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Subject: MacOS X woes

Posted by [mirek](#) on Fri, 15 Dec 2006 12:52:12 GMT

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lundman wrote on Fri, 15 December 2006 07:22

Got it and recompiled all, but no difference, core the same place, the same backtrace. At what place to you pull out the number of images so I can check we are getting a sane value? All I see is zeros.

Well, it is a little bit complicated....

There are two .iml formats.

I guess we are dealing here with newer one. In the new format, there are image headers (with names) and images are compressed in about 4KB blocks (because compressing several small images together yields better compression ratio than compressing them individually).

The problem here is most likely that number of headers does not match number of images in compression blocks (there is more headers).

The critical function to investigate first is IMHO:

```
Vector<Image> UnpackImlData(const String& d)
```

placing a couple of LOGs and DUMPs there might reveal what is going on.

BTW, moving this to the forum...

Mirek

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Subject: Re: MacOS X woes

Posted by [lundman](#) on Fri, 15 Dec 2006 13:07:07 GMT

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I'm not so good at your debug code, but gdb I can handle... just doing a quick run through of the UnpackImlData() function, what should "len" normally be? I would guess this number is large:

(First pass, first image)

```
(gdb) p ib
$9 = {
```

```

<NoCopy> = {<No data fields>},
members of ImageBuffer:
kind = 0,
size = {
    <Moveable<Size_<int>,EmptyClass>> = {
        <> = {<No data fields>}, <No data fields>},
    members of Size_<int>:
    cx = 3328,
    cy = 3328
},
pixels = {
    <Moveable<Buffer<RGBA>,EmptyClass>> = {
        <> = {<No data fields>}, <No data fields>},
    members of Buffer<RGBA>:
    ptr = 0x428a008
},
hotspot = {
    <Moveable<Point_<int>,EmptyClass>> = {
        <> = {<No data fields>}, <No data fields>},
    members of Point_<int>:
    x = 256,
    y = 256
},
[snip]

```

```

(gdb) n
240             s += 13;
(gdb) n
241             int len = ib.GetLength();
(gdb) p len
$10 = 11075584

```

Am I getting warmer?

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Subject: Re: MacOS X woes  
 Posted by [lundman](#) on Fri, 15 Dec 2006 13:10:35 GMT  
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Actually, its just size.cx\*size.cy and at 3328 pixels each, that is the right value. So assuming 3328x3328 is correct..

The function ends with, after just one pass:

```
255         return img;
(gdb) p img
$3 = {
  <MoveableAndDeepCopyOption<Vector<Image>,EmptyClass>> = {
    <Moveable<Vector<Image>,DeepCopyOption<Vector<Image>, EmptyClass> >> = {
      <DeepCopyOption<Vector<Image>,EmptyClass>> = {
        <> = {<No data fields>}, <No data fields>}, <No data fields>}, <No data fields>},
  members of Vector<Image>:
  vector = 0xbffff740,
  items = -1,
  alloc = 2315384
}
```

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Subject: Re: MacOS X woes  
Posted by [lundman](#) on Fri, 15 Dec 2006 13:19:14 GMT  
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If I'm posting too much, just tell me off

#1 0x002ffbd0 in UnpackImlData (d=@0xbffff78c) at ImageBlit.cpp:237  
237 ImageBuffer ib(Peek16le(s + 1), Peek16le(s + 3));

```
(gdb) x/16x s
0xffb014:  0x000d000d  0x00010001  0x00000000  0x00000000
0xffb024:  0x00000000  0x00000000  0x00b2b2be  0xff676789
```

So +1, and +3 should be 0d00 0d00, in LE, or rather, 13x13. However, I get 3328. (\$D00)  
Peek16le isn't flipping?

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Subject: Re: MacOS X woes  
Posted by [mirek](#) on Fri, 15 Dec 2006 13:25:33 GMT  
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lundman wrote on Fri, 15 December 2006 08:10  
Actually, its just size.cx\*size.cy and at 3328 pixels each, that is the right value. So assuming 3328x3328 is correct..

-> is 0xd00, 0x00d is much more realistical (first picture in the .iml is 13x13 pixel image).

Are you sure that Peek16le is in correct version? (Maybe just preprocess the file and look.)

Mirek

When I rsynced the new Util.h it over-wrote my port changing, including setting of flagPPC. Sigh.

Called LoadIm1(), which does not find IMAGE\_ID and IMAGE\_DATA, so it throws the exception, and loads in a more low-level loader.

Seems to parse the input ok, until it reaches:

[illegible]

```
100     else if(id == "IMAGE_PACKED" && parser.IsChar("\\"))
```

```
(gdb) n
105                               stringstream ss(d);
(gdb) n
106                               ss % image;
```

```
(gdb) n
107         if(!ss.IsError())
(gdb) n
108             accepted = true;
(gdb) n
```

```

109                                     }
(gdb) n
112                                     if(name.GetLength() >= 6 && !memcmp(name, "_java_", 6))
(gdb) p name
[snip]
    ptr = 0x1b89654 "ufxp"
(gdb) n
115                                     if(accepted)
(gdb) n
117                                     if(name.GetLength() >= 4 && !memcmp(name, "im__", 4))
(gdb) n
120                                     Image m = RLEToAlpha(encoded_data, image.size);
(gdb) p encoded_data
$34 = {
  <AString<char,String>> = {
    <Moveable<String,EmptyClass>> = {
      <> = {<No data fields>}, <No data fields>},
    members of AString<char,String>:
      ptr = 0x20c9414
"????\001????????????????\004????????????\002????????????\004????[[[???
?????\003ooo????????????\n???\036\036\036\033\033\033?????ooo\xf\xf016\016\016???
?????????\n999\001\001\001"
    }, <No data fields>}
(gdb) p image.size
$35 = {
  <Moveable<Size_<int>,EmptyClass>> = {
    <> = {<No data fields>}, <No data fields>},
    members of Size_<int>:
      cx = 268435456,
      cy = 268435456
  }
}

```

Should sizes be set here? Before we call, or is it just uninitialised?

encoded\_data looks correct, in that it was parsed in ok.

```

(gdb) x/16bx encoded_data.ptr
0x20c9414:  0x83  0xff  0xff  0xff  0x01  0xfd  0xfd  0xfd
0x20c941c:  0x82  0xfc  0xfc  0xfc  0x83  0xff  0xff  0xff

```

But it dies in RLEToAlpha.

