Subject: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Fri, 03 Aug 2012 11:25:32 GMT
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Is it possible to run Ultimate++ on a Raspberry PI (with Raspbian) as OS?!

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Didier on Fri, 03 Aug 2012 16:16:37 GMT
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Hi Wolfgang,

Raspbian is a linux tuned for the rasberry PI so for me it should run without any problems

Maybe some others have already tried ?

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by twkrimm on Tue, 07 Aug 2012 14:47:39 GMT
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Did you find out if it works on the Raspberry PI?

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by mirek on Tue, 07 Aug 2012 16:28:39 GMT
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Didier wrote on Fri, 03 August 2012 12:16Hi Wolfgang,

Raspbian is a linux tuned for the rasberry PI so for me it should run without any problems

Well, somebody mentioned on the forum that in order to link theide, you need at least 512MB of RAM.

Mirek

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Thu, 09 Aug 2012 13:30:44 GMT
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hmm okay... I've downloaded the sources with svn.. but how to build it? Is there a tutorial or

something like that?

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by mirek on Thu, 09 Aug 2012 18:04:21 GMT
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Wolfgang wrote on Thu, 09 August 2012 09:30hmm okay... I've downloaded the sources with svn.. but how to build it? Is there a tutorial or something like that?

I think that in order to build on new platform, tarball of nightly build would be better (as it has generated makefile).

As for instruction, you will be the first to try, so I hope to get some from you

Mirek

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Fri, 10 Aug 2012 18:58:44 GMT
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of course I'll give you information - if it would work for me..

but i got stucked at the very beginning of make for upp-x11-src-5267 - it tells me that my arch is unknown (but in the makefile there is an entry for arm) - how to find out which arch-string it uses?

> arch
> armv6l

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by dolik.rce on Sat, 11 Aug 2012 08:50:42 GMT
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I don't have Raspberry, but just for fun I tried to build a cross compile toolchain and build umk for arm. I followed this guide and then set up build method in TheIDE to use the toolchain. I noticed only two problems: First, the Core/config.h didn't recognize the architecture correctly, so I had to help it a little. Second problem was that I don't have the libraries for arm on my system. If you have raspbian installed, I think it should suffice to just copy the include and lib folders.

Because of the missing libraries the linking failed, but otherwise I think everything should work fine. Just my two cents

Best regards,
Honza

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Sun, 12 Aug 2012 07:58:18 GMT
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Okay, I tried and after installing some libs, changing two config files and after hours of compiling I got this:

Quote:idewin.cpp:(.text._ZN3IdeC2Ev+0x8e0): undefined reference to `Upp::CPU_Cores()'
collect2: ld returned 1 exit status
make[1]: *** [ide.out] Fehler 1
make[1]: Leaving directory `/home/wolfgang/upp.src/uppsrc'

This is the point there I don't know how to handle it..

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by dolik.rce on Sun, 12 Aug 2012 09:20:27 GMT
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The function is defined in Core/Cpu.cpp, like this:#ifdef CPU_X86
int CPU_Cores() {
 static int n;
 ONCELOCK {
  // platform dependent code to find out number of cores
 }
 return n;
}
#else
inline int CPU_Cores() {
 return 1;
}
#endif
It should never be undefined... Although the fallback to assuming one core is not really correct, it should work. At least for now.

My guess the problem is in the 'inline' keyword. Try removing that...

Honza

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Sun, 12 Aug 2012 10:41:13 GMT
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ahhh, thank you - I'll try and give you response

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Sun, 12 Aug 2012 19:39:17 GMT
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It has compiled... now i will try to start

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by dolik.rce on Sun, 12 Aug 2012 20:39:45 GMT
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Wolfgang wrote on Sun, 12 August 2012 21:39It has compiled... now i will try to start
Wow, that went better than I expected

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Sat, 18 Aug 2012 14:37:53 GMT
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Here's a short manual what to do... for the one who will compile it on raspberry: It takes hours, really!

Started theIde one time but until now I haven't found the time to try to create a projekt or compile a own projekt on the raspberry.

1.
I've used the tarball version:
http://www.ultimatepp.org/www$uppweb$nightly$en-us.html
....
First of all, we need some packages: libx11, libxft, libnotify, libgtk2.0, libbz2
apt-get install libx11-dev libxft-dev libnotify-dev libgtk2.0-dev libbz2-dev

2. Edit ./uppsrc/Core/config.h Line 91,
Change
#elif __arm // ToDo!
to
#elif __arm || __arm__ // ToDo

3. Edit /usr/include/glib-2.0/glib/gtypes.h Line 34,
Change
#include <glibconfig.h>
to
#include </usr/lib/arm-linux-gnueabihf/glib-2.0/include/glibconfig.h>

4. Linking gdkconfig.h
ln -s /usr/lib/arm-linux-gnueabihf/gtk-2.0/include/gdkconfig.h /usr/include/

5. Edit ./uppsrc/Core/Cpu.cpp Line 104,

Change
inline int CPU_Cores()
to
int CPU_Cores()
6. do a "make" and compile it!

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by dolik.rce on Sat, 18 Aug 2012 15:41:18 GMT
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Hi Wolfgang,

Congratulation on the successful build

Points 2. and 5. should be committed to Core soon. Points 3. and 4. should be properly solved by editing include and lib path, respectively. When using tarball, just add the paths to CINC and LIBPATH variables at the beginning of uppsrc/Makefile.

I believe that compiling anything using U++ on Raspberry would be reaaally slow. Especially when using makefile (thus not using BLITZ) on single core processor. That is why cross compiling was invented

Honza

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Sat, 18 Aug 2012 20:07:06 GMT
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Yes, of course you're right. But it's a nice feeling to know that you can compile it on raspberry itself respectively to know that u++ compiles on raspberry!

