

<http://64.21.136.85/cgi-bin/twiki/view/Main/DatabaseTutorial>

As always, feel free to provide comments or ask questions, although I will be unable to respond between July 7 and July 23.

Cheers!

Ron



By [Neal Bridges \(Nbridges\)](#) on Friday, July 6, 2001 - 02:19 pm: [Edit](#)

Looks very good, Ron!

Neal

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

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VFS

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): VFS](#)



By [david](#) on Monday, July 2, 2001 - 07:54 am: [Edit](#)

I know this was asked before, but....

I am having some trouble trying to find out what the systrap numbers are for the VFS functions. Everything in the PalmOS headers are easy to understand. i.e. Find a library and initialize-call systrap. But for some reason I can't figure out where the VFS Manager systraps start. It would be fun to try to write VFS aware programs in QF. Thanks for any help.

david



By [Neal Bridges \(Nbridges\)](#) on Friday, July 6, 2001 - 02:20 pm: [Edit](#)

Hi David. I don't know that anybody's undertaken to implement the VFS calls yet. What bits of the header info are you confused about?

Neal



By [mmmkdm](#) on Friday, July 6, 2001 - 05:19 pm: [Edit](#)

Hey Neal,

In trying to find the systraps for say..the CF functions on the TRGPro, it was easy to find the actual numbers by looking for the last systrap defined. After looking for the SysLibLoad function, you could see where the next systrap number for the CFCardInserted define would be. (ie decimal 43015). Load up the stack with the the needed arguements, the 43015 and call systrap.

This is where I loose it. I can't seem to find what that number should be for say...VFSFileOpen.

The header is using a `__SYSTEM_` type macro, but I am not that good.

thanks

david



By [eli](#) on Wednesday, August 29, 2001 - 06:20 am: [Edit](#)

Hey Neal,

Did you do something about VFS?

I also interest in handling files on SD card, but I am not familiar with systrap calls.

If you can do small example it will be very nice.

Eli



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 29, 2001 - 12:39

pm: [Edit](#)

Eli, I'll have a look at it. I thought I answered mmmkdm's message here about VFSFileOpen -- but there's no response visible here. Anybody else remember that, or am I delusional? 😊

Neal



By [eli](#) on Wednesday, August 29, 2001 - 05:40 pm: [Edit](#)

Neal, There was about 3 or 4 discussions about VFS, but until now, there was nothing to push this subject.

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Quartus FTP program?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Quartus FTP program?](#)



By [Jim N. Deakin \(Jndeakin\)](#) on Tuesday, June 26, 2001 - 11:33 am:

[Edit](#)

Hi,
Has anyone ever developed a simple FTP program in Quartus, or in Forth in general? I've checked the archives, and found some basic references to sockets, but I know nothing about them and was hoping someone might already have done the hard work (understanding it!).

If anyone can help me. or provide pointers to writing just the basic put and get functions, I'd appreciate it.

Thanks



By [collin](#) on Wednesday, June 27, 2001 - 12:31 pm: [Edit](#)

Look at <http://acftp.sf.net>

This ftp server was written in Forth and now supports even MySQL authorization.



By [Jim N. Deakin \(Jndeakin\)](#) on Friday, June 29, 2001 - 05:55 am: [Edit](#)

Thanks, I've found the source (not over-obvious on that site!). I'll examine it later.

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QF 1.25R and the Sony Clie 710

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): QF 1.25R and the Sony Clie 710](#)



By [Gregg Bergman](#) on Tuesday, June 26, 2001 - 01:45 am: [Edit](#)

I just purchased a Sony Clie 710 using Palm version 3.5.2 and can not get QF 1.25R to work without a "Fatal Exception" error when exiting the app either with the Home key or when performing a Cold restart (from the menu or typing COLD). I originally beamed the app from my Palm IIIxe but have also tried reinstalling it from scratch. I tried removing my startup file (startup.quartus) and also disabled all hacks. I've been using Afterburner 3.0z but disabled that too. QF works fine on my old Palm IIIxe. All the apps on my Clie are all the same versions I have on my IIIxe, has anyone else experienced this sort of trouble using the Clie 710?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 26, 2001 - 01:47 am: [Edit](#)

I don't know, Gregg. Yours is the first Clie problem report. Send me an email, I'll send you the latest beta to try.

Neal



By [Mike Will](#) on Tuesday, June 26, 2001 - 10:09 am: [Edit](#)

I received my CLIE a month ago. It was DOA and I sent it back. The screen was in permanent 'funky' mode. Unfortunately, I never even tried loading Quartus (or anything else). The irony is that I bought the SONY after Palm's lack of support for my gorchted IIIxe left a bad taste in my mouth.

[customary rant about crappy hardware omitted]

Mike



By [Chirs Bucsko](#) on Wednesday, June 27, 2001 - 10:20 am: [Edit](#)

I just tried it on a Sony we have here. I don't have the memo library on the PDA, but the basic math words, + * / work, and csunused returns '-21184', which is right. There's a setting in Prefs for 'HiRes assist.' I toggled that off and on, and QF still is OK. My version is 1.2.5R as well. Hope this helps narrow down the problem.



By [Gregg Bergman](#) on Wednesday, June 27, 2001 - 11:39 pm: [Edit](#)

I just spent the last two days (almost?) trying to figure out what was causing the "Fatal Exception" error on my Clie when exiting QF either with

the Home key or when performing a Cold restart. I'm using an application for mounting the memory stick media card called MSMount. This app is apparently using some system resources that are also used by QF. I found that if I disable MSMount, the "Fatal Exception" error is gone. I'm not sure what resources are common, but will contact the author of MSMount and try to resolve this issue.

Thanks to all for the help and support.

Gregg



By [Jamie Cairns \(Jamie\)](#) on Thursday, June 28, 2001 - 12:05 pm: [Edit](#)

Thanks Greg - I was watching this to see what the resolution would be - it affects the Handera 330 as well (if using MSMount)

Jamie



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 28, 2001 - 03:55 pm:

[Edit](#)

MsMount is still in beta, after all. I have no idea what might be tripping it up -- Quartus Forth doesn't do anything illegal, and it deliberately creates its workspace on memory card #0 (normal system storage).

Neal

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I want to GET data from a Web Server on a Palm VII

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): I want to GET data from a Web Server on a Palm VII



By [Don Golding](#) on Saturday, June 23, 2001 - 12:54 pm: [Edit](#)

Does anyone know how to call/use the Internet functions in a Palm VII?

IE:

server--> <http://www.google.com>

request--> /custom?q=robot

I just bought one for \$119 from Palm...Just sign up as a developer which anyone using Quartus is...



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 23, 2001 - 12:59 pm:

[Edit](#)

Don, quite a long time ago I assisted somebody in doing something like this on the Palm VII. It involved calling the clipping app with certain parameters.

We don't have VII functionality in Canada, so I haven't had much occasion for hands-on.

Neal



By [Don Golding](#) on Saturday, June 23, 2001 - 01:43 pm: [Edit](#)

Do you have any code examples from that effort? Is the web clipping docs the place to start? I haven't gotten up to speed with Quartus/Palm programming yet but I am an experienced Forth programmer....



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 23, 2001 - 04:18 pm:

[Edit](#)

I am digging. I don't know what I kept; I was assisting somebody else with getting their own code running.

The docs are certainly going to be required, so grab hold of them straight away.

Neal

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Basic FP input and output

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Basic FP input and output



By [stschad](#) on Saturday, June 23, 2001 - 12:06 pm: [Edit](#)

I've got lots of small numeric routines I'd like to quickly put into Quartus, no user interface required. Can someone demonstrate how to prompt for a floating point number (like 2.4--perhaps accepted as a string and converted to floating point), perform a calculation (square root, etc.), and display a label+answer? I'm picking up Quartus again after a prolonged absence and I'm trying to re-RPN my brain!

Thanks- <STS>



By [ChapmanFlack](#) on Saturday, June 23, 2001 - 12:40 pm: [Edit](#)

```
needs core-ext \ for PAD
needs float-ext \ for F.
```

```
: go
  ." gimme a number: "
  PAD 84 ACCEPT CR
  >FLOAT
  FSQRT
  F.
;
```

If you need floating-point functions fancier than fsqrt you might wind up looking at <http://www.sleepless-night.com/wiki/MathLib>

-Chap



By [Chapman Flack](#) on Saturday, June 23, 2001 - 12:46 pm: [Edit](#)

Oops, I forgot labeling the output, but of course ." will do that. If you end the go word above with a little event loop:

```
BEGIN EKEY DROP AGAIN
```

then you can make it a trivial standalone square-root app; without the loop it will exit immediately after displaying the result, so you can't see it.

-Chap



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 23, 2001 - 12:57 pm:

[Edit](#)

Hang about -- ACCEPT only returns the count.

pad dup 84 accept

should work.

Neal



By [Chapman Flack](#) on Saturday, June 23, 2001 - 03:41 pm: [Edit](#)

darn, it worked for me ... I hate when I get lucky ...

-Chap



By [stschad](#) on Monday, June 25, 2001 - 12:03 pm: [Edit](#)

What's the simplest way to display a fp number in decimal form without the exponent (i.e.- 24.8 instead of 0.24800000E2)? Convert it to a string first?

<STS>



By [Chapman Flack](#) on Monday, June 25, 2001 - 01:02 pm: [Edit](#)

needs float-ext ok

24.8e ok

F. 24.7999999 ok

Notice the slight innaccuracy, because FPs are binary fractions of finite length, and 24.8 is (exactly) $124/5$ and anything with 5 in the denominator is an infinite (nonterminating) binary so it can't be stored exactly. (The same way things with, say, 7 in the denominator are nonterminating in decimal).

Because of things like that, you usually want to round/chop to whatever precision you really need.

For fancier formatting needs, see REPRESENT.

-Chap



By [Chris Bucsko](#) on Monday, June 25, 2001 - 03:12 pm: [Edit](#)

I use 'n' set-places (where n is the number of digits you want after the decimal point) and then (f.) which returns an address and length on the

stack, where you can treat it like a string, using type for immediate output, or string>field for program output.



By [stschad](#) on Monday, June 25, 2001 - 05:23 pm: [Edit](#)

The 'n' set-places did the trick, although it took me a few tries before I deduced that my zipped version of the library files didn't contain the newest version of float-ext (the zipped version omits the definition for set-places). I'll also try using REPRESENT.

It's looking like I'll eventually need to load MathLib to get a full complement of trig functions, and the readme file mentions Chapman as the author! Congrats on truly formidable amount of coding. Are there any howto documents on loading and using the library?

<STS>



By [Chapman Flack](#) on Monday, June 25, 2001 - 07:29 pm: [Edit](#)

Well, the most concentrated glob of information is the readme file, and there's more information on the wiki, including the list of MathLibFunctions with links to their individual documentation.

I know I haven't had time to expand the wiki pages into a real tutorial, but most of the info should be in there or in the readme. Please let me know if you run into any questions I haven't answered adequately, and that kind of guidance helps me figure out what to focus on when I have time to work on the tutorial. Or go ahead and do the wiki thang--ask your own questions and put down what you're thinking the answers are, and if I think of better answers I'll fix 'em.

So there's two "libraries" you have to load. One is the MathLib shared library itself, which is not Quartus-Forth-specific; one copy of MathLib on a handheld can be used by all floatish applications no matter how they were built. All you have to do for that part is get a copy of MathLib.prc and load it onto your device like any app. You don't do anything else with it. (If you have a Visor it's already in ROM, and you might check it didn't get installed already by some calculator or other kind of app you're already using.)

The other "library" you need is the collection of Quartus Forth memos that provide the words you need for using the MathLib functions. The current version is downloadable from the wiki as FloatLib. (I think the version in Contrib is a bit older.)

When you go to the wiki to download FloatLib, you'll see it refers to some other downloads on other wiki pages, and one of them is InitializationAndFinalization, and it refers to a couple more. Anyway, it

won't really be long before you've loaded on everything you need. ;)

Assuming you're using the newest version, there's really no trick to using it. If you'll need basic IEEE floating point, add "needs NewFloatMgr" to the top of your program. If you'll need MathLib functions, add "needs MathLib". Then just go ahead and write your code and build your app.

If you build an app that uses MathLib functions and install it on a handheld that doesn't have MathLib.prc, your app will still run as long as it doesn't actually call any MathLib functions. If it does, there'll be a -21 THROW (unsupported operation) that you can CATCH and give a helpful message.

Let me know if anything else seems murky.

-Chap

BTW, I wasn't the author of all those mathematical functions themselves--they were mostly written by paid numerical analysts at Sun (and better than me!) with a few added by GNU folks, and Rick Huebner ported them into the form of a PalmOS shared library. I just wrote the glue so you can call them from Forth.



By [stschad](#) on Wednesday, June 27, 2001 - 05:55 pm: [Edit](#)

I added:

```
needs NewFloatMgr
needs MathLib
```

--at the start of a test program and got this error on load:

```
Exception in file: sdfd
included by: MathLib
included by: testprog
(2>r)? undefined word
```

--I can't seem to find this word defined anywhere, and the load seems to stop at the point where the sdfd file defines DFROT using (2>r). Is there a newer version of sdfd than 2001.4.4 JCF? I still missing a file?

<STS>



By [Chapman Flack](#) on Wednesday, June 27, 2001 - 08:14 pm: [Edit](#)

There's a version of CoreExtModule on the wiki that includes (2>r) and friends. I put them there because they turn out to be implementation factors of an improved 2>R and company, and that was an easy way to

maximize the benefit of the optimization.

I think Neal is kernelizing and (I hope) optimizing some of the common words for the next version, and I don't know exactly what will be where after he does, so I might have to find a new home for the (...) factors then, if Neal doesn't make them available as natural factors of the kernelized words. But I'll cross that bridge when there's a bridge to cross.

Bottom line, download core-ext from the wiki, you should be in business.

-Chap



By [stschad](#) on Wednesday, June 27, 2001 - 09:34 pm: [Edit](#)

I loaded the new file and it gets me much further...but halts with this message:

```
Exception in file: inifini
included by: MathLib
included by: testprog
xts? non-existent file
```

--Did I miss a file?

<STS>



By [Chapman Flack](#) on Wednesday, June 27, 2001 - 10:22 pm: [Edit](#)

Sorry, yes. xts.txt comes from XtLiterals on the wiki. (That one I think I did mention on the FloatLib page.)

Lessee, you'll probably also run into needs dspaces (wiki MultipleDataSpaces) and needs ans+loop (wiki PlusLoopTerminatesEarly), if you don't have them already.

The whole thing presents a little puzzle in how best to organize the wiki. It's a Good Thing to break out generally useful functions like xtliterals and dspaces so they can be easily used wherever there's a use ... but it makes for more files to download. At the other extreme, every module could aspire to be self-sufficient, but in a real app that would likely lead to a lot of duplication of code, and lots of different words that do the same kinds of things. So I lean toward factor-into-small-modules.

It would be nice if the FloatLib page, say, listed every other module it depends on so you know what to download, but how to handle transitivity? If the FloatLib page says it needs inifini, should it also say it needs xtliterals, ans+loop, and dspaces, because `_inifini_` needs them? That could

be a nightmare to keep up to date; suppose inifini is revised and now needs the Foo module as well; does that mean somebody has to add Foo to the "other modules needed" list for every module that `_uses_` inifini?

Some automated mechanism on the wiki to display the transitive closure of needed modules for a given module would be really cool, but I don't yet have any more than a vague idea how it ought to look; I haven't suggested it to Kris yet.

Meanwhile, sorry it seems so sisyphian to get all the files you need.

-Chap



By [Kris Johnson \(Kdj\)](#) on Tuesday, July 3, 2001 - 11:41 pm: [Edit](#)

I think for now, it's best for module authors to just manually list references to other needed modules. There really aren't that many, and the great thing about the wiki is that if anyone notices something missing, it can be instantly fixed.

But some sort of common convention would be useful, so that people know where to look. For example, putting all dependencies at the top of a page, and labeling it "Other Needed Modules".

Something else I've considered is creating a page that has links to all attachments everywhere in the wiki. There's a FileAttachmentIndex page that lists all of the pages with attachments, but it has a level of indirection.

-- Kris

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Multiply two double-cell values

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Multiply two double-cell values



By [Bob Ryan](#) on Friday, June 22, 2001 - 06:09 pm: [Edit](#)

Ok I must be missing something 😞

Is there a convenient way to multiply two double-celled values together?

I can't seem to find the built-in word that does this.



By [Neal Bridges \(Nbridges\)](#) on Friday, June 22, 2001 - 07:23 pm: [Edit](#)

This'll do the trick:

<http://www.quartus.net/discus/messages/23/1139.html?#POST7400>

Neal



By [Chapman Flack](#) on Friday, June 22, 2001 - 09:23 pm: [Edit](#)

I was going to suggest a CODE implementation would be neater, but it looks like 32-bit multiply instructions only came in with the 68020. Oh well.

-Chap



By [Rick Harmsen](#) on Saturday, August 11, 2001 - 03:01 pm: [Edit](#)

Here are some double-celled and triple-celled math routines that I copied from Tim Hendtlass's "Real Time Forth":

```
\ triple (Tim Hendtlass)
\ Double and triple precision words
\ from "Real Time Forth" © 1993

needs core-ext

: ?dnegate ( ud n -- d )
  0< if dnegate then ;

: ud*c ( ud1 ud2 -- ud3 ?overflow )
  dup >r rot dup >r >r over >r
  >r swap dup >r um*
  0 2r> um* d+ 2r> um* d+
```

```

0 2r> um* d+ or 0<> ;

: ud* ( ud1 ud2 -- ud3 )
  rot >r over >r >r over >r
  um* 2r> * 2r> * + + ;

: d* ( d1 d2 -- d3 )
  dup >r dabs 2swap dup >r dabs
  ud* 2r> xor ?dnegate ;

: t* ( ud un -- ut )
  dup rot um* 2>r
  um* 0 2r> d+ ;

: t/ ( ut un -- ud )
  >r r@ um/mod swap
  rot 0 r@ um/mod swap
  rot r> um/mod swap drop
  0 2swap swap d+ ;

: ud*/ ( ud1 un1 un2 -- ud2 )
  >r t* r> t/ ;

: ud/ ( ud1 ud2 -- udquot )
  dup 0= if swap t/
  else
    dup 65536. rot 1+ um/mod >r
    drop r@ t* drop 2>r
    dup 0 2r@ ud*/ d-
    2r> r> rot rot nip ud*/
    nip 0
  then ;

: d/mod ( d1 d2 -- drem dquot )
  2 pick over xor >r
  dabs 2swap dabs 2swap
  2over 2over ud/ 2dup 2>r
  ud* d- 2r> r> ?dnegate ;

: d/ ( d1 d2 -- dquot )
  2 pick over xor >r
  dabs 2swap dabs 2swap
  ud/ r> ?dnegate ;

```



Thanks, Rick!

Neal

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Resources in separate file - again

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Resources in separate file - again



By [Richard Chamberlain \(Rac\)](#) on Friday, June 22, 2001 - 06:15 am:

[Edit](#)

Hi,

I want to pop a set of resources in a separate pdb file. In the calling application how do I retrieve the resources.

I presuming I just need to open it using `DmOpenDatabaseByTypeCreator`. I then use `DmGetResource` to retrieve any of the resources?

If so a few questions:

Do I just discard the `dbRef`? -- it doesn't seem required.

Do I need to close the database when I close the app or does that happen anyway?

What do I need to set the creator and type to?

Creator presumably my application's creator, but what about the type?

Thanks,

Richard

[sorry if this appears twice the first didn't seem to work]



By [Bob Ryan](#) on Friday, June 22, 2001 - 10:59 am: [Edit](#)

You use `DmOpenDatabaseByTypeCreator` and `DmGetResource`.

You won't need the `dbRef` for `DmGetResource`, but keep it around so you can close the DB.

Its a good idea to close the DB after you're done with it. Use the "closeDB" word from the `DataMgr` memo. It might happen anyway, but its better to be safe.

Use your application's Creator ID. The type can be any 4-letter sequence except 'Appl'.

-- Bob



[Edit](#)

By [Richard Chamberlain \(Rac\)](#) on Friday, June 22, 2001 - 11:37 am:

Thanks Bob,

It might be easier just to mail my questions straight to you in future ;-)

Richard

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Xxx d0 .w a0 di) d1 .l move ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Xxx d0 .w a0 di\) d1 .l move ?](#)



By [Amy Yeah \(Amy\)](#) on Thursday, June 21, 2001 - 01:31 pm: [Edit](#)

How to express "xxx d0 .w a0 di) d1 .l move" on quartus forth assembler ?
That is long-sized operations and word-sized index register .

thanks

Amy

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Xxx d0 .w a0 di) d1 .l move ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Xxx d0 .w a0 di\) d1 .l move ?](#)



By [Amy Yeah \(Amy\)](#) on Thursday, June 21, 2001 - 01:23 pm: [Edit](#)

How to express "xxx d0 .w a0 di) d1 .l move" on quartus forth assembler ?
That is long-sized operations and word-sized index register .

thanks

Amy



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 21, 2001 - 01:39 pm:

[Edit](#)

Hi Amy. Did you not get my email reply to this question? From memory--
di) assumes a word-sized index register.

```
1234567. # d0 a0 di) d1 .l move
```

should do the trick, though I'm unable to test it right this second. Let me know.

Neal

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Password:

address is optional.

E-mail:

~ Dynamic Binding?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): ~ Dynamic Binding?



By [Elan Goldman](#) on Tuesday, June 19, 2001 - 06:59 pm: [Edit](#)

Hi,

I have different save words for different forms. `save_nnn` saves values from form `nnn` and `save_mmm` saves value from form `mmm`.

I would like to have a word defined, let's call it `save`, and whenever a form is loaded, that word will be assigned the `save_xxx` for that particular form. I.e. whenever a form is closed the word `save` will be evaluated, and as a result the appropriate `save_xxx` routine (`save_nnn`, `save_mmm`) will be evaluated.

In C I would declare a pointer to a function and assign the address of a function to the function variable at runtime. I would then call the function via the function variable.

How do I do something like this in Forth?

TIA,

Elan



By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 19, 2001 - 07:09 pm:

[Edit](#)

In much the same way:

variable `save`

```
: routine1 ." One" ;
: routine2 ." Two" ;

: go
  ['] routine1 save !
\ or
  ['] routine2 save !
\ and later on...
  save @ execute
;
```

Neal



By [Elan Goldman](#) on Tuesday, June 19, 2001 - 08:34 pm: [Edit](#)

Aha! Very nice.

Thanks.

Elan

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Large Quartus applications

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Large Quartus applications



By [John Newell](#) on Tuesday, June 19, 2001 - 08:12 am: [Edit](#)

Neal,

Can you help me here? I have a large application which consists of 5 Forth programs. That's because the code is much too big for Quartus to handle in one go (prc's are a total of 228k). At the moment they transfer control between each other by launching each other when required. However, I would like them to be in a single prc. Is there any way of combining them into a single prc? Thank you.

Regards
John



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, June 19, 2001 - 08:41 am: [Edit](#)

John,

I'll soon be attempting the same thing. I haven't yet dug into it, but here is a link to a previous discussion on the topic:

<http://www.quartus.net/discus/messages/23/613.html?ThursdayJuly2020001052pm>

Hope it helps,

Barry Ekstrand



By [John Newell](#) on Tuesday, June 19, 2001 - 12:42 pm: [Edit](#)

Thanks Barry. That's a big help. I should have searched myself.

One of the reasons for asking my question was to prevent the sub-apps from appearing in the launcher. My 5 prc's all have different creator ID's but are all of type "appl". I'll probably keep the creator ID's as they are but change the type to something other than "appl" on all except the main-app. Only the main-app will appear in the launcher then.

I still wonder if it is possible to get it all into one prc though.

Regards
John



By [Mark Wickens \(Markwickens\)](#) on Tuesday, June 19, 2001 - 02:41 pm: [Edit](#)

John

Unless you really want to go to the trouble of combining your apps, you may like to consider using an App' called invisible which lets you hide the icons of defined applications. It's a neat little utility that only costs a few dollars and does exactly what

ot says on the tin! Try visiting www.palmgadget.com if you're interested.

Regards

Mark



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, June 19, 2001 - 05:05

pm: [Edit](#)

John,

I believe the approach Jim Purdy took with his great ProStats application is to have 1 of the 5 apps be the main one and keep its type as "appl". The others are changed in RrscEdit to something else for the type - say "sub1", "sub2", etc. They should all have the same creator ID.

I understand that changing the type from "appl" will result in no icon being shown for those apps, which effectively become subroutines to the main app. In the end you get 1 icon as desired. The user still has multiple prc files to load but it appears to be one program overall, and if the main program is deleted I assume the subs go with it since they share the same creator ID.

I would be interested in how you are calling the different apps from each other and passing data to one another, if that is something you care to share. It might be helpful to me as I embark on the effort.

Barry



By [John Newell](#) on Wednesday, June 20, 2001 - 04:18 am: [Edit](#)

Hi people,

Various responses here.

I use McPhling as my launcher. You can both hide apps. or make apps. permanently visible to McPhling. It's easy to use, immediately available and its FREE. I highly recommend it and wouldn't do without it.

I am calling the sub-apps using SysUIAppSwitch (using a method cribbed from somewhere else on this discussion forum). I place the CalledFrom app and ReturnTo app creator ID's in a preferences record so that each app knows where it has been called from and where it should return to. The link Barry suggested uses SysAppLaunch. I would like to know what advantages one has over the other.

The application is in five parts with three databases. One database is associated with the main-app and two of the sub-apps have responsibility for the other two databases although the remaining two sub-apps do read them. It is possible to run just a part of the whole application that would not require all of the sub-apps to be on the PDA.

I am torn between either:

Case1: using multiple creator ID's and all apps of type "appl" (as I have it at the moment;) or

Case2: using a single creator ID and different tytes; or

Case3: using multiple creator ID's with just two types.

E.g.

Case1:

```
Main-app      - cre1  appl
Sub-app1      - cre2  appl
Sub-app2      - cre3  appl
Sub-app3      - cre4  appl
Sub-app4      - cre5  appl
```

or

Case2:

```
Main-app      - cre1  appl
Sub-app1      - cre1  sub1
Sub-app2      - cre1  sub2
Sub-app3      - cre1  sub3
Sub-app4      - cre1  sub4
```

or

Case3:

```
Main-app      - cre1  appl
Sub-app1      - cre2  suba
Sub-app2      - cre3  suba
Sub-app3      - cre4  suba
Sub-app4      - cre5  appa
```

In all cases the main-app would be of type "appl" to make it visible to the launcher.

Case1 is how I have it at the moment. You can use the custom launcher to hide the sub-apps if required. Un-required parts of the application can be deleted without losing the whole application. Each app can be compiled under Quartus without having to change the type.

Case2 would mean that when the Main-app is deleted, all the apps disappear. However, since Quartus only creates prc's of type "appl", I would have to change the type every time I compile a prc and always compile Main-app last (otherwise it would be deleted whenever a sub-app was compiled).

In Case3 I could compile all the apps. and change the sub-app types later. However, each app would have to be deleted separately. However, it is possible to run just a part of the whole application which would not require all of the sub-apps to be on the PDA. That may suggest using Case3.

[Pauses to tear hair]

Regards

John



By [Richard Chamberlain \(Rac\)](#) on Wednesday, June 20, 2001 - 06:14

am: [Edit](#)

John,

Could you not use DmSetDatabaseInfo to change the type after creating each sub app?

Richard



By [John Newell](#) on Wednesday, June 20, 2001 - 07:49 am: [Edit](#)

Richard,

I guess that would work although I haven't tried it out. The Case2 problem of generating the main-app would still exist of course.

I was really just kiting some options to get some feedback.

John



By [John Newell](#) on Monday, June 25, 2001 - 04:48 am: [Edit](#)

OK, I converted to Case2. It seemed the right choice to me.

I tried out Richards idea and it worked ... but with problems. Perhaps Neal can help.

After issuing:

```
['] go CreatorID MakePRC Sub-app1
```

I assumed that the latest open resource database would be the PRC and I did the following:

```
0. DmNextOpenResDatabase srcDbr 2! \ Get database pointer
0. cardnum >abs 0. 0. dbID >abs srcDbr 2@ DmOpenDatabaseInfo throw \ Get
database ID and card number
(ID) sub1 sp@ 0. 2swap 0. 0. 0. 0. 0. 0. 0. 0. 0. dbID 2@ cardnum @
DmSetDatabaseInfo throw 2drop \ Set the database type
```

This worked as it was supposed to and changed the type of the PRC to 'sub1'.

The problems occur when I try to re-compile the Sub-app1. In that situation, Quartus crashes with the "Fatal Error" screen and I have to reset the Palm. If I delete the Sub-app1 before the re-compiling it works OK.

Neal,

Is there any way of setting the type of the PRC being produced by MakePRC?

Why do I get Fatal Error if the app exists with a type of 'sub1'. Note that the Fatal Error does not occur for an app of type 'appl'?

Quartus always deletes the app of type 'appl'. This means that I either 1) have to change the type of the Main-app to something else, compile the sub-app, the change the type of the Main-app back; or 2) re-compile the Main-app every time I compile a sub-app.

Any suggestions?

Regards

John



By [Neal Bridges \(Nbridges\)](#) on Monday, June 25, 2001 - 06:04 am: [Edit](#)

Simplest solution is to deliberately delete the 'sub1' app yourself before the MakePRC.

Neal



By [John Newell](#) on Monday, June 25, 2001 - 07:56 am: [Edit](#)

Simplest? For whom? A few people have commented on the creation of large applications, requiring a Main-app and several sub-apps called when required. If the entire application is to have the same Creator ID for all its PRC's then the problem is going to come up again.

Instead of just calling Quartus to compile a sub-app I have to:

Enter RsrcEdit
Change the Main-app creator ID to a dummy value
Delete the Sub-app
Call Quartus
Enter RsrcEdit
Change the Main-app creator ID back to its proper value

... and do it each time I want to compile one of the five sub apps.

I guess I could develop some code to do this before the MakePRC command (though I don't really want to).

You don't comment on the acceptability/safeness of changing the sub-app type in this way (particularly the assumption that "the latest open resource database would be the PRC").

Quartus appears to create an app called Quartus app and then change the creator ID and Name to that specified in the MakePRC command. Is that something to do with why Quartus crashes if the app does not have a type of 'appl'?

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Monday, June 25, 2001 - 10:39 am: [Edit](#)

'Simplest' in terms of the amount of code required. I'll draw up the code tonight and post it; it's quite straightforward.

Neal



By [Neal Bridges \(Nbridges\)](#) on Monday, June 25, 2001 - 10:41 am: [Edit](#)

... and I'll provide some commentary on your other questions also. 😊

Neal



By [Jim Meadows](#) on Monday, June 25, 2001 - 11:36 am: [Edit](#)

I currently use method 2 to compile my large app consisting of several modules. The problem you are running into when you re-compile a sub module is the name of the sub module already exists and you cannot have an "appl" type and "sub1" type with the same name.

My solution was to compile the name with something appended to the end (e.g. "-A").

After compiling I do the following in rsrcredit:

1. Delete the old sub1 module
2. Remove the -A from the name and change the type to sub1 of the newly compiled module

It would be great if this could be automated ... it is time consuming when several modules are involved. It would be even greater if larger modules could be compiled (hint hint).

- Jim Meadows



By [Jim Meadows](#) on Monday, June 25, 2001 - 11:46 am: [Edit](#)

I have an additional question concerning multiple module apps and gremlins ... how do you run gremlins across the multiple modules?

I use SysUIAppSwitch and pass parameters via records in a database. I need the gremlins to keep running when I switch modules since my sub-module cannot be run by itself (each sub module requires certain passed parameters to be setup properly).

Any thoughts?



By [Neal Bridges \(Nbridges\)](#) on Monday, June 25, 2001 - 02:45 pm: [Edit](#)

I've never tried that, Jim. My first reaction is to guess that the Gremlins carry happily on when the sub-app is called -- do they not?

Neal



By [Ron Doerfler](#) on Monday, June 25, 2001 - 05:07 pm: [Edit](#)

Yes they do. I use SysUIAppSwitch and pass global variables via Saved Preferences, and Gremlins runs back and forth between them just fine.

Ron



By [Jim Meadows](#) on Thursday, June 28, 2001 - 01:25 pm: [Edit](#)

Ok ... I think I have determined my problem. If your sub-modules have type of "appl" the gremlins run just fine. However, if you use method 2 to hide the sub-modules by changing their type to say "sub1" then the gremlins will not run on the sub-modules.

The example below runs the gremlins fine (when you tap the screen of the main module it switches to the sub module for a short time). If you change the type of the sub module to "sub1" and change the switch routine to use the following

```
[ID] TRY1  
[ID] sub1
```

to switch modules, the program runs fine stand alone but does not run the gremlins. I use the following command line to run gremlins horde 0:

```
Emulator.exe -psf Try.psf -run_app Try0 -horde_apps Try0,Try1 -horde 0
```

I am going to look into leaving the type as "appl" and hiding the icons.

Notes: The program actually switches twice when the screen is tapped due to 2 events generated. Also this method does not switch until the main program exits and then restarts the calling program from the beginning when the sub module finishes.

Jim

Example:

\ Project main

.(main)

needs tools-ext

needs ids

needs toolkit

needs textalign

needs events

needs forms

create DmSearchStateType 16 allot

variable cardnum

2variable localid

2variable gpt

: switch

\ find app

localid >abs cardnum >abs true

[ID] TRY1

[ID] appl

DmSearchStateType >abs true

DmGetNextDatabaseByTypeCreator throw

18 s>d MemPtrNew gpt 2!

0 gpt 2@ MemPtrSetOwner throw

\ launch it

gpt 2@ 0 localid 2@ cardnum @

SysUIAppSwitch throw

;

: go

page

40 40 at

." Main Program "

60 40 at

." Tap to switch ... "

100. systaskdelay drop

begin ekey until

switch

```
80 40 at
." exiting to switch ... "
100. systaskdelay drop
;
```

```
' go (id) TRY0 makeprc Try0
```

```
\ -----
```

```
\ Project sub
```

```
.( sub )
```

```
needs tools-ext
```

```
needs ids
```

```
needs toolkit
```

```
needs textalign
```

```
needs events
```

```
needs forms
```

```
: go
```

```
page
```

```
40 40 at
```

```
." Sub Program "
```

```
100. systaskdelay drop
```

```
;
```

```
' go (id) TRY1 makeprc Try1
```



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 28, 2001 - 03:59 pm:

[Edit](#)

I haven't explored this, Jim -- it surprises me, as I'd expect the gremlins process to carry on furiously without any regard as to the type of a given resource database. Does it actually come to a halt?

At any rate, even if this is a hard limitation, it's easy to compile with 'appl' as your sub-app type, Gremlin test, and re-compile with another type for release.

Neal



By [Ron Doerfler](#) on Thursday, June 28, 2001 - 09:33 pm: [Edit](#)

I have my main app as creator ID Cfil and type appl, and my sub-app as CfIO with type QMod, and Gremlins works fine across them when launched in the POSE, which is version 3.0a4, an older version. So it looks like I really use Case 3, where the creator ID's are also different. Note that you can access the Saved Preferences of another app just as easily as yours, so I don't have a problem with that.

Ron



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 28, 2001 - 09:38 pm:

[Edit](#)

That's just how I would expect it to go, Ron. Jim, are you sure the gremlins are stopping, and can you tell me what version of POSE you're using?

Neal



By [Jim Meadows](#) on Friday, June 29, 2001 - 10:51 am: [Edit](#)

I am running 3.0a5 currently with a 3.0 debug rom (I have new versions that I am going to test with as well).

What happens is when the main program exits to allow the switch, the sub program is not run and control is returned to the Palm launcher screen. The gremlins then merrily go about clicking on things like beam, info, etc. on the main palm screen.

Jim



By [Jim Meadows](#) on Friday, June 29, 2001 - 11:37 am: [Edit](#)

If I stand on one foot and hold my mouth just right....

OK I think I have it running OK now using method 2. I changed the command line as follows for my simple test program:

```
Emulator.exe -psf Try.psf -run_app Try0 -horde 0
```

Note that I removed the "-horde_apps Try0,Try1" parameters which was to restrict it to just running Try0 and Try1. However this apparently didn't allow Try1 to run ... maybe because the Try1 type had been changed from appl to sub1. Anyway it appears to run gremlins OK now!

Thanks for all your feedback!

Jim



By [Neal Bridges \(Nbridges\)](#) on Friday, June 29, 2001 - 02:59 pm: [Edit](#)

Ah, very good. I have never used the command-line options for the emulator.

Glad you got it sorted!

Neal



By [John Newell](#) on Tuesday, July 3, 2001 - 12:41 pm: [Edit](#)

I have come up with the following code to create a sub-app, giving it the correct creator and type, and without deleting the Main-app.

First of all it deletes the old sub-app (because Quartus doesn't like it being there). Then it makes the sub-app, using a dummy Creator ID. (This will be given a type of 'appl' by Quartus).

Then it changes the Creator ID and type to that required for the sub-app.

(Note that any resources required by the sub-app can be copied after it has been re-named.)

```
\ ReCreator 3-7-01 17:06 jrn
needs core-ext
needs ids
```

```
2variable dbID \ Local DB Id
0. dbID 2!
variable cardnum
0 cardnum !
create DmSearchState 16 cells allot
```

```
: setCreatorType ( <40> creator. type. -- )
2>r 2dup or 0= if 0. else sp@ then
2r> 2swap
2>r 2dup or 0= if 0. else sp@ then
2r> 2swap
0. 0. 0. 0. 0. 0. 0. 0. 0. dbID 2@ cardnum @ DmSetDatabaseInfo throw
2drop 2drop
;
: GetDatabase ( creator. type. -- lid. cnum err )
2>r 2>r
dbID >abs cardnum >abs true
\ creator type
2r> 2r>
DmSearchState >abs true
DmGetNextDatabaseByTypeCreator
dbID 2@ rot cardnum @ swap
;
: ChangeCT ( newC. newT. oldC. oldT. -- )
GetDatabase nip nip nip 0= if
  SetCreatorType
else
  2drop 2drop
then
;
: DeleteCT ( Creator. type. -- )
GetDatabase 0= if
  DmDeleteDatabase throw
else
  drop 2drop
then
;
```

```
\ Make a sub-app that will have Creator ID of 'Crel' and a type of 'subx'
```

```
(ID) Crel 2CONSTANT Creator \ Application Creator ID
(ID) Dumy 2CONSTANT Dummy \ A dummy creator ID
(ID) appl 2CONSTANT appl \ Application type
(ID) subx 2CONSTANT subx \ Sub-app type
```

```
: go
." Hello"
```

;

```
Creator subx DeleteCT \ Delete old version of sub-app - Cre1 subx
' go Dummy MakePRC AppName \ Make new app - Dmy appl
Creator subx Dummy appl ChangeCT \ Change to Cre1 subx
```

... and it works.

Regards

John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 3, 2001 - 06:04 pm: [Edit](#)

John, that's very good. I just realized I never posted my promised code; however, yours is very close to what I would have done.

Neal



By [John Newell](#) on Wednesday, July 4, 2001 - 08:14 am: [Edit](#)

Thank you.

A little while ago, in another thread, I asked about setting the Creation Date of the PRC. That could be done here by adding the following:

```
: setCreationDate ( <20> seconds. -- )
sp@ 2>r
0. 0.
0. 0. 0. 0. 0.
2r>
0. 0. 0. dbID 2@ cardnum @ DmSetDatabaseInfo throw
2drop
;
: ChangeCD ( <60> seconds. Creator. Type. -- )
GetDatabase nip nip nip 0= if
  SetCreationDate
else
  2drop
then
;
```

\ Set Creation date/time for sub-app
TimGetSeconds Creator subx ChangeCD

Regards

John



By [Kris Johnson \(Kdj\)](#) on Wednesday, July 4, 2001 - 08:31 am: [Edit](#)

John, in your stack comments you have things like <20>, <40>, and <60>. I haven't seen that before--what does it signify?

-- Kris



By [John Newell](#) on Wednesday, July 4, 2001 - 12:33 pm: [Edit](#)

Kris,
<ba> in the comment signifies the number of cells that the word expects on the stack on entry (before) and the number it leaves on the stack on exit (after).

I wrote a : word which automatically recorded the name of all defined words along with these numbers (which it expected at the beginning of the bracketed comment after the words name - the < and > being delimiters). Then, every time the word was executed, it checked that there were at least 'b' cells on the stack on entry, but more usefully that there were 'b-a' less cells on the stack after exit. (It could even check the number of cells expected at any other point within the word.) If there was a mismatch, it printed out a message giving the name of the word with the problem, where the problem had occurred, details of the stack mismatch and then stopped. You could then interrogate cells and abort or even change the stack and continue.

e.g.

```
: fred ( <31> n1 n2 n3 - n ) \ Expect 3 words, leave 1
. \ Prints n3
( <2A> ) \ Expect 2 words
* \ Multiplies n1 by n2
( <1B> ) \ Expect 1 word
. \ Prints n1 * n2
5 \ Puts 5 on the stack
; \ Expect 1 word
```

The problem was/is that it takes up so much dictionary space that it is not usable for large (or even medium) apps. (I was also having problems with does> words and the development slowed down and stopped). However, I got into the habit of putting the <ba> into the comment for each word. I continue to do it because I find it a useful reminder.

Got more than you bargained for huh!

Regards
John



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 13, 2001 - 03:29 pm: [Edit](#)

I have split one of my large applications into 2 modules so I can do some expansion for the next version. All seems to work right on the device, but when I try to run it in POSE, I get very nearly the same issue that Jim identified above. The first app module (type = appl) runs fine for awhile and then ultimately POSE freezes. A reset shows that POSE had attempted to switch to the second module (type = mod2); it simply stopped without exiting. I can resume and it will go back to the first module for awhile and then the same thing occurs again. I've tried messing with POSE's command line parameters but I get no difference.

One other oddity is that before it freezes, I watch POSE jump between the 3 screens in the first module a whole bunch before it ever tries to switch modules. Since the jumps are called by button taps, it seems really strange that the jump attempt to the

second app doesn't happen much, much earlier, assuming there should be a kind of randomness to the button tapping. This appears to not be the case.

Anyway, if someone can offer more enlightenment on how to get the gremlins to run through app switches, please let me know.

Thanks,

Barry

 By [Kris Johnson \(Kdj\)](#) on Thursday, December 13, 2001 - 08:58 am:
[Edit](#)

I'd be interested to know why so many people are hitting the Quartus codespace limit.

I write small apps myself. The one time I hit the limit, it was because I was including a lot of code I didn't need, and not factoring.

Are there particular kinds of programs that, by their nature, have to be big?

-- Kris

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, December 13, 2001 - 10:59 am: [Edit](#)

Kris,

In my case I'm sure my programming style isn't as clean or tight as it should be, although I've gotten a lot better along the way (I think!). Where I maxed out on codespace was with WealthBuilder, which uses Double Floats (for accuracy with large value calculations) and has 5 different screens, each representing a different calculation routine. I factored some of the code (where I could), but much of each calculation routine is separate from one another. Before I split it into 2 modules I tried to slim it down as far as I could easily do, but ultimately found the split to be the best approach in this case.

Barry

 By [Ron Doerfler](#) on Thursday, December 13, 2001 - 04:27 pm: [Edit](#)

Hi Kris,

My TeachFile app requires multiple modules, as it's a complete attendance and gradebook application. Students can be entered from either Address Book entries or imported from class memos created and hotsync'd from the PC. Net grade calculations are done across weighted categories in assignments and attendance, and eleven different reports can be viewed at the class, assignment and individual level, by name or student ID number. These can also be exported into memos in text or CSV format. There is a lot of flexibility in editing students, adding notes for students, excusing students over ranges of dates, propagating assignments to other classes, etc. Once I code a PC desktop companion, the needs may be reduced, as I essentially put the equivalent of a PC gradebook program onto a Palm. There are a lot of functions and forms, and I've been through many iterations of optimization. After awhile you find you hit diminishing returns, particularly since you

have to re-test all the parts you touched, and it becomes apparent that you have to expand into a new module.

I believe another app that has more modules is PalmStats (which I believe has been renamed to ProStats or ??), which is very computationally and graphically intensive.

Note that it is not the final size of the app that is the limiting factor, but the intermediate compile, before unused kernel, etc., words are stripped out, that hits the limit. I've created so many stripped-down versions of library files for this reason that it's a little difficult to keep track of them.

Ron



By [Kris Johnson \(Kdj\)](#) on Thursday, December 13, 2001 - 06:23 pm:

[Edit](#)

Thanks for the information. I can certainly understand why ProStats goes over the limit, but I was wondering why "data entry" apps would do so as well. I guess if you're doing lots of double-cell and/or floating-point arithmetic, or doing lots of text manipulations or format translations, things can easily get pretty big.

-- Kris



By [John Newell](#) on Friday, December 14, 2001 - 09:08 am: [Edit](#)

The Archery Suite now consists of 6 modules and growing. I've gotten to the stage where each module only handles a single form otherwise I run out of compile time space. By the time I have included all the required Quartus libraries and my own libraries which handle database functions, lists, and tables I have used 2/3rds of available codespace. A lot of the defined words are not even used at run time but there's no way of telling Quartus that. And I'm not going to factor them and end up with lots of libraries with almost the same words to support.

A couple of things that would help a lot as far as I can see:

- 1) Get NEEDS to include only a set of declared words, not every word in a library
- 2) Put word names and constant definitions in a separate dictionary space

Regards

John



By [Christopher J. Smith \(Missilemax\)](#) on Saturday, December 15, 2001 - 12:38 am: [Edit](#)

I gota ask...

Is the 64K limit is just the code size of your program, i.e. the "p4ap" record of your PRC after it's compiled? It does not include Forms, Bmps and other resources, nor does it include the data area for your variables and constants...right?

I thought my FreeTris game was complex and it only uses 18,318 bytes of compiled code, the rest of the 66,843 bytes are resources and data.

So, my question is: Just what is included in the 64k barrier?



By [Kris Johnson \(Kdj\)](#) on Saturday, December 15, 2001 - 11:54 am:

[Edit](#)

There is a 40K limit for code. This limit applies at the time Quartus is being used. Not all of that 40K would be copied into the p4ap record, because MakePRC only copies the definitions that are used, and doesn't copy the headers that precede each code definition. (However, if you use generate-symbols then some extra stuff does get put into the PRC.)

Dataspace has a limit of a little bit less than 32K, I think. This gets copied to the DATA 1 resource in a standalone app.

There is no limit on sizes of other resources, other than the limits of Palm OS and your handheld's memory.

-- Kris



By [Christopher J. Smith \(Missilemax\)](#) on Thursday, December 20, 2001 - 07:36 pm: [Edit](#)

Thanks for the info.

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Palm specific tutorials

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Palm specific tutorials



By [Bill Dobson](#) on Monday, June 18, 2001 - 01:37 pm: [Edit](#)

I have been teaching myself Forth using the Quartus Forth on my Palm IIIc. I've master the (very) basics, and now want to try some more sophisticated applications with user input from the screen or buttons, and graphical output. Are there any tutorials that discuss these or other Palm specific implementations of Forth, other than studying other's source code?

Bill



By [Bob Ryan](#) on Monday, June 18, 2001 - 02:51 pm: [Edit](#)

There are quite a few tutorials on the Quartus Forth Wiki:

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthTutorials>

If you have specific questions just ask here. We're always willing to help. J



By [Chris Bucsko](#) on Monday, June 18, 2001 - 03:39 pm: [Edit](#)

Also check out the excellent intro from the QF files area:

<http://www.quartus.net/files/PalmOS/Forth/Contrib/Tutorial-v1.02.zip>



By [Kris Johnson \(Kdj\)](#) on Monday, June 18, 2001 - 04:28 pm: [Edit](#)

The most common comment I get about the tutorials in the wiki is that they are still too far over newbies' heads. I'm not sure exactly what to do about that, but I'd encourage people who know what they're doing to write some more basic tutorials, and for the in-the-dark newbies to post some questions about exactly what they want to know that they can't find.

-- Kris



By [Mikael](#) on Monday, September 30, 2002 - 06:56 am: [Edit](#)

Hello,

I'm one of the ones in the dark. I like to see a tutorial describing who Quartus Forth and Palm PilRC is used to dessign an application. I like to se the focus on the "linking" of the PilRC resource deffinition and the Forht code. Links to suitable existing material are most appreasiated.

Tnaks /Mike



By [Neal Bridges \(Nbridges\)](#) on Monday, September 30, 2002 - 02:52

pm: [Edit](#)

Mike -- while the sample apps in the manual show the PilRC process, the focus nowadays is on the newer RsrcEdit solution that runs directly on-board the device.

Neal

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Please review microticks code

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Please review microticks code



By [Les Grundman \(Lesgrundman\)](#) on Sunday, June 17, 2001 - 11:02

am: [Edit](#)

Attached is some code to measure time in microticks; each microtick is approximately .2 microsecond. Please review and offer comments for improvements and corrections.

I need this capability for a data acquisition project - general use might be to determine code optimization benefits. For example it is possible to see a 5 microsecond improvement in a simple pass when inlining is used.

The idea for this code was taken from a 1998 article by Ken Krugler, "PalmOS Microsecond Timing".