Breakpoint 3, RLEToAlpha (rle=@0xbffe5898, sz=@0xbffe5850) at lmlFile.cpp:32

```
32      ImageBuffer ib(sz);
```

```
(gdb) p sz
```

```
$39 = (Size &) @0xbffe5850: {  
  <Moveable<Size_<int>, EmptyClass>> = {  
    <> = {<No data fields>}, <No data fields>},  
  members of Size_<int>:  
    cx = 268435456,  
    cy = 268435456
```

Makes me think the size should be "somewhat smaller".

You set the size at IMAGE\_END phase, I don't recall it reading IMAGE\_END. Could it be our .iml file is incorrect, old ?

Has IMAGE\_BEGIN(ufxp)

IMAGE\_SCAN x 16

IMAGE\_PACKED(ufxp, ....)

Then next IMAGE\_BEGIN. etc. (of two)

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Subject: Re: MacOS X woes

Posted by [lundman](#) on Sat, 16 Dec 2006 01:49:52 GMT

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I can confirm that with the following hack

lmlFile.cpp:112

```
    if (image.size.cx > 1000) {  
        image.size.cx = 16;  
        image.size.cy = 16;  
    }
```

...since I know that my two icons are 16x16...

The image editor loads without core dumping, and displays my first icon just fine.

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Sun, 17 Dec 2006 14:03:02 GMT  
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lundman wrote on Fri, 15 December 2006 20:30  
When I rsyned the new Util.h it over-wrote my port changing, including setting of flagPPC.

Ooops. Can you post the patch please so that I can apply it?

Quote:  
Anyway, back to where we were, looking at the image editor segv.

Based on the code, looks like problem in serialization. Will look at it asap.

Mirek

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Subject: Re: MacOS X woes  
Posted by [mirek](#) on Sun, 17 Dec 2006 14:22:41 GMT  
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Coconfirmed&fixed (well, at least I hope).

In the process, I have encountered an interesting problem - serialization of float and double.

How is the float/double format on PowerPC (or other non-x86 CPUs)? Is it the same, just needing to swap the order of bytes like integer types?

Mirek

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---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Sun, 17 Dec 2006 14:38:53 GMT  
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---

OK. It really seems like fp numbers are the same, just swapped. Altering code to this..

Mirek

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Subject: Re: MacOS X woes  
Posted by [lundman](#) on Mon, 18 Dec 2006 02:33:12 GMT  
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---

I stepped through the serialisation code earlier to confirm it did indeed break endianness. (File is

saved in little). After setting the sizes to 16x16 it became saved in big-endian and just worked but that's not ideal either

Changes for OSX11 are:

Package Organiser:

CtrlLib: Add Package, When "OSX11": PdfDraw

Draw: New Libraries, When "OSX11": X11 Xft fontconfig Xrender freetype expat

Only patching that is questionable is the plugin/bmp/bmhdr.h with my extra casting.

So currently, you set "flagPPC" or "flagX86" in the Build Environment variables. This will trigger code to add "-arch X" for cc and lnk times.

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## File Attachments

1) [osx11\\_patch](#), downloaded 462 times

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Subject: Re: MacOS X woes

Posted by [lundman](#) on Mon, 18 Dec 2006 02:48:31 GMT

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---

Hmm, seems that -DflagPPC does not trigger the code with HasFlag("PPC") so that won't work either.

Need to be able to trigger extra linking variables (since they can not be specified in Build Environment).

I guess I could change it so that you specify "-arch ppc" or "-arch i386" in BE instead, then add:

Core/Core.h:

```
#ifdef __BIG_ENDIAN__
    #define flagPPC
    #undef flagX86
#else

#ifdef __LITTLE_ENDIAN__
    #undef flagPPC
    #define flagX86
#endif
```

(those endian defines are set by gcc based on the -arch flag)

then I can add linking flags in GccBuilder.cpp.

Which way to do you prefer?

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Mon, 18 Dec 2006 07:28:36 GMT  
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Hm, what this says

<http://developer.apple.com/qa/qa2005/qa1424.html>

?

Maybe for the moment, we could use some of predefined macros...

Mirek

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Mon, 18 Dec 2006 08:28:21 GMT  
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Yeah I'm okay with that. I will change it to be as shown above, and we specify the build type with "-arch" in BuildEnv. Then the lnk additions will also work.

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Mon, 18 Dec 2006 09:36:06 GMT  
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lundman wrote on Mon, 18 December 2006 03:28

Yeah I'm okay with that. I will change it to be as shown above, and we specify the build type with "-arch" in BuildEnv. Then the lnk additions will also work.

Well, I am afraid that `__LITTLE_ENDIAN__` could bite us with ARM. Is not there some `__power_pc__` macro?

Mirek

---

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Subject: Re: MacOS X woes  
Posted by [lundman](#) on Mon, 18 Dec 2006 09:53:55 GMT  
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```
#define __ppc__ 1
#define __POWERPC__ 1
#define _ARCH_PPC 1
```

Last one could be interesting.

Similarly:

```
#define i386 1
#define __i386 1
#define __i386__ 1
```

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Mon, 18 Dec 2006 10:15:40 GMT  
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Although I should mention I put the `#ifdef ENDIAN` inside that of `PLATFORM_OSX11` so it shouldn't matter, but based on arch is better than endianess

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Mon, 18 Dec 2006 12:50:18 GMT  
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Another small issue: Maybe instead `CPU_PPC` it should be `CPU_POWERPC`, because PPC clashes with PocketPC a bit...

Mirek

---

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Tue, 19 Dec 2006 00:15:05 GMT  
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---

Ah whoopsie.. I assumed you had previously done CPU\_PPC to be powerpc, since the PocketPC cpu arch is ARM, SH3 or MIPS.

I will guess what is needed here and submit a patch.

I use something along the lines of:

```
#ifndef flagOSX11
    #define PLATFORM_OSX11
    #define PLATFORM_POSIX
    #ifndef flagGUI
        #define PLATFORM_X11
    #endif

    #ifndef flagTESTLEAKS
        #define TESTLEAKS
    #endif

    // defines set by OsX for us.
    #ifndef __POWERPC__
        #define flagPOWERPC
    #endif

    #ifndef __i386__
        #define flagX86
    #endif

#endif
```

However, can you help to find a solution as to how to be able to do Intel build on a PPC platform and vv.

The problem is, I need to set "-arch i386", which currently I set in "Build Environment". This is only use for Compile, and not use in Linking. There are no Linking options that I can see in Build Environment. So without that set, "\_\_i386\_\_" is not set, so the linking is done as POWERPC.

If no extra input boxes in the GUI, how can I user-optionally build for different archs?

The sources specify "linkoptions" which is Gathered from pkg.link. Not sure where that comes from.

I could take out "flagOSX11" and make two flags, but that seems unnecessary when you have a fully features build environment setup.

Can I define a new GCC32 and supply different flags?

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Wed, 20 Dec 2006 03:13:38 GMT  
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---

Fetchd latest sources to try out the Serialization changes (20th GMT 01:00).

Lots of issues in Installer.cpp (path not defines etc) but I assume that is just work in progress, so //ing my way through that. It didn't like "::" in "::GetLastError()" in Socket.cpp.

Anyway, loading "ide" I get:

Assertion failed in /Users/lundman/src/upp/uppsrc/Core/Stream.cpp, line 1362  
!backup.IsError()

```
(gdb) bt
#0 0x9004796c in kill ()
#1 0x9012dc14 in abort ()
#2 0x00237abc in Upp::AssertFailed (file=0x3a68d0
"/Users/lundman/src/upp/uppsrc/Core/Stream.cpp", line=1362, cond=0x3a6c14
"!backup.IsError()") at Util.cpp:83
#3 0x002495fc in Upp::Load (serialize=@0xbffe6cb8, stream=@0xbffe6cc0) at Stream.cpp:1362
#4 0x0026ae5c in Upp::LoadFromFile (serialize=@0xbffe6d70, file=0x0) at Stream.cpp:1390
#5 0x00456624 in Upp::LoadFromFile<Ide> (x=@0xbffe6ee8, name=0x0) at Util.h:339
#6 0x00086bf0 in GuiMainFn_ () at idewin.cpp:805
#7 0x0008749c in main (argc=1, argv=0xbfffaec, envptr=0xbfffaf4) at idewin.cpp:571
```

That "name" and "file" are NULL probably is not good? But might be normal behavior for all I know.

Also, I'm in \_awe\_ of the size of your "ide" variable. I'm never doing "p ide" again.

---

Subject: Re: MacOS X woes

Posted by [lundman](#) on Wed, 20 Dec 2006 03:44:50 GMT

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Fails due to

```
53 int version = 5;
(gdb) s
54 s.Magic(0x12346);
(gdb) s
Upp::Stream::Magic (this=0xbffe6c20, magic=74566) at Stream.cpp:719
719 dword a = magic;
(gdb) s
720 *this % a;
[snip]
Upp::Stream::SerializeRaw (this=0xbffe6c20, data=0xbffe6a68, count=1) at Stream.cpp:459
459 EndianSwap(data, count);
[snip]
(gdb) n
Upp::Stream::operator% (this=0xbffe6c20, d=@0xbffe6a68) at Stream.cpp:592
592 return *this;

Upp::Stream::Magic (this=0xbffe6c20, magic=74566) at Stream.cpp:721
721 if(magic != a) LoadError();
(gdb) p magic
$16 = 74566
(gdb) p a
$17 = 1176699136
```

---

Subject: Re: MacOS X woes

Posted by [lundman](#) on Wed, 20 Dec 2006 04:01:02 GMT

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D'oh, you should have said I need to delete my .ide/ config files since they are all big-endian

However, we do get this situation:

```
rm .ide/ide.cfg
gdb ide
(gdb) run
(Once loaded, click Cancel instead of Selection a main Package)
```

Program received signal EXC\_BAD\_ACCESS, Could not access memory.  
Reason: KERN\_INVALID\_ADDRESS at address: 0x1876d580

0x00275584 in Upp::RichEdit::SetupRuler (this=0xbfff707c) at Editor.cpp:272  
272           zoom, q.grid, q.numbers, q.numbermul, q.marks);

(gdb) p unit  
\$1 = 16777216

And indeed, now that it has written "ide.cfg" it won't load it unless I delete it first, with the exact same core. So for some reason "unit" ends up big-endian in memory (as well as on disk?) even when Initialised from scratch.

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Wed, 20 Dec 2006 07:55:31 GMT  
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---

I do not see obvious problem.

I think breakpoint at RichEdit/Editor.cpp 452 and see what is going on....

Mirek

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Subject: Re: MacOS X woes  
Posted by [mirek](#) on Wed, 20 Dec 2006 07:57:15 GMT  
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---

lundman wrote on Mon, 18 December 2006 19:15

Ah whoopsie.. I assumed you had previously done CPU\_PPC to be powerpc, since the PocketPC cpu arch is ARM, SH3 or MIPS.

I will guess what is needed here and submit a patch.

I use something along the lines of:

`#ifdef flagOSX11`

OK, now at the beginning of Core.h.

Mirek

---

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Subject: Re: MacOS X woes

Posted by [lundman](#) on Wed, 20 Dec 2006 08:14:04 GMT

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Right