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by dolik.rce on Sat, 18 Aug 2012 20:41:20 GMT
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Wolfgang wrote on Sat, 18 August 2012 22:07Yes, of course you're right. But it's a nice feeling to know that you can compile it on raspberry itself respectively to know that u++ compiles on raspberry!
Yes, it is very good to know that U++ works well on ARM.

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?

Posted by koldo on Sat, 18 Aug 2012 21:59:41 GMT
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I will try it soon. I have got one .

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by kohait00 on Tue, 04 Sep 2012 10:51:27 GMT
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what about precompiled upp libs? for most common architectures and a detailed guide how to cross compile for other platforms (todos on upp side)? sth. in the stile of SDL, with core, gfx, etc..

i dont know, probably sth like this exists already...

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Zbych on Tue, 04 Sep 2012 13:42:35 GMT
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There is short guide on raspbian page that describes how to build cross tools:

http://www.raspbian.org/RaspbianDocumentation
http://pastebin.com/raw.php?i=YrtntGtU

It would be nice to be able to build upp-arm applications on PC.
RP is just to slow and has to little memory, to be reasonable platform for development.

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by mirek on Tue, 04 Sep 2012 16:17:43 GMT
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What might be interesting is compiling examples/UWord for Pi and see how it performs...

Mirek

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Zbych on Tue, 04 Sep 2012 16:45:39 GMT
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X-server on RP uses fbuff driver and there is no hardware acceleration. Web browser page scrolling takes about a second or two. I guess that UWord will not perform to well either.
Only hope for fast graphics on RP is openGL ES lib (without x-server).

BTW I tried to compile UWord in TheIde on RP, but there wasn't enough RAM to finish compilation. Maybe I will try umk.

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by NilaT on Wed, 14 Nov 2012 20:11:04 GMT
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Hello and sorry for digging out this old thread again but I have some issues installing Upp on my Pi (512 MB RAM model B)

I downloaded the latest source and followed the instructions from page 1, but when I run make, I get an error which I don't understand.

It tells me:
CtrlCore/ImageX11.cpp:252:2: error: stray '@' in program
as you can see in this picture: http://db.tt/IL3qlFVB

I opend ImageX11.cpp as root with nano and looked at line 252, but theres no @, as you can see here: http://db.tt/9yyjt5b4

Sorry for the bad pic quality, I made them with my mobile phone. Don't know how to make screenshots on the pi yet.

I just did a quick google search and found something that says the compiler don't understand a character. I choose utf8 as I setted up the pi, is that a possible error?

Or can you guys give me a bump?

Thanks in advance

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by dolik.rce on Wed, 14 Nov 2012 21:16:42 GMT
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NilaT wrote on Wed, 14 November 2012 21:11I downloaded the latest source and followed the instructions from page 1, but when I run make, I get an error which I don't understand.

It tells me:
CtrlCore/ImageX11.cpp:252:2: error: stray '@' in program
Hi NilaT,

You just had a bad luck in picking the nightly source Someone forgot a debug macro in source,

which is in release mode defined as '@' (so that it is easy to notice - though it seems that nobody ever does). It is already fixed, just grab a newer package tomorrow (or older, if you don't want to wait).

Best regards,
Honza

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by NilaT on Fri, 16 Nov 2012 07:05:40 GMT
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Good morning,

and thank you very much again, dolik.rce.
I downloaded the new nightly build yesterday and compiled it.

It took damn long but it succeeded.
So from now on, upp is running on my pi.
It's not very fast though.

Thanks again for the help!

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Wolfgang on Fri, 23 Nov 2012 19:49:03 GMT
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Hi again,

after long time of abstinence i'm try do something with my raspberry

Can some1 tell me how to build a cross compile toolchain with to compile an application written with upp for the raspberry ARM?

Subject: Re: Raspberry (Raspbian) - ARM 6 Core + Ultimate++?
Posted by Didier on Sat, 24 Nov 2012 19:21:50 GMT
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Hi wolfgang,

if you have U++ running on the Raspberry PI the half of the work is done : you all the bibs and the includes that you need to compile apps for the Raspberry PI.

Here is what I did to make a cross compile environment for the gumstix (ARM cortex-A8).

1 - Make a copy of /usr/lib and /usr/include from the Raspberry PI to you're computer ==> this is the easiest way to get all the compatible libs and includes.

2 - Compile a GCC suite for the ARM11
To do this I used open-embedded environnement. But you can try this
    http://raspberrypi.stackexchange.com/questions/1/how-do-i-bu
ild-a-gcc-4-7-toolchain-for-cross-compiling

3 - You need a correct U++ Build Method (xxx.BM files)
I have attached the one I use to cross compile towards cortex-A8
The important things to notice are :

 gcc name (arm-angstrom-linux-gnueabi-g++ in my case)
 --sysroot=PATH_TO_COPIED_USR   options added to compiler and linker (to tell gcc to use the wright libs)
 path to the gcc bins directly set
 -mcpu=cortex-a8 -mfpu=neon : options for cortex-A8
 remove SSE2 form the default options (SSE2 is not part of ARM instructions set)

4 - Report the corrections made to Upp code (/Core/Config.h) : add __arm__

5 - Some Upp pitfalls/bugs on ARM to be aware of :
    MT does not work : apps get stuck in infinite loop on start ==> I didn't have time to look into it

This should help you start up quickly

File Attachments

1) GCC_ARM_example.bm, downloaded 355 times