<http://oasis.palm.com/dev/kb/papers/1969.cfm>

```
\ microticks 2001June17 LAG
\
\ NOTE!!! This code is hardware
\ dependent and will not work beyond
\ current Dragonball 328vz processor
\ i.e. Visor Edge or m505
\
\ Also please note that this code will
\ not work if an overclocking utility is
\ in use

needs ids
needs ver
needs float-ext

\ determine processor ID
\   328db = 1, 328ez = 2, 328vz = 3

: Pversion ( -- processorID )
  ver >abs 2 psys FtrGet drop
  ver 1+ c@ ;

\ timrlocxxx = counter register
```

```

\ timrcompxxx =
\     timer-compare register
\ prescalerxxx = prescaler register
\
\ 1/100th second "ticks" are created:
\
\     incrementing the counter register
\     every
\     system clock/(prescaler + 1)
\     when the counter register = the
\     timer-compare value then
\     1/100 sec has passed
\
\ Example:  for orig Palm III
\
\     (3/16,580,608 Hz) * 55268
\     = .009999875 second
\
\ Values for 16Mhz, 20Mhz & 33Mhz
\
\ Clock   prescaler a@+1 timrcompar
\ 16,580,608Hz    3           55268
\ 20,250,650Hz    4           50626
\ 33,161,226Hz    6           55268

(hex) ffff.f608 2constant timrloc328ez/vz
(hex) ffff.f614 2constant timrloc328db
(hex) ffff.f604 2constant timrcomp328ez/vz
(hex) ffff.f60C 2constant timrcomp328db
(hex) ffff.f602 2constant prescaler328ez/vz
(hex) ffff.f60A 2constant prescaler328db

```

```
2variable timrloc
```

```
2variable ticksStart
```

```
2variable ticksEnd
```

```
variable microticksStart
```

```
variable microticksEnd
```

```
variable timrcompare
```

```
: timrloc! ( -- )
```

```
  Pversion dup 2 = swap 3 = or
```

```
  If
```

```
    timrloc328ez/vz timrloc 2!
```

```
  Else
```

```
    timrloc328db timrloc 2!
```

```

Then ;

: timrcompare@ ( -- timrcompare )
  Pversion dup 2 = swap 3 = or
  If
    timrcomp328ez/vz @a
  Else
    timrcomp328db @a
  Then ;

: prescaler@ ( -- prescaler )
  Pversion dup 2 = swap 3 = or
  If
    prescaler328ez/vz @a 1+
  Else
    prescaler328db @a 1+
  Then ;

: countStart ( -- )
  timrloc!
  timgetticks ticksStart 2!
  timrloc 2@ @a microticksStart ! ;

: countEnd ( -- )
  timrloc 2@ @a microticksEnd !
  timgetticks ticksEnd 2! ;

: countmicroticks
  ( -- microtickscount. )
  ticksEnd 2@ ticksStart 2@ d-
  timrcompare@ 1 rshift 1 m*/
  2 1 m*/
  microticksEnd @
  microticksStart @ 2dup
  < if -1 timrcompare - + -
    else -
    then
  0 d+ ;

\ convert to float seconds from
\ microticks

: m>Fs
  ( microtickscount. -- ) ( F: -- f )
  D>F prescaler@ dup 6 = swap 3 = or

```

```
if      1.809343e-7
else    1.973245e-7
then    f* ;
```

\ example of how to use microticks

```
: somethingtotime 9 0 do loop ;

: getelapsedtime ( -- )
  countstart
  somethingtotime
  countend
  countmicroticks 2dup
  m>fs cr cr
  ." Seconds:      " f. cr
  ." MicroTicks: " 0 d.r space cr cr ;
```

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Copying resources into standalone application

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Copying resources into standalone application



By [Duane Foster](#) on Thursday, June 14, 2001 - 02:20 pm: [Edit](#)

I am preparing a 'make' file for standalone compilation. When a tFRM resource is copied into the application (via copyRsrc), does it bring in the button resources associated with that form or do they have to be copied explicitly?

Should I copy all the resource items dumped out from OnBoard RsrcEdit 'build resource list'?

DuaneG



By [Ron Doerfler](#) on Thursday, June 14, 2001 - 02:29 pm: [Edit](#)

It brings the internal resources with the form. You should have one line in your make file for every line appearing when you first open your resource database in RsrcEdit. I'm not sure what all is dumped out in the build resource list from RsrcEdit, as I've never used that list.

Ron



By [Duane Foster](#) on Thursday, June 14, 2001 - 03:41 pm: [Edit](#)

Thanks for the clarification on that.

It seems a much more manageable scenario now.

Build resource list creates a template for naming all the resources as constants. So all the resources are listed by it (every button, popup list, string, u-name-it).

DuaneG



By [Bob Ryan](#) on Thursday, June 14, 2001 - 04:13 pm: [Edit](#)

An automated way to copy your resources is available here:

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/AutomatedMake>

The make module not only generates the PRC, it also copies all of the resources from your resource file to your new executable.

Cheers,
Bob



By [Chapman Flack](#) on Thursday, June 14, 2001 - 06:01 pm: [Edit](#)

I just tried the Build Resource List in RsrcEdit just to see what it does. Not very useful I'd say; it creates constants for various UI elements, which could be handy, but the names it creates aren't much more enlightening than the numbers, and for some elements it includes the label as part of the Forth constant name. Good luck with that if any of your labels contain spaces.

-Chap

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PopupTrigger vs. SelectorTrigger

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): PopupTrigger vs. SelectorTrigger



By [Elan Goldman](#) on Thursday, June 14, 2001 - 02:43 am: [Edit](#)

Hi, it's me again.

I'm using OnBoard RsrcEdit to edit my resources.

When I use a SelectorTrigger control a `ctlSelectEvent` is reported when I click on the trigger.

If I leave everything as is, but change the type of control from SelectorTrigger to PopupTrigger, I can no longer detect a `ctlSelectEvent`. I did, however, expect to get one.

By "leave everything else as is" I mean that I have made no modifications to the other settings of the control (in RsrcEdit) and I have made no changes to the Forth code that processes the events. Since the Resource ID has remained unchanged, the same resource is now simply defined as being a PopupTrigger, I would think that my app should behave exactly the same way, no matter which type of control I use.

Any ideas?

TIA,

Elan



By [Kris Johnson \(Kdj\)](#) on Thursday, June 14, 2001 - 07:15 am: [Edit](#)

According to the Palm OS docs, it looks like a `popSelectEvent` is sent by a popup trigger.

I'm not sure that it makes sense to expect the application to work the same way with different types of controls.

-- Kris



By [Elan Goldman](#) on Thursday, June 14, 2001 - 03:39 pm: [Edit](#)

Hi Kris,

thanks for the info. I'd tried using the `popSelectEvent` before I reported my problem, and that hadn't worked either (at least not the way I thought it should).

I didn't understand how triggers work, but I've finally figured it out. RsrcEdit takes care of it for me (I create a PopupTrigger, a List, and a Popup). I don't need to (and probably can't) intercept the trigger's event. My guess is that the popSelectEvent is generated by the popup associated with the trigger, and not by the trigger itself.

Elan



By [John Newell](#) on Friday, June 15, 2001 - 06:22 am: [Edit](#)

You need R1.2.6R to catch popSelectEvents.

See

<http://www.quartus.net/discus/messages/23/734.html?>

or

<http://www.sleepless-night.com/cgi-bin/twiki/view/Main/QuartusForthBugs>
if you can get into the twiki (which I never have yet)

John



By [Kris Johnson \(Kdj\)](#) on Friday, June 15, 2001 - 07:34 am: [Edit](#)

What problem do you have with the wiki? Does the name not resolve, or does it just not return any data?

-- Kris



By [John Newell](#) on Monday, June 18, 2001 - 07:31 am: [Edit](#)

Kris,

Using the Quartus Forth Wiki links I get, using Netscape or Using Explorer, a timeout - 10060 Connection timed out.

John



By [kdj](#) on Monday, June 18, 2001 - 11:13 am: [Edit](#)

It's been a long time since I've had a timeout--the wiki always responds within a second or two. I suspect that there is some sort of a routing problem between your ISP and my host provider.

If you don't mind, could you try doing a traceroute to sleepless-night.com to see what's going on? You can send the results to my e-mail:

kris@sleepless-night.com.

Thanks,

-- Kris



By [John Newell](#) on Tuesday, June 19, 2001 - 07:58 am: [Edit](#)

Kris,

I'm on a proxy server and the traceroute software doesn't seem to work in that environment. Any suggestions?

Regards

John

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Floodfill weirdness

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Floodfill weirdness



By [Matthew Burke \(Mmb\)](#) on Tuesday, June 12, 2001 - 10:47 am: [Edit](#)

I have the following code:

```
: draw-sun
  yellow foreground
  4 80 80 circle
  80 80 floodfill ;
```

which works fine until I modify my app to use double-buffering. Then all I get is a yellow outline circle.

As far as I can tell, floodfill should work fine. The WinGetPixel call gets the pixel value from the current draw window.

Can anyone think of something I might be doing wrong? (yeah, I know, with a straight line like that)

Matt

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[NEWBIE] ">r", "r>", and ShowForm

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): [NEWBIE] ">r", "r>", and ShowForm



By [Elan Goldman](#) on Tuesday, June 12, 2001 - 02:56 am: [Edit](#)

Hi.

Here's what I'm trying to do:

When a button on my main form is selected I want to save the ID of the current form and display a new form. When the "Done" button is clicked on that second form I want to retrieve the ID of the previous form and return to it.

I discovered that the input library uses the following code sequence to (I believe) accomplish what I am trying to do.

In the input library the following code snippets are used. The definition for the word get-input includes the expression:

```
FrmGetActiveFormID >r
```

The same function later uses the expression

```
r> FrmReturnToForm
```

I tried using these two expressions but in my case the app crashes before the new form is shown.

The expressions are used in two different if ... else ... then branches. After having detected that I am dealing with a ctlSelectEven and having done the obligatory event>abs itemid dup I continue:

```
....  
mFirstButton = if  
FrmGetActiveFormID >r  
secondForm ShowForm drop  
else dup  
mSecondButton = if  
r> FrmReturnToForm  
then then  
....
```

My guess is that the return stack is used during the evaluation of ShowForm and perhaps it's not such a great idea to mess around with the return stack before calling ShowForm. Correct?

If I leave out ">r" and "r>" by storing the first form's address in a variable and then using the value stored in that variable like this:

```
variable cf
```

```
....
```

```
mFirstButton = if
FrmGetActiveFormID cf !
secondForm ShowForm drop
else dup
mSecondButton = if
cf @ FrmReturnToForm
then then
....
```

then secondForm ShowForm executes properly, but when I hit the mSecondButton then an empty form is displayed (instead of the my first form, which I expected to see).

1. Is it illegal to embed ShowForm between ">r" and "r>"?
2. Am I missing some convenience function that would make it simpler to travel between different forms?
3. If I have to use a variable to store the return form's id, is there an easy way to implement it as a stack?
4. If I use ShowForm the second time around (i.e. to return to the first form in response to the "Done" button) instead of using FrmReturnToForm, then the form is displayed correctly. Is it safe to do that repeatedly?

TIA,

Elan



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 12, 2001 - 10:39 am: [Edit](#)

The problem is that you have to restore the return stack to its original state before returning from a word.

If I understand correctly, you have a word something like this:

```
: handle-thingee ( -- )
... if
... >r ...
else
... r> ...
then ;
```

The problem is that you are putting something onto the return stack in the IF part, and then leaving the function before taking it off. You can't do this, because on entry to the word, the top of the return stack contains the return address, and you have now covered that with "garbage".

The return stack is not being changed by ShowForm. In general, you can

assume that calling any function is going to leave the return stack intact.

Your variable-based solution is on the right track. I'm not sure exactly why it doesn't work.

-- Kris



By [Jamie Cairns \(Jamie\)](#) on Tuesday, June 12, 2001 - 11:38 am: [Edit](#)

I spent a while figuring this out (being a rank newbie myself) and this works well. I needed to go to the same Preferences screen from several different possible screens, and wanted to return to the calling screen. This code snippet assumes that you're using buttons to control navigation...

```
variable PrvForm  /previous form
```

```
When going to new form :
```

```
GetPrefsButton of  
  FrmGetActiveFormID  
  PrvForm !  
  PrefForm PopUpForm  
endof
```

```
When returning to previous form :
```

```
PrefOKButton of  
  Process-PrefForm  
  PrvForm @ FrmReturnToForm  
endof
```

Hope this helps

Jamie



By [John Newell](#) on Tuesday, June 12, 2001 - 11:41 am: [Edit](#)

The Forth standard, DPANS94.doc, says:

3.2.3.3 Return stack

Items on the return stack shall consist of one or more cells. A system may use the return stack in an implementation-dependent manner during the compilation of definitions, during the execution of do-loops, and for storing run-time nesting information.

A program may use the return stack for temporary storage during the execution of a definition subject to the following restrictions:

- A program shall not access values on the return stack (using R@, R>, R<, R+)

2R@ or 2R>) that it did not place there using >R or 2>R;

- A program shall not access from within a do-loop values placed on the return stack before the loop was entered;
- All values placed on the return stack within a do-loop shall be removed before I, J, LOOP, +LOOP, UNLOOP, or LEAVE is executed;
- All values placed on the return stack within a definition shall be removed before the definition is terminated or before EXIT is executed.

Have you got the Save Behind attribute set for the called Form?

John

 By [Elan Goldman](#) on Tuesday, June 12, 2001 - 03:22 pm: [Edit](#)

Hi and thanks for all the responses.

John wrote:

> Have you got the Save Behind attribute set for the called Form?

I just checked, and yes, I do have the Save Behind attribute set for the called form.

Does anyone know if it is safe to use ShowForm repeatedly on a form, even though the Save Behind bit of the subsequent form was set?

Does anyone know of a standard stack (Last In First Out) implementation? My problem with using a variable to store previously displayed forms is that it does not allow me to keep a log of the sequence in which forms were displayed.

TIA,

Elan

 By [Kris Johnson \(Kdj\)](#) on Tuesday, June 12, 2001 - 03:28 pm: [Edit](#)

For a stack implementation, check out
<http://www.quartus.net/files/PalmOS/Forth/Snippets/stacks.txt>

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 12, 2001 - 03:34 pm:
[Edit](#)

Thanks Kris -- you beat me to it. I remembered writing such a thing some moons ago.

Neal



By [Elan Goldman](#) on Wednesday, June 13, 2001 - 01:57 am: [Edit](#)

Again, thanks for the answers. It's great to see that this forum is so responsive.

I'm sure I'll have more questions as I continue my project. I hope you guys don't mind some increased traffic over the next few days ;-).

Elan



By [chris bucsko](#) on Wednesday, June 13, 2001 - 01:21 pm: [Edit](#)

I just looked at the snippet. What a great idea!! But in the calling example, you have "10 stack mystack" to create a 10 cell stack called mystack. Shouldn't it read "10 mystack stack" ?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 13, 2001 - 01:35 pm:

[Edit](#)

'stack' is the name of the creation function; the name of the stack it creates must come after it to be parsed, not before it.

Neal



By [Richard Chamberlain \(Rac\)](#) on Thursday, June 14, 2001 - 02:53 am: [Edit](#)

that's what I thought by looking at the stack diagram. apart from reading the code is there anyway of representing that in the diagram?

Richard



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 14, 2001 - 05:55 am: [Edit](#)

The stack diagram for that word indicates it:

: stack (size "name" --)

The "name" is common-practice for indicating a forward-parsing word.

Neal



By [Richard Chamberlain \(Rac\)](#) on Thursday, June 14, 2001 - 06:31 am: [Edit](#)

Ahhh - I am enlightened.

Thanks Neal.

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Free Handle

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Free Handle](#)



By [Richard Chamberlain \(Rac\)](#) on Monday, June 11, 2001 - 07:48 am:

[Edit](#)

Hi,

For those who haven't read my recent messages I've moved a set of S" into resource strings (via some nice code that Bob wrote).

At runtime I get the handle to the string resource and write it to a field. So far so good.

Everything compiles ok and the resource strings copy across ok.

In my program I have a word that picks a random number and then shows the string associated with that number using `handle>field` in `string2anyfield`.

This works a few times and then I get a freehandle exception which bombs my palm big time. It's got a nice reset button but when it resets the exception just pops back up again. So I need to do a hard reset - ouch - I should really use POSE :-).

Any ideas what is causing this?

What if there wasn't a resource with a certain number what would `dmGetResource` return?

Thanks,

Richard



By [Bob Ryan](#) on Monday, June 11, 2001 - 11:10 am: [Edit](#)

Your last line answers the question :o) Trying to do a `DmGetResource` on a resource that doesn't exist almost always crashes the Palm.

BTW did you try doing a warm reset? Press the up-arrow key while pressing reset. It's strange that you had to do a cold reset for this.

-- Bob



By [Bob Ryan](#) on Monday, June 11, 2001 - 11:20 am: [Edit](#)

Actually I ment to say that the Palm will crash when you try to USE the value returned from DmGetResource.

DmGetResource returns a double-cell zero if it cant find the resource.

Check the value DmGetResource returns using:

```
: DmThrow ( addr. -- addr. )
  2dup or 0=
  IF
    DmGetLastErr throw
  THEN ;
```



By [Neal Bridges \(Nbridges\)](#) on Monday, June 11, 2001 - 11:22 am: [Edit](#)

Indeed it is strange that you'd need a hard reset. I suspect something more drastic is occurring -- maybe a severe stack underflow.

Neal



By [Richard Chamberlain \(Rac\)](#) on Monday, June 11, 2001 - 11:28 am:

[Edit](#)

Yes, I tried a warm reset.

That restarted the palm into preferences and is OK until I go into the Launcher at which time it bombs again.

So I can use the programs attached to the hardware buttons but nothing else.

Thanks for code Bob - I'll put it in and see what happens, although I don't think this is actually happening. I'm pretty sure I'm always calling a real resource.

Richard



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 12, 2001 - 04:30 am:

[Edit](#)

I'm still having troubles.

I looked through all my resources and they are all consecutive (1-287) and I tested my rand code to make sure I wasn't choosing a quote outside that range.

I looked at the code I was using in string2anyfield (handle>field). This calls a word called freeHandle which calls the palmos MemHandleFree - is this the problem?

I presumably don't want to free the handle because it's a handle to a resource. If you call string>anyfield I can understand calling freeHandle because you're using against a s", but in this case I'm not sure you do.

Thanks,

Richard



By [Bob Ryan](#) on Tuesday, June 12, 2001 - 01:23 pm: [Edit](#)

Here's some code that might help. I didn't get a chance to test it though.

tSTR>s will search all open resource files for a tSTR with a given ID and returns the string in the form (c-addr u).

```
\ tSTR>s
```

```
\ Allot a temp string at least as  
\ long as your longest quote  
create tempStr 256 chars allot
```

```
: tSTR>s ( ID -- c-addr u )  
  [ID] tSTR DmGetResource DmThrow  
  MemHandleLock 2dup 2>r  
  tempStr >abs StrCopy  
  2r@ MemHandleUnlock throw  
  2r> DmReleaseResource throw  
  2dup StrLen >r >rel r> ;
```



By [Richard Chamberlain \(Rac\)](#) on Wednesday, June 13, 2001 - 01:38 pm: [Edit](#)

Thanks again Bob.

Unfortunately it doesn't work - but I haven't had time to work out why yet.

Richard



By [Richard Chamberlain \(Rac\)](#) on Thursday, June 14, 2001 - 01:43 pm: [Edit](#)

I'm a bit lost...

```
: tSTR>s ( ID -- c-addr u )  
[ID] tSTR DmGetResource DmThrow  
MemHandleLock 2dup 2>r
```

I've commented bits of this out - it crashes at 2>r for some reason? I've checked the stack at this point and there is 4 items on it.

```
tempStr >abs StrCopy  
2r@ MemHandleUnlock throw  
2r> DmReleaseResource throw
```

I don't understand the next bit. I think the stack would probably be empty at this point (unless i've missed something).

```
2dup StrLen >r >rel r> ;
```

Help,

Richard



By [Bob Ryan](#) on Thursday, June 14, 2001 - 02:01 pm: [Edit](#)

Oops, I put the '2dup 2>r' combo in the wrong place. Here's the corrected code:

```
: tSTR>s ( ID -- c-addr u )  
  [ID] tSTR DmGetResource DmThrow  
  2dup 2>r MemHandleLock  
  tempStr >abs StrCopy  
  2r@ MemHandleUnlock throw  
  2r> DmReleaseResource throw  
  2dup StrLen >r >rel r> ;
```

-- Bob



By [Bob Ryan](#) on Thursday, June 14, 2001 - 02:17 pm: [Edit](#)

StrCopy leaves a pointer to the destination string on the stack. This is a 2-cell (32-bit) pointer to the original tempStr.

StrLen gets the length of the string, which is temporarily stored on the r-stack.

>rel converts the 32-bit pointer into a 16-bit one.

We're getting closer :o)

Bob



By [Richard Chamberlain \(Rac\)](#) on Thursday, June 14, 2001 - 02:53

pm: [Edit](#)

Thanks Bob that works perfectly.

I'll keep going I'm sure one day soon I'll figure it all out.

Richard



By [Bob Ryan](#) on Monday, June 18, 2001 - 05:17 pm: [Edit](#)

Here's a much shorter version of tSTR>s :

```
create tempStr 256 allot
: tSTR>s ( ID -- c-addr u )
  tempStr >abs SysCopyStringResource
  tempStr dup >abs StrLen ;
```

I just now stumbled over the SysCopyStringResource function in the SDK. It's amazing what you can find when you're not looking for it J .



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 19, 2001 - 03:58 pm:

[Edit](#)

Thanks Bob,

I'll have a play.

Richard

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Memory and program size questions

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Memory and program size questions



By [Les Grundman \(Lesgrundman\)](#) on Saturday, June 9, 2001 - 08:50

am: [Edit](#)

Hello all; I am working on my first Palm app - a data acquisition project that requires microsecond timing, assembly language to quickly & directly access the palm hardware and advanced math routines to do a Fast Fourier Transform; in other words I am jumping in way over my head 😊

On a historical note, I have used Forth before but it was 17 years ago on an Atari (valForth).

Ok, now to the point of this post. I have been trying to understand the "big" picture for programming with Quartus Forth on the Palm relative to memory use, program size, etc. so I am going to make some statements and ask some questions. Please correct errors in the statements and answer the questions as possible:

STATEMENTS:

Palm memory is divided into two types, dynamic & storage. Dynamic memory is between 12k and 64k - it depends on Palm ROM version. It is possible to freely write to dynamic memory, but it is only possible to write to storage memory through PALM OS system calls. (to paraphrase the Quartus Manual Q&A page).

The Quartus dataspace is in Dynamic memory and holds the Forth stack, the location of data pointed to by variables or returned by constants, system variables, etc. To reserve a large block of dynamic memory requires either the "ALLOT" command at compile time or the ALLOCATE or (ALLOCATE) command at run time. If you use "ALLOT" it will cause the PRC files to be larger than necessary.

The Quartus codespace is in Storage memory; word definitions are then compiled into codespace. "CSUNUSED" lists the amount of remaining codespace, 44352 bytes for Quartus v1.2.5R. No Quartus app can be created which requires more than 44352 bytes of codespace unless the sub apps approach is used. ProSTATS is an excellent Quartus application which uses this sub apps approach.

QUESTIONS:

How do I determine how much dynamic memory is available? On my IIIxe with 4meg free "MEM D. D." returns 219778 and 198596 - clearly out of the 12k to 64k range noted above.

What are the latest thoughts on the use of "ALLOCATE" versus "(allocate)" versus an alternate heap memory manager? Previous postings pointed out that "ALLOCATE" must be called repeatedly until it finally works. Does this repeated call strategy always eventually work? Does the repeated call strategy work with PalmOS 4.0?

Are there any code examples on using the sub apps approach? When the sub apps approach is used, how is data passed? Is the only way PalmOS databases?

Thanks,
Les



By [Kris Johnson \(Kdj\)](#) on Saturday, June 9, 2001 - 03:19 pm: [Edit](#)

Regarding memory allocation, I'd recommend using (allocate), or the Palm OS memory routines. However, that means that your application will have to use double-cell absolute addresses rather than single-cell addresses, which may complicate things (or may simplify them, depending upon how you are using memory).

However, if your memory usage is bounded (that is, you know the maximum amount you'll need), then there's nothing wrong with using ALLOT to put it all in dataspace. I'm not sure what the maximum amount is that you can ALLOT.

BTW, my introduction to Forth was on an Atari computer as well. Things have changed a little since then.

-- Kris



By [Les Grundman \(Lesgrundman\)](#) on Saturday, June 9, 2001 - 04:59 pm: [Edit](#)

Kris,

Thanks for the comments.

Yes, computers have changed quite a bit since the Atari days. I remember splurging and getting two extra 16K memory cards for \$100 each for my Atari 800... I then had a whole 48K of ram...

Thinking back, the disk i/o (96k 5.25" floppy) was also kind of humorous; you could always tell how fast data was moving cause there was a beep every time a few hundred or so bytes were transferred...

I do think, though, that I like programming on the Palm with Quartus so much because it is similar to the old days. It is possible/necessary to understand the computer and software down to a low level.

Les



By [Chapman Flack](#) on Monday, June 11, 2001 - 11:44 am: [Edit](#)

Your whole Forth dataspace including your variables, constants, everything you allot, cannot together exceed 32k (the limit of positive, signed 16-bit offsets from A5). And yes, doing the ALLOT prior to MakePRC will expand your PRC file by the amount you allot. (And doing the ALLOT in the standalone app is likely to crash the device because ALLOT depends on an internal global variable that doesn't get initialized in the standalone app startup.)

I agree with Kris in recommending (allocate) or the PalmOS API.

In recent versions of PalmOS the dynamic heap can be bigger than 64k depending on the device, 96k is not uncommon and on recent devices it is sized at reset time according to the total memory on the device. But the dynamic heap is shared; it's not all for your application. Also, be very careful about the validity of pointers when writing to memory allocated in the dynamic heap--there is no protection to keep you from writing to another app's dynamic memory chunks. ☹

-Chap



By [Les Grundman \(Lesgrundman\)](#) on Tuesday, June 12, 2001 - 09:47 pm: [Edit](#)

Chap,

Thanks for the comments. I am afraid I am still not quite straight about (allocate).

When you use (allocate) is the memory it reserves outside of the dataspace (and the 32k limit)? Since the stack diagram shows an unsigned cell input, does that mean I can additionally (allocate) 64k?

<http://www.palmos.com/dev/tech/hardware/compare.html> shows that my PalmIIIxe can have upto a 256k dynamic heap; it would be nice to be able to use more of it.

Thanks,
Les



By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 12, 2001 - 10:22 pm:

[Edit](#)

You can use (allocate) to allocate dynamic memory up to the amount available on the device; this may well exceed 64k in later models.

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 12, 2001 - 10:35 pm: [Edit](#)

(allocate) only accepts a 16-bit parameter, but it is just a wrapper for the MemPtrNew Palm OS function. You can pass a 32-bit value to MemPtrNew, so I assume it is possible to allocate a chunk bigger than 64K.

FWIW, this works on my Visor Deluxe:

```
65505. MemPtrNew
```

but any value higher than 65505 fails. I can allocate three chunks of size 65505; the fourth attempt fails.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 13, 2001 - 07:28 pm: [Edit](#)

Quote:

Also, be very careful about the validity of pointers when writing to memory allocated in the dynamic heap--there is no protection to keep you from writing to another app's dynamic memory chunks.

What does this mean? I was under the impression that only one app runs at a time under Palm OS, so the entire range of dynamic memory would be used by the running app plus whatever OS usage is going on (and Hacks, I guess).

-- Kris



By [Chapman Flack](#) on Thursday, June 14, 2001 - 01:54 pm: [Edit](#)

Oh, you're going to ask for precise definitions.... Hmm, I'm not sure I know enough. What I should have said was "nothing stops you writing to dynamic heap that your app didn't allocate." That would pretty much cover the

bases. You can clobber anything the OS might have in dynamic heap ... you can clobber unallocated portions of dynamic heap (not harmless, because that's likely to be where the allocation-management structures live) ... you might certainly clobber dynamic heap allocated by hacks ... and it would not surprise if you can clobber other apps' dynamic data when you are running as a subcall or under an alternate launch code.

-Chap



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 14, 2001 - 01:59 pm:

[Edit](#)

Broadly speaking, the CPU in current Palm devices doesn't have memory-protection built in except in an extremely broad sense -- 'storage' RAM is protected from casual writes, and hence is much harder to corrupt accidentally.

Dynamic RAM is unprotected, so your app could merrily go off and corrupt low memory addresses if it so chose. The Palm OS Emulator is good at catching this sort of infraction.

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, June 14, 2001 - 06:11 pm: [Edit](#)

OK--I wasn't trying to be a stickler on definitions. An application should never write to memory that it doesn't own, no matter what the memory protection mechanism is, so I was wondering why you explicitly made this point.

And I was just wondering how multiple apps could be simultaneously using the heap. When running as a subroutine, then yes, your app could be sharing the heap with another app.

-- Kris



By [Chapman Flack](#) on Saturday, June 16, 2001 - 10:28 pm: [Edit](#)

I explicitly made the point because when applications do address memory they don't own, it's usually by accident, not because the programmer deliberately tried to do it. We're all imperfect. But many of us are accustomed to operating systems that tell us when we have made that mistake, so we can fix it. It's worth a heads up to be **much more careful** under Palm OS, which will give you no sign you have written outside your allocated dynamic heap chunks, and there is **no telling what will happen** if you do.

Considering possible direct and indirect effects, basically all bets on the integrity of anything you have on your PDA are off. Most of us have already

come to grips with that awful truth of the Palm environment, but it bears repetition for the benefit of newbies.

-Chap



By [Les Grundman \(Lesgrundman\)](#) on Sunday, June 17, 2001 - 11:09

am: [Edit](#)

Thanks for all the comments. I still have a long way to go, but this info really helps.

The support from Neal and the members of this forum is amazing and very much appreciated.

Les

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More String Resources

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): More String Resources



By [Richard Chamberlain \(Rac\)](#) on Friday, June 8, 2001 - 01:59 am: [Edit](#)

Hi,

I'm going to need my hand held all through this I think...

Ok the code that Bob posted works perfectly copying the string resources in the prc.

What I need to do now is get the strings into a field.

What's the best of way of doing that?

Presumably I need to:

DmGetResource
MemHandleLock

and then I was considering using FldSetText - but for that I need to get the size - is there a function for that - i.e. something that returns resource size given a handle.

Or is there a better way?

Thanks as always,

Richard



By [Neal Bridges \(Nbridges\)](#) on Friday, June 8, 2001 - 11:54 am: [Edit](#)

If your strings are stored zero-delimited, the StrLen systrap will return the length.

Simplest way to get a string into a field -- use
<http://www.quartus.net/files/PalmOS/Forth/Contrib/string2anyfield.txt>.

Neal



By [Chapman Flack](#) on Friday, June 8, 2001 - 12:04 pm: [Edit](#)

If you're using a tSTL (a list of zero-delimited strings) then StrLen is the way to go.

You may have another choice if each string is in its own tSTR resource: you can also get the size of the resource with MemHandleSize which operates in constant time (StrLen requires time proportional to the length of the string).

-Chap



By [Bob Ryan](#) on Friday, June 8, 2001 - 12:54 pm: [Edit](#)

What I would do is:

- 1) DmGetResource to get a handle to the resource.
- 2) MemHandleLock to get a pointer to the string (it will be zero terminated).
- 3) String>Field (from the Fields module) to copy the string to the field.
- 4) MemHandleUnlock the handle
- 5) DmReleaseResource the handle

This is untested, but should give you a good starting point.

-- Bob



By [Bob Ryan](#) on Friday, June 8, 2001 - 12:59 pm: [Edit](#)

Actually String>AnyField is a better choice :o)



By [Richard Chamberlain \(Rac\)](#) on Friday, June 8, 2001 - 04:26 pm: [Edit](#)

MemHandleLock returns a handle. and string>anyfield expects a handle - do I therefore need to call >rel then push the String Length and Field ID onto the stack?

Thanks for everyone's help so far!

Richard



By [Neal Bridges \(Nbridges\)](#) on Friday, June 8, 2001 - 04:55 pm: [Edit](#)

string>anyfield doesn't expect a handle, but one of its factors -- handle>Field -- does. You could use that directly.

Neal



By [Richard Chamberlain \(Rac\)](#) on Friday, June 8, 2001 - 05:36 pm: [Edit](#)

Hi Neal,

I've tried that but can't get it to work,

something like:

```
1000 [ID] tSTR
dmGetResource 2dup
MemHandleLock
fldQuote handle> field
MemHandleUnlock
```

Thanks,

Richard



By [Neal Bridges \(Nbridges\)](#) on Friday, June 8, 2001 - 05:42 pm: [Edit](#)

Almost. If you lock a handle, it becomes a pointer -- you don't want that. Pass the handle directly, without using MemHandleLock/MemHandleUnlock.

Neal



By [Richard Chamberlain \(Rac\)](#) on Saturday, June 9, 2001 - 01:36 am:

[Edit](#)

Thanks Neal,

I had things the wrong way round I thought you got a pointer and locked it to get a handle.

Thanks again,

Richard

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String Resources

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): String Resources



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 5, 2001 - 03:53 am:

[Edit](#)

Does anyone know an easy way to insert string resources into a pdb or prc file?

I want to convert a long list of S" strings into resource strings. However it would take me forever in RsrcEdit as there are about three hundred or so.

I've never used pilrc but I believe that generates a .bin file is there anyway that could be inserted into a pdb file?

Thanks,

Richard



By [Tim Hulme](#) on Tuesday, June 5, 2001 - 11:35 am: [Edit](#)

If you have them on your PC try a program called 'Bigdoc' (<http://visionary2000.com/bigdoc/>). Its a shareware text editor for Windows that can write pdb files. I have used it a number of times to get things into POSE since I haven't bothered to setup a network hotsync. It works well.



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 5, 2001 - 12:10 pm:

[Edit](#)

Thanks for the reply Tim.

Not quite what I meant. That's approximately how I'm doing it at the moment (except using WordSmith). Which is a long file full of S".

What I want to do though is replace all those (they're quotations) with tStr resources.

I can create a string resource in something like RsrcEdit, but it would take me several months to copy and paste all the quotes.

I could do it in pilrc but then I'd have to merge my current rsrc file which is a bit of a pain.

Richard



By [Chapman Flack](#) on Tuesday, June 5, 2001 - 12:40 pm: [Edit](#)

Why not write a little memo that redefines S" (and maybe a few other words) and then includes your file full of strings, so what your redefined S" really does is just make the string into a tSTR resource (or add it to a tSTL), and what it actually compiles is a code sequence to retrieve the right resource and put its address and length on the stack at run time?

-Chap



By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 5, 2001 - 01:14 pm: [Edit](#)

That's an interesting approach, Chap. One tricky bit -- the address of a string in a resource is a 32-bit value, and you'd have to accomodate that.

Neal



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 5, 2001 - 02:36 pm:

[Edit](#)

I kind of thought of that, but haven't the skill to implement it :-).

Any pointers?

Richard



By [chapman Flack](#) on Tuesday, June 5, 2001 - 03:37 pm: [Edit](#)

The StringListResource topic on the wiki has a little memo attached that will show how to make string list resources. The structure of a tSTR resource is even simpler; I think it's just the string.

With a string list, what you can do at run time is call SysStringByIndex (part of the 2.0 new feature set) which will copy the selected string into a buffer of your choosing (it handles the get/lock/unlock/release of the resource for you).

If you pass it the 32-bit address of a buffer in Forth dataspace, you can then put the 16-bit address and length on the stack and pretend you are really S".

So at compile time you parse the string from the input buffer and stash it away as a resource, and you compile a literal with the string index, followed by a word that calls SysStringByIndex, and StrLen, and puts the 16-bit address and length on the stack.

-Chap



Here's some tested code. S>tSTR takes an S" string and a resource ID on the stack and creates a tSTR resource containing that string.

```
\ s>tSTR RLR 2001-06-05
```

```
needs resources
needs core-ext
needs ids
```

```
2variable DBref
2variable String
```

```
\ Of course you would open your own
\ resource DB here. Be sure to open
\ it in Write mode.
```

```
DmModeReadWrite (ID) RYPz (ID) util
DmOpenDatabaseByTypeCreator
DBref 2!
```

```
: DmThrow ( addr. -- addr. )
  2dup or 0= if
    DmGetLastError throw
  then ;
```

```
: Make_tSTR ( size resID -- h. )
  >r 0 r> [ID] tSTR DBref 2@
  DmNewResource DmThrow ;
```

```
: EndData ( u destPtr. -- )
  2>r >r 0 1. r> 0 2r>
  DmSet drop ;
```

```
: CopyData ( c-addr u destPtr. -- )
  2>r >r >abs r> 0 2swap 0. 2r>
  DmWrite drop ;
```

```
: S>tSTR ( c-addr u resID -- )
  >r String 2!
  String 2@ nip 1+ r>
  Make_tSTR 2dup 2>r
  MemHandleLock 2dup 2>r
  String 2@ 2swap CopyData
  String 2@ nip 2r> EndData
```

```
2r@ MemHandleUnlock throw
2r> DmReleaseResource throw ;
```

```
: test
s" Hello" 1000 S>tSTR ;
```



By [Richard Chamberlain \(Rac\)](#) on Wednesday, June 6, 2001 - 02:19 am: [Edit](#)

Wow!

Thanks guys for all that - marvellous. I haven't had time to try it yet but I'll drop some feedback when I have.

Thanks again,

Richard



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 6, 2001 - 09:54 am: [Edit](#)

Bob, would you mind if I were to post your code to the wiki? (Or would you like to do it yourself?)

I intend to put together a sort of "resource compiler" by gathering a bunch of resource-creation words posted to the Quartus forum. If all goes well, I won't have to do any work at all. 😊

-- Kris



By [Bob Ryan](#) on Wednesday, June 6, 2001 - 10:36 am: [Edit](#)

Kris, Please feel free to post it on the Wiki.

The resource compiler idea is cool, if I can help in any way just drop me a line.

Bob

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Reading from extension card

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Reading from extension card



By [eli](#) on Monday, June 4, 2001 - 06:09 pm: [Edit](#)

I have m505 with 32mb extension card, does somebody know how to read from the extension card.

I have seen in this forum, that I need to change the cardnum to 1, I tried it, but I get fatal alert.



By [Neal Bridges \(Nbridges\)](#) on Monday, June 4, 2001 - 06:15 pm: [Edit](#)

The extension card is not addressable in the same way as normal storage memory. There's a new API in Palm OS 4 that allows access to it -- it provides VFS functions.

The card gets formatted in 16-bit FAT format (you may remember this from DOS). The VFS sysstraps access it accordingly.

I haven't exposed the Palm OS 4 API sysstraps yet, but I will do shortly. If some enterprising soul wants to undertake it in the meantime, that'd be fine!

Neal



By [eli](#) on Tuesday, June 5, 2001 - 02:45 pm: [Edit](#)

does Quartus Forth support VFS functions?

Eli



By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 5, 2001 - 02:46 pm: [Edit](#)

You can call any sysstrap from Quartus Forth. The VFS sysstraps are not implemented by name yet, but can certainly be called anyway. I'll be including them in the kernel soon.

Neal

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Docneeds

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Docneeds](#)



By [Richard Chamberlain \(Rac\)](#) on Saturday, June 2, 2001 - 11:54 am:

[Edit](#)

Hi,

For the first time I decided I'd try using doc files. I copied a memo verbatim into a doc file but I get a control structure mismatch error.

Has anyone had this problem?

Thanks

Richard



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 2, 2001 - 11:48 pm: [Edit](#)

Can you post the memo in question, Richard?

Neal



By [Richard Chamberlain \(Rac\)](#) on Sunday, June 3, 2001 - 01:07 am:

[Edit](#)

Sure, not much to it though,

```
\ sc-quotes1 31.10.2000 RAC
```

```
: getQuote1 ( -- str u ) rand 31 mod case
```

```
0 of S" A closed mouth gathers no foot." endof
```

```
1 of S" Get outside! It's too nice a day to be stupid indoors!! -- Ren (to  
Stimpy)" endof
```

```
2 of S" Sometimes I think the surest sign that intelligent life exists  
elsewhere in the universe is that none of it has tried to contact us. -- Bill  
Watterson" endof
```

```
3 of S" an unbreakable toy is useful for breaking other toys." endof
```

```
4 of S" God is real, unless declared integer." endof
```

5 of S" Childhood is that state which ends the moment a puddle is first viewed as an obstacle instead of an opportunity. -- Kathy Williams" endof

6 of S" No job is so simple that it cannot be done wrong." endof

7 of S" You can only be young once, but you can be immature forever." endof

8 of S" Everything is possible except skiing through revolving doors." endof

9 of S" The sum of the intelligence on the planet is constant, but the population is increasing." endof

10 of S" There's no such thing as a tough child -- if you parboil them first for seven hours, they always come out tender. -- W.C. Fields" endof

11 of S" Alcohol & calculus don't mix. Never drink & derive." endof

12 of S" Americans always try to do the right thing -- after they've tried everything else. " endof

13 of S" In California, they don't throw their garbage away - they make it into TV shows. -- Woody Allen" endof

14 of S" German in the most extravagantly ugly language - it sounds like someone using a sick bag on a 747. -- Willy Rushton" endof

15 of S" I never forget a face, but in your case I'll make an exception. -- Groucho Marx" endof

16 of S" The chief excitement in a woman's life is spotting women who are fatter than she is. -- Helen Rowland" endof

17 of S" Women are like elephants to me: nice to look at, but I wouldn't want to own one. -- W. C. Fields" endof

18 of S" He may look like an idiot and talk like an idiot but don't let that fool you. He really is an idiot. -- Groucho Marx" endof

19 of S" Sharp as a sack full of wet mice. -- Foghorn Leghorn" endof

20 of S" You've got the brain of a four-year-old boy, and I bet he was glad to get rid of it. -- Groucho Marx" endof

21 of S" A great many people now reading and writing would be better employed keeping rabbits. -- Edith Sitwell" endof

22 of S" If all the girls who attended the Harvard-Yale game were laid end to end, I wouldn't be surprised. -- Dorothy Parker" endof

23 of S" Thank you for sending me a copy of your book - I'll waste no time reading it. -- Moses Hadas" endof

24 of S" This is not a book that should be tossed lightly aside. It should be hurled with great force. -- Dorothy Parker" endof

25 of S" He has no enemies, but is intensely disliked by his friends. -- Oscar Wilde" endof

26 of S" He is one of those people who would be enormously improved by death. -- H. H. Munro" endof

27 of S" I'd call him a sadistic, hippophilic necrophile, but that would be beating a dead horse. -- Woody Allen" endof

28 of S" Only dull people are brilliant at breakfast. -- Oscar Wilde" endof

29 of S" Some cause happiness wherever they go; others whenever they go. -- Oscar Wilde" endof

30 of S" Don't look now, but there's one too many in this room and I think it's you. -- Groucho Marx" endof

endcase ;

Last night I tried another of the memos which is just a header file setting up constants that worked fine.

Thanks,

Richard



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 3, 2001 - 01:09 am: [Edit](#)

Those are really long lines. The DocInclude module has a buffer size limit -- have a look. You can adjust it upwards, and that should remedy things.

Neal



By [Richard Chamberlain \(Rac\)](#) on Sunday, June 3, 2001 - 01:18 am: [Edit](#)

Jeez that was a fast answer - are you biologically attached to this forum?

That solved it straight away.

Thanks as always Neal,

Richard.



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 3, 2001 - 12:42 pm: [Edit](#)

Electrodes, Richard. Glad it helped. 😊

Neal

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Binary numbers

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Binary numbers



By [Dave Bennett \(Dbennett\)](#) on Friday, June 1, 2001 - 07:09 pm: [Edit](#)

I'm having a problem with binary numbers. I've defined a binary number (8bits) that I've split into two parts. The low order byte represents the tonal note, the high order byte the octave it is in. However, I'm having a difficult time storing them.

If I interactively create a variable and assign 001100 to it, it works. If I do this programmatically it doesn't. Not just the upper part of the 16bit word is trashed, but the lower part as well.

Any advice? Thanks.

Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, June 1, 2001 - 07:21 pm: [Edit](#)

Dave -- let's see your code. That should be straightforward enough to sort out.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, June 2, 2001 - 12:02 am: [Edit](#)

An example of doing this sort of thing is in the wiki:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/BinaryLogic>

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Monday, June 4, 2001 - 07:10 pm: [Edit](#)

\ bintest

```
variable s1t
variable s2t
variable s3t
variable s4t
```

```
:mgo
2 base !
01011000 s1t !
```

```
01010011 s2t !
01001011 s3t !
01000110 s4t !
decimal ;
```

I start quartus, type in "needs bintest", then enter mgo. I then enter "2 base !" and enter. Then I enter "s1t @ .s" and the display is 110110100111000.

If I start quartus, enter "variable s1t", "2 base !", "01011000 s1t !", then "s1t @ .s" I get back the same number I input.

Dave

Palm Vx, OS 3.3

 By [Neal Bridges \(Nbridges\)](#) on Monday, June 4, 2001 - 07:13 pm: [Edit](#)

Simple fix. You need to be in base 2 while compiling, or the compiler has no way of knowing those are not decimal numbers.

Two ways to do this:

```
\ bintest
```

```
variable s1t
variable s2t
variable s3t
variable s4t
```

```
2 base ! \ either this,
\ or use (binary) as below:
```

```
:mgo
2 base !
(binary) 01011000 s1t !
(binary) 01010011 s2t !
(binary) 01001011 s3t !
(binary) 01000110 s4t !
decimal ;
```

```
decimal
```

Neal

 By [Kris Johnson \(Kdj\)](#) on Monday, June 4, 2001 - 09:59 pm: [Edit](#)

In other words, setting BASE inside the definition doesn't help. The compiler will just compile the instructions that will set BASE when MGO is executed, but BASE stays equal to 10 while you're compiling.

Here's another way you can do what you want:

```
: mgo
[ 2 base ! ]
01011000 s1t !
01010011 s2t !
01001011 s3t !
01000110 s4t !
[ decimal ] ;
```

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Tuesday, June 5, 2001 - 04:27 am: [Edit](#)

So putting (binary) in on a line by line basis directs the compiler to use base 2 on that particular line. Enclosing the "2 base !" in square brackets directs the compiler to have the behavior I was seeking in bintest.

Any caveats on either method?



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 5, 2001 - 09:45 am: [Edit](#)

(BINARY) always reads the next "word" in the input as a binary number. It doesn't affect the rest of the line. And I guess (BINARY) is "state smart", meaning that it works either in compile mode or in interpret mode.

I don't think there is anything wrong with either method. If I'm just using a few numbers, I'll put (BINARY), (HEX), or whatever in front of them. But if I have a long list, like you do in your example, I'll set BASE and then reset it to 10 at the end.

-- Kris

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Is case-insensitive search possible ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Is case-insensitive search possible ?



By [Amy](#) on Friday, June 1, 2001 - 12:56 pm: [Edit](#)

I would like to Perform a case-insensitive substring search on quartus forth

. It can use FindStrInStr or TxtFindString api .

But the functions must use normalized string by way of TxtGluePrepFindString on PalmOSGlue library .

So could quartus forth call TxtGluePrepFindString of PalmOSGlue library or have another instead way ?

Amy



By [Neal Bridges \(Nbridges\)](#) on Friday, June 1, 2001 - 02:03 pm: [Edit](#)

Hi Amy. Did you get my e-mail response to that question?

Here's the short version: the Palm OS provides StrNCaselessCompare with which you can roll a case-insensitive search very easily.

I haven't ever looked at the Glue bits & pieces, so I can't speak yet on what would be involved.

Neal



By [Chapman Flack](#) on Friday, June 1, 2001 - 06:34 pm: [Edit](#)

I think later versions of PalmOS are sneaking in support for wide characters a la Unicode and all the support functions that requires, and the glue library allows some of those functions to be linked into an app and thus used on earlier OS versions.

The difference between StrNCaselessCompare and using the glue routines is StrNCaselessCompare will work correctly for ASCII where only 26 characters matter and UC and LC differ by one bit, but it has no chance of knowing that, say, ARMENIAN CAPITAL LETTER YIWN and ARMENIAN SMALL LETTER YIWN ought to compare equal. For that you'd need the glue stuff.

I looked at all that kind of stuff a couple years ago in the context of thinking how to add Unicode support to ANTLR, but I've been sort of avoiding thinking about what would have to happen to QF as PalmOS goes that direction.

On the bright side, I guess Forth has such piddly support for strings in the first place that the pain of writing an app that does something with wide strings might not be much more than what you have to do anyway. 😊



By [Neal Bridges \(Nbridges\)](#) on Friday, June 1, 2001 - 07:41 pm: [Edit](#)

Actually the caseless comparison routines in the PalmOS are fairly sophisticated; they use a lookup table of character equivalencies, and will match accented and non-accented vowels, for instance.

Neal



By [Amy](#) on Sunday, June 3, 2001 - 11:02 am: [Edit](#)

Thanks, I had understood your meaning .
The solution is to call StrNCaselessCompare in proper order .



By [Amy](#) on Sunday, June 3, 2001 - 11:08 am: [Edit](#)

Thanks, I had understood your meaning .
The solution is to call StrNCaselessCompare in proper order .



By [Amy](#) on Sunday, June 3, 2001 - 11:20 am: [Edit](#)

Thanks, I had understood your meaning .
The solution is to call StrNCaselessCompare in proper order .

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Is case-insensitive search possible ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Is case-insensitive search possible ?



By [Amy](#) on Friday, June 1, 2001 - 12:49 pm: [Edit](#)

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Is there a way to call QForth from, say NSBASIC or AppForge VB ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Is there a way to call QForth from, say NSBASIC or AppForge VB ?



By [Ray Saarela](#) on Friday, June 1, 2001 - 03:08 am: [Edit](#)

Used to write embedded real-time apps with 4th in 80's and early part of 90's. However, when using PDA as GUI/H.I. for embedded application, the GUI is much easier to write on something like Appforge or NSBASIC, though latter is quite slow indeed.

Clearly, one can write some faster code either with Cwarrior and then call it as shared library from NSBASIC or AppForge, but, if one wanted to write the embedded "closer to real time" part of code, say, in Quartus Forth, is there a way to call QForth-app/code from AppForge or NSBASIC (latter can called shared libraries) ... ?

I would like to make a small Visor Springboard with some Flash for app and a CAN-controller on board, but need a nice way to develop and debug the apps, and possibly, if somehow possible, put Palm OS to sleep while executing some real-time interrupt driven code (in Forth, C or Asm) for the CAN communications, and then would let the Palm come alive again once doing the operations that needed some speed and timing accuracy ...

Also, Mr. Neal, have you considered "Visual" forth aspect similar to what the UK company has with their PC forth, ... If one could perform the GUI programming visually, and then the application code-parts that do not deal with text or databases/HI, one would like to use either forth or C, I'd prefer forth, but only if I could call it from AppForge VB, or NSBASIC or even from CodeWarrior C ?

Now, why I am asking these questions before I get into any deeper of this stuff, is because I want to hear from more experienced whether

this would work or not, otherwise, I may be better off just get an IPaq where there is speed enough to use VB all the way, and if necessary, access to VC++ written controls is easy yet.

Really, the only, and very only reason I consider Visors are the fact they have the quite open hardware slot, and I have not found any others yet that would have similar in CE handhelds or even the Linux handhelds, which I would expect from some of them at least. The display in palms and visors is not that hot, backlights suck, and 160x160 and difficulty in producing true type scalable fonts to screen hurts also, so, not sure if one should waste more time on palm/visors in spite of the fact that 68k is nice, Forth is nice and Visor seems to be pretty stable.

Appreciate, Ray S.



By [chapman Flack](#) on Friday, June 1, 2001 - 11:15 am: [Edit](#)

Re: just your last paragraph, I think it depends on the sort of application you happen to admire or want to create. PalmOS devices are simple, inexpensive, and adequate to showcase the value of truly useful, non-bloated software, of which they have a great variety available. Do I need scalable fonts on my PDA? Did I buy the PDA to save myself time, or to give myself yet another way to futz away time and RAM deciding if I like my appointments better in Palatino or Goudy Old Style?

Not intending to start a religious war, just to represent the point of view that parsimony is not a bad thing.

-Chap



By [Mike Will](#) on Friday, June 1, 2001 - 02:02 pm: [Edit](#)

Seeing the words 'futz' and 'parsimony' used in the same post is what makes this forum what it is. Thanks Chapman (and Mr. Neal, of course).