```
Breakpoint 1, Upp::RichEdit::SerializeSettings (this=0xbfff707c, s=@0xbffe6c20) at
/Users/lundman/src/upp/uppsrc/RichEdit/Editor.cpp:453
453 int version = 1;
(gdb) s
454 s / version;
(gdb) s
Upp::Stream::operator/ (this=0xbffe6c20, i=@0xbffe69b8) at Stream.h:223
223 Stream& operator/(int& i)      { dword w = i + 1; Pack(w); i = w - 1; return *this; }
(gdb) s
Upp::Stream::Pack (this=0xbffe6c20, w=@0xbffe6958) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:471
471 if(!sError()) return;
(gdb) n
491 }
(gdb) n
0x0041d410 in Upp::Stream::operator/ (this=0xbffe6c20, i=@0xbffe69b8) at Stream.h:223
223 Stream& operator/(int& i)      { dword w = i + 1; Pack(w); i = w - 1; return *this; }
(gdb) n
Upp::RichEdit::SerializeSettings (this=0xbfff707c, s=@0xbffe6c20) at
/Users/lundman/src/upp/uppsrc/RichEdit/Editor.cpp:455
455 s % unit;
(gdb) p version
$4 = 1
(gdb) p unit
$5 = 1
(gdb) s
Upp::Stream::operator% (this=0xbffe6c20, d=@0xbfffb67c) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:585
585 SerializeRaw((dword *)&d, 1);
(gdb) s
Upp::Stream::SerializeRaw (this=0xbffe6c20, data=0xbfffb67c, count=1) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:457
457 SerializeRaw((byte *)data, 4 * count);
(gdb) s
Upp::Stream::SerializeRaw (this=0xbffe6c20, data=0xbfffb67c "", size=4) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:442
```

```

442 if(!setError()) return;
(gdb) n
447 }
(gdb) n
Upp::Stream::SerializeRaw (this=0xbffe6c20, data=0xbfffb67c, count=1) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:459
459 EndianSwap(data, count);
(gdb) p data
$6 = (dword *) 0xbfffb67c
(gdb) p *data
$7 = 1
(gdb) n
461 }
(gdb) p *data
$8 = 16777216
(gdb) n
Upp::Stream::operator% (this=0xbffe6c20, d=@0xbfffb67c) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:586
586 return *this;
(gdb)
587 }
(gdb)
Upp::RichEdit::SerializeSettings (this=0xbfff707c, s=@0xbffe6c20) at
/Users/lundman/src/upp/uppsrc/RichEdit/Editor.cpp:456
456 s % showcodes;
(gdb) p unit
$9 = 16777216

```

Seems it is given a default value, then gets EndianSwapped, when maybe it should only be endianswapped when read?

---

Subject: Re: MacOS X woes  
 Posted by [mirek](#) on Wed, 20 Dec 2006 08:29:12 GMT  
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lundman wrote on Wed, 20 December 2006 03:14  
 Right

```

Breakpoint 1, Upp::RichEdit::SerializeSettings (this=0xbfff707c, s=@0xbffe6c20) at
/Users/lundman/src/upp/uppsrc/RichEdit/Editor.cpp:453
453 int version = 1;
(gdb) s
454 s / version;
(gdb) s

```

```

Upp::Stream::operator/ (this=0xbffe6c20, i=@0xbffe69b8) at Stream.h:223
223 Stream& operator/(int& i)      { dword w = i + 1; Pack(w); i = w - 1; return *this; }
(gdb) s
Upp::Stream::Pack (this=0xbffe6c20, w=@0xbffe6958) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:471
471 if(!sError()) return;
(gdb) n
491 }
(gdb) n
0x0041d410 in Upp::Stream::operator/ (this=0xbffe6c20, i=@0xbffe69b8) at Stream.h:223
223 Stream& operator/(int& i)      { dword w = i + 1; Pack(w); i = w - 1; return *this; }
(gdb) n
Upp::RichEdit::SerializeSettings (this=0xbfff707c, s=@0xbffe6c20) at
/Users/lundman/src/upp/uppsrc/RichEdit/Editor.cpp:455
455 s % unit;
(gdb) p version
$4 = 1
(gdb) p unit
$5 = 1
(gdb) s
Upp::Stream::operator% (this=0xbffe6c20, d=@0xbfffb67c) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:585
585 SerializeRaw((dword *)&d, 1);
(gdb) s
Upp::Stream::SerializeRaw (this=0xbffe6c20, data=0xbfffb67c, count=1) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:457
457 SerializeRaw((byte *)data, 4 * count);
(gdb) s
Upp::Stream::SerializeRaw (this=0xbffe6c20, data=0xbfffb67c "", size=4) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:442
442 if(!sError()) return;
(gdb) n
447 }
(gdb) n
Upp::Stream::SerializeRaw (this=0xbffe6c20, data=0xbfffb67c, count=1) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:459
459 EndianSwap(data, count);
(gdb) p data
$6 = (dword *) 0xbfffb67c
(gdb) p *data
$7 = 1
(gdb) n
461 }
(gdb) p *data
$8 = 16777216
(gdb) n
Upp::Stream::operator% (this=0xbffe6c20, d=@0xbfffb67c) at
/Users/lundman/src/upp/uppsrc/Core/Stream.cpp:586

```

```

586 return *this;
(gdb)
587 }
(gdb)
Upp::RichEdit::SerializeSettings (this=0xbfff707c, s=@0xbffe6c20) at
/Users/lundman/src/upp/uppsrc/RichEdit/Editor.cpp:456
456 s % showcodes;
(gdb) p unit
$9 = 16777216

```

Seems it is given a default value, then gets EndianSwapped, when maybe it should only be endianswapped when read?

Oops. I am stupid. There must be TWO swaps, one before SerializeRaw, second after it!