Mike



By [Neal Bridges \(Nbridges\)](#) on Friday, June 1, 2001 - 02:20 pm: [Edit](#)

Palm screens are small, the backlight can't guide your way in the fog -- but the battery life is long, and you can do a remarkable amount even in 160x160 monochrome if you aim at the right target. Make apps that do one thing well, and present the user with only the information he needs at any given time.

The screen layout is the smallest part of such apps, significantly less than 5% of the total effort of writing an app. I haven't given much thought to a drag'n'drop GUI constructor for the Palm for that reason, and also because there are already such out there on the market.

Re calling Quartus Forth from other apps -- I'm neither an AppForge nor an NSBASIC customer, but if either one can call sub-apps, there's no reason they can't call a Quartus Forth app. From what I know of them, taken alone they benchmark very slowly indeed, and have significant run-time overhead; there are a number of significant advantages to writing your entire app in Quartus Forth.

Neal



By [Travis Casey](#) on Friday, June 1, 2001 - 03:34 pm: [Edit](#)

Just to put my own 2 cents in... you can draw a set of screens in Codewarrior, create an "empty" application with them, put that on your Palm, and then use RsrcEdit and Quartus to pull them over into a Quartus app. When I did the time dialog for my toolkit, I did essentially that... just did a copy-and-paste in RsrcEdit of the time dialog from Preferences into my own resource database.

Doing it that way, you can use whatever tool you want to create the screens, and Quartus to do the programming.

--

Travis Casey



By [Kris Johnson \(Kdj\)](#) on Friday, June 1, 2001 - 04:59 pm: [Edit](#)

The real value to the "visual" types of GUI builders is not only the drag-and-drop control placement, but also the automated way of connecting controls to code. They generally provide some way that you can select a control and say "I want to handle a tap for this", and the tool will automatically create some sort of "WhenButtonTapped" function, hook it into the event handler, and then put the cursor at the beginning of the empty function so that you can write the code.

For the simple applications I've created, this sort of work represents a lot more than 5% of the total effort of the application.

Of course, the downside to such automated tools is that the final application takes up ten times the memory space and runs at one tenth the speed.

-- Kris



By [Ray S.](#) on Saturday, June 2, 2001 - 05:10 am: [Edit](#)

To Neal: Thanks for the comments, yes, the problem is that some people do not have very good eyes that are target users = some are elderly people and even the largest Palm font is a bit small, that is all, would not want to have to create bitmaps for all of the larger characters, if not forced to do so. I'd rather use true type font importing allowing to scale hopefully to larger size, if not, then, Visor may be dead for the application that it is planned for, and may require CE handheld or Linux handheld.

To Travis: Really appreciate your message, which I found very useful and kind. Idea of these type of message boards is to be helpful, and your answer was helpful in that I tried the method and it is not totally dead.

To Kris: I also appreciate your message a lot, because I have similar situation, I have to produce "looker" demos fast, with less effort placed in swapping, dapping and rotting, or writing "novel" recursive create does>'s ...

One reason for the Ipaq's is that they are up to 40 times faster and have up to 16 times more memory, yet, they cost max 2x the Visor, and look better than Visor, yet, the Visor's could serve as a low-end terminal for some of the users, and Ipaq's for the upper end.

=====
other than that, 4th was always a way to have fun, not to get fuzzing or fighting, therefore, I just like to thank everyone who had a friendly tone and helped me with the answers, I know now what I need to do, thank you, and btw, I am not native E speaker, therefore, I leave the more sophisticated linguistic to those who get kick out of such.

4th writers used to be one of the finest people out there, when 4th was still a language of somewhat "idealistic" fellows. It was an honor to meet some of those great people back in early 80's, did not get chance to get into the 70's forth gig though. Too Bad.

Ray



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 2, 2001 - 10:22 am: [Edit](#)

Regarding larger fonts -- there are tools available that allow you to make a Palm font out of any TrueType font, which can then be used in any PalmOS 3.0 or later application.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, June 2, 2001 - 06:32 pm: [Edit](#)

Ray, before you give up on Visors/Palms as being too slow, you might want to do some simple benchmarking. I don't know exactly what you want to do, but if all you need is some sort of "data terminal", the 68K's should be plenty fast.

Also, the speed advantage of the iPaq's is not as great as it would seem by just looking at the numbers. CE is a slower operating system than Palm OS, and the better displays means more CPU power is required for the graphics processing. And they have a lot more memory because they need a lot more memory.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 2, 2001 - 06:38 pm: [Edit](#)

Plus, MHz speeds alone do not determine the speed difference between brands of CPU. For example, a 33 MHz 486 benchmarks quite differently from a 33 MHz 68000, or a 33 MHz ARM.

Neal



By [Ray S.](#) on Saturday, June 2, 2001 - 06:56 pm: [Edit](#)

To Neal :

"Regarding larger fonts -- there are tools available that allow you to make a Palm font out of any TrueType font, which can then be used in any PalmOS 3.0 or later application.

Neal"

Could you be kind enough and let me know such a tools name, I tried something called Xfont but I did not find it very easy to use. Is there better tools than that ?

I am not giving up in Visor's because of speed, with Forth and in-line assembly which I can write ok(at least did with all 4th's I've written with before) for several processors, I know I can get quite a lot of power even from 5 mips

processor, more than enough for the needs, only thing I would need is a way to get control over the "real-time" i.e. get timer-interrupt driven tasks going and ability to still go back and forth to PalmOS for the displaying stuff.

I need fairly moderate real-time response for CAN-bus communications, as the VISOR would serve as a "GUI/HI" monitoring device in a mobile vehicle application, where it would serve as control terminal for a C167CR based application that controls all kinds of little motors and valves etc. and in that application there is some needs to be able to poll the devices for feedback data trough the can without getting dead for seconds.

But, I NEED larger fonts (and room service too) and fast way to develop the "looker" screens.

Would it be possible to develop the "LOOKS" in NSBASIC, and then, if necessary, modify those with the Rcp-whatever it was, to get the hooks to bind the forth code to the graphics/gadgets ?

I find the NSBASIC desktop perhaps the best way to develop the "looks" and as it is not too expensive at \$99, if one could use that as the GUI development tool, then the Rc-thing for binding the graphics to Quartus, I would probably be content with that, as the product concept has place for low-cost version that would be the visor, and a high-end version, with the CE/Ipaq, b/c there is 2 versions of the controlled hardware with massive difference in cost and performance, therefore, there would definitely be place for Visor also.

In any case, I appreciate your kind responses, lack of development funds is one reason why I dared to ask for help from you, as I do not have the luxury of being \$'d while learning these first hand myself ...

Thank You, Ray



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 2, 2001 - 07:08 pm: [Edit](#)

This is the package I was thinking of:

I doubt you'll find many NSBASIC users here; you'll likely get a better answer from them on whether it can interface to other apps.

Neal

 By [Ray S](#) on Saturday, June 2, 2001 - 08:34 pm: [Edit](#)

Thank You, Neal, it seems it could solve the size problem.

I experimented with building the "looks" with NSBASIC, and it was totally editable with the RsrcEditor program recommended for Quartus, so it would appear one could well use NSBASIC as a fairly cheap and excellently easy Visual GUI builder for Quartus ... I have to play with this during next week when there is some spare time hopefully, and see if this combo would be the way to go. Those events where NSBASIC is fast enough, there would be no reason to switch to Quartus, but the communications routines where I definitely need faster speed than NSB can do, QUARTUS would be optimal for me to write the CAN words, as I have already written such for other embedded applications, would just need to port those ... Which would not be too bad. I guess I have to do something myself now, experiment with NSBASIC GUI & RsrcEdit combo, and trying to get the Quartus code called. Thanx.

R

 By [Ray S](#) on Saturday, June 2, 2001 - 11:10 pm: [Edit](#)

About TrueType Fonts program ... seems to crash ... DataMgr.c,Line:5304
DmWriteCheck failed ...
So ... never got to see those larger fonts.

Seems have to find some other True Type font proggy, or something's wrong with the Visor Dx or me ...

 By [Neal Bridges \(Nbridges\)](#) on Saturday, June 2, 2001 - 11:13 pm: [Edit](#)

I was thinking particularly of the conversion program, the one that converts TrueType fonts to PDB files on the desktop. Those PDB files then contain Palm fonts, and those fonts can be accessed by your applications.

Neal

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Newbie - double length numbers ?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Newbie - double length numbers ?



By [Tim Hulme](#) on Wednesday, May 30, 2001 - 02:23 pm: [Edit](#)

I'm currently reading "Starting Forth" and I'm into the chapter about numbers, Double-length numbers in particular. Leo Brodie talks about entering a number such as 200,000 at the console and states that most forth's will see the punctuation as an indicator that the number is double-length and put it on the stack in two cells. Aside from the comma, Brodie mentions (. / : -) as punctuation marks that can be entered in along with numbers. My question is which library file "needs" to be loaded to make this work in Quartus Forth. I'm not having any luck turning up the right file to make this work. Neal, if you have the book I'm on page 164 and 165. By the way - entering this in Swiftforth works as illustrated by Brodie. I realize that's because double-length numbers are built-in on that system. Up to this point I have been able to get the majority of Brodie's stuff to work while practicing in Quartus Forth, sorry for such a silly question but at times I just get lost trying to track things down on my own.

TIA,
Tim



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 30, 2001 - 02:49 pm:

[Edit](#)

No files need to be included. In Quartus Forth, as per the ANSI Standard, a '.' signifies a double-cell value.

200000. is the canonical form, but 20.0000 or 200.000 will also work.

Neal



By [Tim Hulme](#) on Wednesday, May 30, 2001 - 03:09 pm: [Edit](#)

If you wanted (for some reason ?) to enter something like 12:27:30 or 05/30/01 what would the accepted practice be per ANSI standard. I may be missing the point of Brodie's discussion, but the text is illustrating that certain punctuation results in double-length numbers and then 'D.' will return them in a consistent format.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 30, 2001 - 03:18 pm:

[Edit](#)

Well, even if / or : were supported as double-cell indicators, you'd still only

get two cells per value entered. That mechanism isn't really suited for entering times, or dates, or anything other than double-cell values.

20.0000 and 200.000 and 200000. and 2.00000 all return exactly the same two cells on the stack; the placement of the '.' isn't relevant.

When you say 'enter', do you mean from the console, or from within an application? Different parsing solutions would pertain to each.

Neal

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 30, 2001 - 03:31 pm: [Edit](#)

Here's a general-purpose word that will convert any delimited string into a series of single-cell values on the stack:

```
: string>numbers ( c-addr u -- i*x )
  begin
    0. 2swap >number
    rot drop
    dup while
      1- swap 1+ swap
    repeat
  2drop ;
```

Example:

```
parse-word 12:13:15 string>numbers .s -> 12 13 15
```

Neal

 By [Tim Hulme](#) on Wednesday, May 30, 2001 - 03:41 pm: [Edit](#)

Again, I'm working thru Starting Forth and merely trying to work all the examples. I'm not not sure why you would want to enter a date or time at the console, but that's the example Brodie sights. In an application the input can of course be parsed, so punctuation would not be of interest except to aid the users input. Interestingly enough it does work that way in SwiftForth. i.e. if I enter (at the console) 12:23:30 or 12/23/30 and then execute

'D.' I get back '122330' in both cases. Is this a problem of reading a text that was written in 1981? If so, how do I know when to ignore some of this kind of thing. My head already hurts!

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 30, 2001 - 03:56 pm: [Edit](#)

Likewise, in Quartus Forth:

122330. d. -> 122330
12233.0 d. -> 122330
1223.30 d. -> 122330
122.330 d. -> 122330
12.2330 d. -> 122330
1.22330 d. -> 122330

Some Forths permit multiple separators, and separators other than '.'. The ANSI Standard requires only the '.', and while it allows it to be recognized anywhere in a number, a compliant system is still considered compliant if it only recognizes it at the end of the number.

Quartus Forth recognizes one instance of the '.' separator anywhere after the first digit, which is compliant, and a deliberate design decision. With the small size of the Palm screen, the proportional Palm fonts, and the perhaps greater possibility of typos when using Graffiti, I feel it's better to generate an 'undefined word' exception for entries like '1,2.3' or '51/' than it is to parse them silently into double-cell numbers.

To separate the wheat from the chaff in that 20-year-old text, it is best to have the ANSI Standard on-hand to consult when conflicts arise.

Neal



By [Tim Hulme](#) on Wednesday, May 30, 2001 - 04:00 pm: [Edit](#)

I was beginning to arrive at that conclusion. Thanks for your help Neal.

Tim



By [Kris Johnson \(Kdj\)](#) on Wednesday, May 30, 2001 - 05:20 pm: [Edit](#)

Here's my recipe for making good sense of the differences between Starting Forth and the ANS Forth standard:

- 1) Read Starting Forth.
- 2) Do nothing with Forth for fifteen years.
- 3) Read the ANS Forth spec.

This worked well, as I remembered just enough about Forth to make sense of the ANS spec, but not enough to be confused by the changes.

If you think that step #2 is impractical, then all I can say is that you're

obviously not dedicated enough. 😊

-- Kris



By [Tim Hulme](#) on Wednesday, May 30, 2001 - 06:51 pm: [Edit](#)

If I subscribed to that plan then I may as well take up kite flying or something else. Fifteen years from now we will more than likely only have to think about what we want to develop and it will magically appear on our brain implanted PDA's. The point is to learn NOW and hopefully catch the current wave before it's too late - AGAIN!

Tim



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 30, 2001 - 07:09 pm:

[Edit](#)

But Tim, by then all the kites will be flying themselves too!



Neal



By [Tim Hulme](#) on Wednesday, May 30, 2001 - 07:31 pm: [Edit](#)

Your right as usual!

My airplane has autopilot too, but that hasn't stopped me from flying. I'm as dedicated as my current schedule allows. For now it's just another hobby. I know more about forth now than last December when I got my first PDA and found out about forth for the first time. I'll keep plugging away, that's for sure!

Tim



By [Chris Bucsko](#) on Thursday, May 31, 2001 - 05:31 pm: [Edit](#)

Here's a couple of other suggestions. Buy the Forth programming book from Forth, Inc., and check some other Forth sites like

<http://www.albany.net/~hello/comus.htm> and

<http://www.albany.net/%7Ehello/simple.htm> for updated info. Starting Forth is great for the basics, but the particulars can be different.

If you see something doesn't work in QF, consult other sources, and the forum. Myself, I never use the specs, but I don't try to do all the examples in Starting Forth. Just the ones I may need at the moment.



By [Tim Hulme](#) on Thursday, May 31, 2001 - 06:53 pm: [Edit](#)

I have recently purchased from Forth, Inc. the "forth applications techniques" and downloaded the trial version of "Swiftforth" in order to get the .pdf version of "Forth programmers handbook". Both left me with more questions than answers until I got a copy of Starting Forth thru my local library. I'm nearly finished with the first read and I feel I have gained more from that text than any other so far. I read Leo Wong's Simple Forth at least six times and most of it leaves me wanting clearer examples. I'm new enough at this language that the spec is very confusing at this point. In fairness to Kris, I maybe should have surfed the Wiki a little closer. I see now the answer to my question was actually there already. But, Neal is still the first place to go when you want a quick answer and time constraints or laziness prevail. Even if it makes me look silly or not too dedicated.

Tim



By [Neal Bridges \(Nbridges\)](#) on Thursday, May 31, 2001 - 08:40 pm:

[Edit](#)

Questions about Forth are certainly not silly, and anyone with the enthusiasm to pursue those matters which may not be entirely clear is decidedly dedicated.

Keep asking!

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, May 31, 2001 - 09:29 pm: [Edit](#)

Yeah, keep asking! And if you have any ideas about making the wiki more useful for newbies, please make suggestions.

You might want to take a look at some of the Forth tutorials on this page, if you haven't already:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/ForthTutorials>

-- Kris



By [Hans Nordstrom](#) on Sunday, June 3, 2001 - 02:59 pm: [Edit](#)

There's a link in the Quartus online manual to ANSized code from Starting Forth, rendered by Benjamin Hoyt.

It might help, catch the nuances of Forth code.

[Starting Forth examples ANSized](#)



By [Vincent Oberson](#) on Monday, July 2, 2001 - 11:10 am: [Edit](#)

Hi all!

Just another newbie question, sorry to bother you... I'm currently reading Steven Donahue's QF Tutorial, and creating a "Hello, World!" app. This code needs the "ids" library included in QF's package. My question is: what is the role of ">in @" and ">in !" in the "ID" word definition found in this library?

TIA
Vincent



By [Kris Johnson \(Kdj\)](#) on Monday, July 2, 2001 - 01:56 pm: [Edit](#)

>IN is the address of the current offset into the input buffer. ">in @" retrieves the value; ">in !" stores the value.

What the ID word does is use ">in @" to get the current offset. Then, it calls "(ID)", which reads a word from the input and therefore moves the offset forward. So calling ">in !" restores the original offset, so that the same word that was used by (ID) can also be used by 2CONSTANT.

-- Kris

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SetDate

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): SetDate](#)



By [Richard Chamberlain \(Rac\)](#) on Wednesday, May 30, 2001 - 09:42

am: [Edit](#)

Can anyone please give me an example of using the SetDate systrap? I'm kind of mystified by it.

Thanks,

Richard



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 30, 2001 - 11:00 am:

[Edit](#)

There's no SetDate systrap, per se -- which specific systrap are you referring to?

Neal



By [Richard Chamberlain \(Rac\)](#) on Wednesday, May 30, 2001 - 11:07

am: [Edit](#)

Sorry.. I wasn't thinking straight - it's the SelectDay function that I want to use.

Richard



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 30, 2001 - 11:32 am:

[Edit](#)

Here's one helpful thread (there are others in the archives):

<http://www.quartus.net/discus/messages/23/630.html?TuesdayJuly1820000304pm#POST3927>

Neal



By [Richard Chamberlain \(Rac\)](#) on Wednesday, May 30, 2001 - 12:13

pm: [Edit](#)

Thanks Neal,

Just what I was looking for!

Richard



By [Richard Chamberlain \(Rac\)](#) on Thursday, May 31, 2001 - 07:31 am:

[Edit](#)

Hi,

I'm trying to use the systrap SelectOneTime - but it doesn't work. I'm I doing something stupid (likely) or isn't it implemented?

Thanks

Richard



By [Neal Bridges \(Nbridges\)](#) on Thursday, May 31, 2001 - 10:53 am:

[Edit](#)

Here you go:

```
: SelectOneTime ( &titleP. &minute. &hour. -- Boolean )  
  (hex) a34f systrap  
  2drop 2drop 2drop  
  d0 drop 255 and ;
```

Neal



By [Richard Chamberlain \(Rac\)](#) on Thursday, May 31, 2001 - 11:07 am:

[Edit](#)

Thanks Neal.

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What exactly does S" ??

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): What exactly does S" ??



By [Jindra Vavruska](#) on Tuesday, May 29, 2001 - 12:47 am: [Edit](#)

Sorry for this, I got lost when looking for answer in docs.

According to ANS specs, S" does

```
( ... <"> -- addr u )
```

which should be temporary storage somewhere in memory.

But in Quartus S" obviously returns just address.

Now, is the address returned by Quartus S" also pointing to a temporary storage (i.e. not in the dictionary space and I don't have to care how to release it afterwards)?

How do I recognize end of the string?

How does it work in compile mode vs. runtime vs. interactive?

-- JV



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 29, 2001 - 01:29 am: [Edit](#)

... the Quartus Forth S" returns (-- c-addr u) just as required by the Standard. The kernel contains the CORE version of S", which only works from within a definition.

If you want the FILE version of S" -- the one that works while interpreting, and uses a temporary buffer -- do

needs file

to load the appropriate definition.

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, May 29, 2001 - 01:47 am: [Edit](#)

For more information on strings, you might want to check out the Strings Tutorial in the wiki:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/StringsTutorial>

-- Kris



By [Jindra Vavruska](#) on Tuesday, May 29, 2001 - 04:19 am: [Edit](#)

Thanks for all hints. I actually mixed S" with C" which probably made my question quite confusing.

I'll check the tutorial, that should help.

--JV

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Stupid newbie Q: Can I create a lookup table or "private dictionary"?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Stupid newbie Q: Can I create a lookup table or "private dictionary"?



By [Jindra Vavruska](#) on Monday, May 28, 2001 - 12:57 pm: [Edit](#)

Hi there,

I want to implement a simple lookup table/array (associative array). This kind of structure is also called dictionary (IIRC in Postscript and Python at least).

In my project I want to lookup a value of code (constant) assigned to a character. Since the keys would be the most common characters (0-9, A-Z, and few more), I certainly do not want these to mess the Forth dictionary.

Is there a "forthy" way to do it? I am not a big expert in stack computing 😊

-- JV



By [Neal Bridges \(Nbridges\)](#) on Monday, May 28, 2001 - 01:33 pm: [Edit](#)

An array would be the simplest route.

```
needs toolkit
256 array lookup
```

```
17 char A lookup !
42 char B lookup !
```

and so on. To retrieve a value from within a definition:

```
: go
  [char] A lookup @ . ;
```

Neal



By [Bev](#) on Tuesday, May 29, 2001 - 12:20 am: [Edit](#)

Thank you. I actually thought of something "more fancy" 😊 but ARRAY will be perfect for the job.

I'd rather implement CARRAY for that thing, but the difference is insignificant.

In the same project (morse code trainer) I am having trouble to understand strings, but that's in a new thread...



By [Bev](#) on Tuesday, May 29, 2001 - 12:23 am: [Edit](#)

Thanks for hint. ARRAY was actually one solution I thought of. When reimplemented as CARRAY it fits perfectly!

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Creating an API

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Creating an API



By [Mike Will](#) on Sunday, May 27, 2001 - 02:39 pm: [Edit](#)

Has anyone done any work on or thought about exposing an API to their Quartus app? I have a database app that I'd like to do this with. I like the way products like HanDBase and ThinkDB allow 3rd party apps to use their databases and engines. Ideally, this would enable developers to create plug-in modules (presumably in C/ASM, though Quartus would be cool) that would be enumerated and incorporated by my app at startup.

TIA

Mike



By [Neal Bridges \(Nbridges\)](#) on Sunday, May 27, 2001 - 03:40 pm: [Edit](#)

The launch-code Quartus Forth beta fits that bill, Mike. Do you have it already?

Neal



By [Mike Will](#) on Sunday, May 27, 2001 - 04:48 pm: [Edit](#)

Uh, I have 1.26R

I've been so successful with it, I haven't even asked for a more recent release since last summer!

I'll look back through the forum for launch-code discussions, thanks Neal.

Mike



By [Neal Bridges \(Nbridges\)](#) on Sunday, May 27, 2001 - 04:50 pm: [Edit](#)

I'll send you the beta.

Neal

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Random Numbers

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Random Numbers](#)



By [Bob Ryan](#) on Thursday, May 24, 2001 - 09:17 pm: [Edit](#)

To get a random number between 0 and 7, I use:

rand 7 and

The question is: Does this suffer from the same bias toward zero as

rand 8 mod ?



By [Neal Bridges \(Nbridges\)](#) on Thursday, May 24, 2001 - 11:44 pm:

[Edit](#)

You're in good shape with that range, and in fact with any $2^{(n-1)}$ mask.

Neal



By [Chapman Flack](#) on Friday, May 25, 2001 - 07:13 pm: [Edit](#)

... and of course rand 8 mod is completely equivalent to rand 7 and.

The situations that give you bias are simple enough. Suppose you say rand 10 mod. rand gives you a number from 0 to 32767. 0 to 9 cover your range ... 10 to 19 cover it again ... and 20 to 29 ... and so on, even 32750 to 32759 .. but then 32760 to 32767 only cover the 0 to 7 part of the range. You wind up with each final result 0 through 7 having 3277 chances of selection, but 8 and 9 having only 3276 chances each. In other words you have a bias when the range from rand doesn't completely wrap your desired range a whole number of times. You're safe whenever $(\text{rand_max} - \text{rand_min} + 1)$ is an exact multiple of $(\text{desired_max} - \text{desired_min} + 1)$.

-Chap



By [Martin Dicks](#) on Saturday, May 26, 2001 - 05:04 pm: [Edit](#)

This thread caught my attention because I am writing a program that needs to generate some random numbers. I was going to ask why the number was biased but that has already been answered, thanks Chapman, I was using...

rand 100 mod

to generate a number between 0 and 99 but that is apparently biased towards 0-67 because of the last incomplete, compared to my divisor, range of 32700-32767.

Is it okay to remove the bias by just ignoring a rand result in that final range and getting a new number? For example;

```
begin rand dup 32700 < if true else drop false then until 100 mod
```

Thanks,
Martin



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 26, 2001 - 05:07 pm:

[Edit](#)

That is potentially an extremely slow method, Martin. You'd be better served by the random number code that's available in the Wiki; it provides unbiased numbers.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, May 26, 2001 - 08:16 pm: [Edit](#)

Is Martin's method really that much slower?

It seems that the code in the wiki calls RAND a number of times equal to the number of bits in the result. And it has several bit shifting and masking operations for each iteration.

Martin's method has a probability of 32700/32767 of calling RAND exactly once, and may call it a few more times, but has a very low probability of calling it 16 times. Then again, I guess there is no guarantee that a result will eventually be returned.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 26, 2001 - 08:19 pm:

[Edit](#)

The code in the wiki can be optimized to use successive bits from a single RAND call, if you wish to do so; that'll speed it up still further.

Neal



By [Chapman Flack](#) on Thursday, May 31, 2001 - 02:50 pm: [Edit](#)

Some years back I somewhere stumbled on a factoid that comes in handy for judging probabilistic methods like Martin's. The factoid was just this: computer systems make (or made, back when the factoid was current)

computational errors with physical, hardware causes (failing components, over temperature, static discharge, electromagnetic interference, etc.) with a probability somewhere on the order 10^{-14} .

That allows one to stick one's thumb in the air and say, hmm, the chance of Martin's method calling RAND more than five times is no greater than the chance the Palm glitches out for no reason related to the program at all.

No, unfortunately I can't remember the reference for the 10^{-14} figure, but please let me know if you've seen a similar figure in the literature and can tell me where to cite it.

-Chap



By [Neal Bridges \(Nbridges\)](#) on Friday, June 1, 2001 - 02:37 pm: [Edit](#)

Martin's method for getting unbiased random values under 100 would work well enough, I expect. There's a 0.2% chance of receiving a value $32768 > n > 32700$ from RAND -- and thus a chance, though not a high one, of being stuck in the loop for awhile discarding high values.

I am biased toward my own unbiasing code for two reasons -- it's deterministic, and it's general-purpose. No retooling required to return a different range of values.

Neal

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Emit? misses menu shortcut drawing

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Emit? misses menu shortcut drawing



By [Steve Bohrer \(Skb\)](#) on Thursday, May 24, 2001 - 03:43 pm: [Edit](#)

When I draw at the bottom of the screen in response to a menu command, I find the drawing gets trashed by the background save/restore of the menu shortcut handler. Emit? does not give any warning of this condition: it returns -1 while the OS has "Command:" and then the name of the menu selection drawn at the bottom of the screen.

Is there any way to detect (and avoid drawing during) system menu shortcut processing?



By [Kris Johnson \(Kdj\)](#) on Friday, May 25, 2001 - 12:01 am: [Edit](#)

My JacksOrBetter game has a similar problem. The button at the lower left part of the screen changes its text from "Deal" to "Draw", and if a menu shortcut was used to deal or draw, then the text of the button gets munged.

In other words, the order of events seems to be:

- user enters menu shortcut
- Palm OS saves lower-left bits and draws menu command text
- JacksOrBetter changes button text as part of its menu command handler
- Palm OS removes menu command text and restores underlying area, leaving the button looking bad.

I don't think EMIT? would help me. I haven't bothered fixing it, as I assume most users use the buttons rather than the menu commands. I've even considered removing the menu commands, as having buttons and menu equivalents is considered to be bad form on Palm OS.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, May 25, 2001 - 01:14 am: [Edit](#)

There's a system call that tells you if the command bar is being displayed; enhancing EMIT? with that would provide a solution. I'll hunt it down, unless someone beats me to it.

Neal



By [Steve Bohrer \(Skb\)](#) on Friday, May 25, 2001 - 12:03 pm: [Edit](#)

MenuEraseStatus clears the OS's menu drawing at the bottom of the screen. So, rather than using a modified emit? to wait for the OS to finish, pass a null pointer to MenuEraseStatus to have it get its stuff out of the way before you draw. Once again, thanks for the pointer to "check the OS docs"!

Here's what the Ref Guide says:

Quote:

You need to call MenuEraseStatus explicitly only if the command toolbar covers something that is going to be changed by the menu command the user has selected. For example, if the user selects a command that displays a new form, call MenuEraseStatus before executing the command. Also, if the command performs some drawing in the lower portion of the window, call MenuEraseStatus before performing the drawing function.

So, I added

```
0. MenuEraseStatus
```

to my menu handling words in forms where I draw at the bottom of the screen.



By [Kris Johnson \(Kdj\)](#) on Friday, May 25, 2001 - 04:34 pm: [Edit](#)

Thanks. I never bothered looking for such a thing; my assumption was that the OS was taking control and that there was nothing I could do about it.

-- Kris

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ARM Processor

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): ARM Processor](#)



By [Mike Will](#) on Tuesday, May 22, 2001 - 11:01 am: [Edit](#)

Forgive me, Neal, if this has already been covered. I'm just wondering if you plan to continue Quartus into the ARM processor once the DragonBall is finished. I realize that's a year away, but I'd like to avoid a surprise.

Have you noticed that surprises get less joyful and more fearsome as one ages?

Merci

Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 22, 2001 - 11:25 am: [Edit](#)

Indeed, I have an ARM version of Quartus Forth already in the initial stages; I'm the proud owner of every relevant bit of ARM documentation, and have an ARM assembler/disassembler presently under construction in Forth.

Neal



By [Mike Will](#) on Tuesday, May 22, 2001 - 02:45 pm: [Edit](#)

Please mark me down for the first commercial copy.

Thanks Neal

Mike



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 22, 2001 - 02:54 pm: [Edit](#)

Thanks for the vote of confidence, Mike! 😊

Neal



By [Barak Shilo \(Barak\)](#) on Tuesday, May 22, 2001 - 05:50 pm: [Edit](#)

I heard that Motorola was coming out with a DragonBall-compatible ARM processor, so I would think Quartus would still work as-is. However, I don't know anything more than I've read, and I'm sure if Quartus was recoded specifically for the ARM platform it would be more efficient.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 22, 2001 - 08:04 pm: [Edit](#)

My understanding of that Motorola ARM processor is that it is compatible with DragonBall peripherals, so all the same bits & pieces (RAM, etc.) can plug into it, but otherwise it's an ARM chip.

The 68K instruction set can certainly be emulated, and Palm has indicated that they'll go that way for legacy apps; however, a native ARM version of the Quartus Forth compiler would be a good thing.

Neal



By [Alex Alava](#) on Wednesday, May 23, 2001 - 09:38 am: [Edit](#)

This is slightly off topic but could you suggest any good reference and learning books on the arm processor?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 23, 2001 - 01:23 pm:

[Edit](#)

The bible is "The ARM Architecture Reference Manual", ISBN 0201737191.

Neal



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 23, 2001 - 04:04 pm:

[Edit](#)

Here's a link for Amazon for the ARM reference book:

<http://www.amazon.com/exec/obidos/ASIN/0201737191/nealbridgesquart>

and one for Chapters:

<http://www.Chapters.ca/affiliate/itempage.asp?isbn=0201737191&affid=101454>

Neal



By [Neal Bridges \(Nbridges\)](#) on Wednesday, May 23, 2001 - 04:10 pm:

[Edit](#)

I've added the ARM reference manual to the Books section:

<http://www.quartus.net/books>

Neal



By [Alex Alava](#) on Thursday, May 24, 2001 - 10:30 am: [Edit](#)

Thanks I ordered it.

As a contribution, anyone who needs a book can use the book search engine at

<http://www.bestbookbuys.com>

It can do a price comparison (Amazon, Barnes & Noble, Fatbrain, etc...) and gives their price availability and shipping charges for a total cost picture. It can even show used books if available.



By [Marcel Hendrix](#) on Friday, May 25, 2001 - 05:37 pm: [Edit](#)

Mike wrote:

- > I'm just wondering if you plan to continue Quartus into
- > the ARM processor once the DragonBall is finished.
- > I realize that's a year away, but I'd like to avoid a
- > surprise.

That's interesting. I might want to have a PDA with an ARM. Where'd you get that information?

-marcel



By [Neal Bridges \(Nbridges\)](#) on Friday, May 25, 2001 - 06:57 pm: [Edit](#)

Palm announced their future ARM direction last December at the PalmSource conference.

Neal

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Hack Programming

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Hack Programming



By [Bill Chan](#) on Tuesday, May 22, 2001 - 10:09 am: [Edit](#)

Hello, Can somebody tell me how to create a Hack extension by using Code Warrior or GCC compiler. Please kindly provide you solution to me if you know how to do it. Thank a lot.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 22, 2001 - 10:10 am: [Edit](#)

Bill, you're asking in the wrong place. This forum is for Quartus Forth. If you need CodeWarrior and GCC help, you'll get better results elsewhere.

Neal



By [Geo. Figole](#) on Monday, June 18, 2001 - 04:57 pm: [Edit](#)

<http://www.daggerware.com/hackapi.htm> has info on coding hacks

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Add font to application

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Add font to application



By [eli](#) on Saturday, May 19, 2001 - 02:26 pm: [Edit](#)

Does someone know how to add new font to an application. I made a font with Font Editor, and I want to add it to my application.



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 19, 2001 - 02:33 pm:

[Edit](#)

The call you want (Palm OS 3.0 and later only):

```
FntDefineFont ( &fontP. fontID[>byte] -- err )
```

&fontP. is a 32-bit pointer to your font, and the fontID is a value 128 and greater. After using FntDefineFont, use FntSetFont to select it.

Neal



By [eli](#) on Saturday, May 19, 2001 - 03:37 pm: [Edit](#)

Thanks Neal

how I get the Pointer to the font? My font is a pdb file. and the resources of my application is in separate file.

Is there a way to put them together?

Eli



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 19, 2001 - 05:20 pm:

[Edit](#)

If you copy out the data in the PDB record, and create a resource, or even have those bytes directly compiled as data in your app, you'll have access to them without having to access a separate PDB.

I once did this laboriously by hand, but I don't have an automated solution to suggest; perhaps one of the developers here can suggest a route.

Neal



By [eli](#) on Saturday, May 19, 2001 - 08:24 pm: [Edit](#)

How can I directly compile this record as data in my app, what has to be the command in Forth?

Eli



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 19, 2001 - 08:39 pm:

[Edit](#)

create myfont
hex
1234 , 5678 ,

and so on. That's manual, and clumsy, but if your font data isn't too long it'd work.

Neal

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Naive CtlSetLabel question.

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Naive CtlSetLabel question.



By [E.](#) on Thursday, May 17, 2001 - 08:22 pm: [Edit](#)

I pass CtlSetLabel (&newlabel. &pControl.), according to the sysstraps document.

I have a whole buncha of buttons which I set, and instead of doing things the Right Way, I copy a segment of data out of memory into TempString (17 chars allot) and then CtlSetLabel it, inside of a loop.

I find that when I click on the buttons thus labeled, when they are selected, their text changes to that of the last button.

Is this just more "E. Doesn't Know How To Code" wackiness, or is this an established concept of which I was previously unaware?

Yes, I've already figured out how to work around it (I'm not sure if I'm finally doing things the Right Way, so I'm going to refer to it as a workaround), so this question is just informational.



By [Kris Johnson \(Kdj\)](#) on Thursday, May 17, 2001 - 09:31 pm: [Edit](#)

CtlSetLabel does not make a copy of the string. You need to have multiple memory buffers.

-- Kris



By [E.](#) on Thursday, May 17, 2001 - 09:38 pm: [Edit](#)

Thank you. Coincidentally (and I'm sure that's what it was), that's the solution I adopted. Well, sort of. I have a great huge block of memory, and I store the offsets into it and cmove as necessary.

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Quartus Forth to the Arctic

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Quartus Forth to the Arctic



By [Jim Purdy](#) on Thursday, May 17, 2001 - 10:26 am: [Edit](#)

Thanks,

It was a great suprise to me that the German team chose ProStats. I had NO idea they were even looking at it until they asked for some preliminary support and explained their plan.

Thanks again to the group for all the help.

Best Regard,

Jim

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How can I install library.mpa from a Linux box?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): How can I install library.mpa from a Linux box?



By [Jindra Vavruska](#) on Wednesday, May 16, 2001 - 11:55 pm: [Edit](#)

Works nice! Thks!

It took some time to move all the new memos to a new category from "Unfiled". install-memo surely needs a command line option like

--into-category=xxxx 😊



By [Chapman Flack](#) on Thursday, May 17, 2001 - 01:02 am: [Edit](#)

Oops, sorry. My RefileMemos code is now posted on the wiki. Too late I know, but maybe you'll have to load in another bunch of memos some time....

-Chap



By [Dave Bennett \(Dbennett\)](#) on Friday, May 18, 2001 - 07:11 pm: [Edit](#)

Hey, my install-memo hasn't worked for the last three versions! What version are you running?



By [Kris Johnson \(Kdj\)](#) on Saturday, May 19, 2001 - 12:39 pm: [Edit](#)

I've stuck with version 0.9.3 of the pilot-link package, due to problems with subsequent versions.

If anyone knows of a newer, working version, please let us know.

-- Kris



By [Chapman Flack](#) on Saturday, May 19, 2001 - 11:24 pm: [Edit](#)

0.9.3 is what I'm using, and I just downloaded it recently (OK, March); I got the impression it was the "official" version at that time.

-Chap



By [Kris Johnson \(Kdj\)](#) on Sunday, May 20, 2001 - 10:56 am: [Edit](#)

There's a 0.9.5-beta version available in the Debian unstable distribution. I had problems with 0.9.4, so I downgraded to 0.9.3 and haven't upgraded it since.

I haven't checked out the official pilot-link site.

-- Kris



By [Jih-tung Pai](#) on Friday, June 22, 2001 - 04:42 pm: [Edit](#)

My pilot-link package is 0.9.4. When I type "install-memo --help", it shows:

```
usage: install-memo [-qrt] [-c category] [-p /dev/cua??] file [file] ...
```

```
-q = do not prompt for HotSync button press
```

```
-r = replace all memos in specified category
```

```
-t = use filename as memo title
```

So, it should be able to install the memos to certain category. If I remember correctly, it worked for me last time I tried.

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FourTap

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): FourTap](#)



By [Kris Johnson \(Kdj\)](#) on Thursday, May 17, 2001 - 09:41 am: [Edit](#)

Buz found a problem: if game sounds are turned off in the Preferences app, then the buttons don't flash. (So much for "high-quality"...)

If anyone is interested in fixing it, replace the BTN-SOUND definition in the fourtap-sounds memo with this:

```
: btn-sound ( n -- )
  volume 0= if
    duration ms
    drop exit
  then
  >r volume duration r> btn-freq
  sound ;
```

I had assumed that SOUND would pause silently if volume is zero, but apparently it just does nothing and returns immediately.

Thanks for the report, Buz.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Sunday, May 20, 2001 - 01:54 pm: [Edit](#)

Version 1.0 is now available from PalmGear:

<http://www.palmgear.com/software/showsoftware.cfm?prodID=14875>

-- Kris



By [Steve Bohrer \(Skb\)](#) on Wednesday, May 23, 2001 - 08:57 am: [Edit](#)

Sound delays (a tangent to Kris' note): very slight testing indicates that different versions of the OS deal with sounds differently. I have an auto-repeat button that incs a counter, and it seems that under OS3.1 the screen click slows down the counting, but under OS3.5 the sound is more async, and the counter increments more rapidly.

I suppose the solution is to use a timed delay in either case.



By [Kris Johnson \(Kdj\)](#) on Wednesday, May 23, 2001 - 11:07 pm: [Edit](#)

Hmmm. Does that mean that I need to buy an OS 3.5 handheld to test my sounds? Sounds like a good reason to buy a new Visor Platinum!

Does Palm have any documentation on "async" sound? I have a couple of apps where this might cause a problem.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Wednesday, May 23, 2001 - 11:27 pm: [Edit](#)

To answer my own question: look here:

<http://www.palmos.com/dev/tech/docs/palmos/SoundManager.html#924979>

Async sound is apparently supported in OS 3.0 and higher. I can't find any info on differences in auto-repeat or screen clicks between 3.1 and 3.5.

-- Kris



By [Steve Bohrer \(Skb\)](#) on Thursday, May 24, 2001 - 09:51 am: [Edit](#)

My speed testing was on an m100 with OS3.5 vs a IIIe with OS 3.1 . Since Benchmark shows the m100 slightly slower than the IIIe, I assume that the sounds made the difference. But, perhaps they just changed the buton-repeat rate. (Is this rate user or program settable?)

But, now that some devices Bench at 204% out of the box, I suppose that we should use explicit delays for everything.



By [Kris Johnson \(Kdj\)](#) on Saturday, May 26, 2001 - 09:45 pm: [Edit](#)

Version 1.1 is now available for download:

<http://www.palmgear.com/software/showsoftware.cfm?prodID=14875>

Sound now works properly on Palm OS 2.0.

-- Kris

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Tables Re-re-visited

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Tables Re-re-visited



By [Dave Bennett \(Dbennett\)](#) on Friday, May 18, 2001 - 07:16 pm: [Edit](#)

I'm not sure, but I think Palm is slipstreaming the Palm OS on hardware. I've had people tell me that using the same hardware and OS version as I, that the same app fails. I cannot reproduce the problem, yet they cannot get the app to function. ☹

Perhaps an "insignificant" change somewhere has caused this problem for you.



By [Neal Bridges \(Nbridges\)](#) on Friday, May 18, 2001 - 07:39 pm: [Edit](#)

I suspect that that sort of problem is caused by something far simpler than variant versions of the hardware/OS -- more likely, it's reliance on uninitialized memory, assuming that a given area of memory contains, for instance, zero bytes; in testing it may very often do so in development, but in production, maybe not.

This situation would come up most frequently when transferring string data that needs to be zero-byte delimited.

Neal

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Anyone ever use Wordsmith??

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Anyone ever use Wordsmith??



By [Chris Bucsko](#) on Thursday, May 17, 2001 - 04:24 pm: [Edit](#)

I wanted to get back and 'tie up' this thread before I forget. I tried Wordsmith, and wound up buying it for a couple of reasons: it supports standard PalmDoc format (QF compatible using the docinc memo from the library) and it does a pretty good job with MS Word files. I need the latter for other non-programming tasks, and, it might come in handy if I ever need to enter a lot of code. The memo portion of Wordsmith isn't all that useful to me, except for doing a lot of cutting and pasting. But it lets you save your memos in Doc format, which is handy for archiving. All in all, a useful compromise between PalmDoc viewing and editing, memo pad editing and MS Word viewing and editing.

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Debugging

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Debugging



By [Kelly Janz](#) on Wednesday, August 1, 2001 - 01:11 pm: [Edit](#)

To continue the thread:

On the Wiki topic "Debugging" Neal says:

"[NealBridges] Of those examples, I can think of ways to test event loops and animations piecewise and interactively."

Could you expand on that please? I'm still struggling with my Event Loop and would like some techniques to see what is going on inside on an interactive basis.

Thanks - Kelly



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 1, 2001 - 02:10 pm: [Edit](#)

Kelly, it might be better if we work with a concrete example as opposed to discussing debugging in the abstract. Can you outline what you're doing, and what you're having trouble with?

Neal



By [Kelly Janz](#) on Wednesday, August 1, 2001 - 06:52 pm: [Edit](#)

Well... I don't really have code that I would be willing to see the light of day 8-). The code situation is that I call ekey in my go word and then send the results to a doEvent word that has a large condthens structure to sort out the events and dispatch them to words like doPenUp, doPenDown, doControl, doMenu etc. To test things, I've tried to simplify the code so that each word puts it's name on the screen as it executes. I seem to be getting phantom events, because when I execute the go word, I get penDown's without touching the screen. It then goes into a loop where things blur by so fast I can't see all the words that go by, and I can't abort the loop. I would like to single step through that sequence to see what is going on. Is there a way to do that?

Thanks



By [Bob Ryan](#) on Thursday, August 2, 2001 - 04:13 pm: [Edit](#)

Hmm, Its hard to tell what's going on without seeing the code, but the error

is probably in the event dispatcher somewhere. I suspect the program is seeing nilEvents and reacting as if they were penDownEvents.

Not being able to abort would mean that EKEY isn't being executed. The program gets lost in the event dispatcher and never returns to the loop containing EKEY.

'course all this is guess work 😊

-- Bob



By [Bob Ryan](#) on Thursday, August 2, 2001 - 04:24 pm: [Edit](#)

To test my theory you can replace EKEY with

-1 (ekey)

in your event loop. This will prevent nilEvents from occurring.



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 2, 2001 - 04:28 pm:

[Edit](#)

Watch out -- that needs to be

-1. (ekey)

(the dot matters).

Neal



By [Kelly Janz](#) on Thursday, August 2, 2001 - 04:44 pm: [Edit](#)

Thanks for the starters. I guess what I'd like to see is more of a general strategy for getting inside a loop structure - with some kind of pause word so that you could stop & see what was going on, then going through the loop once more. Right now, things happen so fast that I can't tell what's happening.

Could my doMenu word be what is preventing the Abort too? I'm not actually putting up my own menubar, so it should never change the Quartus bar... and the code only looks for an "About..." item - which should never occur. So I thought that leaving that menu code in would not interfere with any other menu items that ekey would usually handle. Ekey is handling certain events before I even see them - right? I guess I'm confused about what exactly ekey is doing and how my code builds on top of it (or does it substitute for it?)

Confused about the big picture,

Kelly



By [Bob Ryan](#) on Thursday, August 2, 2001 - 05:37 pm: [Edit](#)

Good point, Neal.

To pause a Forth program use the MS word. For example

```
3000 ms
```

would pause for 3 seconds. Make sure the number is a multiple of ten.

Try commenting out the doMenu call and see what happens, but I think the problem is somewhere in the dispatcher itself.

-- Bob



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 2, 2001 - 06:41 pm:

[Edit](#)

Perhaps an example would help you, Kelly. Can you outline what it is you're trying to achieve? We can make you a short example.

Neal



By [Kelly Janz](#) on Friday, August 3, 2001 - 11:11 am: [Edit](#)

I'm not being coy - really! But I thought that I lifted the doEvent word from someone else's posted code, and obviously I didn't steal enough or too much. I don't understand the condThens or the case construct completely and I'm working through the wiki pages on those.

Basically, my app is a game and I need to handle 2 menu commands, 2 buttons on the form and penDown, penMove and penUp events within a graphic gameboard area. Irwin's Quintominos code helped with the pen events - they almost always work - for a while at least (I think I'm leaving stuff on the stack which catches me later). If you want to sketch some code around that I'll compare the two to see how it's REALLY done.

Like I said, I need any help I can get in slowing things down enough to see where it is going off the rails. I will try adding
: wait (--) 3000 ms ;
to let me check the names of the functions as they get printed. I'm also going through Ron's database tutorial to see what I pick up, although I'm not really reading or writing files - I'm so new that almost anything gets me further down the road!

Looking forward to some time to work on this on the long weekend. Thanks for the help - Kelly



By [Neal Bridges \(Nbridges\)](#) on Friday, August 3, 2001 - 05:15 pm: [Edit](#)

My best advice -- go 'one step at a time'. Write your handling code to handle one sort of event, and make sure that's working before extending it to handle a second sort of event.

I'll see what I can draw up by way of an example.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, August 25, 2001 - 09:45 am: [Edit](#)

Here's a trivial example of pen-handling I've done:

```
\ dudl 2001/8/23 KDJ

needs Events
needs graphics
needs ondo

2variable last

: last@ ( -- y x )
  last 2@ ;

: last! ( y x -- )
  last 2! ;

: penDown ( -- )
  coords@ last! ;

: penMove ( -- )
  coords@ 2dup last@ line last! ;

: dispatch-event ( ekey -- ekey )
  on: penDownEvent do: penDown
  on: penMoveEvent do: penMove ;

: handle-events ( -- )
  begin
    ekey dispatch-event drop
  again ;

: go ( -- )
  BlankFormID ShowForm
  handle-events ;
```

It uses the OnDoModule from the wiki, but you can replace the dispatch-event word with this for a more "traditional" approach:

```
needs condthens
: dispatch-event ( ekey -- ekey )
  cond dup penDownEvent = if
    penDown
  else dup penMoveEvent = if
    penMove
  thens ;
```

-- Kris



By [Kelly Janz](#) on Saturday, August 25, 2001 - 12:41 pm: [Edit](#)

Thanks Kris

I'll work through those and see if enlightenment strikes or a new approach suggests itself.

Kelly



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 25, 2001 - 12:46 pm:

[Edit](#)

Thanks, Kris, for that code.

Neal



By [Kelly Janz](#) on Monday, August 27, 2001 - 04:00 pm: [Edit](#)

The following code was added to the wiki:

```
: faster-event-loop ( -- )
  begin
    10. (ekey) drop \ wait max of 100 ms
    do-my-thing
  again ;
```

Because the drop is in front of do-my-thing, am I right in thinking that the do-my-thing word will not see the event that (ekey) detects?

Thanks
Kelly

t



By [Neal Bridges \(Nbridges\)](#) on Monday, August 27, 2001 - 04:35 pm:

[Edit](#)

That's right.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, August 27, 2001 - 06:37 pm: [Edit](#)

That code in the wiki is really for a "do-nothing" event loop that just ignores the events but needs to perform periodic activities. The assumption is that do-my-thing doesn't care what the event was. For a real event loop, it would make sense to put the drop after do-my-thing, or to have do-my-thing consume the event.

Sorry if that was confusing.

-- Kris



By [Kelly Janz](#) on Tuesday, August 28, 2001 - 10:50 am: [Edit](#)

No Kris - I wasn't confused and that was the heartening thing. I read some code and actually understood what would happen! Maybe I CAN learn some Forth! 8-)

Kelly

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A minor MathLib caveat, for anyone using it

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): A minor MathLib caveat, for anyone using it



By [Dave Bennett \(Dbennett\)](#) on Friday, May 18, 2001 - 06:53 pm: [Edit](#)

Any word on this issue, Chapman?

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Double-asm help please

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Double-asm help please



By [BobRyan](#) on Thursday, July 12, 2001 - 08:12 pm: [Edit](#)

Removing the ROTs from Extract-signs makes it a bit more efficient:

```
: EXTRACT-SIGNS
( N. N. -- +N. +N. NEGFLG )
  2DUP D0< >R DABS 2SWAP
  2DUP D0< >R DABS 2SWAP
  2R> XOR ;
```

-- Bob



By [Neal Bridges \(Nbridges\)](#) on Friday, July 13, 2001 - 01:55 pm: [Edit](#)

Thanks, Bob!

Neal

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Implementation of "recurse" keyword

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Implementation of "recurse" keyword



By [Kris Johnson \(Kdj\)](#) on Monday, May 28, 2001 - 01:37 am: [Edit](#)

I didn't notice this thread before. I wrote my own TAIL-RECURSE word, described in the wiki:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/TailRecurse>

-- Kris

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New Quartus App

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): New Quartus App](#)



By [Geo. Figole](#) on Monday, June 18, 2001 - 06:35 pm: [Edit](#)

Hmm, this source code is not yet included in the source downloads.



By [Richard Chamberlain \(Rac\)](#) on Tuesday, June 19, 2001 - 03:14 am:
[Edit](#)

errrrmm. Nobody ask for it :-)

I'm just about (in the next few weeks probably) to release a newer version of Static. If I ever manage to get on the wiki it would seem a good place to post the source.

Richard

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Rand use

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Rand use](#)



By [BobRyan](#) on Monday, July 16, 2001 - 02:36 am: [Edit](#)

Can anyone tell me the formula used by the SysRandom function? I've searched the web and found nothing.

TIA
Bob



By [Bob Ryan](#) on Monday, July 16, 2001 - 02:42 am: [Edit](#)

BTW Kris you might want to check out this article:

<http://www.paradisepoker.com/rng.html>

It's a very well done discussion of both random numbers and shuffling.

Cheers
Bob



By [Kris Johnson \(Kdj\)](#) on Monday, July 16, 2001 - 09:29 am: [Edit](#)

Thanks for the link, Bob.

BTW, anyone reading this thread should probably take a look at <http://sleepless-night.com/cgi-bin/twiki/view/Main/RandomNumber> for additional information.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, July 16, 2001 - 03:34 pm: [Edit](#)

Bob, hopefully the links above are helpful to you. If you need to know exactly what the Palm is using, let me know -- I can dig it up. Their implementation isn't very robust.

Neal



By [Bob Ryan](#) on Monday, July 16, 2001 - 05:28 pm: [Edit](#)

Just curious 😊 If you happen run across it I'd be interested, but it's not that important.

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Shareware applications

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Shareware applications



By [Kris Johnson \(Kdj\)](#) on Monday, May 28, 2001 - 01:27 am: [Edit](#)

For those of you that use registration codes: what algorithms do you use to generate the codes? Do you use standard algorithms (hash functions, public-key crypto, etc.), or do you just roll your own and hope that no one cracks it?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, May 28, 2001 - 02:11 pm: [Edit](#)

Registration codes and other protection mechanisms are an art unto themselves; to discuss them openly is to assist the crackers, so you won't find too much in the way of documented methods.

The trouble with using somebody else's method is that once that method is cracked, all apps that use the same method are also automatically cracked.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, May 28, 2001 - 02:30 pm: [Edit](#)

There are cryptographic algorithms that are believed to be completely secure, even if the details of the implementation are public (PGP, RSA, ElGamal, etc.) Cryptographic experts say that if an algorithm is not open, and not reviewed thoroughly by experts in the field, it should not be trusted.

However, those algorithms tend to be somewhat expensive in terms of CPU usage, and also require considerable expertise to implement properly. So I can understand why people would go with the "security through obscurity" approach.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, May 28, 2001 - 03:06 pm: [Edit](#)

True, there are secure algorithms, but that's only a first step. How those algorithms are linked into your code, and where, and what dependencies pertain, are all key factors (no pun intended).

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, May 29, 2001 - 10:21 am: [Edit](#)

If you have separate evaluation and registered versions on PalmGear, how are updates handled? Does PalmGear automatically send notifications to registered users when a new version comes out, or is that up to the author?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, May 29, 2001 - 10:23 am: [Edit](#)

Not to speak for them, but in my experience PalmGear will do that for you if you request it.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, May 30, 2001 - 08:42 am: [Edit](#)

Kris,

I use separate evaluation and registered versions. When I update a program, I compile the new evaluation and registered versions, post the evaluation version on PalmGear for public downloading, and send the new registered version to them for the "Real Time Fulfillment" distribution to those who purchase it. I choose to go ahead and distribute the updated registered version to past registrants myself, but PalmGear will do that for you if you want. In that case, I believe they prefer the author to send an updated distribution list as they assume the author is getting notes from registered users when their e-mail address changes. Otherwise they can go with the list of e-mail addresses from the original registrations.

By the way, I find something close to 5% of the e-mail addresses are no longer good when I send an update out, and that takes into account those users who have updated me on new e-mail addresses.

Barry Ekstrand

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Beaming: Now Working! J

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Beaming: Now Working! J



By [Kris Johnson \(Kdj\)](#) on Monday, June 4, 2001 - 10:24 pm: [Edit](#)

This is a little off-topic, but can someone give me some tips for getting beaming to work?

I've got a Visor Deluxe and a Visor Platinum, and I'm trying to beam applications and databases from the Deluxe to the Platinum. I've tried using Launcher III's and Z'Catalog's Beam command, as well as some other applications' beam commands, but I can't get a successful beam.

The sender says "Searching" and then "Sending" and the receiver says "Receiving". But within a few seconds after it starts the sender displays a "Beam interrupted" message, followed a while later by a "Beam disconnected" message.

I've tried this with several applications and several databases, and they all fail.

Batteries in both units are fresh, and Beam Receive is turned on in both units. I've tried various distances from about three inches to about twelve inches, and I've tried different rooms with different lighting conditions.

Any tips?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, June 4, 2001 - 10:31 pm: [Edit](#)

I've never had trouble establishing a beam, except once with a Visor with a faulty IR port. Do you have any other devices to test against -- perhaps a demo unit in a shop, or even a laptop with IR, for an IR HotSync?

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 5, 2001 - 01:04 am: [Edit](#)

I've added a third Visor to the mix. Now I can beam from A to B, and from B to C. But I can't beam from A to C.

When you say you've never had trouble establishing a beam, do you really mean no trouble at all? Every beam attempt I've ever done has taken a few tries at various angles and distances.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Tuesday, June 5, 2001 - 04:31 am: [Edit](#)

I beam between four different Palms regularly and have never had any issue either. I also use all four to beam to a canon printer and it has always worked as well.

I've only had two issues with beaming and both were application specific and caused application, not beaming, errors.



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 5, 2001 - 09:54 am: [Edit](#)

FWIW, my "A" PDA seems to be the problem. A and B can communicate, but I get a lot of errors and I have to hold A at a weird angle to get it to work. B and C beam to one another pretty reliably. A and C have never completed a beam. I've also used A with other people's PDAs, without much success.

Maybe I've just always had a bad IR port. I've always assumed that unreliability is just an unavoidable feature of PDA communications.

Can someone point me to some documentation about how beaming works? What gets me is that A and C seem to have no problem at all establishing a "connection", but it always gets broken within a few seconds. It might just be flaky hardware, but I'd like to know a little bit about the protocol.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 5, 2001 - 11:12 am: [Edit](#)

OK, I think I've found the cause of the problem.

I removed the batteries from my "A" PDA, let it sit for an hour, and then reinstalled the batteries and got a fresh start. After this, A could beam to and from the other PDAs without any problems.

Then I restored A's original data from the Handspring Backup Module. At this point, the flaky behavior of A returned.

So, it is my learned, professional opinion that "something weird" has happened which has corrupted the state of A, interfering with the IR driver.

"A" has been my PDA for a year and a half. I've installed and uninstalled a lot of stuff on it, so I really have no idea where the problem may have crept in. Also, I use a Stowaway keyboard, so maybe its low-memory overwriting

is messing things up.

Thanks for the input. If no one had told me that IR should work most of the time, I never would have spent any time figuring this out.

-- Kris

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Ms bug?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\): Ms bug?](#)



By [Kris Johnson \(Kdj\)](#) on Friday, May 18, 2001 - 12:18 pm: [Edit](#)

Can someone verify whether this is fixed in 1.2.7?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, May 18, 2001 - 06:53 pm: [Edit](#)

It's fixed in 1.2.7 -- but here's a universal fix anyway:

```
: MS
  10 / ?dup if 0 systaskdelay drop then ;
```

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, May 18, 2001 - 10:31 pm: [Edit](#)

Thanks. I've added this information to the wiki page.

-- Kris



By [Wolfgang Allinger \(Wall\)](#) on Saturday, May 19, 2001 - 05:41 pm:

[Edit](#)

I think

```
: MS 9 + 10 / ?dup if 0 systaskdelay drop then ;
```

would be better

bye from germany

Wolfgang



By [Neal Bridges \(Nbridges\)](#) on Saturday, May 19, 2001 - 05:44 pm:

[Edit](#)

That will round up to the next highest 100th of a second, if that's the behaviour you prefer.

Neal



By [Leland Williams \(Leland\)](#) on Tuesday, September 25, 2001 - 09:25 am: [Edit](#)

What does MS do ?



By [Kris Johnson \(Kdj\)](#) on Tuesday, September 25, 2001 - 10:54 am:
[Edit](#)

MS waits for at least the given number of milliseconds.

See <http://sleepless-night.com/dpans/dpans10.htm#10.6.2.1905>

-- Kris

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Problem sending registration code to Pan Yen Yen

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Problem sending registration code to Pan Yen Yen

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Strange behaviour of bitmap

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Strange behaviour of bitmap



By [Kris Johnson \(Kdj\)](#) on Thursday, July 19, 2001 - 09:44 am: [Edit](#)

I'm trying to use ".", CR, and other standard Forth output words in an offscreen buffer. Basically, I'm switching to an offscreen buffer, drawing some graphics and outputting text, and then blit the result to the screen.

When I do the blit, the graphics show up on the screen, but the text does not. I think this means that the text output routines don't use the current draw window. Is this true, and is there any way to "fix" that?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 19, 2001 - 11:16 am:

[Edit](#)

They do indeed use the current draw window. Is it possible that the current text position is not within the window you're drawing to?

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, July 19, 2001 - 01:28 pm: [Edit](#)

My program basically does a WinSetDrawWindow on the offscreen window, draws, then WinCopyRectangle to blit to the main screen followed by a WinSetDrawWindow back to the main screen.

If I remove the WinSetDrawWindow and WinCopyRectangle calls, and just call my draw routine, then the text appears where I expect. I do a "5 5 at-xy" just before writing the text.

I'll do some more investigating. I'll post my code if I can't figure it out.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Thursday, July 19, 2001 - 10:10 pm: [Edit](#)

OK, here's an example of the problem I'm seeing:

```
\ blittest
```

```
needs core-ext
```

needs facility

0 constant scrCopy

0 constant screenFormat

2variable ofs

variable winerr

create bounds

0 , 0 , 160 , 160 ,

create drawrect

20 , 18 , 120 , 120 ,

: ud>string (u. -- cadr u)
<# #s #> ;

: ud. (u. --) ud>string type ;

: (ud.) (u. --)
2>r currenty @ currentx @
2r> ud>string swap >abs
WinDrawChars ;

: .ticks TimGetTicks ud. ;

: (.ticks) TimGetTicks (ud.) ;

: draw (--)
page
0 drawrect >abs WinDrawRectangle
6 1 at-xy .ticks
6 7 at-xy .ticks
6 12 at-xy (.ticks)
82 140 82 20 WinEraseLine ;

: create-offscreen (-- ofs.)
winerr >abs screenFormat >byte
160 160 WinCreateOffscreenWindow
winerr @ throw ;

: begin-offscreen (-- ofs. win.)
ofs 2@ 2dup WinSetDrawWindow ;

: end-offscreen (ofs. win. --)
2>r 2>r
scrCopy >byte 0 0 bounds >abs

```

2r> 2r>
2dup WinSetDrawWindow 2drop
2swap WinCopyRectangle ;

: blittest ( -- )
begin-offscreen
draw
end-offscreen ;

: handle-event ( -- )
ekey drop ;

: go' ( -- )
begin
  draw handle-event
again ;

: go ( -- )
create-offscreen ofs 2!
begin
  blittest handle-event
again ;

```

The DRAW routine draws a black rectangle, writes two lines of text using TYPE, draws a third line of text using WinDrawChars, and then erases a line through one of the lines of text.

The GO' word just repeated draws everything directly to the screen. It works, but it flickers.

The GO word, which uses an offscreen bitmap, does not have the lines that are generated using TYPE. The other graphics, including the WinDrawChars drawing, show up.

Any ideas why GO isn't showing the TYPed text?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 19, 2001 - 10:12 pm:

[Edit](#)

I haven't tried your code yet, but try making it the active window, with WinSetActiveWindow.

Neal



By [Kris Johnson \(Kdj\)](#) on Thursday, July 19, 2001 - 10:50 pm: [Edit](#)

I've tried calling WinSetActiveWindow on both the offscreen window and on the screen window, and it doesn't help. And WinSetActiveWindow seems a little scary anyway, since it generates events and switches the input focus.

Do you suggest this because the text words use WinGetActiveWindow?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, July 19, 2001 - 10:53 pm:

[Edit](#)

That's not why I suggested it; I just wondered what effect it might have. The text output words don't call anything other than font width systraps, and WinDrawChars. Have you tried calling WinDrawChars yourself, directly, to confirm that it causes the same problem?

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, July 20, 2001 - 12:20 am: [Edit](#)

My example does draw one line using WinDrawChars, (the (.ud) and (.ticks) words), and that one line does show up in double-buffered mode.

I'm in the process of writing equivalents to TYPE, EMIT, CR, and so on using WinDrawChars. I'll let you know how that goes.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, July 20, 2001 - 10:42 pm: [Edit](#)

That might do it. I suspect it's the EMIT? checking embedded in TYPE that's refusing to output on the non-active form; I'm looking into it.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, July 21, 2001 - 01:57 am: [Edit](#)

OK, that makes sense. But I've managed to put together replacements for the built-in words that do work in an offscreen bitmap:

<http://sleepless-night.com/cgi-bin/twiki/view/Main/TextModule>

-- Kris



By [Matthew Burke \(Mmb\)](#) on Saturday, July 21, 2001 - 09:40 am: [Edit](#)

It's always good when people smarter than I am stumble across the same problems <g>. I've been struggling with . TYPE etc. not working on an offscreen window for a few days now.

In fact I've been struggling with a host of problems related to double-buffering and other items but haven't had a chance to post yet as mostly I've only had a few minutes here and there to work on this stuff. Hopefully tonight I'll have a big block of time...

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How to include resources from another DB?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): How to include resources from another DB?

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Compiling at Run Time?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Compiling at Run Time?



By [Kris Johnson \(Kdj\)](#) on Saturday, June 2, 2001 - 03:08 pm: [Edit](#)

I have a couple of blue-sky-dream projects where it would be useful to have a "scripting language" available at run-time. For macros, for user programming, etc. While I could create my own application-specific language parser, I'd like to just implement my own Forth interpreter.

How hard would it be to write a Forth interpreter in Quartus Forth that would be available at run-time? It wouldn't need to do native compiling or anything like that; it would just have execute word definitions and allow the user to define new words. It wouldn't have to be ANS compliant; I think a subset of the core wordset would be sufficient.

I've looked at a couple of "How to Implement Your Own Forth" articles, and I think I understand the basics of how a Forth engine works. But I don't have a good grasp on exactly how long it would take to do it, or the best approach to take.

Any comments or suggestions?

-- Kris



By [Eric Cole](#) on Friday, October 26, 2001 - 01:16 pm: [Edit](#)

Kris

How far have you gotten with this? It sounds very much like something I need for an upcoming project.

Thanks

Eric



By [Kris Johnson \(Kdj\)](#) on Friday, October 26, 2001 - 02:06 pm: [Edit](#)

Not very far at all, and I don't have plans to do much in the near future.

-- Kris



By [William Tanksley](#) on Friday, October 26, 2001 - 03:46 pm: [Edit](#)

Why don't you adapt FICL for your uses? That's what it's for...

-Billy



By [Kris Johnson \(Kdj\)](#) on Friday, October 26, 2001 - 05:50 pm: [Edit](#)

FICL is written in C, so it might be non-trivial to integrate it into a Quartus program. But it's probably the right thing to do.

-- Kris



By [Eric Cole \(Eric\)](#) on Friday, October 26, 2001 - 10:35 pm: [Edit](#)

Thanks all! I'll check out FICL.
Eric

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Has anyone used EncDigestMD5 and friends?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(PalmOS version\)](#): Has anyone used EncDigestMD5 and friends?

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 1, 2002 - 10:46 am:

[Edit](#)

John -- yes, it does really change them from a functional perspective -- but does it alter that preference resource? In other words, if you delete ChangeName, does the HotSync name stay changed?

Neal



By [John Newell](#) on Tuesday, October 1, 2002 - 12:35 pm: [Edit](#)

Neal,
Yes, it really, really does changes the HotSync name and UserID. You can see it in the Unsaved Preferences Type psys, ID4.

You are warned in the help text to write down your original name and User ID just in case you want to set them back again.

The help text also says that the next time you HotSync you will be asked by the Palm Desktop if you wish to create a new user (as long as you have changed the UserID). According to the comments on PalmGear it's an easy way of changing your PDA's name (although I haven't tried it).

The ROM ID and OS version string are faked by patching the traps.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, October 1, 2002 - 02:10 pm:

[Edit](#)

Interesting. Thanks for the detail.

Neal



By [Matthew Burke \(Mmb\)](#) on Wednesday, October 2, 2002 - 06:58 am:

[Edit](#)

John,

I got a cable (from Belkin I think, I can double-check if you'd like) that lets me do a serial hotsync between my Clie and my Win95 box.

The hotsyncing works fine although I haven't been able to get MS Export to run; I haven't spent a lot of time trying to figure it out because mostly I hotsync to my Mac at the office and the Missing Sync lets me import/export to the mem stick just fine.



By [John Newell](#) on Thursday, October 3, 2002 - 07:53 am: [Edit](#)

Matthew,
Thanks for the infomation. However, I don't think it is possible to connect anything USB to Windows NT. I've had a look at the Belkin site but couldn't find anything.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Thursday, October 3, 2002 - 11:38 am:

[Edit](#)

A company called B-Square sold USB software for NT -- it remaps USB ports to COMx: ports. Works quite well. I haven't done a search, but they may still be out there.

Neal



By [John Newell](#) on Monday, October 7, 2002 - 11:51 am: [Edit](#)

Neal,
Yes B-Square have a software solution at:

http://store.bsquare.com/catalog/index.cfm?fuseaction=product&theParentId=127&id=2317&int_prod=1

However, beaming from the Palm Vx and backing up to the memory stick isn't causing me \$39.95 worth of problems.

Thanks anyway.
Regards
John

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E-mail:

Everything else!

[Quartus Handheld Software: Discussion Forum: Everything else!](#)

- [Suggestions for how to make this happen, please](#) 3/10 06:07pm [5]
- [Sony NZ90](#) 3/1 12:31pm [4]
- [Blank lines in lists](#) 2/14 12:54pm [7]
- [Palm dying?](#) 2/8 12:22am [7]
- [Advice on fields](#) 1/22 11:51am [5]
- [Advice on reset](#) 1/7 07:12am [6]
- [Palm Vx wanted](#) 12/5 09:41am [1]
- [What about this from Kyocera](#) 11/29 02:02pm [4]
- [Dell PDA](#) 11/16 03:55am [3]
- [Archive for Memo Pad](#) 11/7 12:40pm [10]
- [Doc file algorithm](#) 11/4 08:24am [1]
- [Forth.NET](#) 11/3 11:12am [4]
- [QSource Conduit](#) 11/4 12:17am [4]
- [Palm OS Desktop Support for .NET](#) 11/1 11:43pm [2]
- [PalmGear legalese - Advice needed](#) 11/7 07:15pm [8]
- [OT: Problem with Internet Explorer](#) 10/13 05:52pm [5]
- [Handango](#) 10/10 05:25pm [9]
- [PalmGear financial letter](#) 10/16 12:04am [18]
- [Hotsync name](#) 10/7 11:51am [13]
- [Information icon on non modal form](#) 9/27 06:26am [6]
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- [Cheap Springboard modules at Staples](#) 9/13 08:27am [1]
- [Recommendations for shareware sites](#) 9/24 12:01pm [22]
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- [Detecting menu dropdown \(2\)](#) 7/17 03:41pm [16]
- [Good Win32 Forth?](#) 7/2 10:13am [4]
- [Creating .SITs on a wintel box](#) 6/30 10:48am [2]

- [Mass email software recommendation](#) 6/23 07:25pm [2]
- [Clie overdue items](#) 6/26 10:44am [4]
- [Palm OS 5](#) 6/28 12:15pm [15]
- [Form Alert](#) 5/17 06:11am [1]
- [Handera 330](#) 5/8 08:52am [5]
- [Opinion sought on feasibility of a hack](#) 4/8 02:44pm [2]
- [Recommendations for a new Palm to use with Quartus?](#) 3/28 06:05pm [7]
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- [Palm Loses Less Than Expected](#) 3/23 09:31pm [4]
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- [ROM manipulation](#) 3/18 02:25pm [6]
- [Link not working](#) 2/16 10:58am [5]
- [Another attempt at re-entering the fold...](#) 1/30 11:18pm [3]
- [Programmer Down!](#) 1/29 11:02am [1]
- [Read only categories in pedtit](#) 6/18 07:43am [4]
- [Examples of good and bad code](#) 1/19 06:38pm [1]
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- [Handspring Treo](#) 4/8 05:10pm [2]
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- [Nostalgia](#) 11/19 06:18pm [6]
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- [M505 color](#) 11/7 08:02am [2]
- [Problem Related to Palm OS API's](#) 11/3 05:45am [1]
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- [Hackable Christmas Presents](#) 10/20 10:34pm [4]
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- [Kyocera Smartphone](#) 10/15 06:27pm [2]
- [Palm Alliance Program Profile](#) 9/21 11:32pm [1]
- [New Visor Models](#) 4/30 02:39pm [3]
- [Interview with Chuck Moore](#) 9/14 09:22pm [7]

- [More PalmGear complaints!](#) 12/5 04:59pm [17]
- [New Palm input method](#) 8/25 04:52pm [1]
- [Palm Buys Be](#) 8/17 01:08pm [4]
- [Programming burnout](#) 8/11 01:20pm [3]
- [Palm OS](#) 9/15 11:56am [15]
- [HandEra POSE](#) 8/2 10:18pm [2]
- [Palm exchange](#) 8/1 04:16am [3]
- [Payment from PalmGear?](#) 8/7 04:33pm [31]
- [Handera ?](#) 6/7 12:06am [6]
- [Palm Security](#) 6/23 07:08pm [3]
- [Starting the Second Forth Revolution](#) 7/3 04:51am [5]

Welcome to Everything else!. You may enter any of the discussions below by clicking on the appropriate link. Or, to start a new discussion of your own, click on the "Create New Conversation" button.

Quartus Forth (Royal daVinci version)

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(Royal daVinci version\)](#)

- [Quartus Forth on Royal daVinci v. PalmOS](#) 1/12 12:46pm [6]
 - [Is someone here who developing for daVinci!!!!?](#) 11/4 09:39am [4]
 - [Is there any way to edit fonts?](#) 10/30 08:34am [1]
-

Welcome to Quartus Forth (Royal daVinci version), for questions, comments and discussion of the Royal daVinci version of the [Quartus Forth](#) on-board compiler.

You may enter any of the discussions below by clicking on the appropriate link. Or, to start a new discussion of your own, click on the "Create New Conversation" button.

Quartus Forth on Royal daVinci v. PalmOS

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(Royal daVinci version\)](#): Quartus Forth on Royal daVinci v. PalmOS



By [Julian Robin Fondren](#) on Sunday, November 25, 2001 - 01:33 am:

[Edit](#)

Well, how are the versions different? Are there any caveats in using Quartus Forth on the Royal daVinci? Right now I'm looking at the M100 and the Royal daVinci DV4 -- same cost, but the latter seems very superior. All I want is a nice and portable Forth machine; could someone give me advice on this?



By [Neal Bridges \(Nbridges\)](#) on Sunday, November 25, 2001 - 01:42

am: [Edit](#)

Quartus daVinci Forth is only for the DragonBall 68K-based Royal daVincis, which have been out of production for quite some time.

My advice: buy the M100; you'll have access to a huge array of software, and Quartus Forth as well.

Neal



By [Steve Bohrer \(Skb\)](#) on Sunday, November 25, 2001 - 08:01 pm: [Edit](#)

Neal may not have made this explicit enough. The daVinci does not support external programming.

Royal's advertising states that the daVinci comes with basic organizer programs built-in, but they do not say there is any provision for adding any other software to the device.

Various daVinci discussion forums are filled with complaints about the lack of any API information. Some users have posted the results of their attempts to reverse engineer simple software changes on the daVinci by hacking the OS image provided with the device, but it looks like there has been pretty minimal progress so far.

Thus, if you want "a nice and portable Forth machine" it is hard to see how the daVinci fits this bill, unless you wish to start from scratch and write your own Forth and OS. (Which would certainly be easier if there was any documentation of the hardware internals.)

Apparantly the daVinci is targeted only as a calandar/calculator/address book/memo pad, not as a general purpose PDA.



By [Neal Bridges \(Nbridges\)](#) on Sunday, November 25, 2001 - 09:09 pm: [Edit](#)

Steve's right; the daVinci in its current incarnation is little more than a hand-calculator with delusions of grandeur.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, November 26, 2001 - 09:45 am: [Edit](#)

Question for Julian: what about the DV4 makes it seem "very superior" in comparison to the M100?

-- Kris



By [Julian Robin Fondren](#) on Saturday, January 12, 2002 - 12:46 pm: [Edit](#)

Yikes, thank you Steve. Fortunately I emphasized for my parents this last christmas that I wanted a Palm, and I got an M125.

Kris, I only remember that the DV4 came with a keyboard and double the RAM. I didn't know very much at all about Palm OS, and I still don't know much about whatever the daVinci uses. (but 'daVinci' seems an unfortunate name, or maybe it has nothing to do with Leonardo.)

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Is someone here who developing for daVinci!!!!?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(Royal daVinci version\)](#): Is someone here who developing for daVinci!!!!?



By [TaraN](#) on Saturday, November 3, 2001 - 01:16 pm: [Edit](#)

Why there is no messages at all!?

I need the discussion!!!

Let me know if anyone working with Forth on daVinci, pleeeeeeeasee...



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 3, 2001 - 01:39 pm: [Edit](#)

I doubt many people are developing anything at all for the daVinci. The new model doesn't have a development kit, and the older models are no longer in production.

Neal



By [Taran](#) on Sunday, November 4, 2001 - 03:55 am: [Edit](#)

So - there are no people with the old (2mb, dragonball) daVinci?



By [Nicholas Penree \(Penree\)](#) on Sunday, November 4, 2001 - 09:39 am: [Edit](#)

I still own an old daVinci, but I bought a Palm m100 and don't use it anymore. Oh yeah by the way Neal I foregot to tell you that I did get a Palm! I like Quartus Forth for Palm OS but I like the dotted line for the text.

Add a Message

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Is there any way to edit fonts?

[Quartus Handheld Software: Discussion Forum: Quartus Forth \(Royal daVinci version\)](#): Is there any way to edit fonts?



By [TaraN](#) on Tuesday, October 30, 2001 - 08:34 am: [Edit](#)

I just want to ask is there any way to edit characters tables to add or to edit something? - i need this for localisation of my PDA (daVinci don't understand my native language so i want to do something with this).

Add a Message

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Other Quartus Products

[Quartus Handheld Software: Discussion Forum: Other Quartus Products](#)

- [SecretAgent](#) 4/4 04:42pm [4]
 - [RsrcEdit - Changing an Application's Name](#) 3/27 07:36am [3]
 - [Leaving Previous Form Visible Around the Edges of New One](#) 2/27 10:05am [4]
 - [What happened to all the posts about RsrcEdit?](#) 9/8 11:53pm [3]
 - [Resource Edit bug](#) 1/24 09:09am [1]
 - [Testers needed for new Benchmark app](#) 3/5 08:15pm [23]
 - [LeftHack and ClearHack](#) 3/20 07:28am [34]
-

Welcome to Other Quartus Products, for questions, comments and discussion of all non-Forth [Quartus](#) software products.

You may enter any of the discussions below by clicking on the appropriate link. Or, to start a new discussion of your own, click on the "Create New Conversation" button.

SecretAgent

[Quartus Handheld Software: Discussion Forum: Other Quartus Products: SecretAgent](#)



By [Crystal Hennings](#) on Thursday, March 27, 2003 - 01:20 pm: [Edit](#)

I recently downloaded SecretAgent 1.0 to my Tungsten T, but it doesn't work. I have HackMaster and also TealMaster. I don't know if perhaps another hack or program could be interfering. Are there any known OS 5.0 bugs or things to be wary of?



By [Neal Bridges \(Nbridges\)](#) on Thursday, March 27, 2003 - 01:24 pm: [Edit](#)

Hi, Crystal. The Tungsten runs OS5; that's not just an upgraded version of OS4.x, but in fact a whole new version that runs on a new CPU. Hackmaster modules are not, as such, directly supported; TealMaster makes some of them work, but not all.

Some Hackmaster modules can be re-written as OS5 apps, but some cannot; the hooks in the OS are not all the same as they used to be. I haven't looked at SecretAgent in that regard yet to see if it can be translated.

Neal



By [Crystal Hennings](#) on Friday, March 28, 2003 - 02:07 pm: [Edit](#)

Do you plan to update for OS5 soon? I searched hard and long for a hack that masks my password that didn't charge \$20-30. When I found SecretAgent, I almost fainted.

Until then, TealMaster has some OS5 emulations - if I find something within the program that helps, I'll let you know.

I recently upgraded from Palm IIIxe - WOW, what a learning curve! I love my TT, but I'm having a hard time letting the III go, because of the differences.



By [Neal Bridges \(Nbridges\)](#) on Friday, April 4, 2003 - 04:42 pm: [Edit](#)

Hi, Crystal. Somehow I missed replying to this. I would like to update SecretAgent to work on OS5; at this point, however, I have yet to determine if it even can be written to work under OS5. I'll keep you posted.

Neal

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Password:

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RsrcEdit - Changing an Application's Name

[Quartus Handheld Software: Discussion Forum: Other Quartus Products](#): RsrcEdit - Changing an Application's Name



By [abbarron](#) on Tuesday, March 25, 2003 - 07:11 pm: [Edit](#)

Can RsrcEdit change the name of my Palm application as it appears on the Applications screen? I tried changing the application's name using RsrcEdit, however the old name still appears on the Applications screen. I do see the new name, for example, in the list of applications under the Delete menu (although the old name is next to it in parentheses). Is there any way to have the name change affect what I see on the Applications screen?

Thanks in advance.
abbarron



By [Neal Bridges \(Nbridges\)](#) on Wednesday, March 26, 2003 - 01:29 pm: [Edit](#)

Quartus RsrcEdit can indeed change the name of an app. However, depending on what launcher you're using, you may need to reset the device to refresh the name that appears on the launcher's screen.

Neal



By [John Newell](#) on Thursday, March 27, 2003 - 07:36 am: [Edit](#)

There is a resource called tAIN. If one exists in the application resource DB then the entry in this resource is displayed by the launcher rather than the DB name. You can use RsrcEdit Hex edit mode to change it. (If it needs to be longer than the existing one you will have to delete it and recreate it one bigger than the length of the name you require and then use the Hex edit mode to enter the data. It needs a trailing null (0x00).)

Regards
John

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Leaving Previous Form Visible Around the Edges of New One

[Quartus Handheld Software: Discussion Forum: Other Quartus Products](#): Leaving Previous Form Visible Around the Edges of New One



By [Andrew Johnson](#) on Saturday, February 22, 2003 - 10:07 am: [Edit](#)

For a nice effect, I'm trying to get a new form to pop up leaving a view of what was visible on the previous form around the edges of the newer, smaller form.

So far all I can do is get blank white screen to show up.

Anybody know how to set this?



By [Steve Bohrer \(Skb\)](#) on Sunday, February 23, 2003 - 05:48 pm: [Edit](#)

Try PopupForm ... FrmReturnToForm to go to a new form without unloading the current form. PopupForm is defined in Neal's "Forms" module, and it calls FrmPopupForm, so check the docs on that.

I've only used this when I popup a dialog and then return to the form I started from. In this case, I use 0 as an argument to FrmReturnToForm. Not sure how it works otherwise.

Note that the Palm UI docs suggest that a "dialog" form should be the full width of the screen, and flush to the bottom edge. Thus, you usually only see the old form over the top of the popped-up form. An exception might be a small "I'm busy" message that you want to show while you do some lengthy processing; in this case, it makes sense to just use a small, centered, window. But, the UI docs suggest that you eliminate the wait, instead.



By [John.Newell](#) on Monday, February 24, 2003 - 12:13 pm: [Edit](#)

=====

Outside event loop:

FrmGotoForm - REMOVES the current form and triggers a load form event for the new one.

In event loop: (frmLoadEvent)

FrmInitForm - Load the form resource

FrmSetActiveForm - activate form

FrmSetEventHandler

In event loop: (frmOpenEvent)

FrmDrawForm - draw the form (must be done before doing any custom changes to the form)

..

..

FrmDeleteForm

=====

FrmPopupForm - Does NOT REMOVE the current form but queues a frmLoadEvent and a frmOpenEvent

etc.

...

...

FrmReturnToForm - delete the current form

=====

Regards

John



By [Andrew Johnson](#) on Thursday, February 27, 2003 - 10:05 am: [Edit](#)

Thanks, guys. I've got it working and it looks terrific. I know this is not how I'm supposed to follow the GUI guidelines but my mapping partner wants his own brand on things.

It looks really cool to have bits of graphics left behind around the edges and it does give you a feeling that you are still connected to the parent form you came from.

Thank you both very much for helping me. I have decided to make a beta version of my travel guide for Bangkok available to anybody who's interested on the WIKI. That way, for any bits of the code that people like - I can offer an explanation on how I did it.

Thanks again from one very happy Forth programmer.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

What happened to all the posts about RsrcEdit?

[Quartus Handheld Software: Discussion Forum: Other Quartus Products](#): What happened to all the posts about RsrcEdit?



By [David Beers](#) on Sunday, September 8, 2002 - 11:36 pm: [Edit](#)

There used to be quite a number of posts concerning suggested improvements and bug reports for RsrcEdit here. Even if there was no timeline for doing any of these things, it was helpful to have them public as "known issues". Users need to be aware, for example, that until certain memory leaks are fixed they should perform regular soft resets to avoid a dangerous overflow of the dynamic heap.



By [Kris Johnson](#) on Sunday, September 8, 2002 - 11:49 pm: [Edit](#)

You can probably find the old posts in the Message Archives (see the link in the frame to the left).

For more permanent and/or visible descriptions of issues with RsrcEdit, you may want to use the wiki. See <http://kristopherjohnson.net/wiki/QuartusRsrcEdit>

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 8, 2002 - 11:53 pm: [Edit](#)

I haven't archived the messages in too long now, so those relating to Quartus RsrcEdit are all still here, available under the search for the time being.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Resource Edit bug

[Quartus Handheld Software: Discussion Forum: Other Quartus Products](#): Resource Edit bug



By [Dave Bennett \(Dbennett\)](#) on Thursday, January 24, 2002 - 09:09

am: [Edit](#)

I'm assuming that this is going to be the area for Resource Edit as well...

I just ran into a bug using resource edit for a new app. I had several forms defined, all with a close button in the same location. I created a new form. I opened one of the previous forms, selected the close button, Edit, Copy. I opened the new form, Edit, Paste. Fatal Reset. I tried this a few times with the same result.

The new form had no other items defined for it. I created a Title for it, then performed the same operation as above, and it worked. I then deleted the Title to get the desired result I wanted.

Dave

Add a Message

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Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Testers needed for new Benchmark app

[Quartus Handheld Software: Discussion Forum: Other Quartus Products](#): Testers needed for new Benchmark app



By [John Hale](#) on Friday, June 15, 2001 - 11:02 am: [Edit](#)

Benchmark 2.0 Results for Handera 330:

Stock unit = 244%



By [Neal Bridges \(Nbridges\)](#) on Friday, June 15, 2001 - 01:32 pm: [Edit](#)

A respectable score!

Neal



By [Richard Allen](#) on Wednesday, June 20, 2001 - 03:24 pm: [Edit](#)

Benchmark 2.0

Here are some more results:

Palm IIIe - Stock unit = 100%

TRG Pro - Stock unit = 148%

Handera 330 - Stock unit = 244%



By [Larry Miller](#) on Tuesday, June 26, 2001 - 10:53 pm: [Edit](#)

IIIex Benchmark Tests

Hacks Disabled

Cruise Control – Slow

FastCPU - Disabled 99%

Hacks Disabled

Cruise Control – FastFast

CPU - Disabled 148%

Hacks Disabled

Cruise Control – SlowFast

CPU – 20MHz 183%

Hacks Disabled

Cruise Control – Slow

FastCPU – 32MHz 261%

Hacks Disabled

Cruise Control – Fast
FastCPU – 20MHz 185%

Hacks Disabled
Cruise Control – Fast
FastCPU – 32MHz 261%

Hacks Enabled
Cruise Control Fast
FastCPU – 20MHz 185%

Hacks Enabled
Cruise Control Fast
FastCPU – 26MHz 241%

Hacks Enabled
Cruise Control Fast
FastCPU – 32MHz 261%

For what it is worth.



By [PAttrick](#) on Wednesday, September 26, 2001 - 07:15 am: [Edit](#)

Dear Sir ,
DO u know where can I find the NEW BRIDGE BENCHMARK for down know ?
I have been seen other website that can be use together with thr CRUISE
SPEED . (Not the benchmark 2.0) , thanks. Looking forward for your reply .

Best Regards
Pat



By [Patrick](#) on Wednesday, September 26, 2001 - 07:22 am: [Edit](#)

Dear Sir ,
Sorry for typing error on the previous mail , I would like to make the
correction was NEAL BRIDGE BENCHMAAK , thanks for reply .



By [Neal Bridges \(Nbridges\)](#) on Wednesday, September 26, 2001 -
09:05 am: [Edit](#)

I'm Neal Bridges. Benchmark 2.0 is the latest and newest version of my
Benchmark app. It's available for free download at

<http://quartus.net/products/benchmark>

Neal



By [Mike Will](#) on Tuesday, October 16, 2001 - 09:33 am: [Edit](#)

Benchmark 2.0 results for Visor Pro:

162%

Disappointing, to say the least.

Mike



By [Christopher Smith](#) on Wednesday, November 14, 2001 - 07:56 pm:

[Edit](#)

I didn't see the m505 so here ya go...

154% (stock)



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 -

09:20 pm: [Edit](#)

Thanks, Chris! The m505 here in the Quartus lab gives 156%. Lucky, I guess. 😊

Neal



By [Dennis Hoskins](#) on Thursday, November 15, 2001 - 09:31 am: [Edit](#)

Benchmark 2.0 results for a Sony Clie 760C:

212% - stock

Dennis



By [Dave Bennett \(Dbennett\)](#) on Thursday, November 15, 2001 - 06:10 pm: [Edit](#)

Hey Neal,

My Palm Vx registered 168%. No cruise control or anything, just a stock Vx.

Dave



By [Dave Bennett \(Dbennett\)](#) on Thursday, November 15, 2001 - 06:13

pm: [Edit](#)

Oops! I lied. Cruise control is on this unit. With CC off, it registers 112% as your chart shows.



By [Mike Will](#) on Friday, November 16, 2001 - 07:41 am: [Edit](#)

Benchmark 2.0 results for a Visor Prism:

246%

Mike



By [Victor](#) on Monday, December 10, 2001 - 09:50 pm: [Edit](#)

Benchmark 2.0 Results for Sony Clie 610C:

Stock: 214%

FastCPU at 46MHz: 303%



By [Mike Will](#) on Thursday, May 30, 2002 - 02:33 pm: [Edit](#)

Benchmark 2.0 results for Sony Clié NR70V:

Stock: 307%

Too scared to install AfterBurner just yet.

Imagine the best new feature set that any new Palm device has ever delivered, then triple it. Sony has just opened up a large can of whoop-ass.

Mike

PS. Quartus hums like a kitty on this machine.



By [Neal Bridges \(Nbridges\)](#) on Friday, May 31, 2002 - 01:06 am: [Edit](#)

I'd like one of those myself; I wonder if they've hit Canada yet?

Neal



By [Mike Will](#) on Friday, May 31, 2002 - 01:10 pm: [Edit](#)

Yes, Future Shop & Sony store.

One caveat: dead pixels.

It took me a couple of attempts to get a unit with no dead pixels because it's not trivial to find them. There's no easy way to turn on all pixels (it has a 320x320 LCD), and the screen swivels & flips. This means that you need to use a program like Paint, and be sure to test in both the flipup and turned over modes.

Other than that, I can't recommend this machine highly enough. Some might be disappointed in only a Bridges' Benchmark of 307, but remember that the dragonball is powering 4 times the screen area, and a lot of multimedia toys as well. The sound quality and all lighting conditions

viewability will blow you away. Long live the PalmOS 😊

Mike



By [Paul Norman](#) on Monday, July 1, 2002 - 12:54 pm: [Edit](#)

Benchmark 2.0 for the Sony Clie T615C:
At standard CPU speed (33 MHz): 214%
With Fast CPU set to 55 MHz: 300%
With Fast CPU set to 22 MHz: 165%

Fast CPU messes up Ir reception so I have to shut it off and do a soft reset. Otherwise, it works fine so far. I don't recall having a device that gives me such pleasure in operating ... just LOOKING at it brings a smile of pleasure to my face. I deliberately avoided the NR70 models. The extra \$\$\$ wasn't that much of a factor, but I thought it was getting too far from the basic Palm concept. (I'd have liked a faster CPU though).

For testing pixels, I found a neat "LCD analyzer" that gives me an opportunity to test out Color, Resolution, Readability, Geometry, Brightness, Depth, and Speed. It also tells me that my Clie's Resolution is: 320x320, Max. Color: 65536, and Depth is 16. The web-site is at: <http://www.palmary.com.hk>



By [Dave Bennett \(Dbennett\)](#) on Wednesday, February 26, 2003 - 09:48 am: [Edit](#)

Neal,

Sony PEG-T665C, stock: 310%



By [Neal Bridges \(Nbridges\)](#) on Friday, February 28, 2003 - 04:39 pm: [Edit](#)

Thanks, Dave.



By [Christopher J. Smith \(Missilemax\)](#) on Wednesday, March 5, 2003 - 11:03 am: [Edit](#)

Tungsten|T returns 255% - Stock



By [gwiese](#) on Wednesday, March 5, 2003 - 08:15 pm: [Edit](#)

Sony Peg-NX70V/U 271%

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LeftHack and ClearHack

[Quartus Handheld Software: Discussion Forum: Other Quartus Products: LeftHack and ClearHack](#)



By [D Payan](#) on Thursday, May 24, 2001 - 01:47 pm: [Edit](#)

Hi

Is ClearHack compatible with the new Palm OS 4 which comes with the Palm 505m?

Daniel



By [Neal Bridges \(Nbridges\)](#) on Thursday, May 24, 2001 - 03:10 pm:

[Edit](#)

It is indeed. I'm running it on an m505 as we speak.

Neal



By [Clint Pulley](#) on Wednesday, June 27, 2001 - 05:05 pm: [Edit](#)

Neal,

I have found LeftHack to be very useful since I registered it last fall. However, I have recently discovered that it does not function properly with the Eudora mail and web programs. I suspect that you are already aware of this and am curious to know if anything can be done about the problem.

Clint Pulley



By [Jorge Palacios](#) on Thursday, August 30, 2001 - 03:31 pm: [Edit](#)

Hi:

I have installed a trial copy of left Hack downloaded from Handango , on a Vx palm pilot that also has Memo Plus ver. 3.12. However the if I try to operate memo Plus with Left Hack it blocks the drawing toolbar. I have tried with lefty and it works on memoplus but it doesn't operate with to do list. Is it a way I can cope with this problem ?

Best regards



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 30, 2001 - 04:10 pm:

[Edit](#)

Hi Jorge. The simplest solution is to use X-Master instead of HackMaster. As I understand it, X-Master lets you set up five different profiles, so you can

include/exclude certain apps from LeftHack's influence.

Let me know if that helps!

Neal



By [D. Martel](#) on Wednesday, October 17, 2001 - 03:32 pm: [Edit](#)

I'm using LeftHack on my m505 and have found two problems with ActionNames: in the Address View the first letter of every line is erased by LeftHack and in quarterly view the first day of every week of the third month is erased.

According to Iambic (the makers of ActionNames) it's not up to them to fix the problem. Can you do anything?

Thank you.

Dominique



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 17, 2001 - 03:45 pm: [Edit](#)

Hi, Dominique. There are two aspects to this.

Looked at from one direction, Iambic is right -- they cannot do much to resolve conflicts with LeftHack. What LeftHack does is tricky, and there's no way that it can work 100% with every app.

However, what Iambic can do, and what they should do, is to make their application 'Lefty' compatible -- code it to recognize a global 'left-handed' flag set by the Lefty app, and to draw their interfaces accordingly. When they do that, LeftHack is no longer necessary in any way. That's the ideal situation.

A partial fix for you now is to use X-Master, and to configure one of its profiles not to use LeftHack specifically for ActionNames. This fix has been reported to me by users -- I haven't tried X-Master myself yet, but I'm happy to help if I can.

Neal



By [D. martel](#) on Thursday, October 18, 2001 - 05:53 pm: [Edit](#)

Thanks for the reply. Iambic says they have added my suggestion to their Feature request database.

In the meantime, since I'm already using X-Master, I'll try what you say,

although that means accepting the scroll bars on the right in all views of ActionNames.

Dominique



By [Scott Holson](#) on Thursday, October 25, 2001 - 12:38 pm: [Edit](#)

I'm using leftHack with a Sony Clie N610C and X-master. If I disable leftHack I do not have a problem, however with leftHack enabled I receive Fatal error moving from one application to another.

Any thoughts how to not get fatal errors and still use LeftHack

Sincerely

Scott



By [Neal Bridges \(Nbridges\)](#) on Thursday, October 25, 2001 - 01:05 pm: [Edit](#)

I've had a couple of reports about failures on the Clie, Scott. I haven't an answer at present, but hope to soon.

Neal



By [Scott Holson](#) on Wednesday, November 14, 2001 - 10:11 am: [Edit](#)

Hello Neal:

Regarding the Fatal error message I wrote about October 25, on an N610C. Since then I tried a couple of things and found the following. I hope this helps:

I did a hard reset, and added back into ram Left hack and hackmaster.91 Results were: always the same, upon switching in to and out of the palm launcher after making a change in any of the standard programs in ROM (ie: memopad, datebook, etc..) a resulting error message occurred, "Launch error - The application cannot be launched because of system error" At this point pressing the "okay" button on the screen does nothing, the only way to move on is a reset or pressing on any of the application buttons on the CLie, when this is done, the "Fatal Error" message comes up forcing a soft reset.

I don't know if this helps?

Scott Holson



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 02:45 pm: [Edit](#)

Thanks for the report.

The Clie launcher is not my friend. I will investigate; it's not the highest item on my list at present, but it is something I'd like to fix.

Neal



By [dooxer](#) on Sunday, December 2, 2001 - 11:59 pm: [Edit](#)

please make it work with a Clie! There's a bunch of us out there, and we'd probably be happy to pay a nominal fee, too!



By [ClieGuy](#) on Monday, December 3, 2001 - 05:13 am: [Edit](#)

Neal,

I too would appreciate it if you could fix the Clie problem. Left Hack is a necessity to us south paws. I use the Clie 760 and experience the same fatal error message.

Paul



By [Neal Bridges \(Nbridges\)](#) on Monday, December 3, 2001 - 09:35 pm: [Edit](#)

Thanks for the encouragement, gentlemen. I shall see what can be done.

Neal



By [David](#) on Thursday, January 17, 2002 - 06:55 pm: [Edit](#)

Lefthack and Vindigo

Hi Neal,

I find that Lefthack is not compatible with Vindigo. For example, Vindigo presents a screen with restaurant categories in a narrow column on the left. With Lefthack activated, these categories get shifted to the right of the screen. It looks bad!

Thanks for considering this problem.

David



By [david mydans](#) on Sunday, February 24, 2002 - 11:56 pm: [Edit](#)

Neal,

I've got similar clie issues to those posted above. ActionNames, which runs fine w/ Lefthack on my III & Vx, crashes when exiting the application on the Clie.

Best current work-around is TealMaster.
This is not freeware, but its very functional.
Up to five profiles can be created that
automatically change according to prior application mapping.

X-Master requires an additional hack and then a graffiti stroke to change sets.

Interestingly,lefthack always crashed the drawing engine in ThoughtManager on my Palms, but its working correctly on the Clie 615.

tfn dsm



By [Brette Blatchley](#) on Friday, June 7, 2002 - 05:04 pm: [Edit](#)

Hi Neal,

I'm writting a simple program (in Quartu Forth) that uses a field and scrollbar; I noticed that LeftHack does not do with my program what it does with, say, memopad. Here's what I mean:

In memopad, LeftHack will move the scrollbar, AND the field itself (which it appears to shift to the right, to make room for the scroolbar).

Well in my program, LeftHack moves my scrollbar but does not move my field; the scrollbar draws over my field.

Is there a resource setting (for the field or scrollbar) that I need to tickle for this behaviour to occur?

I'll working making my program "lefty aware," but I still want this to work right with LeftHack.

Thanks Neal!

PS, could you please email me my password for the discussion forum.



By [Neal Bridges \(Nbridges\)](#) on Friday, June 7, 2002 - 11:28 pm: [Edit](#)

Brette -- I've sent your password.

Examine the width and positioning of the scrollbar and memo field in the MemoPad app -- duplicate that, and you'll see identical behaviour in your own app.

Let me know!

Neal



By [Brett Blatchley](#) on Saturday, June 8, 2002 - 04:33 pm: [Edit](#)

Thanks Neal, I'll try that and post a follow-up.



By [Brette Blatchley](#) on Saturday, June 8, 2002 - 05:50 pm: [Edit](#)

OK, I got it to work:

The problem was that I had set the field to be Dynamic in RsrcEdit.

When I switched this off the scrollbar and field switched places just like they do in MemoPad.

Then I adjusted to size of the field and scrollbar to what I wanted and it still worked fine.

(As a double-check, I switched Dynamic back on in the field and the LeftHack would not move the field, just as before. So this really appears to be the solution to the problem.)

Thanks for the hints Neal!

Take Care All :-)



By [Jason Love](#) on Monday, September 16, 2002 - 05:11 am: [Edit](#)

Hi Neal,

I've got one of the new NR series Clie's and also am unable to use Lefthack because of the crashes. Any news on a fix?

Thanks,
Jason



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 17, 2002 - 08:13 pm: [Edit](#)

Hi, Jason. It's on my list, but I haven't got to it yet; soon, I hope.

Neal



By [Annoyed by Palm marginalizing at least 20% of their userbase](#) on Thursday, September 26, 2002 - 10:30 pm: [Edit](#)

People have been complaining about lefthack's lossage on the clie for about a year now. What will it take to encourage you to fix it?