```

void Stream::SerializeRaw(word *data, dword count) {
#ifdef CPU_BE
    EndianSwap(data, count);
#endif
    SerializeRaw((byte *)data, 2 * count);
#ifdef CPU_BE
    EndianSwap(data, count);
#endif
}

```

```

void Stream::SerializeRaw(dword *data, dword count) {
#ifdef CPU_BE
    EndianSwap(data, count);
#endif
    SerializeRaw((byte *)data, 4 * count);
#ifdef CPU_BE
    EndianSwap(data, count);
#endif
}

```

```

void Stream::SerializeRaw(uint64 *data, dword count) {
#ifdef CPU_BE
    EndianSwap(data, count);
#endif
    SerializeRaw((byte *)data, 8 * count);
#ifdef CPU_BE
    EndianSwap(data, count);
#endif
}

```

(later we most likely should speed optimize that)

Mirek

---

---

Subject: Re: MacOS X woes

Posted by [lundman](#) on Wed, 20 Dec 2006 08:50:29 GMT

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---

I pretty guessed that was the case, and it fixed it. It starts up correctly, and looks nice. No change in the icons that are off-colour still.

Can't build anything at the moment, but I think that is due to that the -current version is "in between" versions, maybe.

HelloWorld.cpp:

hello.cpp:3: error: expected class name before '{' token

Hmm odd - but anyway, will sync again next change.

What we were fixing was the Image Editor in ide, and that does work now (reading my little endian .iml file and displays correctly) so that is one bug down.

To focus on why icons in the IDE are odd coloured, where are they coming from? For example the "Help Topics"'s question mark icon?

Any of the Examples do simple .png, .bmp tests?

---

Subject: Re: MacOS X woes

Posted by [lundman](#) on Wed, 20 Dec 2006 08:59:51 GMT

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---

Ah no I lie, it was just that my icon had little colour.

If I draw a line on icons

line of red  
line of green  
line of blue  
line of purple

I visually see  
line of "nothing"  
line of "nothing"  
line of blue  
line of cyan

Hmm maybe I should have screenshot that.. So, are RGBA perhaps needed to be Endian swapped too?

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Wed, 20 Dec 2006 09:50:17 GMT  
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---

Yes, very likely, RGBA has to be swapped before being sent to X11.

There are two ways how to do that. I think we should try to alter RGBA structure itself first

Core/Color.cpp

```
#ifdef CPU_LE
struct RGBA : Moveable<RGBA> {
    byte b, g, r, a;
};
#else
struct RGBA : Moveable<RGBA> {
    byte a, r, g, b;
};
#endif
```

Mirek

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Wed, 20 Dec 2006 12:23:08 GMT  
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---

<http://netbsd.interq.or.jp/~lundman/osx8.jpg>

Very pretty. Running out of things to fix now. Only thing missing is the ability to specify linking options, or somehow be able to do cross-compile for the other arch.

Final code changes:

Core/Core.h

```
#endif // #ifdef flagFREEBSD
```

```
#ifdef flagOSX11
```

```
    #define PLATFORM_OSX11
```

```
    #define PLATFORM_POSIX
```

```
    #ifdef flagGUI
```

```
        #define PLATFORM_X11
```

```
    #endif
```

```
    #ifdef flagTESTLEAKS
```

```
        #define TESTLEAKS
```

```
    #endif
```

```
    // defines set by OsX for us.
```

```
    #ifdef __POWERPC__
```

```
        #define flagPOWERPC
```

```
    #endif
```

```
    #ifdef __i386__
```

```
        #define flagX86
```

```
    #endif
```

```
#endif
```

```
#elif defined(flagPPC)
```

```
    #define CPU_32
```

```
    #define CPU_PPC
```

```
    #define CPU_BE
```

```
    #define CPU_BIG_ENDIAN
```

```
    #define CPU_ALIGNED
```

```
+ #elif defined(flagPOWERPC)
```

```
+    #define CPU_32
```

```
+    #define CPU_POWERPC
```

```
+    #define CPU_BE
```

```
+    #define CPU_BIG_ENDIAN
```

```
+    #define CPU_ALIGNED
```

```
#else
```

And the same changed in CppBuilder.cpp and GccBuilder.cpp, Host.cpp, bmp HDR.h

And the 2 PackageOrganiser changes.

Next semi-stable release I can make a PPC binary, but Intel needs to wait for the Link options (unless I temporarily hardcode it)

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Wed, 20 Dec 2006 15:06:39 GMT  
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---

Do you think you could zip and post all changed files? (Just to be sure that I apply changes correctly).

Mirek

---

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Thu, 21 Dec 2006 01:21:53 GMT  
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---

As requested, attached file.

I guess I could also mention two other things, they don't really affect the usage of U++, but sometimes perfection is desirable.

When a Window is minimized (or possibly removed) Console gets:

X Error: BadMatch (invalid parameter attributes), request: X\_SetInputFocus, resource id: 6295038 = 600DFE

but it is just noisy, no noticable impact.

And when you exit the Ide:

Program received signal EXC\_BAD\_ACCESS, Could not access memory.  
Reason: KERN\_PROTECTION\_FAILURE at address: 0x000004d0  
0x00f20468 in XQueryExtension ()  
(gdb) bt  
#0 0x00f20468 in XQueryExtension ()  
#1 0x00f161c0 in XInitExtension ()  
#2 0x018bf34c in XextAddDisplay ()

```
#3 0x00df11e0 in XRenderFreePicture ()
#4 0x00320568 in Upp::Image::Data::SysRelease (this=0x1bd3488) at
/Users/lundman/src/upp/uppsrc/Draw/ImageX11.cpp:63
#5 0x002fdbf4 in Upp::Image::Data::~Data (this=0x1bd3488) at Image.cpp:324
#6 0x005850dc in Upp::Image::Data::Release (this=0x1bd3488) at Image.h:117
#7 0x002fdd04 in Upp::Image::~Image (this=0x200993c) at Image.cpp:278
#8 0x0044928c in Upp::Iml::IImage::~IImage (this=0x2009938) at Image.h:253
#9 0x0045a694 in Upp::DestroyArray<Upp::Iml::IImage> (t=0x2009938, lim=0x2009a10) at
Topt.h:175
#10 0x0045a76c in Upp::Vector<Upp::Iml::IImage>::Free (this=0x91ea40) at Vcont.hpp:101
#11 0x0045a80c in Upp::Vector<Upp::Iml::IImage>::~Vector (this=0x91ea40) at Vcont.h:82
#12 0x0045a848 in Upp::AMap<Upp::String, Upp::Iml::IImage, Upp::Vector<Upp::Iml::IImage>,
Upp::StdHash<Upp::String> >::~AMap (this=0x91ea04) at Map.h:2
#13 0x0045a8c0 in Upp::VectorMap<Upp::String, Upp::Iml::IImage, Upp::StdHash<Upp::String>
>::~VectorMap (this=0x91ea00) at Map.h:130
#14 0x0047571c in Upp::Iml::~Iml (this=0x91e9f4) at Image.h:252
#15 0x002ae584 in __tcf_0 () at iml_source.h:54
#16 0x00003a44 in cxa_atexit_wrapper ()
#17 0x9001455c in __cxa_finalize ()
#18 0x90014444 in exit ()
#19 0x00002c58 in _start ()
#20 0x00002958 in start ()
```

But all files are saved correctly, so again, no impact, just not "clean". I used File/Exit there, but same happens when you push Close X-icon.

## File Attachments

1) [osx\\_changes.zip](#), downloaded 465 times

---

---

Subject: Re: MacOS X woes

Posted by [lundman](#) on Thu, 21 Dec 2006 03:29:19 GMT

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---

Bored at work, so I looked at it. Reason it complains, is that Xdisplay is NULL, presumably already been freed.

I changed the code to