Sorry to sound cross, and it's not your fault that the operating system is so fundamentally deficient, but let's face it: the palm platform is unusable to left-handed people without this hack and I'm getting a little desperate. So how can we collectively motivate you to work on it already?



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 26, 2002 - 10:33

pm: [Edit](#)

I do intend to see what the Clie does that breaks LeftHack. In truth, complaints I've received from Clie users are very few in number -- not that that makes it less important to those affected, of course.

I appreciate the feedback; I'll take care of it as soon as possible!

Neal



By [annoyed by palm](#) on Thursday, September 26, 2002 - 11:15 pm: [Edit](#)

Tell you what. If you can fix the clie problem, I'll pay 5x the current shareware registration fee for the update.



By [Neal Bridges \(Nbridges\)](#) on Friday, September 27, 2002 - 02:57

am: [Edit](#)

A generous offer -- thanks!

Neal



By [Neal Bridges \(Nbridges\)](#) on Sunday, September 29, 2002 - 11:34

pm: [Edit](#)

Would one of you gentlemen with a Clie be so kind as to run a test for me? Email me at support@quartus.net if you're willing to help.

Thanks!

Neal



By [Neal Bridges \(Nbridges\)](#) on Monday, September 30, 2002 - 12:33

am: [Edit](#)

Thanks; a tester was found!

Neal



By [Benjamin](#) on Thursday, November 21, 2002 - 04:24 am: [Edit](#)

Hello Neal!

I just found LeftHack and after the testing I found it unuseful in a few apps. I know you can't make this apps to work correctly. So my suggestion is to make LeftHack to be application-aware. In configuration window user could make a list of "exclude apps"... and that's it. What do you think?

Benjamin

PS: With this feature LeftHack could be a great product!

 By [Neal Bridges \(Nbridges\)](#) on Friday, November 22, 2002 - 01:19 pm: [Edit](#)

Benjamin, thanks for the feedback. I'll keep you posted!

Neal

 By [Frank Leone](#) on Sunday, December 8, 2002 - 03:19 pm: [Edit](#)

If it's quantity you need, add me to the list of Clie users that would love to see lefthack work! Maybe it's just easier for me to learn righthandedness!

 By [Neal Bridges \(Nbridges\)](#) on Monday, December 9, 2002 - 03:06 pm: [Edit](#)

Frank, thanks; you'll be pleased to hear I own a Clie now, so I'm on the job. 😊

Neal

 By [David Maude](#) on Thursday, March 20, 2003 - 07:28 am: [Edit](#)

Neal's December acquisition is excellent news for sinister Clie users! It was only my own recent move from a Handspring that reminded me how much I relied on the invaluable LeftHack.

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Suggestions for how to make this happen, please

[Quartus Handheld Software: Discussion Forum: Everything else!](#):

Suggestions for how to make this happen, please



By [M A Richard](#) on Thursday, March 6, 2003 - 03:20 pm: [Edit](#)

This is a re-post of a message that I posted last month--but I see now that I placed it into the wrong category. My apologies. I let my enthusiasm get the better of my etiquette.

If there is someone who could advise me, I'd truly appreciate it. Thanks again!

__copied message follows__

Hi!

I've lurked here for years--I can't seem to get started properly with Forth, so I've never felt it appropriate to intrude. However, knowing how lively this forum is, (and loving the elegance and simplicity of Forth) I was hoping for some suggestions on the following:

I have an REB1100, which, if you aren't familiar with it, is an ebook reader. It has a fantastic design, with tremendous hardware--but the OS (RocketEngine) is weak, weak, weak. Gemstar, the corporation that bought NuvoMedia (who designed the hardware) have abandoned the 1100 platform (and thus the OS) for a different format. I really think that a Forth system, "right on the silicon" so to speak, would have tremendous possibilities. The hardware has onboard MP3 audio, 33k modem, infrared port (built into the power switch!), USB, 16-bit grey touch-sensitive screen and a memory card slot. All in the size of a paperback! It uses an ARM processor, and the battery has a 40 hr. working life (weeks on standby.)

I am no programmer, but I think that this device would be a tremendous portable platform if people could program for it. Forth seems to me to be the obvious choice. What would it take to entice someone to build/program such a Forth as a basic OS? Where should one search for such a person?

Once Forth is there, I'm sure different methods of using it would grow (including windowing routines, etc.) As a dedicated device, it would take but a single program on this Forth (an ebook/html reader of some sort) to match its current functionality.

It would take me years to learn how to make such a thing happen on my own--but it would be satisfying to simply help it come into being in some

way.

Well, I hope this instigates some commentary--I really think this could be of great benefit to a lot of folks frustrated by the way the REB1100 was mismanaged by Gemstar.

Thanks for your time.



By [Kris Johnson \(Kdj\)](#) on Thursday, March 6, 2003 - 11:46 pm: [Edit](#)

You might want to check on the comp.lang.forth newsgroup to see if anyone is interested.

Based on Neal's experience with the now-defunct Royal daVinci platform, my guess would be that he wouldn't be too enthusiastic about porting Quartus Forth to this platform.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, March 6, 2003 - 11:49 pm:

[Edit](#)

Indeed -- a failed platform has a decidedly finite lifespan. Additionally, closed and undocumented operating systems are fiendishly frustrating to develop for.

Neal



By [M A Richard](#) on Monday, March 10, 2003 - 05:51 pm: [Edit](#)

Neal, Kris--

Thanks for the replies!

Actually, I'm not interested in porting for an OS. So there wouldn't be anything closed off at all. What I'm hoping for is a native Forth on the hardware, completely replacing the current OS. Or perhaps a development platform on the PC that puts a compiled Forth system onto the device, so that people could create their own reading/writing/listening systems.

I can understand not wanting to work on a failed platform, but I actually think that a Forth might revive the device by freeing it of its proprietary software chains. The hardware is so great, it seems a shame to let it linger on the fringes of success. There are hundreds of thousands of REB1100s, they just didn't sell retail. There's still a strong demand for them on eBay, etc. (I know, I sold four.) There are several yahoo groups and knowbetter.com's largest forum is devoted to the device.

Thanks for the pointer to comp.lang.forth. I'll give it a try, too, in addition to the sales job I just tried with you. ;)

m a r



By [Kris Johnson \(Kdj\)](#) on Monday, March 10, 2003 - 06:07 pm: [Edit](#)

I wish you good luck, but don't be surprised if you don't see a lot of enthusiasm from others.

Development of a new operating system represents an investment of tens or hundreds of thousands of dollars and/or thousands of hours of unpaid developer time. A few hundred thousand privately owned and unsupported machines doesn't seem like a big enough market to warrant such an investment.

It's always sad to see good hardware platforms die, but once the manufacturer stops making them, there is very little incentive for anyone to make a major investment in supporting them unless they serve some mission-critical need for somebody with very deep pockets.

-- Kris

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Sony NZ90

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Sony NZ90



By [Mike Will](#) on Friday, February 21, 2003 - 10:37 pm: [Edit](#)

Has anyone purchased/tried out this device yet? I'm particularly interested in its Bluetooth features. I can't seem to find one in Toronto yet.

Thanks

Mike



By [Neal Bridges \(Nbridges\)](#) on Friday, February 28, 2003 - 04:39 pm:

[Edit](#)

Did you learn anything about it, Mike?

Neal



By [Mike Will](#) on Saturday, March 1, 2003 - 08:23 am: [Edit](#)

- Palm OS 5
- Intel XScale processor running at 200 MHz
- 16 MB of RAM
- 1600 x 1200 resolution camera with flash
- 2X digital zoom feature, manual exposure adjustment, red-eye reduction, and timer delay
- smartLithium battery pack
- built-in Bluetooth radio
- CF I slot for WiFi 802

Looks pretty nice. Sony's going head-to-head with the CE vendors and it's sure fun to watch.

Mike



By [Dave Bennett \(Dbennett\)](#) on Saturday, March 1, 2003 - 12:31 pm:

[Edit](#)

Sony has won every battle since the introduction of the Walkman. They seem to know exactly what the consumer wants and what they'll pay for it to gain market dominance.

Dave

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Blank lines in lists

[Quartus Handheld Software: Discussion Forum: Everything else!](#):

Blank lines in lists



By [John Newell](#) on Sunday, February 9, 2003 - 09:42 am: [Edit](#)

Hi,
I have a form which has both a dynamic list and predefined list. For both sorts of list, when the lists are drawn, they have a blank line at the top and bottom of the first page. (There are no missing lines of data in the lists.) If I select one of the items and then pop up the list again the blank lines have disappeared.

Other programs work OK so has anyone seen this behaviour before and can suggest a cure?

Regards
John



By [Steve Bohrer \(Skb\)](#) on Sunday, February 9, 2003 - 08:19 pm: [Edit](#)

Does the pre-defined pop-up list show this behaviour in RsrcEdit's preview? If so, it must be something funky with the list resource or popup control definition, as RsrcEdit uses the standard system calls for the pre-defined list.

It might be worth testing with just the pre-defined list first, to guard against some strange interaction between the lists.



By [John Newell](#) on Monday, February 10, 2003 - 07:01 am: [Edit](#)

Steve,
I may have misled you. I am NOT using a dynamic list (I used the wrong word). Both list are define in RsrcEdit where they show up correctly. The first list is populated at run time (which is what I meant to say previously) but the second list is populated in RsrcEdit.

Both exhibit the described behavior.

I will have to try the form all by itself and see what happens.

Regards
John



By [Steve Bohrer \(Skb\)](#) on Tuesday, February 11, 2003 - 01:51 pm: [Edit](#)

If a list or popup list works in RsrcEdit, then it should "just work" when you load its form and run an event loop with EKey. No extra initialization is needed to make these "pre-populated" lists work. All your code needs to do is handle the events that result from the list.

For a regular (not popup) list that is populated at run-time, you need to call LstSetListChoices as soon as you show the form to set the items and count, and then LstDrawList to display the result. (Also, if you are using a callback to draw the items, call LstSetDrawFunction before calling LstDrawList).

I have not experimented with popup lists that are populated at run time. If the list items will be static for duration of the form being open, you could probably just call LstSetListChoices when you show the form. If the popup items change in response to other user selections, I don't know if you need to set the list items whenever they change, or if you get an event before the popup so you only populate the list just before it is used. But, for a popup, you should not need to call LstDrawList, as the OS popup handler code should do that when the list is popped.

So, I'd start with the pre-populated list. Try showing your form, and just doing a simple

```
begin
    Ekey drop
again
```

The popup should work.



By [John Newell](#) on Thursday, February 13, 2003 - 09:34 am: [Edit](#)

Steve,

OK. I've sorted it out. A bug on my part naturally. I had a standard function which set the list selection. However, it did:

```
LstSetSelection
LstSetTopItem
LstMakeItemVisible
```

This seemed to confuse the OS which displayed blank lines top and bottom of the visible list box.

I now have:

```
LstMakeItemVisible
LstSetSelection
```

The problem has disappeared.

Regards
John



By [Steve Bohrer \(Skb\)](#) on Friday, February 14, 2003 - 01:13 am: [Edit](#)

The call to `LstMakeItemVisible` is wasted, because as soon as you set a new selection the list will scroll to show the newly selected item. Here's from [chap 14 of the API reference](#), in the comments for `LstSetSelection`:

Quote:

The old selection, if any, is unselected. If the list is visible, the selected item is visually updated. The list is scrolled to the selection, if necessary, as long as the list object is both visible and usable.

So, you can just select an item, and the OS makes sure the user can see the new selection.



By [Steve Bohrer \(Skb\)](#) on Friday, February 14, 2003 - 12:54 pm: [Edit](#)

Oops. Bad link. Chapter 14 of the Palm OS API reference is <http://www.palmos.com/dev/support/docs/palmos/List.html>. Sorry I forgot to check that last night before I posted.

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Palm dying?

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Palm dying?



By [Dave Bennett \(Dbennett\)](#) on Friday, February 7, 2003 - 02:20 pm:

[Edit](#)

Something strange happened with my Palm Vx today. I was editing a file when it suddenly reset. No fatal exception or anything, just a reset. When it returned it started at the "Welcome to you Palm" screen as if it had just came out of the box!

I haven't installed anything on this Palm since November 2001. I've used Quickword to keep a diary of my medical progress over the past year. I'd just started using it daily this past week to write some sample stuff for a project I'm resuming, but no resets on that either.

Could this mean it's dead? or about to be?

Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, February 7, 2003 - 02:27 pm:

[Edit](#)

It's possible, Dave. It might just have been 'one of those things', though. Keep an eye on it, and keep good backups.

Neal



By [Dave Bennett \(Dbennett\)](#) on Friday, February 7, 2003 - 04:27 pm:

[Edit](#)

Well, I started loading stuff back onto it and it did it again. I'm trying again but I'm not holding out any hope.

I'm looking for a new Palm device- cheap. The Sony Clie PEG-SG20 is available locally for \$149. Anyone had any experience with this device?

Dave



By [Dave Bennett \(Dbennett\)](#) on Friday, February 7, 2003 - 05:00 pm:

[Edit](#)

Hey Neal,

Any issues with Quartus on the Sony Clie products that you know of?

Thanks.

Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, February 7, 2003 - 05:07 pm:

[Edit](#)

Not with OS4.x Clie systems, no. I'm using one myself.

Neal



By [gwiese](#) on Friday, February 7, 2003 - 10:09 pm: [Edit](#)

Ok Neal, I have a good one for you. I just purchased a clie nx70 and I am trying to hotsync with the computer, but I am not having much luck. What is happening is when I try to hotsync the computer see's it, but when I click the user name it disconnects. I call tech support for the clie and they said sence I am running other Palm os on the same computer that they will not communicate with the clie software and that I will have to uninstall my other palms to make the clie hotsync. This will not work, sence all my quartus stuff is on those palms.

I know you have a clie. Did you have any problems hotsyncing. Or is there a way to make this work properly. I am using windows XP home edition.

Gary



By [gwiese](#) on Saturday, February 8, 2003 - 12:22 am: [Edit](#)

Never mind I got it to work.

Gary

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Advice on fields

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Advice on fields



By [John Newell](#) on Monday, January 20, 2003 - 10:29 am: [Edit](#)

Hi,
I have a field on a window into which the user enters a value. A second (not user enterable) field displays a value which include the first one but with additions. I wish to be informed whenever anything changes within the field, even deleting or adding one character (by Graffiti or digitiser), so that I can dynamically update the second field. The keyUpEvent occurs when the digitiser is used and I can use RctPtInRectangle to see if it occurred in the bounds of the field. penDownEvent occurs when Graffiti is used but the pen is in the Graffiti area... Any suggestions?

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, January 21, 2003 - 10:41 am:

[Edit](#)

John, a simpler approach would be to check the dirty flag on the field. Any changes to the field set that flag, and you can take appropriate action.

Neal



By [John Newell](#) on Wednesday, January 22, 2003 - 07:25 am: [Edit](#)

Neal,
Thanks for the advice. Do you mean check the dirty flag for the field each time round the event loop? I guess that should work. I'll give it a try.
Thanks again.

Regards
John



By [John Newell](#) on Wednesday, January 22, 2003 - 11:37 am: [Edit](#)

Yes, that worked. I suppose I can check as often as I like by setting the Event timeout value appropriately.

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Wednesday, January 22, 2003 - 11:51

am: [Edit](#)

Glad it worked. Yes, you can check the status as often as you require.

Neal

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Advice on reset

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)

Advice on reset



By [John Newell](#) on Sunday, January 5, 2003 - 02:21 pm: [Edit](#)

I developed a program on my Palm Vx (not in Quartus Forth). Having run it it has somehow corrupted something so that I get Fatal Errors occuring. Doing a Soft reset it always tried to run the program which caused the corruption and gives Fatal Error. I have to do a Warm reset to get the system running. Can anyone advise me on what I may have done and on how to stop the auto running of the program? I have done a Hard reset and reloaded everything but the problem persists. Thank you.

Regards

John



By [Kris Johnson \(Kdj\)](#) on Sunday, January 5, 2003 - 05:02 pm: [Edit](#)

I had a similar problem a while ago, when the Targus keyboard driver corrupted something in my Visor (and all my backups) that screwed up the IR port. The only solution was to hard reset and then reload all the data manually, and stop using the keyboard.

You could try leaving the batteries out of the unit for a while before reloading. (Half an hour? I don't remember what Handspring tech support told me.) I don't know whether you can take the batteries out of a Vx; maybe you need to leave it on for a few weeks.

Before you reloaded things after the hard reset, did the unit work? If so, you might try manually restoring things one at a time.

-- Kris



By [John Newell](#) on Monday, January 6, 2003 - 07:24 am: [Edit](#)

Thanks for the advice Kris. I've done a hard reset but the problem persists. I don't really want to leave the PDA on for weeks just on the offchance that it my cure the problem.

I believe there is some way of telling the PDA to run a program on startup. Presumably this has got corrupted in some way. Does anyone know what it is?

Regards

John



By [Neal Bridges \(Nbridges\)](#) on Monday, January 6, 2003 - 11:22 am:

[Edit](#)

The way to avoid having the device run any code at startup is to hold down the Up button while resetting it. Give that a try.

Neal



By [John Newell](#) on Monday, January 6, 2003 - 12:54 pm: [Edit](#)

Neal,

Yes, that's a Warm reset. And the PDA starts up OK. However, I don't want it to run this program on a Soft reset either. So I would still like to know what I did and how to avoid it.

BRAINWAVE. I've suddenly realised what it's doing (I think). I believe the OS is trying to run the program after a system reset and passing it a sysAppLaunchCmdSystemReset launch code. The program doesn't check and is trying to do UI in response to this launch code (which is against the rules). (The program is written in PP Pascal (free) which I was playing with (having learned Pascal long ago). The documentation says you must check for the launch code but not why. I guess this is one of those reasons).

Regards

John



By [John Newell](#) on Tuesday, January 7, 2003 - 07:12 am: [Edit](#)

Yes, that's what it was doing. All's OK now. Thanks for helping me air the problem here.

Regards

John

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Palm Vx wanted

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Palm Vx wanted



By [Dave Bennett \(Dbennett\)](#) on Thursday, December 5, 2002 - 09:41
am: [Edit](#)

If anyone has a Palm Vx they would like dispose of I would be interested in purchasing it- if the price is right, of course! I'm looking to upgrade my wife's Palm V for the holidays.

I'd need the Palm Vx, and would consider any accessories you may have as well.

Thanks.

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What about this from Kyocera

[Quartus Handheld Software: Discussion Forum: Everything else!](#): What about this from Kyocera



By [John Newell](#) on Thursday, November 21, 2002 - 11:40 am: [Edit](#)

http://www.kyocera-wireless.com/showroom/showcase/coming_soon_7135.htm

John Newell



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 21, 2002 - 03:22 pm: [Edit](#)

Looks neat. CDMA, I see.

Neal



By [Amr Malik](#) on Thursday, November 28, 2002 - 07:05 pm: [Edit](#)

Pardon my ignorance, but can the current stable Quartus Forth (and rsrcEdit) be used to develop solutions on this platform? does Quartus support the wireless functionality on it?

Thanks



By [Neal Bridges \(Nbridges\)](#) on Friday, November 29, 2002 - 02:02 pm: [Edit](#)

Hi, Amr. I believe it's OS4.1, so yes, it should certainly work.

Quartus Forth doesn't have built-in the functions required for wireless, but it can interface to any system systrap; there's no reason I can think of that would mean you couldn't write wireless apps with it.

Neal

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Dell PDA

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Dell PDA



By [Mike Will](#) on Thursday, November 14, 2002 - 11:15 pm: [Edit](#)

It looks like Dell is serious about PDAs, I just saw Michael Dell on TV saying that PDAs will be a focus in the future. The bad news is that it will be PocketPC based, not PalmOS.

Looks like Sony is our only white knight, continuing to release incredible ARM based, PalmOS 5 devices.

I wish Dell and HP would stop copying each other, it's making life hard for the PalmOS and even Palm Inc.

Mike



By [Dave Bennett \(Dbennett\)](#) on Friday, November 15, 2002 - 04:02 pm: [Edit](#)

I don't think Palm is being ran by people who actually know what they are doing, but I have to agree with what the CEO said recently. He said that Microsoft was on the wrong track by trying to put a desktop PC into peoples' hands. MS just doesn't understand the handheld medium- usefulness or purpose.

The new Nokia phones are really heading in the right direction for what people want in a hand held unit.



By [Kris Johnson \(Kdj\)](#) on Saturday, November 16, 2002 - 03:55 am: [Edit](#)

According to the Dell web site, they will start accepting orders for their new PDA on Nov 18.

See http://www.dell.com/us/en/gen/topics/segtopic_axim.htm

-- Kris

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Archive for Memo Pad

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Archive for Memo Pad



By [John Newell](#) on Monday, November 4, 2002 - 08:41 am: [Edit](#)

Hi,
Does anyone know of a program which would allow me to archive/backup Memo Pad categories to a separate database. Also, to restore them to the same or another category.

I ask because I put my apps into their own categories and since there are only 15 have run out.

Regards
John



By [Steve Bohrer \(Skb\)](#) on Tuesday, November 5, 2002 - 12:01 am: [Edit](#)

Probably obvious, but, do you really need them all on-line, or can you archive some older projects on the desktop? Palm Desktop makes it pretty easy to export a bunch of memos to an archive file, and to delete a group of memos with one stroke.



By [John Newell](#) on Tuesday, November 5, 2002 - 07:33 am: [Edit](#)

Steve,
I've looked at Palm Desktop export/import but it's not as flexible as I would like. Also, I would rather keep the apps on-line, I think, so that I can access them as needed.

One of my categories is used for the Forth library and one for my own library and one for testing things out. One of the apps uses 9 of the categories (it keeps growing and currently needs updating with improvements). That leaves only 3 to play with for new apps. One has an app and another has two apps already (which prompted the query). I wanted something where I could easily switch from developing one app to another.

I might have to do my own (if I can find a category to develop it in) but I thought I would ask first rather than re-invent the wheel.

I've looked on the web but most archivers seem to deal with whole databases, not parts of them which I want. I think this may end up as a "category" archiver for any database, not just Memo Pad.

Thanks.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Tuesday, November 5, 2002 - 09:29 am: [Edit](#)

Due to the limited number of categories, I've started just putting an application-specific prefix on each module name (e.g., myapp-main, myapp-events, myapp-resources, otherapp-main, otherapp-events, otherapp-resources). I put them all into one category, and when sorted, they get grouped by application.

-- Kris



By [John Newell](#) on Tuesday, November 5, 2002 - 10:44 am: [Edit](#)

Kris,
I do the same. However, I (currently) have 529 memos. With over 200 memos for one application of 9 modules, I'd still like to separate the modules off by category.

I also use pedit. By putting a special character (!) at the beginning of the category name it will protect the memos from being accidentally changed (a thing I did sufficiently enough times to be annoying so that I asked Paul to implement something like that).

Regards
John



By [Steve Bohrer \(Skb\)](#) on Tuesday, November 5, 2002 - 06:09 pm: [Edit](#)

So sounds like you might need to invent the wheel after all. I guess it's easy enough to swap records from one db to another, but you'll need a clever scheme to keep the categories straight.



By [John Newell](#) on Wednesday, November 6, 2002 - 08:00 am: [Edit](#)

I was just thinking of creating a database per category with a single category in it. e.g. Default to MemoDBResult for the Result category in MemoPad but also allow the user to enter the database name if required. It would have a single category of Result.

Or maybe just get the user to choose the database to archive to and just put the categories in the same category in that database. Yes, that may be better. The user could create a database per application. If the application required multiple categories they could all go into the one database .

In any case, I'll probably compress the records to save space.

Regards
John



By [Steve Bohrer \(Skb\)](#) on Wednesday, November 6, 2002 - 04:11 pm:

[Edit](#)

Possibly worth some experimenting to see how the regular Memo Pad hotsync responds to categories suddenly appearing and disappearing from MemoDB, or to memos getting new unique IDs as they are moved out and back.

Palm's conduit and Desktop software may get quite confused.



By [BarryFernelius](#) on Thursday, November 7, 2002 - 12:28 pm: [Edit](#)

John Newell:

Have you experimented with the library code that allows you to use doc files as an alternative to the memo pad?

-Barry R. Fernelius



By [John Newell](#) on Thursday, November 7, 2002 - 12:40 pm: [Edit](#)

Barry,

I've tried Doc file but found that I prefer to use pedit on the MemoDB database. I find it helps in factoring the code when you cannot create a record bigger than 4K. You can switch more easily between one memo and another to look things up than you could with a e.g. 40K doc file.

I was involved in pedit at the beginning (though it's gone beyond what I want now) so perhaps it just comes down to a matter of preference and what you are used to.

Regards
John

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Doc file algorithm

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Doc file algorithm



By [John Newell](#) on Monday, November 4, 2002 - 08:24 am: [Edit](#)

Hi,
Does anyone have a fast algorithm for creating doc format data from plain source data. I've created one but it's awfully slow compared with other programs that create doc files.

Regards
John

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Forth.NET

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Forth.NET



By [Mike Will](#) on Saturday, November 2, 2002 - 05:45 pm: [Edit](#)

Recently, I was bound, gagged, and forced into a life of slavery coding .NET applications against my will. Happily, this experience caused me to stumble upon this little gem:

<http://www.dataman.ro/dforth/>

This guy's approach is somewhat similar to Neal's in that it is a compiled Forth, and has no dictionary or evaluator once compiled. Of course, it generates IL for CLR on .NET

I'm just mentioning it here because there's virtually no support and I'd be interested in hearing of others' experiences. What this Forth really needs is a WIKI like Kris'

Mike



By [Kris Johnson \(Kdj\)](#) on Saturday, November 2, 2002 - 11:59 pm: [Edit](#)

There is a DeltaForth topic in the wiki, and you are welcome to add whatever content you want.

-- Kris



By [Mike Will](#) on Sunday, November 3, 2002 - 10:05 am: [Edit](#)

Sorry Kris. You beat me to it.

I posted a few thoughts in the WIKI just now. My post was badly garbled somehow. Most line breaks were lost, and every time I typed 'Forth.NET' it got truncated to 'NET'.

Mike



By [Kris Johnson \(Kdj\)](#) on Sunday, November 3, 2002 - 11:12 am: [Edit](#)

I don't know what the problem is with the line breaks, but the wiki software treats "Forth.NET" as "the NET topic in the Forth" web. I have the same problem when writing ASP.NET, ADO.NET, etc.

I'd suggest calling it DeltaForth, putting a space between "Forth" and ".NET", or writing "Forth.NET".

-- Kris

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QSource Conduit

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
QSource Conduit



By [Kris Johnson \(Kdj\)](#) on Saturday, November 2, 2002 - 12:37 pm: [Edit](#)

I've developed a HotSync conduit called "qSource" that will extract all the Quartus source memos from a handheld, and place them into a directory on the desktop computer as separate text files. This is intended to make it easier to back up Quartus modules, put them under version control, and share them with others.

For example, if you have memos with these first lines:

```
\ myapp 2002/10/31 KDJ
```

```
\ somewords
```

```
\ bitmap-utils
```

then the conduit will create files with the names "myapp.txt", "somewords.txt", and "bitmap-utils.txt". It will not create files for memos that don't match the Quartus module naming convention (backslash followed by name of module).

The bad news:

- Runs only under Windows
- You must have the .NET framework installed
- You must have version 4.0 or higher of the Palm Desktop software
- I am having trouble getting it installed on one of my machines. I suspect others will have trouble as well.

If anyone is interested in trying to use this, let me know and I will try to put together an installation package. Otherwise, I'll just keep hacking away at it.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 2, 2002 - 01:53 pm: [Edit](#)

Very neat, Kris. I don't have a box with .NET on it at this point, but I'll see

what I can set up to have a look at what you've written.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, November 2, 2002 - 03:15 pm: [Edit](#)

All the info is at <http://kristopherjohnson.net/wiki/QSourceConduit>.

For now, only binaries are available. I'll put together a source distribution soon.

I worked past my installation problems by rebooting and reinstalling (the universal Windows fix). If anyone else has any trouble, let me know.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, November 4, 2002 - 12:17 am: [Edit](#)

I've uploaded version 1.1 of qSource. This puts memos into subdirectories corresponding to the memo categories.

-- Kris

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Palm OS Desktop Support for .NET

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Palm OS Desktop Support for .NET



By [Kris Johnson \(Kdj\)](#) on Friday, November 1, 2002 - 05:09 pm: [Edit](#)

I have a couple of ideas for applications to integrate Palm OS with desktop apps. I'd like to develop the desktop side using Microsoft's .NET framework. Does anyone know of any .NET libraries or other resources that would help with getting a .NET program to participate in HotSync or to read/write databases using the cradle?

I can probably port the Pyrite or pilot-link stuff if I need to.

Thanks,
-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, November 1, 2002 - 11:43 pm: [Edit](#)

After reading the Palm CDK docs, I think I'll try using the COM Sync interfaces. I'll let you know how things turn out.

BTW, my initial app is one that will grab all the Quartus source memos (those that start with "\ modulename") and write them to a directory. The intent is to make it easier to save them to a version control system.

-- Kris

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PalmGear legalese - Advice needed

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
PalmGear legalese - Advice needed



By [Wade Carlson](#) on Wednesday, October 30, 2002 - 09:43 am: [Edit](#)

So, I get my letter from PalmGear stating that I need to choose from 3 payments options and fax the contract back to them. Here's my interpretation:

Option 1) We pay you 20% of what you are owed on Dec 15th, and you never get paid the other 80%.

Option 2) We pay you only 50% of what you are owed, divided up over the next 14 months

Option 3) We pay you 100% of what you are owed over the next 36 months.

If that's not bad enough, it states they have the right to terminate all contracts if developers on average don't waive at least 50% of what they are owed!

From reading newsgroups on the internet, it sounds like developers are very angry and there is likely to be some litigation involved (with probably resulting bankruptcy of PalmGear in my opinion).

So, what option should I choose? If I choose option 1 or 2, I never get my money, if I choose option 3, they will likely be bankrupt before I get my money.

I have a feeling, that they just want us to sign one of these contracts, so that once we do we no longer can hold them liable in any public lawsuit.



By [Jim Hendricks \(Jimh\)](#) on Wednesday, October 30, 2002 - 10:08 am:

[Edit](#)

If PalmGear bankrupts, it's not due to the developers they have contracts for. I don't see how they can think that they will have good continued relationships with developers if they are asking you to foot the bill for their problems. I understand the financial problem is due in part to Handango's lawsuit, but penalizing the developers who are generating your revenue is insane. I can understand if they renegotiated their existing contracts at a higher rate for themselves and setting higher rates for all new contracts.

Think also this way, if you take option 1, you have a good likelihood of getting paid, but only 20% of what is owed. Option 2 and 3 the likelihood decreases by a large margin due to the element of time.

You also have to take into account that their word is not trustworthy since

they breached your contract not once, but 6 times, once for each month they chose not to pay you.

I wouldn't sign any new contract with them, I would send them a letter indicating that you hold them to the existing contract, and that payment in full of the six months is due immediately. By signing the contract, even for option 3, you relinquish your right to sue them over the missing 6 months of payment, unless they then breach this new contract which is highly likely if you choose option 2 or 3.

Bankruptcy of PalmGear may not be a bad thing since part of a bankruptcy involves dispersal of all remaining money to creditors which would include the developers. You would get something, but the amount would be determined by how much remaining cash is available.

If I'm correct, Bankruptcy does not eliviate the requirement to pay on existing legal judgements which means if PalmGear wanted to skirt all lawsuits, they would have to Bankrupt & fold before the first lawsuit is filed. PalmGear also faces the possiblity of being treated under racketeering laws which would allow the courts to pierce the corporate veil and go after the personal assets of the shareholders who were responsible for the intentional breach of contract. These funds would also be available for creditors.

As I said before, I personally would hold out for full payment under the existing contract. Depending on how much is owed, I would put my lawyer onto them and scare them with the threat of a lawsuit. I would do this because I would assume at this time that your likelihood of recovering anything is very low, and why give PalmGear the chance of screwing you again by signing the contract. It's their problem, not yours, and you are having to pay for it, why let them off scott free?

Jim

 By [Brian Chirgwin \(Bchirgwin\)](#) on Wednesday, October 30, 2002 - 10:34 am: [Edit](#)

I would have a letter sent to PalmGear by your lawyer that states the current contract is binding and no new contract will be signed until past payments are paid in full. Pay \$ for services by Nov 15, 2002 (date of your choice). Give a date to pay by, or it is open ending and will be ignored. If not paid by Nov 15, 2002 a lawsuit will be filed with the court of _____. Having your lawyer send it using letterhead will give weight.

On about Nov 20, 2002 (give mail time to deliver check) file a lawsuit. Developers start suing and Palmgear will have to claim bankruptcy and close. Get the lawsuit in first so that your claim is as close to the top as possible.

Another thought: It is possible for Palmgear to be sold to new owners. New owners will not be binded to past contracts as they did not sign them. At least that is my understanding.



By [Jim Hendricks \(Jimh\)](#) on Wednesday, October 30, 2002 - 11:13 am:

[Edit](#)

If PalmGear has any corporate structure, new owners would be bound to the same contracts since the contracts belong to the corporate.



By [Ron Doerfler](#) on Wednesday, October 30, 2002 - 11:41 am: [Edit](#)

Maybe it's me, as I don't know anything about law (I hate when people start conversations with that), but doesn't a contract need to have something given/exchanged on both sides? In this case, we are just expected to choose in what way we want to be denied the terms of the original contract, with no recompense (such as 110% if we wait 36 months).



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 30, 2002 - 02:04

pm: [Edit](#)

It's ugly business. Discussion I've had with people in this same boat suggest that we're in lousy shape vis-a-vis PalmGear no matter what happens next. Legal action might win us a judgement, but judgements don't help much when it comes to collecting the money. Bankruptcy would be even worse, maybe ten cents on the dollar over the course of several years.

Neal



By [Dave Bennett \(Dbennett\)](#) on Monday, November 4, 2002 - 09:00

am: [Edit](#)

Send the legalese demanding immediate payment under existing contract. If they go down, good. A person or company that acts the way PalmGear has towards the very people who made its existence possible doesn't deserve to continue. Who in their right mind thinks that existing management is capable of doing anything correctly in the future? (Of course, we did let all of those Savings & Loan managers keep running the institutions they bankrupted in the 1980s...)

If consumers want the products being offered, a new way of delivering them will be discovered by the producers. Products with a demand always find a market.

Dave



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, November 7, 2002 -
07:15 pm: [Edit](#)

I haven't yet received my notice - maybe they plan to stiff me completely regardless - however, my view is also to demand full payment and not bite on their silly choices. Probably that means we'll not receive anything from them as they go under, but if they actually survive and get a judgment forcing them to pay it will be for the full amount. Just don't hold your breath, it won't be anytime soon.

One point to the above commentary: I believe that if Palmgear is sold as an ongoing business concern (as opposed to a sale of assets from the business concern) the new owners would be bound to existing contracts, unless those contracts specifically relieved such liability under a change of control event. In other words, the agreements with developers would have to address this possibility, spell out that all bets are off if the business concern is sold, and the developers would have had to agree to it. On the flip side, if Palmgear simply sells off assets as part of a plan to cease operations (as in bankruptcy liquidation), the new owners of the assets would not have any liability to any Palmgear contracts.

It is amazing that Palmgear thinks the developers, who they have in reality stolen from, should somehow assist Palmgear by agreeing to the theft. Hard to imagine how they sleep at night, but I guess they figure the end justifies the means.....which is apparently what the Handango people figured when they sued Palmgear. Too bad Palmgear doesn't see the irony of that.

Barry

Add a Message

Username:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave

Password:

the "Password" box empty. Your e-mail address is optional.

E-mail:

OT: Problem with Internet Explorer

[Quartus Handheld Software: Discussion Forum: Everything else!](#)

OT: Problem with Internet Explorer



By [Steve Graham \(Steve\)](#) on Saturday, October 12, 2002 - 06:54 pm:

[Edit](#)

I know this forum is designed for discussions of Quartus products. And I have posted this question on microsoft public forums, but I have not yet received a workable solution. I find the people here knowledgeable about computers and willing to help. Perhaps you can help me with this, too.

We cannot browse the 'Net with Internet Explorer (IE) 5.50. When we try, the system returns a page titled "Cannot find server" and "The page cannot be displayed". At the bottom of the page, it says "Cannot find server or DNS Error" and "Internet Explorer". I've downloaded IE 6 and have the same problem. Both the older Outlook Express and the new version connect just fine, as does Netscape 6 and 7. I've checked the settings for IE and it is set up for a LAN (we're on a cable modem). I figure this is a setup problem, but can't seem to find it.

Comments?

TIA, Steve



By [Neal Bridges \(Nbridges\)](#) on Saturday, October 12, 2002 - 07:04

pm: [Edit](#)

Perhaps you need to configure IE to use a proxy? Check your Netscape settings and see if there's a proxy configured there.

Neal



By [Steve Graham \(Steve\)](#) on Saturday, October 12, 2002 - 07:12 pm:

[Edit](#)

Neal,

I checked Netscape's settings and it does not use a proxy. Neither does IE.

Thanks for the suggestion.

Steve



By [Kris Johnson \(Kdj\)](#) on Sunday, October 13, 2002 - 10:15 am: [Edit](#)

What Windows version are you running?

Do you have more than one machine on your network? If so, does this happen only with one particular machine, or with more than one?

What happens if you use IP addresses instead of names? For example: <http://216.92.112.50/discus> (Quartus site).

If you open the Network control panel, does it show any connections other than your LAN?

Do you have any dial-up connections configured on the machine? If so, have you tried IE with dial-up, and/or have you tried removing the dial-up connection (ensuring that the LAN is the only network connection)?

-- Kris



By [Steve Graham \(Steve\)](#) on Sunday, October 13, 2002 - 05:52 pm:

[Edit](#)

Kris,

We are using Win98 on the only working machine in the home. We get the same non-response using IP addresses and/or URL's. The Network selection in the Control Panel shows me: Client for Microsoft Networks, Intel 21041 based Ethernet Controller and TCP/IP. Finally, there are no dial-up connections on machine.

Steve

Add a Message

This is a public posting area. If you do not have an account, enter your full

Username:

name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

E-mail:

Handango

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Handango



By [Frank](#) on Wednesday, October 9, 2002 - 10:37 am: [Edit](#)

I have just posted my software on Handango and I seem to have signed a contract. Could anyone tell me if this was a wise thing to do? Should I be warned after all Wild-West stories that I hear?



By [Kris Johnson \(Kdj\)](#) on Wednesday, October 9, 2002 - 11:27 am: [Edit](#)

It wasn't a wise thing to do if you didn't understand the terms of the contract or believe that those terms were favorable enough.

It's always a good idea to check with a lawyer if you expect significant amounts of money or risk to be involved.

Handango's Software Distribution agreement has terms some people may not like:

- All trial versions distributed through Handango can direct the customer only to Handango's web site for purchase.
- Handango keeps 30% of sales revenue (more for software distributed through Value Added Channels--up to 60%). If you live outside the US, you won't receive any payments until your sales reach \$100.
- Handango is allowed to do pretty much anything they want with your software and trademarks, as long as it is for "marketing purposes"
- You are required to provide bug fixes and upgrades to Handango if you release them anywhere else.
- You must provide technical support via e-mail or telephone.
- Termination of the agreement requires 90 days notice.
- Handango may change the terms of the agreement at any time. If you don't like the change, you must object within 30 days, or the new terms are binding.

-- Kris



By [Frank](#) on Wednesday, October 9, 2002 - 11:50 am: [Edit](#)

Hmm.. I think I'll quit them then. I don't like it when people say they have rights on you when they are not really doing anything for you. I like Palm because it makes you a free man. I don't want to give up that freedom.



By [Ron Doerfler](#) on Wednesday, October 9, 2002 - 11:56 am: [Edit](#)

On the other hand, I have always regularly received monthly checks from Handango, and I've had no problems at all with them given their terms. My only wish is that Handango would support downloading two versions, an evaluation followed by the registered version when the user registers. I don't use registration codes, just two versions, and PalmGear does handle this automatically. With Handango, I have to go with the "author" option, which means they send an email to the purchaser saying that the author will send the registered version within a day or two, and an email to me notifying me of the purchase. This means I have to keep on top of my email, which is difficult when I am away.

Ron



By [John Newell](#) on Thursday, October 10, 2002 - 06:40 am: [Edit](#)

Ron,

I don't think that is quite right. I have an unregistered evaluation version of a program on Handango that the user can download. Handango then send a registered version when the user buys it.

Regards
John



By [Frank](#) on Thursday, October 10, 2002 - 10:28 am: [Edit](#)

I got a letter from Paul Johnson at esellerate. He wants to take over my sales (I mean he wants to sell for me) anyone knows something about esellerate?

They ask 10% only.



By [Ron Doerfler](#) on Thursday, October 10, 2002 - 12:02 pm: [Edit](#)

John, thanks for the information on Handango supporting two versions--I'll check it out. This is good news for me.

Ron



By [Kris Johnson \(Kdj\)](#) on Thursday, October 10, 2002 - 12:24 pm: [Edit](#)

Handango provides the official Palm software site:
<http://software.palm.com>. I don't know how popular this portal is, but its

"officialness" and links from the main Palm site should help increase sales.

-- Kris



By [Ron Doerfler](#) on Thursday, October 10, 2002 - 05:25 pm: [Edit](#)

My sales through Handango have increased since the Palm software site switched to them, and decreased for PalmGear, but not radically either way.

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

PalmGear financial letter

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
PalmGear financial letter



By [John Newell](#) on Wednesday, October 2, 2002 - 04:47 am: [Edit](#)

Hi,
I have received a letter from PalmGear asking me to tell THEM how much they owe ME and to include a statement of the items making up that balance. What a cheek. As if they didn't already know. I've been quite patient with them (perhaps because I don't depend on the income from software sales) and was willing to wait to be paid. I think this is "last straw" time however. Has anyone else received a similar letter. What do they think?

Regards
John



By [Ron Doerfler](#) on Wednesday, October 2, 2002 - 10:14 am: [Edit](#)

Yes, I received it as well. I agree with your assessment--they expect me to go back and dig out evidence of every sale made in the time they didn't pay me, and if it's higher than their books show, they'll challenge it, but otherwise they'll assume it's a bookkeeping error on their part (this is a "bookkeeping audit"). I'm fairly sure I don't get monthly sales summaries, just the monthly download statistics, from PalmGear like I do from Handango, so I guess I'm supposed to go through all the daily sales reports and gather evidence?? And to tell you the truth, I'm not sure what the starting and ending dates for non-payments from PalmGear really are, and I'm sure I won't get any response from PalmGear if I ask.

This really is annoying, especially since it is apparent to me what they are trying to do. Like you I've been extremely patient with them, and in fact this is the first time I've complained about the situation that's been going on the past couple of years with PalmGear.

While I'm here--what exactly is the range of months that PalmGear didn't pay developers, and is that range the same for everyone?

Ron



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 2, 2002 - 11:08 am: [Edit](#)

Ron, I believe it is the same for everyone: January-May sales for 2002 have not yet been paid. The first cheque in 2002 was in July, for June sales.

Hotsync name

[Quartus Handheld Software: Discussion Forum: Everything else!](#): Hotsync name



By [John Newell](#) on Monday, September 30, 2002 - 08:11 am: [Edit](#)

Hi,

Does anyone know how to obtain (programmatically) the Hotsync Name (User Identification)? The one that appears at the top right of the Hotsync screen, not the one in Preferences --> Owner.

Does anyone know how to change it programmatically.

Thank you.

Regards

John



By [John Newell](#) on Monday, September 30, 2002 - 08:29 am: [Edit](#)

OK, I knew that. UserName word, in library syncname, does it using DlkGetSyncInfo.

However, I still need an answer to part two - how to change it programmatically.

Regards

John



By [Neal Bridges \(Nbridges\)](#) on Monday, September 30, 2002 - 02:51 pm: [Edit](#)

Hi, John. There's no documented way to alter that info; you're in uncharted territory.

Neal



By [Hans Nordstrom](#) on Monday, September 30, 2002 - 04:51 pm: [Edit](#)

John, if you know C then have a look at this application:

[ChangeName](#)

The source is included.



By [Neal Bridges \(Nbridges\)](#) on Monday, September 30, 2002 - 09:44 pm: [Edit](#)

If I read it correctly, that ChangeName app doesn't change the HotSync name, it just masks it with another one. Superficially the same thing, but perhaps not what's wanted.

Neal



By [John Newell](#) on Tuesday, October 1, 2002 - 06:16 am: [Edit](#)

Thanks Hans. Just what I wanted.

The reason I wanted it was that I have a Sony Clie but am running Windows NT. I have never done a HotSync because the Clie needs a USB connection and NT does not handle that. The Clie has not got a HotSync name and I can't load software to it where the registration code depends on the HotSync name. (When I want other programmes on the Clie I HotSync them to my Palm Vx first and then beam them to the Clie. I backup the Clie to the Memory Stick.)

The ChangeName program has allowed me to give the Clie a HotSync name so I should now be able to get and run a program I have been wanting.

FYI. The HotSync name is held in Unsaved Preferences in resource Type=psys , ID=4.

Neal,
ChangeName really changes the HotSync name and User ID. I think it masks the Rom ID: and OS version string.

Neal



By [Ron Doerfler](#) on Wednesday, October 2, 2002 - 03:58 pm: [Edit](#)

Thanks, Neal. At least I know where to start looking, as it appears I won't get anything if I don't provide evidence (which at this point must consist of collected PalmGear spreadsheet data from this date range).

Ron



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 2, 2002 - 04:09 pm: [Edit](#)

Curiously, I have yet to receive this letter you're talking about.

Neal



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 2, 2002 - 04:35 pm: [Edit](#)

...just arrived today.

Neal



By [Frank](#) on Monday, October 7, 2002 - 01:30 pm: [Edit](#)

I don't understand,

everybody here is always complaining about PalmGear, like a bunch of old men in a bar, but nobody does anything about it.

Why?

Why aren't there any initiatives here? I think the quartus-group is a strong group of people with good programmers. Doesn't anybody here have a commercial background and the will to do something about it and earn good money? Doesn't anybody know somebody that does?

I think lots of programmers here are looking for a way to sell their software and let somebody do the financial stuff.

Frank



By [Ron Doerfler](#) on Monday, October 7, 2002 - 03:13 pm: [Edit](#)

That's a good point. Actually, the reason I haven't complained before about PalmGear is that overall, given that I don't have the expertise or the time it would take to do any alternative myself, they have been a benefit to me.

They have indeed paid me for everything outside the period in question, and I don't mind too much waiting for that given their situation, but in this case I think it's a bit much to request that people provide evidence of what is owed (or else get nothing?). The same time constraints that prohibit me from actively driving new alternatives are now being chafed by having to resurrect old records and snail-mailing or faxing them to PalmGear, so thus my complaint. I would be interested in alternatives, and will support any that arise here, but I'm afraid I am not able to drive such a thing. Meantime I use Handango as well as PalmGear, but I am looking for alternatives.

Ron



By [Frank](#) on Monday, October 7, 2002 - 04:19 pm: [Edit](#)

I think a lot of us are, Ron.

Maybe we should put an add in the newspaper:

Strong softwaregroup looking for commercial talent to handle sales and setup an imperium.

or something 😊

It shouldn;t be to difficult to find someone. The problem is that WE are programmers, and not financial thinkers. Our heart is not with the money but with the machine. We should find someone who is in it for the money.... A lot of people are... they just don;t know where to find the product to sale. We do.



By [Jim Hendricks \(Jimh\)](#) on Monday, October 7, 2002 - 05:54 pm: [Edit](#)

Hey guys, a possible heads up! I talked with a friend who is a host provider plus many other things. I pitched the idea of a PalmGear alternative to him since he has the financial infrastructure in place and all. He may be interested in studying the situation.



By [Frank](#) on Tuesday, October 8, 2002 - 03:19 am: [Edit](#)

Sounds good Jim, I'm interested.



By [Simon Peter Forman](#) on Tuesday, October 8, 2002 - 08:00 pm: [Edit](#)

Hi folks,

I had visions of sitting in a cafe or on the beach, happily developing my Quartus-powered palm applications and letting the friendly internet do all the sales/marketing/distribution for me.

Now I tremble to think that it may not be like that...

One thing I've noticed about "internet" businesses: people are still HUMAN and screw up all the time, computers (and internetworks) just make it happen so much fasterer (and shiny-er)...

But let me get this straight, Palmgear DIDN'T PAY you guys? For months? And then wrote you all saying YOU had to jump through the hoops to get your due FOR them? And if YOU miss a sale, THEY're gonna not tell you AND keep your money?

Wow... huh? Wow...

Where are your lawyers?

But seriously, I am very interested in software distribution models. In fact, I got my palm-device (treo180) exactly to prototype a new distro model I want to explore...

My dad was a salesman and he saw to it that I was well aware of the technology and art of sales as well as ensuring that I was acquainted with all sorts of scams and schemes ("Snail Farming" etc..)

I just spent almost US\$300 on Corey Rudl's "Internet Marketing Secrets" (keep your money, it's good but not that good... IMHO!) and I am eager to put into practice some insights I've developed about business in the age of networks.

I think the "Economy" is about to get majorly overhauled...

TTFN,
~ Simon
reabockus@yahoo.com

P.S. I am vibrating with happiness to discover an excellent well-behaved forth for palm! Thank Neal Bridges! Thank you, Thank you, Thank you!!!!

(It's soooo cool, ;-)



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 8, 2002 - 09:27 pm: [Edit](#)

What are the problems with PalmGear's competitors, like Handango and RegSoft? Is it just that they are not PalmOS-centric, or are there other issues?

BTW, I just noticed that RegSoft is based in my home town. Should I march outside their doors with a sign that says "More Palm Software Now!"?

-- Kris



By [Jim Hendricks \(Jimh\)](#) on Wednesday, October 9, 2002 - 07:35 am:

[Edit](#)

Handango was partially responsible for the financial trouble at PalmGear by tying them up in a legal dispute. That still doesn't excuse paying the programmers. They collected the money on behalf of the programmers. They were entitled to some of it via the contractual agreement. But the money was never theirs. This is not just a late payment to a vendor/employee/contractor, this is stealing what does not belong to you.

In either case, I have never liked Handango working with multiple PDA's. I was so excited once about a piece of software on Handango, it seemed too good to be true, and it was because the proggy had been cross posted and was PPC based.

My pursuit of building our own PalmOS software portal would bring a couple of advantages.

1. It's not my primary business, nor of my potential partner(s). This may not stop a sacking of the programmers monies, but greatly reduces the chances.
2. It will be PalmOS centric. If other handhelds were to be considered, they would be brought up as a totally seperate site.
3. I, nor any of my potential partners have any experience in running this sort of portal, this means there's no baggage. We would rely heavily on those who would use the site for input and insight in the design and function of the site.
4. I don't have the time to write all the software needed to run such a site. This would mean that I would have to tap some of you all who have web programming experience (PHP&mySQL). This would require some kind of "thank you" since I don't have the up front cash to pay for programming services. This "thank you" may take the form of turning the site into a coop where the maintainers and programmers have a higher number of shares in the coop. Profits from the portions of the fees that don't go toward paying the transaction fees & feeding the infrastructure would be distributed amongst the shareholders according to their # of shares.

My concern with a coop is the management overhead which in turn eats

into the profit. It's possible the "thank you" can still take the form of a coop, but only between the owners/original programmers.

My last idea would be a simple "thank you" in the form of allowing minimal fees per transaction, fees that just cover the actual cost of the transaction. This would have to have some sort of termination (maybe a year).

I'm still banging idea's around, but when I'm ready to study this further, I will open my company WIKI to allow open development of a business plan and software map. That is of course is if I even take the risk to takle this.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, October 10, 2002 - 01:54 pm: [Edit](#)

I'm late in joining the fray on this subject, but I also received the Palmgear request for an accounting of money owed. It is silly since I have had a number of contacts trying to get paid, both for my charitable shareware (in which case they are stiffing the Juvenile Diabetes Research Foundation) and my commercial shareware (where they are stiffing me). I ended up taking all of my software off of Palmgear in July since they would make no commitment to ever paying me and JDRF for sales between 1 Jan 02 and 31 May 02. Although it is ridiculous to have to do it, I did send them my accounting of money owed; it will be most interesting to see what their next move is (paying in full would be a good one, but at this point I'm skeptical).

Since my main motivation is the charitable shareware, I haven't found a good alternative outlet. I would be interested in seeing a coop site, but as my desire is to minimize the portal service charge on charitable shareware, my software probably isn't real attractive from the standpoint of helping defray operating cost. I hope a good alternative becomes available, as otherwise my foray into software sales appears to be coming to an end.

Barry



By [Jim Hendricks \(Jimh\)](#) on Thursday, October 10, 2002 - 08:21 pm: [Edit](#)

Barry,

I promise, if I ever go anywhere with the idea of a Palm shareware portal, I will work with you on charware. We would at a minimum have to extract the financial transaction costs from the selling price. If the portal becomes reasonably successful, we can then look at idea's like dollar matching from the portals income.

Jim



By [Dave Bennett \(Dbennett\)](#) on Tuesday, October 15, 2002 - 11:14

am: [Edit](#)

As for doing something about PalmGear... the IRS pays rewards for turning in those who do not report their income correctly. Since there were no payments made the first half of 2002, then presumably it was used as either a loan or as income by PalmGear. Wonder how Kenny reported it on his monthly or quarterly tax paperwork?

Dave



By [Neal Bridges \(Nbridges\)](#) on Wednesday, October 16, 2002 - 12:04

am: [Edit](#)

Good questions, Dave.

Neal

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Information icon on non modal form

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)

Information icon on non modal form



By [John Newell](#) on Monday, September 23, 2002 - 06:50 am: [Edit](#)

Hi,
My main form has a title and help text.

When the form is modal the title is centre justified and the information icon shows up on the right.

When the form is NOT modal then the title is left justified and the information icon (i) does not display. If you tap the position where the icon should be it reappears and the associated help text is displayed. When the help text is dispatched the information icon remains.

Does anyone know how to make the icon appear when the non modal form is first displayed at run time?

The visible/not visible effect can all be seen using RsrcEdit. Thank you for any help.
Regards
John



By [Kris Johnson \(Kdj\)](#) on Monday, September 23, 2002 - 08:52 am: [Edit](#)

There is some old discussion here:

<http://www.quartus.net/discus/messages/23/1723.html>

-- Kris



By [John Newell](#) on Tuesday, September 24, 2002 - 06:24 am: [Edit](#)

Thanks Kris although it doesn't really help. An (i) bitmap placed at the right position would (presumably) work but I was trying to get the original icon to show up. Anybody else got any ideas?

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 24, 2002 - 02:04 pm: [Edit](#)

That (i) is only visible on modal forms. To get it non-modally, you need to fake it as per Kris's recommendation.

Neal



By [John Newell](#) on Wednesday, September 25, 2002 - 07:44 am: [Edit](#)

Oh! OK.
Thank you.
John



By [John Newell](#) on Friday, September 27, 2002 - 06:26 am: [Edit](#)

Hi,
FYI.
I created a transparent bit map (i) and included it in the form definition with coordinates set to make it appear where the info icon should appear. That worked OK.

Reagrds
John

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Shareware compilations

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Shareware compilations



By [John Newell](#) on Sunday, September 15, 2002 - 05:36 am: [Edit](#)

Hi,
I am seeking some opinions on the advisability of putting some software in a Shareware compilation. I have received an e-mail which begins thus:

"Your software (listed above), has been selected by Micro Application in order to be included in a shareware compilation named "Super compile PALM", published by Micro Application. The above compilation will be released on CD-ROM and is intended to be distributed in the European Union and the French speaking countries."

Has anybody made use of such an offer?
What do you think of the idea?
Thanks for any advice you can offer.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Sunday, September 15, 2002 - 08:54 pm: [Edit](#)

I've had several of these things. My Palm software is all freeware, so I always just say "fine".

I did receive a free copy of one of the compilations. All the text is in Japanese, but it was still nice.

The only potential downside is that I'm now getting a lot more junk e-mail from Asia. I don't know whether that is attributable to the compilations.

-- Kris



By [Brian Chirgwin \(Bchirgwin\)](#) on Monday, September 16, 2002 - 07:59 am: [Edit](#)

Kris,

My asian spam has also gone up recently. I do not know the reason, some of yours could be from the compilations but I doubt all of it is.

John,

You might want to give them a special email address to include on the CD.
This does two things.

- if this is just a way to create more SPAM
- if you are getting orders via the compilation.

Brian



By [Dave Bennett \(Dbennett\)](#) on Friday, September 20, 2002 - 04:19

pm: [Edit](#)

I have said yes to these kinds of things. I have never received a copy of whatever it was they were putting my software on or in. My spam is quite high all of the time (I block over 100 ISPs at my machine) and I am only online to two or three websites three or four times a week. (Not those websites!!!)

I have a separate account I play with once in a while if I suspect someone releasing my name. I used it at Palm once and discovered that any response on anything to them or signing up for anything at palmos is a sure way to get your name all over the place. 😞 I pretty much stopped participating in anything on their sites.

It just shows you that it isn't always who you think may be dumping your name everywhere.

Dave

Add a Message

Username:

Password:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

E-mail:

Cheap Springboard modules at Staples

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Cheap Springboard modules at Staples



By [John McKeon \(Jmckeon\)](#) on Friday, September 13, 2002 - 08:27
am: [Edit](#)

Thought I'd give a heads up to any Visor owners that Staples is clearing out their stock of Springboard modules (as well as Visors and other Visor accessories).

I picked up the news yesterday from comp.sys.palmtops.pilot and went straight down to my local Staples. Got an 8mb backup module and a serial cradle for my edge for the ****low**** price of \$10.00 each.

It's been going on since August though. So get em while they last!

Johnny

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Recommendations for shareware sites

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Recommendations for shareware sites

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, September 4, 2002 - 08:58 am: [Edit](#)

I have stopped selling any software through Palmgear because they have refused to disburse funds from sales between Jan 1, 2002 and May 31, 2002, including money due the Juvenile Diabetes Research Foundation for sales of my charitable shareware products.

I am considering setting up a PayPal account to handle the sales, but the bigger issue really is if there are other sites that can give the products decent exposure so users find them. Does anyone have any recommendations on this? If I don't find a decent way to pitch the sales I may need to give up the effort. It is disappointing to have to consider this after raising over \$20,000 for JDRF (plus another \$2,000 that is still owed to JDRF by Palmgear) over the past 3 years, but the reality is that sales don't happen unless people see the software. Any ideas will be appreciated.

Regards,

Barry Ekstrand

 By [Brian Chirgwin \(Bchirgwin\)](#) on Wednesday, September 4, 2002 - 10:51 am: [Edit](#)

I have no answer, but it is a shame that palmgear is not paying the developers the money they have earned. It will be the downfall of palmgear if they continue alienating developers. Even worse it will be the downfall of the Palm if software isn't promoted.

One option is to develop a site that sells palm software. Although it will take a long time for a site to develop a following like palmgear. Hmm, I will have to think about this.

 By [Frank](#) on Thursday, September 5, 2002 - 06:34 am: [Edit](#)

Good that you warn me for palmgear. i was just contacting them. is tucows ok?

 By [Barry Ekstrand \(Ekstrandbb\)](#) on Thursday, September 5, 2002 - 07:01 pm: [Edit](#)

Let me make sure I'm being clear about the issue with Palmgear. They are

overdue in paying developers for sales between 1 Jan 2002 and 31 May 2002. They say they will pay the overdue amounts whenever they have excess funds that will allow it, but they will not make any commitment to a time frame or schedule in any way.

They have stated that they will keep current on all sales from 1 June 2002 on, and to be honest, I do believe they will make every effort to accomplish that. I would also point out that prior to the 1 Jan 2002 timeframe Palmgear did forward all funds in a timely manner, and they were actively participating in my Char-Ware effort by donating nearly all of their normal service charge along with me. Although I can't at all represent Palmgear's intentions or positions, I believe they have subordinated the overdue payments as a way of working through a cash crunch.

Obviously I am disappointed with their approach to the overdue funds. However, my biggest concern is that funds that are due the Juvenile Diabetes Research Foundation from my charitable shareware sales are in the same category as everything else. Some may believe this is as it should be, but since the web pages stated that proceeds from these sales would be donated directly to JDRF, I believe Palmgear has a special obligation to forward the funds to the charity, else donors were being misled.

After several communications where this was pointed out, they still could not commit to sending these overdue funds to the charity or commit to a schedule of payments on them. As a result, I felt obligated to stop selling through Palmgear. I feel I must take this position based on principles, but it was not taken without some reluctance. I still much appreciate Palmgear's past participation in this project to generate funds for medical research to find a cure for juvenile diabetes.

I hope this provides a better understanding of why I made the decision I did and also clears up any misunderstanding about Palmgear's payment history. It is only the sales from 1 Jan 2002 through 31 May 2002 that are overdue and unclear as to when or if they will be paid.

Barry Ekstrand



By [Neal Bridges \(Nbridges\)](#) on Thursday, September 5, 2002 - 07:42

pm: [Edit](#)

I have the same problem with PalmGear, missing funds from Jan-May.

I suggested to Kenny West (owner of PalmGear) that he could offer free advertising to help offset the discomfort I felt from his withholding my money.

He refused to offer free advertising. Instead, he offered to a) give me a

discount price on advertising and b) put me on the list for repayments if I'd drop what he owes me by 20% or better -- in other words, to give him more money so that he'd pay me back less money than he owes.

You can guess at my answer.

Neal

 By [Jim Hendricks \(Jimh\)](#) on Thursday, September 5, 2002 - 09:01 pm: [Edit](#)

To me, regardless of charitable giving, or just paying hard working developers, a vendor who refuses to make good on a business promise is not trust worthy and therefore should not get my business. I understand as a small business owner myself that the cash crunch can be bad, but once you tarnish your reputation as someone who does not pay as agreed, it's very hard to regain trust. Kenny would be better advised to get a small business loan to pay up the backlog and trust that business will be good enough to slowly pay off that debt.

To me, it doesn't matter that he's been consistantly paying since June, and was paying consistantly before January, he has pretty much made it known to all that he doesn't give a crap about honoring his word. What happens if some more cash flow problems occurs? Is he going to dip into the money that doesn't belong to him again?

What's the whole deal with Handango? Why not move over to their service?

Jim

 By [Neal Bridges \(Nbridges\)](#) on Thursday, September 5, 2002 - 09:03 pm: [Edit](#)

I also use Handango, and have removed PalmGear as a recommended point-of-sale on all product pages here.

The only reason I leave any products up at PalmGear is customer exposure; it is a old site and much-frequented by Palm users.

Neal

 By [Jim Hendricks \(Jimh\)](#) on Friday, September 6, 2002 - 07:31 am: [Edit](#)

Wasn't there a big tif a while ago that Handango was responsible for the financial trouble at Palmgear & the financial trouble was caused by more than just mere competition?

Jim



By [John Newell](#) on Friday, September 6, 2002 - 07:36 am: [Edit](#)

I am not defending PalmGear not paying (being able to pay up) promptly. I just wanted to say that I found it to be a more user friendly site than Handango. i.e. easier to navigate and find products and get a list of similar ones.

Also, for my programs, there have been over 3 times as many downloads from PalmGear as from Handango (although the number of sales appears to be about the same).

Regards
John



By [Brian Chirgwin \(Bchirgwin\)](#) on Friday, September 6, 2002 - 07:42 am: [Edit](#)

I purchased software from Palmgear during Jan -May of this year and it I don't like the fact that the developer of that software has not been paid for my purchase.

If I knew the developer was not going to get paid I would have contacted them and ordered it another way.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, September 6, 2002 - 10:29 am: [Edit](#)

Palmgear does blame the parent company of Handango for much of their financial problems due to an expensive lawsuit where the Handango parent claimed Palmgear breached a contract to sell out to them. Palmgear may have also been hurt from expensive system expansion that haven't paid off yet.

Palmgear ultimately prevailed in the lawsuit, apparently with a huge legal cost, and then the other group went out and started Handango as a direct competitor. I haven't heard anyone say anything really positive about Handango - high fees, very one-sided (to their benefit) terms, and I can say they showed no interest in taking part in the charitable shareware effort when they contacted me about hosting my software (twice).

The biggest issue in my mind (outside of being paid!) is exposure. In my mind Palmgear is almost too popular, as there are so many files (how many darned dictionary files can there really be, anyway???) uploaded that any update you put up rolls off the main screen very fast. I always saw a strong correlation between downloads and length of time the file is on the main screen. An alternative is definitely needed.

Any ideas?

Barry



By [Brian Chirgwin \(Bchirgwin\)](#) on Friday, September 6, 2002 - 12:11

pm: [Edit](#)

I have an idea I have been working on for a long time. The monthly costs of running the site would be split between the developers using the site. Would anyone have interest in such a site?

Assume a site costs \$500 a month to run. If 50 developers are signed up that comes to \$10 per month per developer. What would be the maximum you would be willing to pay a month to post your software? With enough developers the cost could be pennies a month. With too few it will be too costly.

Simple example is California AAA Auto Insurance is non-profit. Meaning that at the end of a year any money in the black means you get a refund, usually applied to the following years insurance. This amount is usually 10% of your insurance cost.

So assume each developer signs up and is charged a \$150 which is used for monthly fees. At the end of the year what is left in fees is refunded (or subtracted from next years fees). If costs were high that year the fees for the following year would, of course, go up and their would be no refund.

This has an intriguing concept. The developer community would have a hand in making it a success or having it fail.

The full details are more complicated than above, but I have been thinking of such a site for some time. Wonder if there is interest out there?



By [Jim Hendricks \(Jimh\)](#) on Friday, September 6, 2002 - 01:13 pm: [Edit](#)

Sounds like a good idea to me, but...

\$500 a month seems quite low. Yeah, the costs of hosting are low, setting up a merchant account and/or paypal account is also low, but you have the costs of initial setup (development of the website etc.) that needs to be defrayed at some time, plus the cost of maintaining the site and dealing with problems. The more time consumed in the maint & support, the more money you need to pay the poor soul(s) in this position.

You also have to consider that there does have to be some kind of per transaction fee passed on to the developer, namely the transaction fee's generated by posting transactions to a merchant account and/or paypal

account. It doesn't make sense to defray these costs over the whole service because then the little guy who sells little is paying more than he should because some other guy is selling like crazy.

Just some thoughts, not trying to shoot down the idea, just providing some food for thought.



By [Steve Bohrer \(Skb\)](#) on Friday, September 6, 2002 - 01:19 pm: [Edit](#)

Brian, The idea of small developer's sharing a site to distribute their shareware is a good one. But, I believe the main service that sites like PalmGear and Handango provide is a place for users to go and browse for software even if they don't have a specific item they are looking for.

If I know I need a specific item for the Palm, I can use Google to search for it, and this search would find small developer sites such as you suggest. But, if I just want to see if there are any keen new programs for my Palm, then I need a site like PalmGear that collects a lot of software.

Barry's comment that he always used to see lots of downloads when he posted and update suggests that many potential customers for general software browse PalmGear from time to time and look at what's new, rather than doing more focused searches.



By [Jim Hendricks \(Jimh\)](#) on Friday, September 6, 2002 - 01:22 pm: [Edit](#)

Steve,

I think Brian's idea was to create a site like PalmGear, only it's ownership and funding is a coop rather than private. Do have have that right Brian?

Jim



By [Mike Will](#) on Friday, September 6, 2002 - 02:32 pm: [Edit](#)

What would be the incentive for the early members? They would contribute mightily to get it off the ground and pay for it as it grew in popularity, reliability and usefulness. All they would have to show for that investment is the same membership that others can have for "pennies a month".

Sorry to sound like a capitalist pig, but...

Mike



By [Brian Chirgwin \(Bchirgwin\)](#) on Friday, September 6, 2002 - 02:43 pm: [Edit](#)

Jim,

Yes, you are correct the costs initially would be higher as the site requires development and these costs need to be paid for upfront. As I said at the end of my note the idea is much more complicated than presented, but at that point I didn't want to complicate things with too many details). Since the correct question have been raised...

I would suspect the initial developers involved would realize a larger chunk of upfront costs are involved. Developers who delay and wait until the site is established with a large number of visitors get all the benefits without paying their share. This isn't quite what I was thinking.

Basically, the costs would be different for each developer based on the date joined. In simple terms newer members would be charged enough to "repay" older members until each developer pays an equal amount over some period of time. Maybe each member gets a small percentage added on to his/her loan as well. (thinking of when you lease an apartment you are paid interest on your deposit). I am not sure if it would be legal to provide interest, might be considered a pyramid scheme which is not my intent. There are other ways to handle this though. Maybe depending on when you should you get advertising points or something.

Jim you also correct that I am thinking of a palmgear like site that is owned by the developers themselves. Not some company trying to make a profit off the developers. A co-op is a good way to put it. It could be similar to a investment club concept.

As for transaction fees and such I have thought about that too, but don't have a clear answer. I agree transaction fees should not be shared by everyone, but should be charged to the developer. If a person buys 2 products from two different developers the transaction cost would be split between them appropriately?

If the transaction fee is a flat rate each developer charged in accordance to the percentage of the cost of their software. If the transaction fee is a percentage each developer would be charged a percentage. If not equally split to the penny, the extra penny would go into a charity account (see below).

Another possibility is that each developer has their own paypal account (or their preferred method of being paid and the developer is paid directly.) Since the site isn't to "make money" there is no reason the develop has to use the same payment method. Of course, the caveat to this is that the buyer would have to make multiple purchases one for each developer.

I have also thought of a charity program as well. A portion of fees would be put into an account for donations to charities at appropriate times. I do

believe that a company should donate to certain reputable charities.

Eventually I would like the site self sufficient, where enough cash is available that the co-op would be self sufficient from the interest on the account. By this I mean each yearly fees would be 0 owned 0 returned. Of course, that is what is meant by not-for-profit.

One potential downside about a co-op style site is information is available to each owner. Each developer is an owner and would get to see the books. So each developer would see what is selling and what isn't (I think this would have to be the case by law). This could create unwanted competition in products that are selling well. On the other hand, this could be good thing as more products would be invented were the market wants them.

Anyway, sorry for such a long message. As I said I have been thinking about this for quite some time.

 By [Brian Chirgwin \(Bchirgwin\)](#) on Friday, September 6, 2002 - 02:49 pm: [Edit](#)

Mike,

See my note I was writing when you posted your message. I think your answer is there.

Of course, those that joined early are taking the large risk. The whole site could fail. Those that join early should be paid for that risk in some way. The developers that wait are taking much less risk once the the site is off the ground.

Brian

 By [Kris Johnson \(Kdj\)](#) on Friday, September 6, 2002 - 02:49 pm: [Edit](#)

I have nothing against capitalism, but there would be several "incentives" for early members other than immediate monetary profit:

- A better place to market your products (we're assuming here that the existing sites are bad)
- Input into the design and organization of the site
- Input into the policies and business model of the site
- Learning about setting up web sites and businesses
- Accolades from members and users of the site

- Something to put on your resume ("Founding member of superjazzypalmsoftware.com")

But, having said that, I don't see much benefit in yet another Palm software site. With Palmgear, Handango, PayPal, Palm Boulevard, Tucows, CNet, SourceForge, etc., there are already plenty of places to publicize your software, to host downloads, and to get someone else to handle payments.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, September 6, 2002 - 04:48 pm: [Edit](#)

Regarding the Palmgear payment situation: withholding almost half a year's worth of payment to developers seems pretty onerous. Is anyone suing, or does the Palmgear developer agreement preclude doing that? Has Palmgear declared bankruptcy or taken other steps to prevent legal action against them?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, September 7, 2002 - 11:02 pm: [Edit](#)

It is onerous, and very probably not legal. I don't know that a suit is worth the expense; if Kenny has the wit of a cabbage-leaf, he's doubtless re-paying those for whom the sum is sufficient to draw legal trouble.

Neal



By [Frank](#) on Tuesday, September 24, 2002 - 12:01 pm: [Edit](#)

So now that I have my program ready for the market I understand that there is no real alternative to PalmGear?

This is the first time i do something like this and i don't know how to set up a payment-system for my program. I'm thinking about letting people send an envelop with a 5 dollar bill in it!

Does anybody have an alternative for getting the small amounts of money from A to B? Worldwide?

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Programming Problem

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
Programming Problem



By [Kris Johnson \(Kdj\)](#) on Friday, August 9, 2002 - 09:14 pm: [Edit](#)

I had this question in a job interview. I thought I'd share it for people who like programming puzzles:

Define a word AddOne that consumes an unsigned integer as input and returns a number one greater than the input. In other words, AddOne is equivalent to this:

```
: AddOne ( u -- u+1 ) 1 + ;
```

The catch: define it using only standard Forth words, and without using any of the following words: +, +!, +LOOP, -, 1+, CELL+, CHAR+, D+, DEPTH, DFLOAT+, F+, F-, FLOAT+, LOOP, M+, SFLOAT+ (or any other word that is a thinly veiled addition or subtraction operation).

For simplicity, you can assume that you don't need to worry about the potential for overflow.

BTW, the actual interview question was to implement a C function with this signature:

```
unsigned int AddOne(unsigned int n)
```

without using +, ++, -, or --. You may want to think about it that way.

Those of you who know how, please don't spoil it for others.

-- Kris



By [Rick Harmsen \(Rharmesen\)](#) on Saturday, August 10, 2002 - 12:04 pm: [Edit](#)

This is not elegant and it might violate some of the restrictions: (1) can logical operations be considered thinly veiled additions and (2) does unrolling a loop count as not using LOOP?

Anyhow, the code below only works 8-bit integers but it is fairly trivial to extend it to more bits

```

: IncrementBitWithCarry ( u0 mask -- u1 carry )
  2DUP XOR ROT ROT AND ;

: AddOne ( u -- u+1 )
  1 IncrementBitWithCarry
  0<> IF \ propagate carry
    2 IncrementBitWithCarry
    0<> IF \ propagate carry
      4 IncrementBitWithCarry
      0<> IF \ propagate carry
        8 IncrementBitWithCarry
        0<> IF \ propagate carry
          16 IncrementBitWithCarry
          0<> IF \ propagate carry
            32 IncrementBitWithCarry
            0<> IF \ propagate carry
              64 IncrementBitWithCarry
              0<> IF \ propagate carry
                128 IncrementBitWithCarry
            THEN
          THEN
        THEN
      THEN
    THEN
  THEN ;

```



By [Rick Harmsen \(Rharmesen\)](#) on Saturday, August 10, 2002 - 12:05

pm: [Edit](#)

BTW, you never said that using tables was not allowed either!



By [Mike Will](#) on Saturday, August 10, 2002 - 01:48 pm: [Edit](#)

```

create answer 10 allot
: AddOne ( u -- u+1 )
  cr ." What is " . ." + 1 ? "
  0. answer dup 10 accept
  >number 2drop drop ;

```

Mike



By [Kris Johnson \(Kdj\)](#) on Saturday, August 10, 2002 - 04:03 pm: [Edit](#)

WARNING: SPOILER! If you want to solve the problem yourself, don't read

below.

As Rick suggests, a bitwise logical operation is one way to do it. Rick's solution works for 8 bits and can be extended for other sizes, but there is at least one way to do it a little more elegantly (and my solution is not necessarily the best).

Note these patterns (numbers are binary):

```
00 AddOne -> 01
01 AddOne -> 10
10 AddOne -> 11
011 AddOne -> 100
100 AddOne -> 101
0111 AddOne -> 1000
```

If a number is even (with a 0 in the least significant bit), then incrementing the number is as simple as toggling the last bit. If a number is odd (with a 1 in the least significant bit), then incrementing the number consists of toggling that last bit, and then incrementing the upper part of the number.

So, the basic algorithm is to create a bitmask, initially consisting of the number 1 (low bit set). XOR the mask with the number. If the flipped bit goes to zero, then shift the mask up by one place and do it again. Keep going until you've flipped a bit from 0 to 1 (rather than from 1 to 0).

An advantage of this algorithm is that it works for any number of bits. There is one problem: if you shift the mask too high, the bit will fall off the high side and the mask will be zero. At this point, the algorithm would go into an endless loop, because XOR'ing with a zero mask is a no-op. So if the mask becomes zero, we need to stop.

Here is my Forth implementation of this algorithm:

```
\ add-one 2002/8/10 KDJ

\ Increment a value without
\ using addition operators
: AddOne ( u -- u+1 )
  1 >r ( R: mask )
  begin
    r@ xor
  dup r@ and 0= while
    r> 2*
    dup 0= if
      drop exit
    then
```

```
>r
repeat
r> drop ;
```

And for those who find it easier to read C, here is a C implementation:

```
unsigned int AddOne(unsigned int n)
{
    unsigned int mask = 1;
    for (;;)
    {
        n ^= mask;
        if (n & mask)
            return n;

        mask <<= 1;
        if (!mask)
            return 0;
    }
}
```

BTW, the actual solution I wrote at the interview had this basic idea, but my implementation was a little clumsy. The interviewer deserves credit for the simplicity of this one. He also liked my initial suggestion, which was to use the Win32 `InterlockedIncrement()` function (assuming you are writing code for Windows); it was something he hadn't heard before.

To respond to another of Rick's comments: tables/arrays are not disallowed. But how would you index into the table using standard Forth without using any of the disallowed operators?

I'd be interested in hearing other solutions.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 10, 2002 - 05:49 pm:

[Edit](#)

WARNING: SPOILER! If you want to solve the problem yourself, don't read below.

Since you've posted your spoiler, I'll re-post mine; I put it up earlier but took it down in the interests of non-spoilage.

I believe this works:

```
: add ( n1 n2 -- n3 )
begin
  ?dup while
    2dup and 2*
    >r xor r>
  repeat ;

: AddOne ( n -- n+1 ) 1 add ;
```

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, August 10, 2002 - 06:03 pm: [Edit](#)

Cool. I'll have to show them that one if I get a second interview or a job. I certainly won't take credit for it myself, as I wouldn't have come up with it.

-- Kris

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Starting DateBook and ToDo apps.

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Starting DateBook and ToDo apps.



By [John Newell](#) on Tuesday, August 6, 2002 - 10:35 am: [Edit](#)

Hi,
Does anyone know, or can point me to documentation on, how to start the DateBook and ToDo applications for a specific date?

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 8, 2002 - 02:36 pm:

[Edit](#)

Hi John. If I'm not mistaken, Palm makes the sources to some version of the ToDo app available to developers; that source would be a good reference to determine if there are 'go to date'-specific launch codes.

Neal



By [John Newell](#) on Friday, August 9, 2002 - 12:19 pm: [Edit](#)

Hmmm. Tricky. What seems to be there is sysAppLaunchCmdGoto, used after sysAppLaunchFind. There the meaning of fields of the parameter block are not necessarily clear. I'll keep looking.

Regards
John



By [John Newell](#) on Tuesday, August 13, 2002 - 12:41 pm: [Edit](#)

Hi,
I don't see how you can call Date Book for a particular day. However, you can to call the Date Book application to start up for a particular event (which starts Date Book app. on the day of that event). It is done by using the SysAppLaunchCmdGoto launch code.

I'm making this up as I go along, copying bits out of my source, so forgive me if it is not quite correct.

GetDatabase is a predefined word which returns the localID, card number, and an error code for a database of a given creator and type.

```
: GetDatabase ( creator. type. -- lid. cnum err )
```

...

;

Structure of parameter block for a GoTo is:

\ LaunchPBs 10/8/02 15:32 jrn

```
struct
  1 cells field GPTsearchStrLen
  1 cells field GPTdbCardNo
  2 cells field GPTdbID
  1 cells field GPTrecordNum \ Index
  1 cells field GPTmatchPos
  1 cells field GPTmatchFieldNum \ 0 | 1
  2 cells field GPTmatchCustom
end-struct GotoParamsType
sizeof GotoParamsType constant sizeofGPT
```

To start the application, use:

```
2 constant sysAppLaunchCmdGoto
\ Size of a system-owned dynamic region:
18 constant cmdPBsize

: AppSwitch ( param. lc creator. type. -- )
GetDatabase throw >r 2>r
>r \ lc
2dup or 0<> if \ Copy CB to mem.
  cmdPBsize s>d
  2swap 2over
  MemPtrNew 2>r
  2R@ MemMove throw
  0 2r@ MemPtrSetOwner throw
  2r>
then
r> 2r> r>
\ Launch the app:
SysUIAppSwitch throw (bye)
;
```

e.g.

```
.
.
.
create mbPB sizeofGPT chars allot
```

\ Index is the index of the event record in the Data Book database.

```
: CallDaBo ( Index -- )
mbPB sizeofGPT erase \ clear buffer
\
mbPB GPTrecordNum ! \ Save DateBook record index
\
[ID] date [ID] DATA GetDatabase throw
mbPB GPTdbCardNo ! \ card number
mbPB GPTdbID 2! \ DateBook database ID
\
mbPB >abs sysAppLaunchCmdGoto [ID] date [ID] appl AppSwitch
;
```

Regards
John

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Playing-Card Bitmap Images

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Playing-Card Bitmap Images



By [Kris Johnson \(Kdj\)](#) on Monday, July 29, 2002 - 01:31 am: [Edit](#)

Does anyone know where I can find a collection of free playing-card bitmaps that are freely usable? (That is, with a public-domain or open-source-style license.)

I've tried Google searches, but have had little luck. I did find a GPL'ed collection, but I'd prefer not to use GPL. I found a reference to some card game examples included with XFree86, so I may look into those if I can't find anything else.

-- Kris



By [Richard Chamberlain \(Rac\)](#) on Monday, July 29, 2002 - 06:03 am:

[Edit](#)

I was looking for mahjongg tiles the other day with not much luck.

Have a look at pysol - it's a set of solitaire games written in python/tk and is gpl. It has lots of card bitmaps included, and I imagine they are gpl as well.

<http://www.oberhumer.com/opensource/pysol/>

Richard



By [John Newell](#) on Tuesday, July 30, 2002 - 01:45 pm: [Edit](#)

Kris,
FreeCell, from www.standalone.com, is issued with a PDB called Stand Alone Card (creator SAln, type engn). I don't know if they can help you?

Regards
John

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Detecting menu dropdown (2)

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
Detecting menu dropdown (2)



By [John Newell](#) on Tuesday, July 16, 2002 - 09:17 am: [Edit](#)

Hi,
I have an application which, during the event loop, puts the time on top of the title bar (using WinDrawChars). However, if a menu is dropped down the time output overwrites part of the menu. So, how can I detect if the menu has been selected so that I don't output the time while any menu is showing? I have looked in the SDK and can't see anything. I hope someone can help. Thank you.

Regards
John



By [Jim Hendricks \(Jimh\)](#) on Tuesday, July 16, 2002 - 09:54 am: [Edit](#)

Somewhere in the files section is an analog clock I put together 2 or so years ago. I needed to do the same thing (draw on the title bar & not have it mess up the menu)

Basically I used a variable to act as an allowDraw flag. My menu handling event set this allowDraw flag to false at the beginning and set it back to true when done handling the event. I also had to set allowDraw to false on a WinExitEvent and I had to do a check on WinEnterEvent if the window getting the focus is my main window then set allowDraw back to true. I forget why I needed those last 2 checks, but I'm sure I had a reason at the time I wrote it.

Hope this helps,
Jim



By [Kris Johnson \(Kdj\)](#) on Tuesday, July 16, 2002 - 11:57 am: [Edit](#)

The EMIT? word will return false if a menu is dropped down or if an alert is up.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 16, 2002 - 12:43 pm: [Edit](#)

Beat me to it, Kris. Indeed, EMIT? should do the trick.

Neal



By [John Newell](#) on Tuesday, July 16, 2002 - 01:07 pm: [Edit](#)

It works. Thanks.

Is that sort of information documented somewhere or just arcane knowledge?

Regards
John



By [Kris Johnson \(Kdj\)](#) on Tuesday, July 16, 2002 - 02:19 pm: [Edit](#)

I believe it is arcane. I got the answer when I asked a similar question on the forum a couple of years ago.

I'd be interested in more details too. From the behavior I've seen, my theory is that it checks whether the currently active window (or maybe the draw window?) is the form last displayed by ShowForm, and returns false if not.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, July 16, 2002 - 02:24 pm: [Edit](#)

EMIT? is documented in the Standard.

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, July 16, 2002 - 07:08 pm: [Edit](#)

The ANS Forth standard says "flag is true if the user output device is ready to accept data and the execution of EMIT in place of EMIT? would not have suffered an indefinite delay."

It would be useful to know exactly how Quartus handles this, as the "output device" is not a traditional character-based terminal, and the uses mentioned above are not directly related to EMIT.

I don't mean to complain; I'd just like to know what it is doing so that I can make my own guesses about what situations it will handle and which it won't. And I promise not to complain if you change the implementation some day. 😊

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 17, 2002 - 01:34 am:

[Edit](#)

You're right, Kris -- Quartus Forth's EMIT? could use more documentation.

At present, EMIT? checks to see that the active draw window is the one associated with the presently active form; that covers most circumstances in which you'd want to avoid drawing either graphics, or character symbols.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, July 17, 2002 - 05:34 am: [Edit](#)

Thanks. I'll put something to this effect in the wiki.

BTW, there is also some issue with using EMIT, TYPE, and other character output operators with an offscreen window. They don't work because they check EMIT? and don't draw when an offscreen window is active. I just mention it in case someone searches for EMIT? some day and runs across this thread.

-- Kris



By [Mike Will](#) on Wednesday, July 17, 2002 - 08:21 am: [Edit](#)

EMIT and TYPE also do weird and magical things when they encounter the shift indicator or other icons/text at the bottom of the screen.

Mike



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 17, 2002 - 12:48 pm:

[Edit](#)

Mike -- the only thing that should happen if text encounters other graphics is that perhaps the text, or the graphics, will overwrite each other -- depending on which is drawn last.

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, July 17, 2002 - 01:34 pm: [Edit](#)

Maybe Mike is referring to the scrolling that happens when the cursor hits the bottom?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 17, 2002 - 02:14 pm:

[Edit](#)

Possible. The dimensions of the display window are by default set to avoid the status area at the bottom; if you're setting up your own form, you may

wish to adjust them such that scrolling occurs only above that area.

Neal



By [Mike Will](#) on Wednesday, July 17, 2002 - 02:15 pm: [Edit](#)

I think it's both. It's a difficult behaviour to demonstrate with repeatability. If you set wrap off, then enter a long line that 'interferes' with the shift indicator, you'll sometimes see weird stuff. By 'weird', I mean characters appear that are not a simple overwrite of bits. If you're inputting, these weird characters actually get stored in the input string.

It's not a critical problem, and affects only one of my apps. When I get the time, I'll change the input field to avoid the bottom line altogether.

Mike



By [Neal Bridges \(Nbridges\)](#) on Wednesday, July 17, 2002 - 03:41 pm:

[Edit](#)

Mike, I'd be quite interested in any repeatable results -- the shift indicator is just a graphical mark on the screen, and as such should have no more than cosmetic results even if it intersects directly with an input field, or with output text.

The shift indicator mark can be re-located, if you wish, or disabled completely -- or, as you say, you can move your input field above it.

Neal

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Good Win32 Forth?

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Good Win32 Forth?



By [Mike Will](#) on Sunday, June 30, 2002 - 01:44 pm: [Edit](#)

Has anyone out there found (and used) a decent Forth for Win32? By decent I mean A) uses OCX's properly and B) creates a tight runtime package without ungainly support files all over the place. Up until now I've used VB, but it's nearly impossible to create (and maintain) reliable install packages with latter day MS tools.

TIA

Mike



By [Julian Fondren](#) on Monday, July 1, 2002 - 03:25 pm: [Edit](#)

Many use win32forth. There's also SwiftForth (www.forth.com) and gforth.



By [Mike Will](#) on Monday, July 1, 2002 - 10:04 pm: [Edit](#)

Thanks for the suggestions, Julian. I'm looking at these, and a few others.

The tricky part is finding a true compiler (like Quartus). Most of the public/GNU/commercial Forths I've looked at require distributing the kernel as part of the application. This raises serious licensing and copyright problems. It also opens the dangerous possibility of the end user gaining access to the Forth system itself.

Mike



By [Julian Fondren](#) on Tuesday, July 2, 2002 - 10:13 am: [Edit](#)

Yes, I certainly wouldn't want be within ten miles of a person who gets *that* kind of access!

win32forth has a metacompiler that people have used to write totally different forths in, so I suspect that it would be good, here. gforth, I think, cannot do this.

SwiftForth would certainly work (and, BTW, SwiftForth is available as an uncrippled, untimed 'shareware'. The 'registered' version costs about 2000 USD, giving you all the source and printable (convertable to Palm-readable formats) documentation).

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Creating .SITs on a wintel box

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)

Creating .SITs on a wintel box



By [Paul Randall](#) on Sunday, June 30, 2002 - 05:31 am: [Edit](#)

Is there a (preferably free) utility for making .SITs of my .PRCs and .PDBs?

Regards, Paul



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 30, 2002 - 10:48 am: [Edit](#)

I have used Stuffit with some success -- not free, but effective.

<http://www.aladdinsys.com/downloads/software.html>

Neal

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Mass email software recommendation

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Mass email software recommendation



By [Wade Carlson](#) on Sunday, June 23, 2002 - 05:21 pm: [Edit](#)

Does anybody have a recommendation for a good mass email program? It seems most of them out there are designed for sending spam. I need one for legitimate uses to send out emails to all my customers who have purchased my product to inform them of updates. Is anyone using a program they like?



By [Neal Bridges \(Nbridges\)](#) on Sunday, June 23, 2002 - 07:25 pm: [Edit](#)

PocoMail provides facilities for sending to a large list -- it breaks the list down and sends the mail out to several at a time.

Neal

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Clie overdue items

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Clie overdue items



By [John Newell](#) on Monday, June 17, 2002 - 05:02 am: [Edit](#)

Hi,
On my Clie, an * starts flashing in the upper left hand corner of the screen when Date Book events become overdue. On touching the *, a Reminders screen comes up with a list on the overdue events.

Now, I have an app which changes the date of Date Book events. However, the event stays in the Reminders screen. Does any one know where the Reminder information is kept on the Clie?

Thanks for your help.

Regards
John



By [John Newell](#) on Thursday, June 20, 2002 - 09:18 am: [Edit](#)

OK,
So the Attention Manager handles this stuff. Can someone tell me the sysTrap's for the Attention Manager Functions so that I don't have to download all the OS 4.0 CodeWarrior stuff just to look at the latest CoreTraps.h.

AttnDoSpecialEffects
AttnForgetIt
AttnGetAttention
AttnGetCounts
AttnIndicatorEnable
AttnIndicatorEnabled
AttnIterate
AttnListOpen
AttnUpdate

Thank you.

John



By [John Newell](#) on Wednesday, June 26, 2002 - 09:41 am: [Edit](#)

Do it yourself John,

AttnDoSpecialEffects	A42E
AttnForgetIt	A428
AttnGetAttention	A426
AttnGetCounts	A429
AttnIndicatorEnable	A41F
AttnIndicatorEnabled	A420
AttnIterate	A42D
AttnListOpen	A42A
AttnUpdate	A427

John



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 26, 2002 - 10:44 am:

[Edit](#)

Sorry John; I'd made a note to chase that up for you but you beat me to it!

N.

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Palm OS 5

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Palm OS 5



By [Kris Johnson \(Kdj\)](#) on Tuesday, June 11, 2002 - 12:28 pm: [Edit](#)

Anybody played with Palm OS 5 yet?

Some links:

http://www.palmos.com/about/news/2002/061002_1.html

<http://www.eweek.com/article/0,3658,s=714&a=27971,00.asp>

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, June 11, 2002 - 03:58 pm:

[Edit](#)

I've played with very early builds; I shall be interested in exploring it further.

Neal



By [Dave Bennett \(Dbennett\)](#) on Wednesday, June 12, 2002 - 09:08

am: [Edit](#)

What I've read in the press says that it is not backwards compatible. (No surprise there with Palm following the Microsoft business model.) And that it doesn't have any real new features yet; they'll be released in next year's version. By then I think Palm is going to have a tough time standing up to other options customers will have available.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 12, 2002 - 09:10 am:

[Edit](#)

It won't be 100% backward-compatible, but they're aiming to have as many apps as possible run under it. I'll doubtless need to work on Quartus Forth to make it happy under OS5.

Neal



By [Rick Harmsen \(Rharmesen\)](#) on Wednesday, June 12, 2002 - 11:31

am: [Edit](#)

Here is a link to an article that paints a rather bleak future for the PalmOS:

<http://www.theregus.com/content/54/25198.html>

Perhaps, Neal should give more consideration to a PocketPC port of Quartus.



By [Mike Will](#) on Wednesday, June 12, 2002 - 03:39 pm: [Edit](#)

I'm forced to agree with the article. Zen is a tough sell in Corporate America, despite Palm's early success. If you read "Piloting Palm", you'll realize that the Palm only ever happened because Hawkins and Dubinsky both had amazing tolerance for doors slamming in their faces. Folks like that are rare (outside of the Forth community 😊)

Mike



By [Neal Bridges \(Nbridges\)](#) on Wednesday, June 12, 2002 - 04:18 pm:

[Edit](#)

The market will determine success/failure -- and it may well be that non-Palm hardware running the Palm OS will succeed where Palm's own devices do not (see Sony, Handspring, etc.)

Despite superficial similarities, the PocketPC is not the same sort of product as the Palm. It occupies a smaller and decidedly different segment of the market, and shows no signs of moving in a direction that would take it closer to fitting into Palm's space.

Neal



By [Mike Will](#) on Wednesday, June 12, 2002 - 05:17 pm: [Edit](#)

It's not so much that I see PPC fitting into Palm's space but rather that Palm's space is disappearing. The directionless, non-spiritual culture at Palm is frustrating. OS 5 is problematic (see the article), and OS 6 seems destined to look like WindowsCE. I'd rather see a sleeker, faster OS 3 than just more bloatware. I like Handspring and I adore Sony, but they're not the ones developing the PalmOS.

The one mystery in all this is Motorola. I doubt if they concur with the "68K is dead, long live ARM" philosophy. They may have the next killer chip up their sleeve -- at least I hope so.

Mike



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 13, 2002 - 12:32 am:

[Edit](#)

Certainly they knew they'd have a gap to bridge between older and newer apps with OS5 -- that was a given. How well they can bridge it remains to be seen, but it has been their primary focus for obvious reasons.

I wish I knew what the future held; I'm not demanding really, just six numbers for the lottery would do nicely. 😊

Neal



By [Mike Will](#) on Monday, June 17, 2002 - 01:01 pm: [Edit](#)

Well, so much for the Motorola mystery. I read in a recent issue of "Handheld Computing" that Motorola is peddling its own licensed version of the ARM CPU. They're reportedly going to bundle in an MPEG4 codec and call it the Dragonball MXi, which promises full motion video even over wireless.

I guess the mad dash to ARM is pretty much complete.

Mike



By [Dave Bennett \(Dbennett\)](#) on Tuesday, June 18, 2002 - 09:02 am:

[Edit](#)

Palm, IBM, et. al. (well, not Microsoft) have the commonality of directionless leadership. Since the mid-1980s IBM has been jumping on the "me too" bandwagon with every new technology that comes out the door. Palm is directionless in another way- they have no idea what current Palm users are doing with their devices let alone what people actually want to do with them.

With folding screens and projected keyboards in the 2-3 year consumer product cycle I think Palm had better get a grip- or better yet, get some new leadership with a vision and the ability to set and reach tangible goals that mean something in the marketplace.

Dave



By [Mike Will](#) on Tuesday, June 18, 2002 - 11:15 pm: [Edit](#)

Less is more. Palm made a \$pile\$ by sticking to that principle religiously.

The correct direction is further miniaturization, elegant software design, and a better man-machine interface. Instead, they acquired Be and sailed off into a multimedia sunset. It's like Ferrari acquiring the Lada design team.

Mike



By [Dave Bennett \(Dbennett\)](#) on Thursday, June 20, 2002 - 07:29 am:

[Edit](#)

Palm has a habit of hiring successful development teams that have delivered commercially successful products in the past; like the Apple handheld team, the Grid team, and now the BeOS team. Yup, that'll work!



By [Kris Johnson \(Kdj\)](#) on Thursday, June 27, 2002 - 10:30 pm: [Edit](#)

Here's an article that features a less bleak outlook for Palm:

<http://www.brighthand.com/newsite/features/marketshare.html>

(I just post stuff like this so I can watch people argue with it. 😊).



By [Mike Will](#) on Friday, June 28, 2002 - 12:15 pm: [Edit](#)

When a tremendous lightning storm grounded all flights on the east coast for hours yesterday, I passed the time drinking at the bar. Through the haze, I watched the TV where panic stricken, beautiful blonde women read the obituaries of Enron, WorldCom, Arthur Andersen, etc. I believe something good will come from this (the corporate meltdown, not the drinking) -- a healthy distrust of hucksterism and hyper-BS.

Perhaps now when people are tempted to assume that PocketPC will win on flash and sizzle alone, they'll take a deep breath and reconsider. In the article, after Nagel spews the usual hyper-crap, he ends with "users continue to prefer Palm OS for value, for usability, for battery life, for reliability and for the enormous range and diversity of 3rd party software" -- precisely. Occasionally, salesmen speak the plain truth despite their best efforts.

I once worked for a company that made the most successful gadget in its field. Despite being ridiculously feature-poor, it had much longer battery life than all the rest. Boy, did that chap the asses of our pin-striped competitor's !

Mike

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Form Alert

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Form Alert



By [John Newell](#) on Friday, May 17, 2002 - 06:11 am: [Edit](#)

Hi,
I've used FrmAlert before without problems. The Palm OS Reference says that FrmAlert's purpose is to "Create a modal dialog from an alert resource and display it until the user selects a button in the dialog."
However, in an app. that I am working on it doesn't wait for a button click. It displays on the screen and just goes straight onto the next word without waiting for a button click. It does return a zero. Clicking a button on the alert then dispatches it. Has anyone seen this before and can suggest what I am doing wrong?

```
: IgnoreChanges ( -- flag )
true
ChangesMade if
  SGal_SSaband FrmAlert \ Ask "Abondon changes? Yes No
  0= if
    false to ChangesMade
  else
    0= \ Return false
  then
then
;
```

Regards
John

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Handera 330

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Handera 330



By [Mike Miller](#) on Monday, May 6, 2002 - 10:46 pm: [Edit](#)

Does anyone know if quartus forth will address the handera 330 virtual silk area? Are any special drivers, hacks, etc. needed?



By [Brian Chirgwin \(Bchirgwin\)](#) on Tuesday, May 7, 2002 - 01:16 pm:

[Edit](#)

Download the Handera 330 Development guides from <http://www.handera.com/support/developsupport.asp>. The API to the HE330 specific features are listed. I am working out the APIs myself.



By [mike miller](#) on Tuesday, May 7, 2002 - 08:50 pm: [Edit](#)

Thanks;

I'm a total newbe at this, did some programming in basic years ago in Atari basic, and a little in MS basic but this is a lot closer to the OS than I was used to then. I did some looking at the Handera examples of how to write to the silk area, but those are in "C". Downloaded the codewarrior demo, did some reading of their literature and have tried to determine what the Handera example is doing. So..... Do I understand right that to access the different Handera OS ?functions? is through systrap "is that right?" calls? I tried using regedit to place buttons on the silk area, but at this point I haven't figured out how.

The ultimate goal of this quest is to make my own "simple" hah" user defined keyboard, since a noted awesome commercial keyboard is not yet compatable to the Handera 330.



By [Jamie Cairns \(Jamie\)](#) on Wednesday, May 8, 2002 - 01:52 am: [Edit](#)

Brian - I'd be interested (if you dont mind) in seeing some samples of what you've done with the 330 stuff. The best I've been able to accomplish (though I haven't spent much time on it...) is hiding and showing the silk area, and a couple other relatively minor functions...



By [Brian Chirgwin \(Bchirgwin\)](#) on Wednesday, May 8, 2002 - 08:52 am: [Edit](#)

As soon as I have something I will post. Don't have anything working yet.

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Opinion sought on feasibility of a hack

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Opinion sought on feasibility of a hack



By [John Newell](#) on Wednesday, April 3, 2002 - 11:37 am: [Edit](#)

I am seeking opinions on the feasibility of the following hack:

Hack: HandsOff

For categories whose name begins with a certain character (e.g. !, %, ...), then prevent any updating of database records that are assigned to that category. i.e. pop-up a message "You are about to write to a protected category. Do you wish to continue. Yes No.". If Yes, continue. If No, return dmErrReadOnly or something else???

For example, this could be used to prevent writing to my !Forth Library category in MemoDB (but also has wider uses).

Any thoughts?

Regards
John



By [Neal Bridges \(Nbridges\)](#) on Monday, April 8, 2002 - 02:44 pm: [Edit](#)

That might be feasible, but I'm not sure how, say, MemoPad would react to the error return code.

Neal

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Recommendations for a new Palm to use with Quartus?

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Recommendations for a new Palm to use with Quartus?



By [Travis Casey](#) on Tuesday, March 26, 2002 - 02:54 pm: [Edit](#)

My old Palm VII has been too cramped for a while, and it's starting to act a bit flaky, so I'm in the market for a new unit. Right now, I'm thinking about either a Handera 330 or a Palm M130. Anyone out there using either one who can comment on it? I know Quartus can do color, but has anyone written stuff to take advantage of the Handera's QVGA screen?

--Travis



By [Jamie Cairns \(Jamie\)](#) on Wednesday, March 27, 2002 - 01:02 am:

[Edit](#)

Haven't had a lot of time to do any programming at all lately, but I actually did manage to get a couple of the extended functions working on 330 before getting sidetracked...