```
void Image::Data::SysRelease()
{
    if(picture) {
        if(Xdisplay) XRenderFreePicture(Xdisplay, picture);
        ResCount -= !paintedonly;
```

```
    picture = 0;
}
if (picture8) {
    if (Xdisplay) XRenderFreePicture(Xdisplay, picture8);
```

And now I get:

Program exited normally.

So that is something. Might not be the proper fix though.

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Thu, 21 Dec 2006 13:05:06 GMT  
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---

I sent a binary of my app to a colleague to check and we found an interesting problem. It does not start up, but spins forever, ktrace tells us it is in:

```
11119 UFxp  CALL  open(0xe521f4,0,0)
11119 UFxp  NAMl  "libgtk-x11-2.0.so" 11119 UFxp  RET  open -1 errno 2 No such file or
directory
11119 UFxp  CALL  close(0xffffffff)
11119 UFxp  RET  close -1 errno 9 Bad file descriptor
11119 UFxp  CALL  open(0xbffefa0,0,0)
11119 UFxp  NAMl  "libgtk-x11-2.0.so.36"
11119 UFxp  RET  open -1 errno 2 No such file or directory
```

Which is interesting, since it isn't linked against those libraries the usual way. I assume then that you use dynamic library load at run time, and perhaps does not deal with the error as well as one would hope? What should normally happen on failure to open a library?

Lund

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Thu, 21 Dec 2006 20:25:46 GMT  
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---

U++ tries to dlopen gtk libraries to use it for theming widgets.

If that fails, "standard" look is used.

Mirek

---

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Fri, 22 Dec 2006 11:34:47 GMT  
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---

Ok, I will try with the latest build to see if it still happens, that was a 605 build.

I will hold off on 612-dev2 as it doesn't have all the OsX changes, and stay with the -current versions for now.

---

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Fri, 22 Dec 2006 18:09:30 GMT  
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---

Applied all changes EXCEPT bmphdr, which does not make a sense to me... (casting word reference to word reference?!).

But maybe it was just old version.

Mirek

---

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Sat, 23 Dec 2006 03:43:04 GMT  
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---

Thank you! Synced and trying... You forgot the Color.h changes for RGBA.

Compiling we get:

```
Bmp.cpp
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h: In member function 'void
Upp::BMP_FILEHEADER::SwapEndian()':
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:18: error: cannot bind packed field
'((Upp::BMP_FILEHEADER*)this)->Upp::BMP_FILEHEADER::
    bfType' to 'Upp::word&'
```

```
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:19: error: cannot bind packed field  
'((Upp::BMP_FILEHEADER*)this)->Upp::BMP_FILEHEADER::  
    bfSize' to 'Upp::dword&'
```

[snip]

Which I can "fix" by casting it (lets me compile it at least)

Later on I get:

```
uppsrc/CtrlCore/Win32Proc.cpp:3:20 error winnls.h: No such file or directory
```

I assume it is just too high up, actually its included twice, so I just removed the top one.

Install.cpp

```
/Users/lundman/src/upp/uppsrc/ide/Install.cpp: In member function 'void  
XInstallDlg::FindInstFolder()':  
/Users/lundman/src/upp/uppsrc/ide/Install.cpp:267: error: 'path' was not declared in this scope  
/Users/lundman/src/upp/uppsrc/ide/Install.cpp: In constructor 'XInstallDlg::XInstallDlg()':  
/Users/lundman/src/upp/uppsrc/ide/Install.cpp:280: error: 'tutorial' was not declared in this scope  
/Users/lundman/src/upp/uppsrc/ide/Install.cpp:281: error: 'path' was not declared in this scope  
/Users/lundman/src/upp/uppsrc/ide/Install.cpp: In function 'bool Install()':  
/Users/lundman/src/upp/uppsrc/ide/Install.cpp:304: error: 'struct XInstallDlg' has no member  
named 'path'  
/Users/lundman/src/upp/uppsrc/ide/Install.cpp:311: error: 'struct XInstallDlg' has no member  
named 'path'  
/Users/lundman/src/upp/uppsrc/ide/Install.cpp:346: error: 'struct XInstallDlg' has no member  
named 'tutorial'  
ide: 1 file(s) built in (0:04.97), 4977 msecs / file, duration = 5748 msecs
```

Apart from that, builds.

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Sat, 23 Dec 2006 08:03:01 GMT  
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---

lundman wrote on Fri, 22 December 2006 22:43 Thank you! Synced and trying... You forgot the Color.h changes for RGBA.

You forgot to send the file

Quote:

```
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:18: error: cannot bind packed field  
'((Upp::BMP_FILEHEADER*)this)->Upp::BMP_FILEHEADER::  
    bfType' to 'Upp::word&'
```

Ahh, "packed field" rings the bell - it treats the `__attribute__((packed))` using bit fields! Which makes your fix most likely wrong. Tried to fix (by adding `SwapEndian` functions which operate with value input and value return).

If it compiles, please try to load some .bmp files - there is nice examples/ImageView.

Quote:

Later on I get:

```
uppsrc/CtrlCore/Win32Proc.cpp:3:20 error winnls.h: No such file or directory
```

I assume it is just too high up, actually its included twice, so I just removed the top one.

Fixed.

Quote:

Install.cpp

```
/Users/lundman/src/upp/uppsrc/ide/Install.cpp: In member function 'void  
XInstallDlg::FindInstFolder()':
```

```
/Users/lundman/src/upp/uppsrc/ide/Install.cpp:267: error: 'path' was not declared in this scope
```

Interesting. path should be defined in ide.lay.

Mirek

---

Subject: Re: MacOS X woes

Posted by [lundman](#) on Sat, 23 Dec 2006 09:58:04 GMT

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---

It was your fix

```
Color.h:
#ifdef PLATFORM_WIN32
struct RGBA : Moveable<RGBA> {
    byte b, g, r, a;
};
#endif
```

```
#ifdef PLATFORM_POSIX
#ifdef CPU_BE
struct RGBA : Moveable<RGBA> {
    byte a, r, g, b;
};
#else
struct RGBA : Moveable<RGBA> {
    byte b, g, r, a;
};
#endif
#endif
```

```
#ifndef PLATFORM_WIN32
```

"path" is defined in .lay, I checked, but it just doesn't want to compile

bmphdr (looks like no change):

```
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h: In member function 'void
Upp::BMP_FILEHEADER::SwapEndian()':
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:18: error: no matching function for call to
'Upp::BMP_FILEHEADER::SwapEndian(Upp::word&)'
,
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:15: note: candidates are: void
Upp::BMP_FILEHEADER::SwapEndian()
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:19: error: no matching function for call to
'Upp::BMP_FILEHEADER::SwapEndian(Upp::dword&
)'
```

etc

---

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Sat, 23 Dec 2006 10:17:10 GMT  
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---

bmphdr:

In Core/util.h there should be

```
inline word  SwapEndian(word v)  { EndianSwap(v); return v; }  
inline int16 SwapEndian(int16 v)  { EndianSwap(v); return v; }  
inline dword SwapEndian(dword v)  { EndianSwap(v); return v; }  
inline int   SwapEndian(int v)    { EndianSwap(v); return v; }  
inline long  SwapEndian(long v)   { EndianSwap(v); return v; }  
inline int64 SwapEndian(int64 v)  { EndianSwap(v); return v; }  
inline uint64 SwapEndian(uint64 v){ EndianSwap(v); return v; }
```

I am really not sure what can be wrong here....

(Color.h altered).

Mirek

---

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Sat, 23 Dec 2006 11:10:41 GMT  
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---

I can confirm those functions are in there, and both my utils.h and bmphdr.h are up to date.

```
c++ -c -I"/Users/lundman/MyApps" -I"/Users/lundman/src/upp/uppsrc" -I"/usr/X11R6/include"  
-I"/opt/local/include" -I"/usr/X11R6/include/fr  
eetype2" -DflagGUI -DflagMT -DflagGCC32 -DflagSHARED -DflagOSX11 -DbmYEAR=2006  
-DbmMONTH=12 -DbmDAY=23 -DbmHOUR=20 -DbmMINUTE=4 -DbmSE  
COND=18 -m32 -fexceptions -Os -finline-limit=20 -x c++  
"/Users/lundman/src/upp/uppsrc/plugin/bmp/Icon.cpp" -o "/Users/lundman/uppsrc  
-612d/out/plugin/bmp/GCC32.Gui.Mt.Shared/Icon.o"  
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h: In member function 'void  
Upp::BMP_FILEHEADER::SwapEndian()':  
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:18: error: no matching function for call to  
'Upp::BMP_FILEHEADER::SwapEndian(Upp::word&)  
'  
  
/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:15: note: candidates are: void  
Upp::BMP_FILEHEADER::SwapEndian()
```

/Users/lundman/src/upp/uppsrc/plugin/bmp/bmphdr.h:19: error: no matching function for call to 'Upp::BMP\_FILEHEADER::SwapEndian(Upp::dword& )'

---

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Sat, 23 Dec 2006 12:21:37 GMT  
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---

Strange. OK, try to assign to local variable first:

```
word x = bfType;  
bfType = SwapEndian(x);
```

Mirek

---

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Sat, 23 Dec 2006 12:47:06 GMT  
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---

Same deal. The only candidates are SwapEndian which line 15 above, in bmphdr.h

However if I make it UPP::SwapEndian it compiles too.

Trying sample..

---

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Sat, 23 Dec 2006 13:30:45 GMT  
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---

Sample ImageViewer looks good, displays the few .bmp I have on the system.

---

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Sat, 23 Dec 2006 14:30:01 GMT  
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---

lundman wrote on Sat, 23 December 2006 07:47: Same deal. The only candidates are SwapEndian which line 15 above, in bmp\_hdr.h

However if I make it UPP::SwapEndian it compiles too.

Trying sample..

OMG, I am so stupid... Of course. Clashes with the method name...

I guess we can consider that resolved...

Mirek

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Sun, 24 Dec 2006 00:58:40 GMT  
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---

Great. Do I need to send you that file?

Also, possible bug, on my colleague's machine, which don't have much of the X11 stuff, he dies in XftCharExists(), from DrawTextXftp.cpp:86.

```
XftFont *xftfont = XftFontOpen(Xdisplay, Xscreenno,
                               XFT_FAMILY, XftTypeString, (char *)face,
                               XFT_PIXEL_SIZE, XftTypeInteger, 20,
                               (void *)0);

int n = 0;
for(int c = 0; c < 128; c++)
    if(!XftCharExists(Xdisplay, xftfont, c + 256))
        n++;
```

So I added:

```
XftFont *xftfont = XftFontOpen(Xdisplay, Xscreenno,
                               XFT_FAMILY, XftTypeString, (char *)face,
                               XFT_PIXEL_SIZE, XftTypeInteger, 20,
                               (void *)0);

if (!xftfont) return 0;
int n = 0;
```

Which stops it from coring and gets further in.

Lund

---

Subject: Re: MacOS X woes

Posted by [lundman](#) on Tue, 26 Dec 2006 06:20:27 GMT

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---

After fixing that Xft issue, it actually starts the application, but dies in Acquire() later on, so I guess his Xft is returning many non-standard things (he seems to have no X11 fonts).