The Handera is great in terms of storage, and being able to read through code on the extended screen is nice, but haven't figured out exactly how to use RsrcEdit to setup a 240X320 screen yet...



By [Dave Bennett \(Dbennett\)](#) on Wednesday, March 27, 2002 - 08:55

am: [Edit](#)

I have actually been considering the Sony Clie. I would probably wait for the next generation release, but on a feature for feature basis, it appears to offer the most functionality. Also, since I have a Sony TV and a Sony VCR, they have built-in software that allows you to use the Clie to control those appliances. 😊 Sony always was ahead of the crowd when it comes to customers hooks.

The only thing I don't like about the current ones is that there is an 800k "demo" software that cannot be removed. So you've already lost a meg of space. A dumb move on their part, but knowing Sony, they'll fix this.

The only other thing I don't like is the size of all of these newer units. I am so spoiled by the Vx I've carried since it came out that I doubt I can successfully go back to the fatter unit. And now that I'm limited to lifting 2 - 5 pounds until the end of this year, the weight issue has become very important to me.

Dave



By [Mike Will](#) on Wednesday, March 27, 2002 - 11:21 am: [Edit](#)

Memory Stick technology pushed me into the Clié camp. They're tiny, cheap, and work with my VAIO notebook at the office, allowing me to shuttle work back and forth in my wallet. Also, they have no male/female pins to get jammed and are conservatively rated at 100,000 write cycles (1/2 million is more realistic). And once you look at a 760's screen there's no going back.

Mike



By [Kris Johnson \(Kdj\)](#) on Thursday, March 28, 2002 - 09:32 am: [Edit](#)

Sony has just released its newest Clie model, the NR70:
http://www.sonystyle.com/vaio/clie/nr70_index.shtml

Looks cool.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Thursday, March 28, 2002 - 10:51 am:
[Edit](#)

That looks pretty nice. I am also considering the Samsung phone/palm combination. It looks as if I will need a cell phone within the next year and this looks like a good option.



By [Mike Will](#) on Thursday, March 28, 2002 - 06:05 pm: [Edit](#)

The NR70 spec sheet says it has a 66 MHz CPU.
Would that still be a dragonball?

Mike

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Tandy WP-2

[Quartus Handheld Software: Discussion Forum: Everything else!](#)

Tandy WP-2



By [Mike Will](#) on Sunday, March 24, 2002 - 02:21 pm: [Edit](#)

This is a real odd-ball topic, but I appreciate tips from other Quartus users, so here's one from me.

I've found the Tandy WP-2 word processor to be a great complement to the palm. It does what the palm doesn't do, and nothing more. These units are similar to the Tandy 100/102's that came out in the 1980's, but they're much thinner and lighter. It has a full size, full travel keyboard and an 8x80 LCD screen, and runs on 4xAA alkaline or NiCad batteries. It has ports for printer, RS-232, cassette, DC power, and memory expansion. It also has an internal socket for a 32K static RAM chip. Many folks who were into Forth in the 80's have a few of these still kicking around. It has a great built-in word processor, spell-checker and telcom package. Best of all, these puppies can be had on eBay for \$10-\$20.

I love Palm computers for programming, record-keeping and general PIM apps, but they seriously suck as word processors. The WP-2 serves that purpose admirably, without adding much bulk or cost to deal with.

That is all. Carry on.

Mike

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Palm Loses Less Than Expected

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
Palm Loses Less Than Expected



By [Kris Johnson \(Kdj\)](#) on Friday, March 22, 2002 - 09:48 am: [Edit](#)

In a "victory" of sorts, Palm reported a smaller loss than expected for the third quarter.

See <http://money.cnn.com/2002/03/21/technology/palm/index.htm>

-- Kris



By [Kris Johnson \(Kdj\)](#) on Friday, March 22, 2002 - 09:53 pm: [Edit](#)

And PALM stock went up over 20% today. It's still at less than a tenth of what I paid for it fifteen months ago, but anyone who bought PALM yesterday is probably pretty happy. Handspring had a healthy gain as well.

-- Kris



By [Mike Will](#) on Saturday, March 23, 2002 - 06:36 pm: [Edit](#)

Palm shareholders reported a much, much greater loss than expected in the third quarter. And the fourth quarter. And pretty much every other quarter.



Kris, have you read "Piloting Palm" ? (currently on several best seller lists) I found it a great read and a real eye-opener. I wish I knew then what I know now.

Mike



By [Kris Johnson \(Kdj\)](#) on Saturday, March 23, 2002 - 09:31 pm: [Edit](#)

I haven't read the book. But I can probably afford to buy one book after selling all my PALM stock on Friday. 😊

I plan to keep using Palm OS handhelds for as long as people keep writing apps for them. But I predict that Microsoft will get the upper hand in handhelds within a few years. When a Win CE PDA with equivalent ease-of-use and price is available, I'll give up on Palm. Just like I gave up on Macintosh when Windows 95 appeared.

The problem with "innovative" companies like Apple and Palm is that they really need to keep on innovating, but instead they tend to try to exploit their One Cool Idea forever, and so they lose their lead whenever the imitators like Microsoft copy the idea.

-- Kris

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Doc file format

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Doc file format



By [John Newell](#) on Tuesday, March 19, 2002 - 01:32 pm: [Edit](#)

Can someone point me in the direction of the definition of the Doc file format.
Thank you.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Tuesday, March 19, 2002 - 01:46 pm: [Edit](#)

See <http://www.nicholson.com/rhn/pilot/doc.txt> for one description.

-- Kris



By [John Newell](#) on Tuesday, March 19, 2002 - 02:05 pm: [Edit](#)

Kris,
Thanks for your reply. I did find that one (although it was the only one I did find). It's OK as far as it goes but does not explain what a "Sequence" class is. I have looked at the \ doc memo and tried to decode what it does. I think I have it worked out but would like documented confirmation.

Regards
John



By [Kris Johnson \(Kdj\)](#) on Tuesday, March 19, 2002 - 03:32 pm: [Edit](#)

See http://www.pyrite.org/doc_format.html for a more readable description of the format.

You might want to check <http://www.geocities.com/mpicker0/DocReader/DocReader.htm>, which has source for Doc compression/decompression (in Object Pascal, but you should be able to figure it out).

-- Kris



By [John Newell](#) on Wednesday, March 20, 2002 - 06:20 am: [Edit](#)

That's great Kris. Thank you.

Regards
John

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ROM manipulation

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
ROM manipulation



By [Jim Hendricks \(Jimh\)](#) on Monday, March 18, 2002 - 10:52 am: [Edit](#)

Just got a call from my brother asking about manipulation of the OS stored in Flash. He has a CLIE and was disappointed to find out that there is over a meg of stuff in the OS portion of the Flash ROM that he doesn't use. He was asking me if I knew of anything available to allow him to download the Flash to a PC, manipulate the flash image to eliminate the OS add-ons he doesn't use, then reflash the device with the trimmed down OS. I wasn't sure what's available, but I told him I would ask around.

Anyone know of anything? My brother is not a programmer, just a user, so he would need something somewhat user friendly.

Jim



By [Matthew Burke \(Mmb\)](#) on Monday, March 18, 2002 - 11:59 am: [Edit](#)

You can take a look at <http://romeo.sourceforge.net>

I'm not sure how user friendly it is---I haven't used it. But I have seen some references on various mailing lists to happy users.



By [Brian Chirgwin \(Bchirgwin\)](#) on Monday, March 18, 2002 - 12:18 pm: [Edit](#)

Try <http://www.brayder.com/products/jacksprat.html> not sure if it works for the CLIE.



By [Jim Hendricks \(Jimh\)](#) on Monday, March 18, 2002 - 01:24 pm: [Edit](#)

Thanks Matt, I gave it a quick look, and this might just be the ticket. Looks like this also gives you the ability to store stuff in flash without FlashPro or JackFlash etc. It looks easy enough to use for my brother. He's not a programmer, but he is in the technical fields so I probably shouldn't have said user friendly. He doesn't know anything of the internals of the Palm, but he can follow directions.



By [Jim Hendricks \(Jimh\)](#) on Monday, March 18, 2002 - 01:27 pm: [Edit](#)

Brian,

It looks as if JackSprat will only allow elimination of the alternate language files if available. In my brother's case, he's looking to eliminate the 800k demo app that comes on the CLIE. Thanks just the same.



By [Brian Chirgwin \(Bchirgwin\)](#) on Monday, March 18, 2002 - 02:25

pm: [Edit](#)

Actually, version 2.0, which is in beta but available to paid users, allows deletion of applications. I also have used JackFlash to install replacements into ROM. I do not know if it works with the CLIE. I do know it worked well with my TRGPro.

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Link not working

[Quartus Handheld Software: Discussion Forum: Everything else!](#)

Link not working



By [Dave Bennett \(Dbennett\)](#) on Friday, February 15, 2002 - 01:16 pm:

[Edit](#)

There were no messages when I clicked on Last Day so I clicked on the link to the Wiki changes. When I put the mouse pointer over the link, a web address shows in the action window, but clicking on it doesn't cause any action. Nothing happens at all.

Dave



By [Neal Bridges \(Nbridges\)](#) on Friday, February 15, 2002 - 01:30 pm:

[Edit](#)

That might be a local problem, Dave, as it works here. Try again; let me know if it persists.

Neal



By [Dave Bennett \(Dbennett\)](#) on Friday, February 15, 2002 - 03:09 pm:

[Edit](#)

Well this is weird. I used to be able to clike on the "Main Wiki Page" in the menu frame and get there; now I cannot. If I click on "Main Wiki Page", nothing happens. However, if I follow that click with another click on a blank area of the menu frame, the Main Wiki Page then loads in the other frame! This was working ok last week so I don't know what the issue is. Not a big problem, but strange at the very least.



By [Kris Johnson \(Kdj\)](#) on Friday, February 15, 2002 - 05:41 pm: [Edit](#)

The wiki link works for me. It was very, very slow the first time I clicked on it, but now it is fine.

I'll take a closer look later.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Saturday, February 16, 2002 - 10:58 am: [Edit](#)

Hmmm. It may be that it is just slow. 😊

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Another attempt at re-entering the fold...

[Quartus Handheld Software: Discussion Forum: Everything else!](#):

Another attempt at re-entering the fold...



By [Matthew Blair \(Blair\)](#) on Wednesday, January 30, 2002 - 09:21 am:

[Edit](#)

Wow! I've been gone for a little less than a year, and it seems like this forum has grown by leaps and bounds...

Well, I'm making another attempt at using a Palm again, and I'm trying to decide which Palm platform to buy. I think I would like to buy one of the older Palms, either a Palm IIIx, IIIxe, or Vx.

Anyone here have any opinions, warnings, suggestions regarding the above three models? And also, if you've got one of the aforementioned models that is in good condition and want to sell it, please shoot me an e-mail and maybe we can come to terms! I'd much rather buy a used Palm from someone here...

Thanks for any and all suggestions!



By [Brian Chirgwin \(Bchirgwin\)](#) on Wednesday, January 30, 2002 -

10:07 am: [Edit](#)

I'd recommend the TRGPro (www.handera.com). It is a modified Palm III with a CF slot. Some used ones are available from ebay. An advantage is the backup program that does a backup/restore of the Palm Memory to a CF card. This will allow you to save your Palm data before running untested code. Maybe you are better at coding than I am, but I have on occasion had to perform a hard reset. (Very rare, but I haven't been programming much lately either). I like having the ability to back up my Palm data while away from my desktop as well. Of course, I use my palm for more than just programming it.

In addition the CF card with a CF enabled doc reader (iSilo, TealDoc, and others) will allow you to carry all the documentation as well. Documentation you may want include the Quartus docs, Palm OS API, DPANS 94 ANS Forth Specification.



By [Jamie Cairns \(Jamie\)](#) on Wednesday, January 30, 2002 - 11:18 pm:

[Edit](#)

I'll second the vote for the TRGPro, and add that if you watch the Handera site, every now and then they sell refurb at \$99 each. (Yeah, I know - it's a refurb, but they have pretty high standards, in my experience)

Jamie

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Programmer Down!

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
Programmer Down!



By [Dave Bennett \(Dbennett\)](#) on Tuesday, January 29, 2002 - 11:02

am: [Edit](#)

Thanks to Neal for letting me post this here.

I somehow hurt my neck/spine in early December and cannot work at all right now in the woodworking or farming professions. I haven't been to work yet this year because there is NO lifting of any kind whatsoever. I am having a medical procedure called an epidural (injection into one's spine) weekly that tries to block the severe pain in my neck and right arm. That and the drugs pretty much render me useless to a certain extent physically. Fortunately when I designed my home office I was smart enough to put a day bed in it.

I'm scheduled for surgery on Feb. 22 and won't be able to start rehabilitating for any kind of lifting over 5 pounds until June 1st.

However my brain is still working. (Well, that's what I call it.)

I am looking for some kind of alternative work I can do right now to generate some small amount of income while helping me stay sane, or at least focused and feeling useful.

If anyone on the forum has any need for someone to write or edit end-user or technical documentation or something along those lines, or actually anything you can think of that may be apropos, please let me know.

Thanks.

Dave

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Read only categories in pedit

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)

Read only categories in pedit



By [John Newell](#) on Tuesday, January 29, 2002 - 09:26 am: [Edit](#)

I have posted this message on the peditors message group at <http://groups.yahoo.com/group/peditors/messages>

I anybody is interested in readonly categories in pedit would they please respond.

Greeting from one of the earliest peditors. I am sorry if this post is rather long but if you are a program developer using pedit extensively (like me) I think you will be interested. Jump to the end if you aren't interested in the arguments. Anyway, here goes...

A long time ago I tried to get Paul to implement a way of making memos readOnly. He implemented, in May 2001, \$READ_ONLY\$ text string to be included in a read only memo. I have just discovered this and sent Paul a memo, thus:

"I have only just discovered the readOnly option in pedit. You seem pleased with it from your comments in the Development History but I note that it is not at all what I asked for and is relatively useless for what I want to do. I have a library of memos in categories, supplied from other sources, which I want to lock so that I don't change them. They get included into programs that I write and I need to reference them in pedit to check on required arguments etc. The !Cat was what was asked for and what I thought you had agreed to implement. I had already renamed one category to !Forth Library in readiness for that. I am certainly not changing 81 memos that don't belong to me to include additional text strings. Perhaps it is useful for your own memos but not for memos from another source."

So the idea was that a memo in any category whose name began with the ! character would be treated as read only. There would, however, be a way to temporarily unlock one of these memos if required.

Paul has replied thus:

"Sorry, John, I reserve the right to implement things the way I think is appropriate. I am not saying that your idea is not good. It is, in fact, excellent. However, yours had potential danger.

If an innocent user has an innocent !Cat, he is stuck.

So the next step is to make !Cat optional. This really leads to bloating.

I have a deal for you. Join the Forum. Explain your position as opposed to the current implementation.

If you manage to get 5 more people who insist that your idea should be implemented, I will [if I can].

OK?"

So that's what I am doing. Are more than 5 people interested in my idea that a memo in any category whose name began with the ! character would be treated as read only? There would be a way to temporarily unlock one of these memos if required. I look forward to your responses.

Regards

John

P.S. I wonder if Paul now include me, and another Quartus Forth user that I know of, in the count?



By [Dave Bennett \(Dbennett\)](#) on Tuesday, January 29, 2002 - 05:45

pm: [Edit](#)

I was one of the first to use pedit. I quit when Paul threw every PalmOS API he could into the thing, bloating it (at that time) to over 240k to just edit memos! (This was before extended memos and DOC files.) I don't need an editor that tells me my battery level.

I agree with you. What Paul needs to do is to concentrate on delivering editing functions for the real world in pedit. His remark, "I reserve the right to implement things the way I think is appropriate." is correct, but doesn't show someone willing to implement things that are not done "his way". Not a good position for someone that charges for "his way" or the highway. 😊

Perhaps an RO flag will be added to the next version of the Palm OS...

I think the whole issue of how Q4th handles include files needs to be addressed. Look at the wiki and all the modified versions of Neal's files with the same names. Not a pretty thing to try to keep track of on the Palm. And knowing without doubt which one of the same name is being included when is a logistical chore. The whole mess ends up looking like the Windows DLL game.

Perhaps a well defined naming convention with allowances for 3rd party extensions. i.e.; all Q4th libs start with q4- others with an (assigned?) prefix. All libs that were not standard that relied on each other (such as the MathLib set) would all have the same prefix.

As Q4th grows to include more and more specialized subsets, this will become a more critical issue.

Dave



By [Heather Risedorph \(Rise1525\)](#) on Wednesday, January 30, 2002 - 05:34 am: [Edit](#)

I'd also be interested in being able to go to a page to view all that's available at this time. There's code in the user contrib section of Quartus, more on the Wiki's version, then content in various messages (snippets in this discussion and files to download in messages on the Wiki).



By [John Newell](#) on Tuesday, June 18, 2002 - 07:43 am: [Edit](#)

pedit users,

A while ago I asked Paul to include a feature in pedit whereby you can lock memos in a category (e.g. Forth Library) to prevent them being overwritten.

pedit now allows you to lock memos in a category by beginning the category name with a special character (default !). When the memo is in a locking category it cannot normally be overwritten. However, you can temporarily unlock the memo, change it, and then lock it again. If the memo is moved e.g. to Unfiled it is unlocked.

Works pretty good.

Regards
John

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Examples of good and bad code

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Examples of good and bad code



By [Matthew Burke \(Mmb\)](#) on Saturday, January 19, 2002 - 06:38 pm:

[Edit](#)

I'm going to be giving a lecture on Forth and thought I'd see if anyone has any particularly stellar (or abysmal) examples of Forth code.

I won't attribute the stinkers and will give full credit for the gems .

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Is it true, RsrcEdit is now a Quartus product

[Quartus Handheld Software: Discussion Forum: Everything else!](#): Is it true, RsrcEdit is now a Quartus product



By [Jim Hendricks \(Jimh\)](#) on Wednesday, January 16, 2002 - 06:57 am:

[Edit](#)

If this is true Neal, thanks for taking up the torch! I had contacted Indeo the moment I heard the news of their breakup in hopes of a few things:

- 1) become the maintainer of it myself
- 2) convincing them to go open source
- 3) turning it over to the Quartus community

So, please give us the details, what all will happen with this transaction?



By [Neal Bridges \(Nbridges\)](#) on Wednesday, January 16, 2002 - 02:14

pm: [Edit](#)

It is true -- Quartus is acquiring the rights to RsrcEdit. The transaction is still in process, but I'll have more details later.

Neal



By [John Newell](#) on Thursday, January 17, 2002 - 07:50 am: [Edit](#)

Very good Neal. Now you can put in all those improvements that we wanted IndVideo to make. 😊

Regards
John

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Number of Palm apps

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Number of Palm apps



By [Dave Bennett \(Dbennett\)](#) on Monday, January 14, 2002 - 06:12

pm: [Edit](#)

I'm trying to get an idea of the number of palm apps there are available. I've sent emails to several of the large download sites, and palm, and have received no answers. Does anyone have any information on this topic? Thanks.



By [Kris Johnson \(Kdj\)](#) on Monday, January 14, 2002 - 09:11 pm: [Edit](#)

The Palm OS Software Connection at <http://www.palm.com/software/> claims over 10,000 titles available.

The home page at PalmGear says there are 13,362 software titles available there.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Tuesday, January 15, 2002 - 12:12

pm: [Edit](#)

I finally found this in a Palm press release FAQ.

"As of December 2001, more than 175,000 developers had registered to create solutions for the Palm OS platform, while more than 12,000 software titles and numerous developer tools and services are already available. Developers are writing Palm OS platform applications in a broad range of categories, including contact and schedule management, email and Internet communications, sales force and field automation, personal productivity, groupware, financial management, and games."

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PalmGear trying to die.....

[Quartus Handheld Software: Discussion Forum: Everything else!](#)
PalmGear trying to die.....



By [Wade Carlson](#) on Wednesday, December 5, 2001 - 07:15 pm: [Edit](#)

Hears a letter I got from Handango today. It looks like PalmGear lost out on their exclusive contract with Palm.com. (When you went to Palm.com and clicked on software you would be linked to PalmGear). Apparently, Palm is experiencing as much trouble with PalmGear as developers are, and has decided to go with Handango:

Tomorrow, Handango and Palm will be announcing a Major Strategic Partnership and Alliance through which:

- 1) Handango will exclusively power the Palm Software Connection
- 2) Palm and Handango will collaborate on Enterprise sales, including Palm's Enterprise Alliance Partners.
- 3) Palm and Handango will market Palm OS software through in-box CDs and email marketing.
- 4) International exposure will increase through Palm's international sites, including Europe, already powered by Handango.
- 5) Handango Software partners will be required to follow Palm's trademark guidelines.

Handango's Palm OS software partners are the beneficiaries of this relationship. Your sales will benefit greatly from the increased exposure, marketing, and merchandising. The only action you must now take is to ensure that your software and descriptions comply with Palm's trademark terms. This must be completed by December 15 at the very latest to prevent your Palm powered program from being removed from the Palm.com site.

Please let me know if you have further questions. Below are further details on the partnership. We're excited to work with you to make this successful!

Will Pinnell
Director of Business Development, Palm OS
Handango
305 NE Loop 820, Ste. 200
Hurst, TX 76053
www.handango.com
<mailto:will@handango.com>
Toll Free: 877-725-6246
Direct: 817-548-2171
Fax: 817-280-9628

Handango has partnered with Palm, Inc. to form a new handheld software alliance and partnership to increase the sales of your Palm Powered software. Through this alliance, Handango will now exclusively power Palm's Software Connection. In addition, Handango, together with Palm, will collaborate to provide your software solutions to both Palm's enterprise sales force and to its customers through trial versions available in the box of all Palm branded devices.

1) PALM SOFTWARE CONNECTION

Palm's Software Connection has been completely redesigned to make software applications and solutions easier to locate and purchase, presenting users with a convenient location and new specific software categories from which to choose. In addition, over the next several months Handango will be redesigning and updating its categories to make it easier for you to better categorize your products and target visitors to both Handango and the Software Connection.

2) ENTERPRISE SALES

Handango is also joining forces with Palm, Inc. to serve its growing enterprise market. Handango's handheld software coupled with Palm's robust devices will offer enterprise customers your dynamic handheld solutions. Both of our sales teams will collaborate on customer consultations to provide a complete solution to enterprise customers. Handango will also work closely with Palm's Enterprise Alliance Partners to educate them on the latest software available for Palm OS devices. Quality and complete product information from you will be critical to making this a success!

3) MARKETING

In 2002, all Palm devices will be shipped with a CD catalog of Handango trial software to introduce customers to the latest available Palm powered applications. Palm will also highlight featured software in their company's popular email newsletters including InSync Online, InSync Online (Enterprise Edition), What's In Store, and the Palm Voice.

4) INTERNATIONAL

This multi-faceted partnership is an extension of Handango and Palm's international initiative to target European customers previously announced to you in July. Together, Handango and Palm will continue to provide opportunities for the entire Palm Economy, the community of platform licensees, and developers of the Palm OS platform.

5) TRADEMARK POLICIES

In accordance with Palm's Trademark rules, we request that you verify and ensure your software applications and descriptions are compliant with Palm's specific Trademark rules and guidelines located at <http://www.palm.com/about/trademark.html> by December 15, 2001. Thank you for your attention to this matter! As stated in our previous developer newsletter, if you do not comply with the Palm Trademark rules, we will not be able to sell your products on any of Palm's sites.

The Software Connection went live at noon PST today. To access and checkout the new Handango and Palm Software Connection Store, please visit www.palm.com or go directly to <http://www.palm.handango.com>. Handango and Palm's European joint site can be found by visiting <http://palm.handango.com/europe>.



By [Kris Johnson \(Kdj\)](#) on Thursday, June 20, 2002 - 02:16 pm: [Edit](#)

How is PalmGear doing these days? I'm thinking about distributing a commercial app. Are they up to date on paying their developers?

I have a personal beef with Handango, based upon past treatment. I'd prefer to go with PalmGear. But if PalmGear is not treating its developers well, then...

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Thursday, June 20, 2002 - 02:26 pm:
[Edit](#)

PalmGear claims it will be paying in July for June's sales. However, they're stepping completely over five missing months of back-payments, claiming they'll get to them when they can. It's an ugly bit of business.

Neal

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Handspring Treo

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Handspring Treo



By [Kris Johnson \(Kdj\)](#) on Friday, November 30, 2001 - 01:36 am: [Edit](#)

There's a review and discussion of the upcoming Handspring Treo on Slashdot:

<http://slashdot.org/article.pl?sid=01/11/29/2213248>

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, April 8, 2002 - 05:10 pm: [Edit](#)

Another Slashdot Treo review has appeared:

<http://slashdot.org/article.pl?sid=02/04/05/1718252>

-- Kris

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Forum strangeness

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Forum strangeness



By [Dave Bennett \(Dbennett\)](#) on Saturday, November 24, 2001 - 02:25 pm: [Edit](#)

Neal,

Today I clicked on the "Last week" button and only got three threads showing. (Which wasn't correct.)

I then clicked on "Topics" and selected "Quartus Forth (Palm OS Topics)". I tried to post a reply in a thread and got a "* 23/1475 not in tree file! *". I tried a "post" anyways and got a page with this title on it: "Error writing file 23-tree.txt". The rest of the page had "

Received content is zero length. File write was aborted for safety reasons. Please click 'Reload Frame' to try again.

Please contact Neal Bridges if this problem persists. "



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 02:27 pm: [Edit](#)

Curious. The "Last week" view seems to be working for me.

I'll re-index; let me know if it helps.

Neal



By [Kris Johnson \(Kdj\)](#) on Saturday, November 24, 2001 - 05:27 pm: [Edit](#)

FWIW, it seemed like it "broke" early this morning right after I added a post (which disappeared). I got the same error message ("not in tree file").

Everything looks okay now, but I saw the same behavior Dave Bennett did.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, November 24, 2001 - 05:33 pm: [Edit](#)

Thanks for the reports, gentlemen. Let me know if anything odd happens.

Neal

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Nostalgia

[Quartus Handheld Software: Discussion Forum: Everything else!:](#) Nostalgia



By [Hans Nordstrom](#) on Wednesday, November 14, 2001 - 06:19 pm:

[Edit](#)

I just stumbled on something. A www archive with 10 billion pages from the beginning. Well then, almost. Here's an appetizer:

[Neal Bridges site - 1999.2.25 11:59](#) It's about 10 days before the launch of Quartus v1.21.

If there's a site that has vanished, and you still have the URL, there's a chance that you might dig it up here.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 -

06:38 pm: [Edit](#)

That's a blast from the past, Hans. Thanks. 😊

Neal



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 -

06:49 pm: [Edit](#)

Here's one level deeper yet --

<http://web.archive.org/web/19990202142825/www.interlog.com/~nbridges/p4th.html>

Neal



By [Kris Johnson \(Kdj\)](#) on Wednesday, November 14, 2001 - 10:54 pm:

[Edit](#)

I like the artwork links. Are those images available on the current Quartus site somewhere?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 -

10:56 pm: [Edit](#)

Thanks. That's all on another site -- <http://www.nealbridges.com>

Neal



By [Mike Will](#) on Monday, November 19, 2001 - 06:18 pm: [Edit](#)

Somewhat unrelated, but interesting just the same. I've been reading a lot about robotic space exploration lately due to the pervasive use of Forth that survives in this field. The most stunning success in history was the 1997 Mars Pathfinder mission. Do you know what processor powered that puppy? An 80C85 ! Suddenly I don't feel quite so antiquated and useless 😊

Read on...

<http://www.writing-teaching.com/article-pathfinder.htm>

Mike

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Letter from PalmGear

[Quartus Handheld Software: Discussion Forum: Everything else!](#): Letter from PalmGear



By [Wade Carlson](#) on Monday, November 12, 2001 - 08:20 pm: [Edit](#)

Warning: Long Post:

November 12, 2001

These are interesting times for the hand held business. While much of the discussion involves Microsoft's efforts to displace the Palm OS and Palm's current strategy, there also seems to be quite a lot of speculation about PalmGear.com and its future on some of the developer chat boards. I thought it would make sense to communicate to each of you candidly my thoughts about PalmGear's condition and its plans for the future.

Some of you have inquired about PalmGear's plans for the future, particularly in light of current accounts payable. I want you to know that we have great future-a future that includes me and includes all of you. This is not to say that we haven't had our share of challenges and that we won't have to face other challenges. We remain the number one site for Palm OS related software, and we intend to retain this distinction. As you know, most retailers have experienced a downturn since the events of September 11th. We were not spared from this downturn; however, as most of you are seeing in your own product sales, total sales at the site have been improving weekly since that time and are now in excess of the sales in the week prior to September 11. We look forward to an excellent Christmas season.

As we have told you in prior mailings, we continue to invest in our site to assure you and our customers that we can and will meet all performance goals in the hectic Christmas season. Recently we made the decision to switch MSP's (Managed Service Provider) from a local firm in the Dallas area to Verado, a nationwide firm. We also made the decision to relocate our servers to Verado's secure facility. We have been busy working on this move to assure that all the bugs would be worked out prior to the holiday shopping season. I am happy to announce that the move has been completed and, while we did have a few hours of site outage, it was overall a relatively painless experience.

I imagine that many of you are wondering what our response will be to the increased pricing recently announced by Handango. We understand their reason for their increase in pricing; it is no secret that, despite what some of you believe, this is a low margin business. You may rest assured that we will continue to offer our developer partners pricing below that of the 30% split recently announced by Handango. We have not as yet completed our determination of what our exact response will be therefore I can only ask that you be patient and rest assured, we will keep you informed.

On another note, I was disappointed to read postings by what I hope are a few uninformed developers who complain that PalmGear's current charges are excessive for "processing credit cards". In fact, we operate on an extremely small margin. We don't view PalmGear.com as a credit card processor, we pay banks to process credit cards. What we think we do best is to drive your product sales by providing customers a complete site for all of their questions about their PDA and access to a marketplace full of add on programs that can enable them to get the most out of their Palm OS appliance. We think we have been successful doing this. I think that most of you would agree that our success is why your sales on our site are so much more than your sales on other competing sites.

With respect to the issue of our accounts payable, I want to thank the vast majority of you that have shown such patience with us and concern for us. We are making progress paying down our high developer payables. This progress is clearly slower than we, and you, would like, but absent higher margins, it is the best we can do in the short term. We apologize for the situation, but it was not of our choosing. We recently emerged from costly litigation that drained much of the PalmGear's cash flow. Please remember that it was Handango's majority investor that sued us, NOT the other way around. Given Handango's recent pricing changes I can only imagine what they would have done if their investor had succeeded in acquiring us, or driving us, their only real competition, out of business. Another significant expense was the over \$1 million spent upgrading the site to make it more effective and increase downloads and hopefully sales.

Finally I wanted to let you all know of changes to our policies and procedures. Certain developers are abusing PalmGear.com's site, they post trial versions on our site to get the exposure that aids their sales, but direct final purchasers to another site to avoid our fee. Many of these developers have even gone so far as to specifically mention competing sites within the description of the software they submit to our site in regards to purchasing! This is an abuse of our site and our policies. Computing power is not free, we pay for fast internet access, we pay for the software and hardware that run our computers. We use the money we collect from sales to pay these expenses, depriving us of revenue hurts us as well as the developers that are playing by the rules. We will de-list all software versions of software that is not offered for sale on PalmGear.com but is sold through another outlet (developer site with paypal, esellerate.com,) We will do this without further notice. If your software is for sale, then it must be offered for sale on the PalmGear.com site, otherwise it will be removed from the site (this includes trial versions). For any of that may not be aware, this is no different than the policies of Handango.... This is

good not only for us but for the developers whose software is sold via our site in that competing software that is not sold would not be listed.

In summary, PalmGear.com will continue to be your home for the best that the Palm OS community can be. We will continue to focus on customer service-both our loyal developer partners and our customer base. We believe the market for Palm OS software will grow in coming months into markets previously not yet tapped. Together, we will build upon a strong foundation and, together, become highly profitable.

As always, I am happy to hear from you about specific questions and to hear any suggestions you may have. Until then, please accept my best wishes for a happy, healthy and prosperous holiday season and new year.

Best regards,

Kenny West
President
PalmGear.com
THE One Stop Source for Your Palm Connected Organizer!
<http://www.palmgear.com>

I don't know about you, but I still haven't been paid for August (I just got July's payment). I imagine all of us are having trouble receiving payment, but what gets me the most is that their computer system is 'dropping' sales as well (a customer purchases my product but I never get notice of the sale and hence the customer gets angry).

They state there has been a drop in sales since Sept 11th, but I have not seen any drop in sales for my products (just a drop in sales through palmgear since I have switched to a different vendor).

They continue to whine about how it was 'them'(Handango) who sued us(PalmGear), but yet they have done nothing to solve their internal problems. Yes, they won the lawsuit, but I find it hard to believe they were totally innocent (why did the lawsuit arise in the first place?). In a sense, PalmGear is 'suing' it's fellow developers by not paying them the money they are owed. I don't know about you, but I have christmas presents to buy, bills to pay, etc. If I don't pay my bills, I get bill collectors at my door. Why shouldn't PalmGear be held to the same standards?

Now they are saying they are going to remove our products if we don't sell exclusively through them. I think that PalmGear is digging it's own grave. They are threatening us when they are the one's that owe us money.....



By [Neal Bridges \(Nbridges\)](#) on Monday, November 12, 2001 - 08:44

pm: [Edit](#)

I can't say what the end result of their current business decisions will be. They remain a valuable conduit; I would not like to see them fold.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, November 12, 2001 - 09:13 pm: [Edit](#)

"Now they are saying they are going to remove our products if we don't sell exclusively through them."

That's not how I read it. I think they are only de-listing products that are advertised on PalmGear, but cannot be purchased from PalmGear. That seems fair to me.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Monday, November 12, 2001 - 09:14 pm: [Edit](#)

That's my read on it, too.

Neal



By [John Newell](#) on Tuesday, November 13, 2001 - 10:19 am: [Edit](#)

And mine.

John



By [Brian Chirgwin \(Bchirgwin\)](#) on Tuesday, November 13, 2001 - 12:00 pm: [Edit](#)

Mine take too, but I have other questions.

Palmgear states it wants to be a complete Palm site for all your palm needs. Yet it is getting rid of a lot of products off the site. Is Palmgear going to allow free products to be listed? A % of 0 is 0 and palmgear won't make money but not listing these free products makes the site less valuable and not a complete site.

If palmgear wasn't having the problems with orders being lost, I do not think developers would be mentioning to go elsewhere for orders. At least there would be much fewer developers doing this. In fact, I have seen some of the descriptions saying that orders are being lost off of Palmgear, please order from Handago. My last few orders on palmgear have taken sometime. Quartus, which was a while ago, took a few days since Neal wasn't notified of orders right away.

When a file is loaded on Palmgear, they should have an option for Sell at Palmgear or Advertise only. Sell means a % of the sale price is taken as payment by palmgear. Advertise means a flat rate of x \$ per month charged up front. Link to buy can point to anywhere (competitor or developer site). This is the best of both worlds. Palmgear remains the COMPLETE site.

I have noticed beta software on Plamgear site. I would, when I have my first product finished, like to list it as beta on Plamgear, but not charge for it. Does palmgear's new policy allow me to do this or will they remove it? I do plan on selling the product when it is ready.

 By [Kris Johnson \(Kdj\)](#) on Tuesday, November 13, 2001 - 01:19 pm: [Edit](#)

It's not clear how freeware is going to be handled. The letter does say "If your software is for sale, then it must be offered for sale on the PalmGear.com site", which can be interpreted to mean that software that is not "for sale" elsewhere won't be removed.

-- Kris

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 13, 2001 - 02:30 pm: [Edit](#)

West specifically limits his remarks to for-sale products, with freeware remaining unaffected.

Neal

 By [Mike Will](#) on Wednesday, November 14, 2001 - 10:23 am: [Edit](#)

So, if we have commercial/shareware stuff, we can list it with both Handango and PalmGear, provided it can be purchased at either location?

Mike

 By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 14, 2001 - 11:15 am: [Edit](#)

That's my understanding.

Neal

 By [Dave Bennett \(Dbennett\)](#) on Wednesday, November 14, 2001 - 06:14 pm: [Edit](#)

I looked at Handango's page and it doesn't look like they are interested in handling "freeware".

 By [Kris Johnson \(Kdj\)](#) on Wednesday, November 14, 2001 - 10:57 pm: [Edit](#)

There are lots of freeware apps available from Handango, unless they've changed their policies.

But it's true that they aren't "interested" in freeware. They want to make

money by selling apps. They even "sold" my freeware JacksOrBetter program as part of a package for a while (no compensation to me of course).

-- Kris

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M505 color

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
M505 color



By [Ronny Svensson](#) on Wednesday, November 7, 2001 - 05:53 am: [Edit](#)

I borrowed a m505 from a customer to fix a program that didn't work (IR). My program has a simple picture with pure colors (red and yellow). When testing the program I noticed that the colors looked EXTREMELY washed out (the yellow looked orange). I was testing the program indoors and compared with a IIIc the difference was like night and day!

So I wonder:

- a - is there something wrong with my customers m505?
- b - is there some problem with 8-bit color on the m505?
- c - is it supposed to look like this?

Ronny



By [Kris Johnson \(Kdj\)](#) on Wednesday, November 7, 2001 - 08:02 am:

[Edit](#)

The m505's color is a little weird. You might want to check another m505 to see if it is similar.

-- Kris

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Problem Related to Palm OS API's

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Problem Related to Palm OS API's



By [Nikhil](#) on Saturday, November 3, 2001 - 05:45 am: [Edit](#)

I am using Palm OS API "UIBrightnessAdjust()"
On hardware that supports a brightness setting, this function displays a dialog that allows the user to change the brightness level.

On hardware that has a backlight, this function toggles the backlight. This is implemented only on Palm OS 3.5 or greater. For the Palm OS prior to 3.5 we are searching for the API. So If you have any idea pl'z let me know...

My second problem is related to the WinDrawBitmap API.

The PalmOS Docs says that this API automatically selects the nearest depth Bitmap available, if it does not find the proper depth Bitmap. I have tested on PalmOS 3.3 v series device (Default depth 2-Bit) It supports the 4-bit Color Display. Now I change the display mode to 4-bit programmatically using "WinScreenMode()" and tried to draw a bitmap from a bitmapFamily (having the bitmaps of different bit depth from the current display mode for example : Drawing 1-bit and 8-bit bitmaps in window with 4-bit display mode) Using WinDrawBitmap() it gives me Error. This function works properly with other PalmOS and device series.

Why is it so do you have any idea and how to convert bit depth of the Bitmap while Drawing in a window of different bit depth ?

My third Problem is related to the SysBinarySearch() API.

I am using this API for searching my records in sorted list as described in PalmOS Reference.

I am getting desired results but sometimes in the call back function "SearchF" the address of array element comes invalid causes the Bus Error. This problem comes in PalmOS 3.5.

What may be the reason of this problem and how to solve it...?

You can mail me at nikhil_suhane@yahoo.co.uk
nikhil_suhane@hotmail.com

Thanks

-Nikhil

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Linux Newbie wants to have forth on System

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Linux Newbie wants to have forth on System



By [Leland Williams \(Leland\)](#) on Sunday, October 21, 2001 - 05:46 pm:

[Edit](#)

I just went full-on linux with my system, and I am so glad to be rid of windows, I just can't cease to praise linux.

But, I want a linux compatible forth to have on it, especially one that can substitute for bash for scripting purposes.

Can anyone make a recommendation?



By [Kris Johnson \(Kdj\)](#) on Sunday, October 21, 2001 - 08:44 pm: [Edit](#)

gforth is the most full-featured Forth available for Linux. pforth and kforth are okay too.

I'm not sure which would be best for scripting.

If you feel like doing some hacking, you may want to take a look at my guiforth, which is a pforth derivative with (woefully incomplete) FLTK and Linux system call bindings. See <http://guiforth.sf.net/> if you're interested.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, October 21, 2001 - 08:49 pm:

[Edit](#)

I use gforth under Linux, for scripting and other purposes. I use it here at Quartus.net for some of the cgi, as well.

Neal



By [Leland Williams \(Leland\)](#) on Tuesday, November 6, 2001 - 02:02

am: [Edit](#)

It seems like linux is almost locked into 'C+' ; and in Charles Moore's interview, he seemed to have a anti-text bias, which discourage some from FORTH.

But, since forth is such a great language, why don't most people use it. I have a friend who is going graduate studies in CS, and he has otherwise never heard of forth. Why is this ?



By [Kris Johnson \(Kdj\)](#) on Tuesday, November 6, 2001 - 06:14 am: [Edit](#)

I think Forth lost out during the "language wars" of the 70's and 80's because of the following:

- no type checking
- lots of direct address manipulation
- not enough like Algol or Lisp or other theoreticians' preferred languages

The first two items make Forth seem "unsafe" or "too low-level". The last makes Forth seem "ugly". These made Forth fall out of favor in academia, and CS departments generally don't cover Forth at all.

Forth's major strength, efficiency-in-the-small, is something that most computer scientists don't care much about.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 6, 2001 - 01:55

pm: [Edit](#)

Forth is a great language, but it's not Algol-derived, and didn't have the break C got in academia.

C has direct address manipulation, and commonly-overriden type checking, as well as a fairly complex series of rules for type conversion; you can crash a system just as easily with C as you can with Forth, or assembler. I don't believe that C was ever perceived as safer than Forth, but rather that Forth never came into the comparison at all -- C was the defacto system language that came with the free Unix system at the school, so that's what was used and taught.

Neal



By [Dave Bennett \(Dbennett\)](#) on Tuesday, November 6, 2001 - 06:55

pm: [Edit](#)

Kris,

I just saw this thread and wondered why you're using FLTK. I think using embedded/QT would be a "good thing" right now as it seems to be the interface of choice on Linux PDAs.



By [Kris Johnson \(Kdj\)](#) on Tuesday, November 6, 2001 - 07:56 pm: [Edit](#)

FLTK was the toolkit supported by the Agenda VR3 at the time I was playing with it. I haven't been following what's going on with Agenda, nor with any other Linux PDAs.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Tuesday, November 6, 2001 - 08:00 pm: [Edit](#)

When I was in school, C wasn't really considered to be a "good" language, and the CS professors discouraged everyone from using it. It wasn't until my senior year that professors would allow assignments to be done in C, and that was only because we had to use yacc/lex to write a parser.

The invasion of Unix into universities certainly did have a significant influence on its popularity.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, November 7, 2001 - 12:51 pm: [Edit](#)

A number of universities prefer languages other than C for teaching programming -- languages that enforce structure, and keep the developer in a rubber room -- away from the metal -- where he can't easily dump the core.

Neal



By [Leland Williams \(Leland\)](#) on Thursday, November 8, 2001 - 01:06 am: [Edit](#)

I couldn't get Gforth to compile correctly. Maybe I have to log in as root instead of su. But I am looking around at some others, and kforth seems to be the most actively maintained and developed. Big Forth looks interesting, for a IDE. Anyone know much about those ?



By [Neal Bridges \(Nbridges\)](#) on Thursday, November 8, 2001 - 02:32 pm: [Edit](#)

Leland, I've been able to build Gforth without any trouble, even on systems where I'm not root in any way. Ask on comp.lang.forth about that -- you're sure to get answers.

Neal



By [leland](#) on Tuesday, November 13, 2001 - 05:01 pm: [Edit](#)

Does that mean that you prefer gforth over others ?



By [Neal Bridges \(Nbridges\)](#) on Tuesday, November 13, 2001 - 05:59

pm: [Edit](#)

I can't claim to have comprehensively surveyed the available Unix Forths, but gForth is entirely adequate to the purposes to which I have put it.

Neal



By [Leland Williams \(Leland\)](#) on Wednesday, December 26, 2001 -

05:28 pm: [Edit](#)

Silly me! There is a not-too-easy to find 'Known Problems' section on the end of an FTP site that lets me know that there is a bug in the C compiler that comes with many RedHats, including version 7.1. There are fixes to this available on the RedHat web site



By [Neal Bridges \(Nbridges\)](#) on Saturday, December 29, 2001 - 01:00

pm: [Edit](#)

Were you successful in building it with those patches in place, Leland?

Neal



By [Leland Williams \(Leland\)](#) on Wednesday, January 2, 2002 - 01:32

pm: [Edit](#)

Yes, I was, Neal. Thanks for checking.

By the way, those patches were red-hat packages to replace the buggy gcc compiler (not gforth), and are on the Red Hat web site.

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Hackable Christmas Presents

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Hackable Christmas Presents



By [Kris Johnson \(Kdj\)](#) on Saturday, October 20, 2001 - 05:00 pm: [Edit](#)

Slashdot has a discussion about "hackable Christmas presents". Quartus fans may want to chime in on how hackable a Palm OS handheld is with an onboard development system.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, October 20, 2001 - 05:01 pm: [Edit](#)

That'd be nice to see. 😊 Thanks, Kris.

Neal



By [Jamie Cairns \(Jamie\)](#) on Saturday, October 20, 2001 - 10:31 pm: [Edit](#)

Slashdot ?

What's that ?

(I'm probably the only one here that doesn't know, right ?)



By [Neal Bridges \(Nbridges\)](#) on Saturday, October 20, 2001 - 10:34 pm: [Edit](#)

It's a popular tech news/discussion site: <http://www.slashdot.org>

Neal

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Locker

[Quartus Handheld Software: Discussion Forum: Everything else!](#)

Locker



By [LUC PATERNOSTER](#) on Saturday, October 20, 2001 - 04:07 pm: [Edit](#)

Locker is a application that will turn off and lock your palm , an it is working !

Thats for shure .I transferred this programm on my Palm Vx and after this I need to enter a password .

The problem is , I do not have a password .

Help !



By [Neal Bridges \(Nbridges\)](#) on Saturday, October 20, 2001 - 04:13

pm: [Edit](#)

Hi, Luc. "Locker" isn't a Quartus product -- have you got the right company?

However, in your shoes, I might just try hitting "Ok" with a blank password.

Neal



By [Hans Nordstrom](#) on Saturday, October 20, 2001 - 05:19 pm: [Edit](#)

Locker,

is a program created by Michael Chen a while ago, May 2000. To me it certainly looks like the program is made with the Quartus tool.

I think Michael is not that frequent a visitor nowadays.

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not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Password:

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Thanks All--First app released

[Quartus Handheld Software: Discussion Forum: Everything else!](#):

Thanks All--First app released



By [Eric Idema \(Eki\)](#) on Tuesday, October 16, 2001 - 07:09 pm: [Edit](#)

Hi all,

I recently finished my first application written with Quartus. It's not much, just a Memory game. Anyway, I'd just like to take this opportunity to thank Neal, and everybody else who has participated here on the discussion boards or contributed to the wiki, etc. Writing this program certainly wouldn't have been such a pleasant experience without these resources.

If you want to take a look at it, it's available at <http://www.moxie-cat.com/palm/memory>

Thanks again, everyone!



By [Kris Johnson \(Kdj\)](#) on Tuesday, October 16, 2001 - 10:58 pm: [Edit](#)

Looks pretty cool. Congratulations.

One question: does it work on monochrome displays? (I couldn't find the answer to this on the web site or in the manual.)

-- Kris



By [Eric Idema \(Eki\)](#) on Wednesday, October 17, 2001 - 12:57 am: [Edit](#)

Yes, each bitmap family includes 1 bpp, 2 or 4 bpp, and 8 bpp. I need to get the other screen shots up still, it's on my todo list for tomorrow.

I'll make a note to add something to the web site saying that a color device is not a requirement.

Thanks



By [Ron Doerfler](#) on Wednesday, October 17, 2001 - 12:28 pm: [Edit](#)

VERY nice. I look forward to downloading the demo and trying it out on my Palm this evening.

Cheers!

Ron

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WinCE

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
WinCE



By [Jim Hendricks \(Jimh\)](#) on Monday, October 15, 2001 - 10:28 am: [Edit](#)

I know Quartus targets the Palm handhelds, but I also realize that many developers are cross platform. Just wanted to put up a note here for anyone interested. I have a contact on a WinCE programming job in C,C++, the pay is very good, they expect 10 years industry experience, 2 years CE experience. They pay relocation and will sponsor. The job is in Shelton, CT. I would take the job myself, but I don't do any CE work. If anyone is interested in the details on this job, e-mail me at jim@bizcomputinginc.com.

Sorry Neal if this is not appropriate for the discussion board, just though I might provide an opportunity though to anyone who might be qualified and interested.

Jim



By [Neal Bridges \(Nbridges\)](#) on Monday, October 15, 2001 - 04:37 pm:

[Edit](#)

No problem, Jim.

Neal

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the "Password" box empty. Your e-mail address is optional.

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Kyocera Smartphone

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
Kyocera Smartphone



By [Kris Johnson \(Kdj\)](#) on Sunday, October 7, 2001 - 10:41 pm: [Edit](#)

Does anyone out there have one of those Palm-powered Kyocera Smartphones? If so, how do you like it?

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, October 15, 2001 - 06:27 pm: [Edit](#)

Handspring just announced their new PDA/phone combo: the Treo.

See <http://www.handspring.com> for more information.

-- Kris

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Palm Alliance Program Profile

[Quartus Handheld Software: Discussion Forum: Everything else!:](#)
Palm Alliance Program Profile



By [Kris Johnson \(Kdj\)](#) on Friday, September 21, 2001 - 11:32 pm: [Edit](#)

While updating my profile for the Palm Alliance Program, I noticed a couple of things:

- "Quartus Fourth" [sic] is one of the options for the Development Environment(s) question.
- In the "What platform do you use to develop your applications" question, Palm OS is not listed as a potential answer! It seemed funny to have to fill that into the Other field.

-- Kris

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New Visor Models

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
New Visor Models



By [Kris Johnson \(Kdj\)](#) on Monday, September 17, 2001 - 09:59 pm: [Edit](#)

Handspring has two new models, the "Pro" and the "Neo".

The "Pro" appears to basically be a lighter-colored Visor Platinum with 16 MB RAM and a rechargeable battery. \$299

The "Neo" appears to be a Platinum with a translucent case. Three colors available: smoke, red, and blue. \$199

Both have 33 MHz CPUs and Palm OS 3.5.2H3.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, September 18, 2001 - 06:46 am: [Edit](#)

Thanks, Kris!

Neal



By [Gary Allred](#) on Tuesday, April 30, 2002 - 02:39 pm: [Edit](#)

When I run Benchmark 2.0 on my Neo I get a rating of 162%, but on my Platinum I get 204%. Why is there a difference. My understanding is that the Neo is the same as a Platinum, except for the color of the case.

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Interview with Chuck Moore

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Interview with Chuck Moore



By [Kris Johnson \(Kdj\)](#) on Tuesday, August 28, 2001 - 05:40 pm: [Edit](#)

Those of you who don't normally monitor Slashdot might be interested in taking a look at this article:

<http://slashdot.org/article.pl?sid=01/08/19/1712249> They are going to be interviewing Chuck Moore about his current activities, including colorForth.

Then again, you might want to wait until the interview itself.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 28, 2001 - 05:41 pm:

[Edit](#)

Don't wait; get in there and tell everyone how wonderful Quartus Forth is 😊

Neal



By [Kris Johnson \(Kdj\)](#) on Tuesday, August 28, 2001 - 05:51 pm: [Edit](#)

Are you ready to be slashdotted?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 28, 2001 - 07:00 pm:

[Edit](#)

Bring it on!

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, September 14, 2001 - 07:42 pm: [Edit](#)

Chuck's interview is now up:

<http://slashdot.org/article.pl?sid=01/09/11/139249>

-- Kris



By [Mike Will](#) on Friday, September 14, 2001 - 09:18 pm: [Edit](#)

"the ANSII Forth standard does not describe Forth, but a language with the same name."

"[Forth's] strength is in the ease of violating whatever rules it has."

"Too often our culture seeks the lowest common denominator."

"I'm not interested in recoding C applications."

"New languages seem only to propose new syntax for tired semantics"

Pure ambrosia.

Mike



By [Neal Bridges \(Nbridges\)](#) on Friday, September 14, 2001 - 09:22

pm: [Edit](#)

Hehehe. Chuck is an interesting character.

Though perhaps it is heretical to speak against the creator of the language, he has some odd opinions of Standard Forth. Granted, he's taken Forth in some strange directions of his own, and perhaps that's now what he considers 'Forth' to the exclusion of all else.

Neal

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More PalmGear complaints!

[Quartus Handheld Software: Discussion Forum: Everything else!](#): More PalmGear complaints!



By [Wade Carlson](#) on Sunday, August 26, 2001 - 10:31 pm: [Edit](#)

Again, more problems with PalmGear. I have not received any notification of sales in over a week (not even the blank emails that say no sales!). I am receiving complaints from customers that they are not getting registration codes, but I'm not getting the info from PalmGear to send them their codes. I have emailed PalmGear, but they have not responded in 4 days now. Should we all boycott PalmGear or what?



By [Neal Bridges \(Nbridges\)](#) on Sunday, August 26, 2001 - 10:34 pm:

[Edit](#)

I've been getting reports. What email did you write to a PalmGear?

Neal



By [Wade Carlson](#) on Monday, August 27, 2001 - 07:12 am: [Edit](#)

I sent it to software-orders@palmgear.com, perhaps that wasn't the right email. Even when I am getting sales reports, I was still getting some that were dropped (i.e. it would jump from sales number 356 to 358). I am certain that I am getting email reliably from other sources.

Last night I switched everything over to Handango. I told myself I wouldn't do that, but I've reached my last straw.

This probably isn't kosher, but see how I've put a buy at Handango link on my PalmGear's product listing!!!

<http://www.palmgear.com/software/showsoftware.cfm?prodID=13079>



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 27, 2001 - 08:47

am: [Edit](#)

When you have problems at Palmgear, I would suggest contacting Jennifer at ESDAdmin@palmgear.com for software distribution problems, or for bigger issues Kenny West at kenw@palmgear.com (I think his old pilotgear@palmgear.com address is still valid as well).

I too have seen some recent difficulties, but I feel a certain level of loyalty to Kenny as he joins me in supporting my char-ware effort. On those products, Palmgear donates their profit along with mine to the Juvenile Diabetes Research Foundation.

Also, I wonder if the cost of defending Palmgear from Handango's lawsuit

(recently won by Palmgear) hasn't affected their operation by burning up cash that would otherwise have gone to supporting the growth of the business. If this is so, moving products to Handango would seem to be an ironic (and sadly unfair, in my view) outcome.

Barry

Barry



By [Wade Carlson](#) on Monday, August 27, 2001 - 11:28 am: [Edit](#)

Loyalty to PalmGear was primarily the reason I had waited so long to switch, but it is really becoming a problem now (things like not being paid, etc) that I can't help but switch. I know it's not fair to PalmGear, but you know it's not fair to me either (at least they finally paid me the \$1500.00 they owed me!). There obviously comes a point where something has to be done.



By [Brian Chirgwin \(Bchirgwin\)](#) on Monday, August 27, 2001 - 01:42

pm: [Edit](#)

I don't know if this is related. I have been signed up to receive emails from Palmgear on new software, updates, etc... I haven't received anything in months.



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 27, 2001 - 01:51

pm: [Edit](#)

No disagreement that improvement is needed, and not even that there is a point where a switch can be necessary. The developer absolutely deserves to be paid on time and completely.

Palmgear has served the Palm community and developers well in the past and can continue to do so if their problems are solved, hopefully this will be the case. My concern is that if their problems were caused (or exacerbated) by the Handango lawsuit, moving to Handango would simply reward the source of the problem. I don't know whether or not that is in fact the case, but knowing there was a protracted legal fight between Handango and Palmgear makes me want to know before I make such a move. I recognize, however, each person will have a different assessment of how much they should have to put up with and whether a move for them to Handango is right or not.

My only experience with Handango has been through e-mail communication. They contacted me long ago to see if they could handle sales of my char-ware programs. I asked them back if they were willing to donate their profits to JDRF along with me like Palmgear does, and they gave me a "we'll get back to you" response. A year later they ask again about handling my sales, to which I again ask if they will donate along with me on the char-ware programs. I'm still waiting for their response, and at this point I suspect I will be still be waiting next year when they ask again.

Barry



By [Kris Johnson \(Kdj\)](#) on Monday, August 27, 2001 - 07:37 pm: [Edit](#)

Handango has included my JacksOrBetter game as part of one of their "software suites". JacksOrBetter is free software, but just to see what would happen, I sent an e-mail to them asking whether would receive any part of the profit from that suite or any other sort of consideration. (After all, I assume that including my game makes the suite more attractive.)

I got a rather unpleasant response, apparently written by a lawyer, explaining that they have no responsibilities to me whatsoever, and can do whatever they want with my program. I don't disagree with their position, but they sure didn't get my good will.

-- Kris



By [Kris Johnson \(Kdj\)](#) on Monday, August 27, 2001 - 10:15 pm: [Edit](#)

I just took a look at Handango. JacksOrBetter has apparently been removed from the "Card Games Suite" and added to the "Games Suite". The change was made on June 1.

They of course didn't tell me about this. They didn't tell me about the original inclusion into the suites either--I just happened to do a search for "JacksOrBetter" and ran across it one day.

Not a big deal, but it's not something that makes me want to work with them. It would have been nice to get a little note that said "Congratulations--we're including your game in one of our suites. Thanks for your wonderful program."

-- Kris



By [Wade Carlson](#) on Monday, August 27, 2001 - 11:30 pm: [Edit](#)

I just got an email from PalmGear tonight (4 days later), and they state that they have been doing maintenance on their databases and that I should start receiving emails shortly. It would have been nice if they had told me this 1 week ago! I agree, I despise Handango and their dark sided tactics. Anybody know of anybody else who can EASILY handle palm sales?



By [Neal Bridges \(Nbridges\)](#) on Monday, August 27, 2001 - 11:35 pm:
[Edit](#)

I use RegSoft, also. Worth a look; they've been quite reliable to date.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Tuesday, August 28, 2001 - 08:24 am: [Edit](#)

I noticed Handango's terms state that if you post your software on their site they can re-publish it anywhere, both on the web or on a disk with print media. I

suppose this isn't a really big deal - that assumes they wouldn't put the work on a site that you are opposed to for some reason - but it seems to me that a courtesy request asking for permission to re-publish would be a really easy thing to do. It does seem that they are kind of big on control, and it certainly looks like they are quick to turn the legal pit bulls loose. Not my idea of the way to win friends and influence people.

....on second thought, it might influence people, just not in a positive way.....

Barry



By [Barry Marks](#) on Wednesday, September 5, 2001 - 10:11 pm: [Edit](#)

A year or two ago Palmgear's site got really buggy and slow and nearly impossible to use. At it's best it wasn't really very good but it was just falling apart.

I sent Kenny West an email detailing a number of specific problems I was having. He sent a response explaining that they were aware of most of the problems and were already doing the design for an upgraded site.

A couple months later the upgrades were in place and additional servers were installed and the site was back to it's original clumsy self.

I think the problem is that they don't know how to design a decent website. I don't know if it's their designers or if they interfere or just what it is. But they always have a screwed up website.

Their latest changes seem to be an improvement but still not very good.

They're nice people and fair people and smart people and that's why they get by. If they also had a good website they'd be a lot better off.



By [Matthew Burke \(Mmb\)](#) on Thursday, September 6, 2001 - 09:23 am: [Edit](#)

Would someone post a (brief) summary of the Handango lawsuit. I just spent a few minutes searching for the details but couldn't turn anything up.

Thanks,

Matt



By [Matthew Burke \(Mmb\)](#) on Thursday, September 6, 2001 - 09:31 am: [Edit](#)

Posted too quickly. If anyone else is curious, take a look at

http://www.dfwtechbiz.com/displayarticledetail.asp?art_id=48397&search=palmg



By [Kris Johnson \(Kdj\)](#) on Wednesday, December 5, 2001 - 04:52 pm:

[Edit](#)

I received this today:

Quote:

Tomorrow, Handango and Palm will be announcing a Major Strategic Partnership and Alliance through which:

- 1) Handango will exclusively power the Palm Software Connection
 - 2) Palm and Handango will collaborate on Enterprise sales, including Palm's Enterprise Alliance Partners.
 - 3) Palm and Handango will market Palm OS software through in-box CDs and email marketing.
 - 4) International exposure will increase through Palm's international sites, including Europe, already powered by Handango.
 - 5) Handango Software partners will be required to follow Palm's trademark guidelines.
-

Anyone know what this means for PalmGear?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Wednesday, December 5, 2001 - 04:59

pm: [Edit](#)

Just got that myself. Curious indeed.

Neal

Add a Message

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New Palm input method

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
New Palm input method



By [Dave Bennett \(Dbennett\)](#) on Saturday, August 25, 2001 - 04:52

pm: [Edit](#)

Here's an interesting tidbit on IBM Alphaworks about a newly developed input method for Palm. It looks like some other things I've seen, but it is interesting.

<http://www.alphaworks.ibm.com/tech/atomik?open&t=gr23,p=ATOMIKE>

Dave

Add a Message

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Palm Buys Be

[Quartus Handheld Software: Discussion Forum: Everything else!](#): Palm Buys Be



By [Kris Johnson \(Kdj\)](#) on Friday, August 17, 2001 - 12:05 am: [Edit](#)

Palm is buying the intellectual property and technology assets of Be, Inc. Full details are available here:

http://www.prnewswire.com/cgi-bin/micro_stories.pl?ACCT=no&TICK=PALM&STORY=/www/story/08-16-2001/0001556231&EDATE

My question: why?

-- Kris



By [Mike Will](#) on Friday, August 17, 2001 - 09:22 am: [Edit](#)

Maybe they've decided to bail on the handheld business and get into the pretentious yuppy video toaster market 😊

Mike



By [Kris Johnson \(Kdj\)](#) on Friday, August 17, 2001 - 12:57 pm: [Edit](#)

Speculation on Slashdot seems to be centered on the potential of using BeIA as the new Palm OS kernel for ARM-based handhelds.

Not a bad idea, I guess. \$11 million for a multitasking OS kernel with multimedia capabilities is probably a pretty good deal. We'll just have to wait and see how Palm screws it up.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, August 17, 2001 - 01:08 pm: [Edit](#)

They might just want some core technologies. \$11 mil. isn't much in the grand scheme of things.

Neal

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Programming burnout

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Programming burnout



By [Wade Carlson](#) on Saturday, August 11, 2001 - 09:42 am: [Edit](#)

Does anybody else go through programming burnout from time to time? I've been away from palm programming for several months now, and just can't seem to get motivated to get back into it. I've still been monitoring the message boards, but I haven't really been participating, and I haven't been doing any programming, despite that fact that I need to do some updates to my apps. I've been spending time with my other hobby (flying R/C electric airplanes). I think I'm just in a rut, cause programming seems more like work than fun right now. Anybody got a cure for this?



By [Kris Johnson \(Kdj\)](#) on Saturday, August 11, 2001 - 11:03 am: [Edit](#)

I don't know of a cure, but spending time with other hobbies isn't a bad thing.

I'm actually considering a career change myself. I've been a professional software engineer for ten years, and I'm really getting tired of it. It was fun when I started, but now it just seems like an endless, pointless activity. The popular operating systems suck, applications are too complex, and everything is so buggy that trying to create a reliable system on top of any platform is a futile exercise.

Playing with Quartus is the only thing that is keeping me interested in programming at all.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Saturday, August 11, 2001 - 01:20 pm:

[Edit](#)

One cure for me is to learn something new, explore some area of software development or mathematics that I know little about. Knuth, Pickford, Gullberg -- or any of a dozen others.

Another cure is reading about the history of computing, the great men and their accomplishments.

Exploring another hobby for awhile is also good, as long as it involves learning something new.

Neal

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Palm OS

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Palm OS



By [Nikhil suhane](#) on Tuesday, August 7, 2001 - 06:31 am: [Edit](#)

I would like to know
How I can use the SysGetTrapAddress()
and SysSetTrapAddress() for improving
the performance of my application.

I am working on the developement of an
application where i want the notification ,
whenever user delete an application or file .
Please give me an example also if you can.

thanks
nikhil



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 7, 2001 - 02:26 pm:

[Edit](#)

Nikhil -- it sounds like what you want is a HackMaster module. These are
small apps, usually written in assembler for speed, that hook into system
calls to enhance their function.

If you wrote a normal application and hooked system routines into your
code, you could only be sure that it would work while your app is active;
nothing stops the OS from relocating the application code once you exit the
app. HackMaster modules are protected from this.

Neal



By [Nikhil Suhane](#) on Wednesday, August 8, 2001 - 06:35 am: [Edit](#)

Neal

I do not want to use HackMaster I only wants the notification of deletion of
an application or record from the system.

In my application it shows the list of applications, and files available in a
sorted order. Now if i delete an application/file from the list it takes time to
launch my application again .I wants to reduce that time (Relaunch of my
application time).

Nikhil



By [Nikhil Suhane](#) on Wednesday, August 8, 2001 - 06:36 am: [Edit](#)

Neal

Thanx for the reply

I do not want to use HackMaster I only wants the notification of deletion of an application or record from the system.

In my application it shows the list of applications, and files available in a sorted order. Now if i delete an application/file from the list it takes time to launch my application again .I wants to reduce that time(Relaunch of my application time).

Nikhil



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 8, 2001 - 11:17 am: [Edit](#)

There is a notification system in the Palm OS, but only in the most recent versions. I haven't done a lot of investigation into it myself, but Palm has documented it thoroughly in the SDK. That'd be a good place to begin research.

Neal



By [Nikhil](#) on Saturday, August 11, 2001 - 03:51 am: [Edit](#)

I would like to know that how I can get the list of the system defined Categories. Because i wants to add these categories with some other categories in the category popup List.

Nikhil



By [Nikhil](#) on Tuesday, August 14, 2001 - 02:10 am: [Edit](#)

Dear Neal,

If you have any Idea about the Problem which I mentioned in my previous question then please reply.



By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 14, 2001 - 11:51 am: [Edit](#)

I was hoping somebody with more category expertise would leap in, but I'll take a shot.

Each app has its own categories; to use another apps categories in your own app, you'd need to read them out and add them into yours. This can be done; there's code in the Contrib area that will read the categories from any app.

Neal

 By [Vishal](#) on Monday, August 27, 2001 - 07:03 am: [Edit](#)

Can someone tell me how to hide Some files in a Table.

Vishal

 By [Neal Bridges \(Nbridges\)](#) on Tuesday, August 28, 2001 - 12:12 am: [Edit](#)

Can you explain further, Vishal?

Neal

 By [vishal](#) on Tuesday, August 28, 2001 - 01:32 am: [Edit](#)

yes definetly,

I am trying to make an application in which It shows all the files in a table.Now I want to hide some files(of a particular category) from the table ,when user click hide button.

I have already done that but when I tap "show all file" button It gives me error (No Form to return).

Why it is so.

can you explain.

Vishal

 By [Neal Bridges \(Nbridges\)](#) on Saturday, September 1, 2001 - 03:15 pm: [Edit](#)

Hi Vishal. Sorry for the delay in responding. I don't have a lot of experience with tables, myself, but I know there are Palm OS functions that let you specify that a certain row or column of a table is to be hidden.

Hopefully someone here who has done some work with tables can assist you.

Neal

 By [Neal Bridges \(Nbridges\)](#) on Saturday, September 1, 2001 - 05:55 pm: [Edit](#)

Here's Trevor Steele's page on Palm OS tables:

<http://www.mechengineer.freeserve.co.uk/palmtbl.htm>

Neal



By [Nikhil](#) on Saturday, September 15, 2001 - 01:40 am: [Edit](#)

hello to all,

Whenever i launch my application it breaks
the link between palm and expansion card why this is happening?

nikhil



By [Neal Bridges \(Nbridges\)](#) on Saturday, September 15, 2001 - 11:56
am: [Edit](#)

Nikhil, you'll need to explain further.

Neal

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HandEra POSE

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
HandEra POSE



By [Mike Will](#) on Thursday, August 2, 2001 - 08:11 pm: [Edit](#)

Forgive me if this has been covered previously.

The emulator from HandEra is really sweet. Really does SD and CF card simulation beautifully. It and three ROM images are available from <http://www.handera.com/support/developsupport.asp> and seems to work well. Unlike Palm, HandEra doesn't make you wait 6 weeks to get permission to download ROM images.

My only gripe is the speed. I thought the 330 was F-A-S-T but this emulator is 50% the speed of regular POSE. Anyone else have different results?

Mike



By [Jamie Cairns \(Jamie\)](#) on Thursday, August 2, 2001 - 10:18 pm: [Edit](#)

Same deal here - I was using the POSE (to test a bunch of apps to make sure they'd work) while I waited for the 330 to arrive. The 330 POSE is really slow... but the actual unit is pretty quick. (benchmarks at 244% out of the box)

Not many POSE users in the H-U-G, but I saw no real answers when the question came up a month ago...

Jamie

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This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Palm exchange

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Palm exchange



By [John Newell](#) on Tuesday, July 31, 2001 - 07:06 am: [Edit](#)

I live in the UK. My Palm Vx had a scratched screen so I contacted the UK Palm Support Desk about an exchange. I had to send it to Palm (Celestica) before they would send a replacment for £73 and I'm still waiting (10 days now).

I believe in the States there is a replacement program where a replacement is sent (within 3 days) before having to send back the original. Could someone just say how much this service costs in the States before I have-a-go at Palm for their tardy service?

Thank you.

Regards

John



By [Jim Hendricks \(Jimh\)](#) on Tuesday, July 31, 2001 - 08:01 am: [Edit](#)

If the unit is in warranty, the swap service is free. It works very well. I replaced my IIIc that way because I was having problems with the touch screen. They send you a reconditioned unit (I received mine in 2 days, but I think they specify 5-7 days or something along those lines) and once you've had a chance to load up the recon'd unit and test it, then you send your unit back in the box the recon'd unit came in with the supplied shipping label. My recon'd unit might as well have been new, I couldn't tell the difference.

Jim



By [John Newell](#) on Wednesday, August 1, 2001 - 04:16 am: [Edit](#)

I got it wrong. According to 3Com's web site for Exchange, you have to send it back first and you should get a replacement in 3 days. It took 10 days here (and there's something wrong with it).

Err - Does anybody know how much is the Exchange service in the States. I can't find it on the web. Thanks.

Regards

John

Add a Message

Username:

Password:

E-mail:

This is a public posting area. If you do not have an account, enter your full name into the "Username" box and leave the "Password" box empty. Your e-mail address is optional.

Payment from PalmGear?

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Payment from PalmGear?



By [Wade Carlson](#) on Monday, July 30, 2001 - 07:08 am: [Edit](#)

Anybody else getting delayed and delayed in their payment from PalmGear? I still haven't been payed for May's sales yet, and here it is almost August. I emailed them but no reply. This is getting ridiculous.



By [Neal Bridges \(Nbridges\)](#) on Monday, July 30, 2001 - 12:35 pm: [Edit](#)

Same here, Wade.

Neal



By [Kris Johnson \(Kdj\)](#) on Monday, July 30, 2001 - 09:23 pm: [Edit](#)

My payment of \$0.00 came right on time. Or maybe it's late--I can't be sure. 😊

It seems like there was a month where I was getting "Monthly Sales Totals" every few days. I suspect their accounting system is a little screwed up.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Tuesday, July 31, 2001 - 05:51 pm: [Edit](#)

I get two monthly download reports for my apps on PalmGear; one from PalmGear and one from someone else. They are never in sync or remotely close to reporting the same numbers. The PalmGear report is accurate while the other says things like "8000 downloads of WindChillFactor" and "0 downloads of Text2Morse". Perhaps they are trying to sort out this discrepancy between their two systems; but at least the courtesy of a reply or some kind of general announcement would be nice.



By [E. Ross Helton](#) on Wednesday, August 1, 2001 - 04:05 pm: [Edit](#)

Hi Dave,

Like you I have gotten two different reports. Also as you said one of them is not even remotely correct, but the other is.

This has happened twice and I passed it off as a glitch in the process as they were making change overs to the new system.

Make it a good day!

Ross



By [Dave Bennett \(Dbennett\)](#) on Wednesday, August 1, 2001 - 06:05

pm: [Edit](#)

Today I received 3 copies of the report. All three were the same. Maybe things are looking up!



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 6, 2001 - 01:35

pm: [Edit](#)

I also received multiple copies - 5 in total, of which 3 were blank and 2 that didn't match. The 2 with values appear to need to be added together to get the total downloads for the month - its as if the first report was run before the month end and it reset the number of downloads for the month to zero, which is then where the second one picks up.

The payments from PalmGear are slow on this end also - I did get May but haven't seen June yet. It seems to me that in the digital world 60 days or more for accounts payable is a little long, hopefully it will improve.

Barry



By [Kris Johnson \(Kdj\)](#) on Tuesday, August 14, 2001 - 10:37 pm: [Edit](#)

I'm curious: would anyone be willing to divulge how much money or how many registrations they've received for their PalmGear applications?

I don't mean to pry into anyone's finances. I'm just wondering if a nice PalmOS shareware app can produce a substantial amount of income, and for how long. Specifics would be appreciated.

-- Kris



By [Jim Hendricks \(Jimh\)](#) on Wednesday, August 15, 2001 - 08:30 am:

[Edit](#)

I'm as curious as Kris on this since I am getting ready to make my own shareware venture and it would be nice to know what I might be able to expect. It would also be interesting to see what the opinions are on the pricing of apps, what is reasonable, and what are reasonable means to encourage registration.

Jim



By [Mark Browne \(Markbrowne\)](#) on Wednesday, August 15, 2001 - 09:10 am: [Edit](#)

Hi Jim,

As someone who tries out a fair bit of shareware, the thing that most encourages me to buy is to be allowed to try it out for long enough that it becomes "must have". Like many others, I use DateBook4, and the main thing that convinced me to buy it was the 45 day uncrippled try out period. Similarly for pedit.

If something is only partially functional, I tend to delete it instantly, as I cannot try it properly. Obviously, the way that you use may require a different approach due to "once only" information etc, but otherwise this seems to me to be a good balance - people will buy your software if they need it.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 15, 2001 - 11:12 am: [Edit](#)

In my experience, results vary widely based both on the type of product, and the appeal of any given piece of software. Games sell better than most products when they hit the sweet spot; games that don't hit that spot sell very poorly.

Tools sell well to developers, but that market is smaller than the market for games.

In general terms, with all else being equal, you can expect anywhere from 0.5% to 5% of your downloads to result in product sales, with the low end being more common. Subtract your costs from that to figure profit.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Wednesday, August 15, 2001 - 04:25 pm: [Edit](#)

To add a couple of comments:

1) Pricing does seem to have some affect - everyone wants a bargain, but pricing too low apparently can make some people believe it isn't worth trying out. When I first released LoanPayment there was a \$5 registration fee; I doubled it to \$10 with the first update since the capabilities went up by a factor of 4. I saw the rate of downloads and registrations jump dramatically at that point.

2) I have both char-ware (charitable shareware, where all proceeds go to

the Juvenile Diabetes Research Foundation) and commercial shareware available. The char-ware has a higher rate of registration than the commercial shareware, so I assume it sells both on utility and for the charitable aspect.

3) The marketing side of the equation is something that is largely ignored but would seem to be particularly pertinent. It looks like most developers are content to post the software to PalmGear and maybe a few other sites and let the users find it. This may be fine for something like the "sweet spot games" Neal mentions, but for everything else if you can get the word out in other ways it will be beneficial.



By [Jim Hendricks \(Jimh\)](#) on Wednesday, August 15, 2001 - 06:41 pm:

[Edit](#)

Thanks guys for the input. My first release will be a game, won't reveal what yet, don't want to let the cat out of the bag. Suffice it to say it's a game I have yet to see on the palm.

I agree for application software that crippleware tends to push me away from the eval, but I also know that there is yet to be an app software timeout that is very reliable. I also tend to like the timeouts based on number of uses, or based on actual used days rather than days since you first tried the software out.

For games, it seems that you have to cripple it in some way. Either eliminating features, or eliminating levels, or eliminating the ability to create your own levels and playing user created levels. Guess you could also go with the timeout, but I have yet to see the timeout that I am happy with that is relatively hack resistant, and/or reinstall resistant.

Been thinking of pricing at \$10 - \$15, but don't want the price to scare people away. Been thinking also about source availability. For most this would not be relevant, but for some developers, being able to get at the source can be a good learning tool. Just don't know how to release source in a benefactory way without losing sales or seeming too easy to get to the source. Will still have to consider a policy for Quartus users since I have benefited from the community, contributed to the community, but still enjoy the chance to help aspiring programmers along.

Well, time to take the philisophical cap off and get back to programming. If I can't get the code done, this whole issue is a moot point!

Jim



By [Kris Johnson \(Kdj\)](#) on Wednesday, August 15, 2001 - 11:06 pm: [Edit](#)

Some possible ways to release source without losing your business:

- Release source under GPL. That would keep anyone from reusing your code in another commercial app.
- Release source only for a crippled version or for an earlier version of the software.
- Give source only to registered users, and make it clear that redistribution is not allowed.

Of course, some would claim that Forth source code is completely unreadable. If you don't mind letting Quartus users see the source, you probably don't have to worry too much about the C and Satellite Forms programmers figuring it out. For what it's worth, I've released source to my programs, and the only questions/comments I've ever received about it was from other people on this forum.

-- Kris



By [E. Ross Helton](#) on Thursday, August 16, 2001 - 03:43 pm: [Edit](#)

Hi Jim,

Barry is correct pricing affects downloads a lot. \$5.00 isn't much of anything, and should bring registrations like mad. However, I believe that many see a product listed for \$5.00 as also not being a product worth having no matter how good the product is. \$10.00 on the other hand seems to make people more confident that what they are getting is worth the time to register. Of course \$10.00 isn't the only price that should be charged, but if it is between \$0.00, \$5.00 or \$10.00 the ten dollars product is seen a something good, and the zero and five product are probably viewed as being the same thing.

Make it a good day!

Ross



By [Neal Bridges \(Nbridges\)](#) on Thursday, August 16, 2001 - 04:13 pm:

[Edit](#)

Depends on the product. LightHack sells quite well, and it's \$5.00. Having said that, though, the question becomes -- would I have fewer than half as many sales if I doubled the price?

Neal



By [Kris Johnson \(Kdj\)](#) on Friday, August 17, 2001 - 09:06 am: [Edit](#)

Anyone have any thoughts on marketing? As Barry said, many developers just put their stuff on PalmGear and then wait for the money to roll in. That may have worked a couple of years ago, but now PalmGear gets dozens of new packages every day. I don't pay attention to the new packages any more, and I'm sure other users don't either.

How does one reach the potential buyers?

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, August 17, 2001 - 10:52 am:

[Edit](#)

Part of that is PalmGear's fault. Last time I met Kenny that was my complaint -- the new packages list is invariably filled with fifteen updated data files for some obscure application, kicking everything else clear off. As a forum for announcing new or changed apps, it is thus worthless.

Advertising can be prohibitively expensive for small software businesses like ours. Word-of-mouth is quite important.

Neal



By [Barry Ekstrand \(Ekstrandbb\)](#) on Friday, August 17, 2001 - 01:39

pm: [Edit](#)

A few more thoughts, wearing my MBA hat.

On Pricing

Remember what gets people to look at the software and then to register it is their perception of value, which can be defined as

value = { (perceived actual performance / expected benefits) / price. }

In my opinion there is a basic three step process:

1) User finds the software and description, setting initial expectations about performance. The description and price drive this; it is possible that a \$5 fee will look appropriate for an app that provides a simple-but-beneficial task but that same \$5 might look way too low for an app that purports to do very complicated things. In this latter case, if it looks too low, they may not bother to even look at it.

2) If they decide to try it, user downloads and tests software, creating perceptions about actual performance. Here the initial expectations have an influence on their assessment of performance, not just on the final judgment of value. When expectations are exceeded, perception about actual performance is often judged to be higher when the initial

expectations were lower.

3) User then evaluates price against the initial expectations and performance perceptions and decides either to register (because it has enough value) or not register (because the performance / price relationship is too low).

Bottom line: there is no magic price because there is a dynamic process taking place, with an intertwined relationship between promises made (description), price, and the user's experience in evaluating it. Each software product needs to be considered on its own.

On Marketing / Advertising

It is increasingly clear to me that relying on PalmGear alone does not cut it; that being said, most other Palm software sites are worse in terms of exposure and number of downloads per day. The word needs to be spread through other arenas. A couple of things that have helped boost some of my programs:

1) Getting it included on a CD-ROM collection, particularly when it is being distributed to people in a particular organization. This will only be relevant if the program fits the needs of the organization, of course, but think about who will use the program - if there is a professional or social organization that those users are part of, see if they put together CD-ROM collections for their members.

2) Similarly, even if the organization isn't distributing a disk, if you can get an announcement to their network it can help. For example, I made my CanMortgage program to calculate Canadian mortgages in response to requests from Canadian users of my LoanPayment program. When it was ready, I was able to get an announcement into a Canadian realtor's network through one of the users, so everyone in the network became aware of it.

3) Again an extension of the above, post the software to the organization's website if it has a section for downloads.

4) As the user base grows, try to leverage it for your new programs. I've had good success in getting repeat customers by letting them know when I have new programs available. I believe having a policy of distributing updates for free helps with the perception issue and makes them more oriented to registering subsequent programs.

Bottom line: Neal said it right, word of mouth is essential, but you need to help speed up the movement of the words in any way you can. Look for places to spread the word - usually there is no cost associated with it other than your time.

That's all for now,

Barry



By [Kris Johnson \(Kdj\)](#) on Friday, August 17, 2001 - 01:47 pm: [Edit](#)

I've noticed that I get a lot more downloads from PalmGear immediately after releasing an update than I do immediately after the initial release. I suspect this is due to the Updated Software list being smaller. (Although I notice that this is changing--maybe other developers have caught on to this trick?)

It would be nice if PalmGear would categorize the new releases. The eBooks and travel guides definitely deserve their own sections. But then again, PalmGear might lose advertising fees if their site was more helpful to all developers.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Friday, August 17, 2001 - 01:57 pm:

[Edit](#)

That was my suggestion to Kenny years back -- have a series of category buttons across the top, for the newest & updated apps in each category, instead of one big mixed list. He said something about there not being enough room on the page; I suspect there were other considerations, however.

Neal



By [Mark Beckman \(Mbeckman\)](#) on Friday, August 17, 2001 - 03:35

pm: [Edit](#)

As to the phenomena of more down loads from the update than from the new product category. I personally view any new palm app with suspicion and usually wait for at least the first update to try it. Let someone else be the beta tester...

Mark



By [Kris Johnson \(Kdj\)](#) on Saturday, August 18, 2001 - 02:27 pm: [Edit](#)

That's why I always add a few bugs to the second release, just to make sure everyone participates in the fun. 😊

-- Kris



By [Mark Beckman \(Mbeckman\)](#) on Sunday, August 19, 2001 - 12:29

pm: [Edit](#)

Hmmm, I don't need to "add" them they seem to just "magically" to

appear.

-- Mark



By [Dave Bennett \(Dbennett\)](#) on Friday, August 24, 2001 - 06:16 pm:

[Edit](#)

I get a lot of downloads initially from my free apps, and then something will spur interest and I'll get a rush of downloads at an unrelated time.

One app gets constant, seemingly endless downloads, and that is MetricMeasure. I don't get it either. 😊 It's had close to 8000 downloads in 1 year. Who'd have thought. A question for Barry is "would people have paid for this?" Personally, I think not.



By [Kris Johnson \(Kdj\)](#) on Saturday, August 25, 2001 - 09:17 am: [Edit](#)

From other discussions, I know that some of you manually generate registration codes (or even customized builds of the app) for users who have paid. Have you ever had a problem keeping up with the demand? What's the largest number of codes you've had to send out in one day?

-- Kris



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 27, 2001 - 08:31

am: [Edit](#)

Dave,

I would challenge your thought on payment for MetricMeasure. If it has had 8000 downloads in a year there is strong interest, and being free is probably only one of several reasons. It must be providing real utility to users as well.

One thought I would offer on such a program is to consider making it a char-ware program. I've found people very willing to register for a modest fee, particularly so when the registration fees all go to charity. And, since I'm on my soapbox, I would ask that the Juvenile Diabetes Research Foundation be considered as the recipient of the char-ware funds, as my daughter suffers from that disease.

Barry



By [Barry Ekstrand \(Ekstrandbb\)](#) on Monday, August 27, 2001 - 08:39

am: [Edit](#)

Kris,

At one point I started using registration codes, generated based on the Hotsync ID of the unit. I found it to be a lot more trouble than it was worth. There was a small number of people that couldn't get the registration codes to work at all, likely because their reported Hotsync ID was different than reality. I had a few "master" codes that would work for those cases, but I came to believe that there was little value in the registration code 'security' if you had to dole out master codes to anyone. That, coupled with the need to be real diligent in sending out codes to people - I don't think it is fair to skip a day or two when folks have paid their fees already - led me to the conclusion that registration codes were more trouble than they were worth.

In the end I converted back to having 2 versions of each program, 1 for evaluation and 1 for those who register. Since PalmGear distributes the registered version to users as soon as they pay, it takes some of the pressure off. I don't think anyone is bothered to get a thank-you note a day or two later, as long as they already have the product they paid for.

Just a couple of centavos worth.

Barry



By [Kris Johnson \(Kdj\)](#) on Monday, August 27, 2001 - 11:53 am: [Edit](#)

Thanks, that's what I figured. For high-volume, low-cost sales, I don't think registration codes would be worthwhile unless PalmGear could take care of it themselves.

Of course, the fear is that people who will obtain copies of the registered version without paying. Does anyone have any experiences with widespread piracy, or strategies for dealing with it?

I thought that maybe writing a program that parses the sales reports from PalmGear and automatically sends out the codes would be the optimal solution. But based upon the apparent unreliability of PalmGear, I'm not sure I'd want to trust to that.

-- Kris



By [Dave Bennett \(Dbennett\)](#) on Wednesday, August 7, 2002 - 04:12 pm: [Edit](#)

Looks like Kenny solved the rapid paging problem on the new apps. The recent email I received indicated that no freeware would be displayed on the front page at all! That, and his continuing to talk about eventually paying the back money he owes has led me to remove all of my apps from PalmGear. He simply doesn't deserve the business or consideration at this point.



By [Neal Bridges \(Nbridges\)](#) on Wednesday, August 7, 2002 - 04:33

pm: [Edit](#)

He does seem to be dying in a rush.

Neal

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Handera ?

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Handera ?



By [Jamie Cairns \(Jamie\)](#) on Wednesday, June 6, 2001 - 03:22 pm: [Edit](#)

Slightly off-topic, although I am using them for learning Forth using Quartus...

My P3 just died, just 2 weeks after my P3e screen quit - was looking at replacement options and was wondering if anyone else had looked at the Handera 330. It seems to me like it's a good machine, and since I'm not entirely convinced of the benefits of colour (except for games or pictures...), and having the CF expansion option as well as MMC..., Anyways, what's the consensus - why do you need color (if you do), and is it worth the extra \$150 (C\$)?

Thanks
Jamie



By [Tim Hulme](#) on Wednesday, June 6, 2001 - 03:47 pm: [Edit](#)

IMHO, You only need to bother with color as you say, for games and surfing the web. My wife has a Visor Prism and surfing the web with it using the Blazer web browser is very nice when compared to mono. She also plays way to many games, so for her it's nice. I'm happy with my Visor Solo. The only draw back I see to the Handera is it's not USB hotsync. Expansion options I think make it worth it though.



By [Ron Doerfler](#) on Wednesday, June 6, 2001 - 05:29 pm: [Edit](#)

Color is also nice for non-game apps that have complicated displays, including Planetarium, PocketSat, and some mapping programs. The screenshots look so much more readable (I haven't received my color Palm yet).

Ron



By [Kris Johnson \(Kdj\)](#) on Wednesday, June 6, 2001 - 05:55 pm: [Edit](#)

The available color PDAs (Prism and IIIc) both seem to suffer from these problems:

- slow (color screens require more CPU power)
- drain batteries quickly

I plan to stick to mono PDAs until these problems are solved, or until some more-compelling color apps come out.

BTW, has anyone considered implementing something like Chuck Moore's Color Forth on a PDA? With the limited screen space, it might make some sense.

-- Kris



By [Stefan Wehner \(Chandor\)](#) on Wednesday, June 6, 2001 - 06:16

pm: [Edit](#)

As I have just ordered a Handera maybe my reasons to decide for that unit instead of a M505 might help you too.

1. The ability to use a CF card (even the 1gig Microdrive) as storage and peripheral in several devices from Laptop to digital camera had me already consider going for a TRGPro.

2. The innovation they choose by enlarging the usable screen size is much more useful than color for the kind of applications I use and develop. Color is nice, but as Kris said, I won't easily sacrifice battery power for that. If I need to show Flash animations I go for a Laptop and probably an external monitor.

I have almost ever found the amount of screen real estate being a limitation for applications.

3. as for games, well carrying a Gameboy Advance is only a bit of strain on the purse, and as far as I remember prices it is also about 150 bucks.

The arguments above will only fit your case if you use the unit as a workhorse though, the higher the amount of recreative use, the more color becomes an issue and I will happily upgrade to a color unit provided that power consumption and peripherals match the Handera.

-- Stefan



By [Jamie Cairns \(Jamie\)](#) on Thursday, June 7, 2001 - 12:06 am: [Edit](#)

Thanks for the opinions - I hadn't even considered battery life, and yeah, USB would be nice, but the extra 15 - 30 seconds won't kill me... OK - I had almost decided, but it's good to hear that my reasons for doing so are shared by others... Have ordered.

Thanks all
Jamie

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Palm Security

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Palm Security



By [Sam](#) on Sunday, June 17, 2001 - 03:35 am: [Edit](#)

Can a hotsync be performed when the PALM is locked???

I'd love a program that would encrypt DOC or NotPad files when Hide Private records is activated, and decrypt when Show Private Records is triggered. Any hack/other like that out there?

thanks



By [Chapman Flack](#) on Saturday, June 23, 2001 - 01:10 pm: [Edit](#)

I just tried hotsyncing using pilot-xfer, and I got prompted for my password first. I'd assume the Windoze and Mac hotsyncs work the same way, but I don't know.

However, there are dot-shortcuts that can be entered at the password prompt to put the device into serial debugger or serial console mode, either of which can be used to extract your data.

There are also several different packages on PalmGear that remove those particular shortcuts from your Graffiti ShortCuts database. Chances are it's not difficult to do with RsrcEdit, either.

-Chap



By [Neal Bridges \(Nbridges\)](#) on Saturday, June 23, 2001 - 07:08 pm:

[Edit](#)

I believe those shortcuts are not active while the device is locked, in the newer versions of the OS.

Neal

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Starting the Second Forth Revolution

[Quartus Handheld Software: Discussion Forum: Everything else!](#):
Starting the Second Forth Revolution



By [Darren Cook](#) on Friday, June 8, 2001 - 08:21 pm: [Edit](#)

I must write and say I have just finished reading this entire discussion including some of the mentioned related websites and papers, and find it absolutely fascinating. I don't understand much about T&M, nor do I even program in Forth yet, but I certainly grasp the value of it as a language and inherently understand and agree with it's original programming philosophy. A year ago I tried to delve into QuartusForth and found it difficult to grasp (I had no books on hand and only the material available from this website), and difficult to learn on the palm as some/many of the non-QuartusForth tutorials used examples with words that were not standard in Quartus. In addition I floundered for lack of vision; I had no software product (no "problem" or "need to meet") with which to drive my learning.

But I got it; at least, a part of it. I took with me an excitement about what Forth is capable of doing, the way it works, and in some ways found myself thinking more like Forth. I took the key concepts of the language (as I grasped them) and began to apply them to my other programming (Web Applications using Cold Fusion, Javascript, SQL), with results that made me proud to have "discovered" Forth and filled me with an insatiable curiosity to really understand it and be able to use it.

So I have found myself back at quartus.net in the last week, and today stumbled upon this discussion. Boy does it hit home (the discussion of Disruptive Technology). In my company, we have a big need to meet (software based). We also have a team of 6 members who have been attempting to meet this need, for the last 3 years, to the tune of 6 million (so far, and with limited results to date). Myself and a coworker came up with a solution in the equivalent of 3 months time, and even implemented it in a legacy system to prove it would work. It is much simpler, very elegant and flexible, and could be used by practically anyone in the company. In short, it works like Forth. I credit my discovery and beginning understanding of Forth to be able to see past the muck and layers of abstraction and come up with our solution. But alas, our solution has been squelched, and until today I really couldn't understand the reason why. But today, I saw many many parallels when reading about Disruptive Technology and products that don't fit the business model (Jeff Fox's essay), and I recognize the same struggle I've felt myself in recently. I also felt a good deal more peace, knowing that A) there are other guys out there recognizing this and struggling with it, and B) I at least understand the battle I'm in now. Us revolutionaries ;-)

I hear you, Harry! I'm with you!! But what I mean is, though I barely know Forth and am not sure if I'll even have the time to learn it (we're talkin' WAY to busy here and stealing time even to write this), I think I intuitively understand it's philosophy and nature and power, and I have a desire to see it thrive. I saw in Forth the very characteristics that I valued in my own programming skills, which is what attracted me so strongly to it. And if there is a second revolution coming, I desire to be part of it.

I also must say that I am happy to see how close the people in this discussion are to the original mind and vision behind Forth. I recognized immediately the layers of abstraction even in the current Palm OS, ANS Forth, and Quartus libraries, which though more simple than programming in Windows, still is a lot to grasp at first grappling. I am glad that there is some sort of anchor out there to the original vision, someone who is still going in the original direction ("simplify!", or as I read today, "Factor, factor, factor!").

So I don't know if I succeeded, but this was intended to be a "hear, hear!" cry of support for Forth and it's hoped-for revolution. And thanks for all the great discussion!



By [Harry Winter](#) on Sunday, July 1, 2001 - 04:18 am: [Edit](#)

Very late Letter to Darren Cook

I did not check this part of the Forum for a long time, because I believed the subject to be closed. Instead, I spend a lot of time trying to get Quartus Forth to generate a .PRC file for me. No success so far! --- Of course, I am blaming myself, my old age, causing incipient senility, and maybe a drop in my already low IQ of only 135. All these problems must have happened in the last 10 years, because I had no difficulty learning the Forth compiler for the RTX2000 in two weeks and winning in the Harris Semiconductor/ Embedded Systems Programming Magazine Contest in four weeks. The problem for me seems to be ---- COMPLEXITY ----, which might be caused by the tight integration of Quartus Forth into the Palm operating system. When I type-in "WORDS", I find that I only recognize only about 10% of those printed out.

I am ready to give up the idea of writing any useful program on the Palm Computer and will find someone else to do it for me when the hardware design for the Star Trek Tricorder is finished. Interestingly, I am doing the "hardware design" with a "Forth-Codesign methodology" and a simple (no operating system) Forth from Newmicros Inc., running on the good-old Motorola HC11. Where-in-Hell does Complexity come from? Einstein's equation don't have it, Van Neuman's theories don't have it, Charles Moore did not produce it and his Forth engines in silicon are "Simplicity-Incarnate"

at highest performance. Ask me again in a few months; I am doing a literature search on "Complexity" and will find out where it comes from. However, I already have a strong suspicion that it actually originated in --- HELL!

For me, the author Robert Wright best describes the philosophy of Forth in an article about the Computer Scientist Edward Fredkin, who is the originator of "cellular automaton's". (Fredkin got rich selling his algorithm's to the military.) Robert writes:

"Nothing is so striking about a good cellular automaton as the contrast between the simplicity of the rule (algorithm) and the richness of its result. We have all felt the attraction of this contrast. It accompanies the comprehension of any process, conceptual or physical, by which simplicity accommodates complexity. Simple solutions to complex problems for example make us feel good. The social engineer who designs uncomplicated legislation that will correct numerous social ills; the architect who eliminates several nagging design flaws by moving a single closet; the doctor who traces gastrointestinal, cardiovascular, and respiratory ailments to a single, correctable cause --- all feel the same kind of visceral, aesthetic satisfaction that filled the first caveman who literally killed two birds with one stone."

Most problems we experience in life, because we don't understand them, appear not to be simple. To handle these problems we develop complex solutions, because that is all we can think of. (Because we are not thinking --- or don't have the time to.) Yes, life is this interplay between Heaven and Hell, good and evil, Ying and Yang, and Simplicity and Complexity, which certainly belongs in Hell! No wonder that one makes us feel good and the other one does not.

Harry



By [Kris Johnson \(Kdj\)](#) on Sunday, July 1, 2001 - 10:23 am: [Edit](#)

Almost all of the words you see when you type WORDS come from the ANS Forth standard--only a few are related to Palm OS programming.

Chuck Moore feels that the ANS Forth standard is too complex and too broad. I get the feeling you agree. However, there is no need to use all those words--you can write useful programs with just the core words and a few Palm OS API functions.

I agree that the simplicity of Forth gets overshadowed by the complexity of the OS when one tries to write a "real program" using Quartus Forth. There's a big difference between writing standalone code for a custom embedded system and writing code that integrates into a complex system.

One solution is to figure out what you want the OS to do, and then define a few simple Forth words that hide those details. The other solution is to eliminate the OS entirely and use or create a Forth that uses the hardware directly for everything. The latter solution may limit the market for your application, or require production of specialized hardware.

BTw, why have you selected Palm OS PDAs as the platform for your application? Maybe you don't really want to use the OS--you only want the hardware. If that's the case, you may be better off with one of the other small PDA hardware platforms, like iPaq or Agenda, that offer more features and more openness than the typical Palm OS hardware platform.

-- Kris



By [Neal Bridges \(Nbridges\)](#) on Sunday, July 1, 2001 - 11:51 am: [Edit](#)

Harry, I didn't know you were still having trouble. By all means, write me and we'll sort it out.

Neal



By [Harr Winter](#) on Tuesday, July 3, 2001 - 04:51 am: [Edit](#)

You got me again Kris! I stand corrected.

Another prove of how old I am getting, and how much Forth has changed since 1990. At Bell Labs I never did any programming --- my field of expertise is Systems engineering and the hardware to build it. Of course I had to work together with the programmers, especially for the part of system designs for "fault tolerant" features. "Systems" today are always a close integration of hardware and software, and if Chuck's dream comes true, there will not be any hardware at all!

That's why you can't say >>> Maybe you don't want the OS--you only want the hardware. <<< (That's like saying: you don't want the girl, you just want the boobs.)

Why did I select the Palm OS PDA? <<< "Total System Concept" >>> 1.) The market, 2.) The performance of the product, 3.) The cost of manufacturing.

The Palm OS, I believe, has more than 60% to 70% of the PDA market compared to Windows CE, and the low priced units are all Palm OS. The Dragonball (68000-type) processor with 2 Mbytes of RAM has more than enough power to run any DSO job. It is estimated that this year alone some ~ 15 million PDAs units will sell worldwide with sales expected to grow to ~ 34 million units in 2004. No other "hardware" can compete in cost with

these kinds of numbers.

Kris, I never intended to do the programming on the Visor myself, I just needed to find out if the Palm OS could accommodate the real-time requirements of a DSO. And it looks that way, because maximum interrupt latency at the "Springboard interface" is ok for loading strings of DSO data and the touch-screen presents a wonderful opportunity to "out design" the control methods used by the competition, Fluke and Tektronix. (Take another look at my updated paper "Star Trek Tricorder", on my web-site < <http://www.msmissp.com/futuretest> >. On page 6, click on the reference for < Virtual-front-panel >.)

Well Kris, I just printed out most of your tutorials from the sleepless-nights of Wiki. At my age one has to see things on paper to learn it, --- but I still have no intention to have my DSO designs programmed or manufactured in an "engineers geriatric ward", and I don't think you should target your tutorials for this audience --- no market!

Neal, let me first study some of the tutorials, --- takes month at my age.

--- Harry

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This document holds all the Quartus Handheld Software discussion forum messages from August, 2001 to April 5, 2003.

The links in the document all work -- but please don't try and post new messages to the Forum via the buttons in this document, as the subject threads may eventually be archived from the web site.

Enjoy!

Neal Bridges
Quartus Handheld Software
<http://www.quartus.net>

QUARTUS

Handheld Software since 1997

Quartus Software Products

 Benchmark	How fast is your Palm? Benchmark tests your Palm system and accurately reports how fast it runs relative to other models.
 Clearhack	Do dots drive you to distraction? ClearHack removes those annoying dotted underlines in the MemoPad, To Do List, Address Book, etc.
 Quartus Forth	Quartus Forth is a complete development environment and compiler that runs entirely on-board the Palm.
 LeftHack	Southpaws unite! LeftHack shifts most scroll-bars over to the left-hand side of the screen.
 LightHack	Having trouble reading your Palm in the dark? LightHack reverses the backlight on your Palm, so that light becomes dark, and dark becomes light.
 The Oracle	A hundred questions a day. Here's something that might help.
 PassPhrase	Need help choosing a new, secure password? Give PassPhrase a try!
 Quartus RsrcEdit	Quartus RsrcEdit lets you edit Palm resources and databases directly on the Palm itself.
 SCX Calculator	The SCX calculator is an easy-to-use, high-precision, large-digit calculator that has built-in Cost/Sell/Margin buttons for quick retail and sales calculations.
 SecretAgent	Who's looking over your shoulder? SecretAgent hides your password from prying eyes.
 ShiftHack	ShiftHack turns control over shifting back to you!
 StreakHack	Does your Palm show 'streaks' on the screen? This can help.
 SwatchHack	Swatch Internet Time -- on your Palm!
 TickHack	Tick tick tick! TickHack adds audible feedback to your Graffiti input -- handy when you're looking away from your Palm while you write.

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