```
f->xftfont = CreateXftFont(font, angle);
f->filename = NULL;
f->ascent = (int16)f->xftfont->ascent;
f->descent = (int16)f->xftfont->descent;
```

Which happens because CreateXftFont() returns NULL. But I am unsure how to fix this, or if we would just consider it "too broken" not to have fonts? But complaining would be nicer than coring.

I can add:

```
f->xftfont = CreateXftFont(font, angle);
if (f->xftfont) return NULL;
```

But we've already called InsertNext(HASH) on it, so would have to roll that back. If I call CreateXftFont() before we call fh->InsertNext() it will eventually die in;

Draw.h:

```
void    Retain(const FontInfo& f) { ptr = f.ptr; ptr->count++; charset = f.charset; }
```

Because ptr is NULL. If I wrap that with "if (ptr)" ...

```
0x0033fa68 in Upp::FontInfo::GetAveWidth (this=0xbffe4080) at Draw.h:316
316 int    GetAveWidth() const          { return ptr->avewidth; }
```

So not sure how deep I would need to go, or if I am even doing the right thing

I can simulate his setup by renaming the "fonts.conf" file to something else.

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Tue, 26 Dec 2006 07:58:02 GMT  
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---

lundman wrote on Tue, 26 December 2006 01:20

After fixing that Xft issue, it actually starts the application, but dies in Acquire() later on, so I guess his Xft is returning many non-standard things (he seems to have no X11 fonts).

```
f->xftfont = CreateXftFont(font, angle);  
f->filename = NULL;  
f->ascent = (int16)f->xftfont->ascent;  
f->descent = (int16)f->xftfont->descent;
```

Which happens because CreateXftFont() returns NULL. But I am unsure how to fix this, or if we would just consider it "too broken" not to have fonts?

Yes, too broken. I would not waste the time with this; the final Mac solution should use Carbon anyway, I consider this effort as an intermediate step (but very important, because we have actually fixed all CPU incompatibility bugs in this productive session).

Mirek

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Tue, 26 Dec 2006 08:43:48 GMT  
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---

Yeah, I might stick a message into CharExists() call returning NULL, it'll core, but at least it will tell the user why.

What is the step for native? I see about 11 files for the X11 support, so presumably the same will be needed for native. Are you going to install OsX and make it happen?

---

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Tue, 26 Dec 2006 09:47:43 GMT  
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---

lundman wrote on Tue, 26 December 2006 03:43

Yeah, I might stick a message into CharExists() call returning NULL, it'll core, but at least it will tell the user why.

What is the step for native? I see about 11 files for the X11 support, so presumably the same will be needed for native. Are you going to install OsX and make it happen?

...as soon as 2007.1 is out...

Mirek

---

---

Subject: Re: MacOS X woes  
Posted by [lundman](#) on Wed, 27 Dec 2006 07:29:23 GMT  
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---

Neat. well, hmm, guess I ran out of things to do.. back to being bored at work..

suppose I could go through the app's todo list and fix somethings...

---

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Wed, 27 Dec 2006 08:06:31 GMT  
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lundman wrote on Wed, 27 December 2006 02:29

Neat. well, hmm, guess I ran out of things to do.. back to being bored at work..

suppose I could go through the app's todo list and fix somethings...

If you wish, there is still a couple of MacOS X things that can be done now as preparation for things to come:

- \* create minimal carbon app (using just U++ Core) in TheIDE - means something that just opens main carbon window and builds in TheIDE

- \* investigate how to get basic drawing primitives working, DrawRect, DrawText and DrawImage.
- \* investigate how to get event loops

Mirek

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Subject: Re: MacOS X woes  
Posted by [lundman](#) on Fri, 29 Dec 2006 04:41:17 GMT  
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While looking into your "No 1" task, I discovered PackageOrganiser/Add/Remove-Flags.. siigghh.. all my complaining about no link-options Anyway, it would be nice if the "WHEN" could also sense the BuildEnvironment-name used. "GCC32" and "GCC32CARBON" or what not.

Anyway, very simple carbon app compiled in U++ as "Core console project", straight out of developer.apple.com, so no credits to me:

UPPCarbon.cpp:

```
#include <Carbon/Carbon.h>
```

```
#include "UPPCarbon.h"
```

```
#define kWindowTop 100  
#define kWindowLeft 50  
#define kWindowRight 250  
#define kWindowBottom 250
```

```
const EventTypeSpec  eventList[] =  
{  
    { kEventClassWindow, kEventWindowClose },  
    { kEventClassWindow, kEventWindowActivated },  
    { kEventClassWindow, kEventWindowDeactivated },  
};
```

```
static pascal OSStatus MyWindowEventHandler(EventHandlerCallRef nextHandler,  
                                             EventRef theEvent,  
                                             void *userData)  
{  
    OSStatus result = eventNotHandledErr;  
    WindowRef theWindow = (WindowRef) userData;  
    UInt32 whatHappened;
```

```

whatHappened = GetEventKind(theEvent);

switch(whatHappened) {

    case kEventWindowClose:
        DisposeWindow(theWindow);
        QuitApplicationEventLoop();
        result = noErr;
        break;

    case kEventWindowActivated:
        ::CallNextEventHandler(nextHandler, theEvent);
        result = noErr;
        break;

    case kEventWindowDeactivated:
        ::CallNextEventHandler(nextHandler, theEvent);
        result = noErr;
        break;

}

return result;

}

void Initialize(void)
{
    // Do one-time-only initialization

    WindowRef          theWindow;
    WindowAttributes    windowAttrs;
    Rect                contentRect;
    EventHandlerUPP     handlerUPP;

    windowAttrs = kWindowStandardDocumentAttributes |
                  kWindowStandardHandlerAttribute;

    SetRect(&contentRect, kWindowLeft, kWindowTop,
            kWindowRight, kWindowBottom);

    CreateNewWindow(kDocumentWindowClass, windowAttrs,
                   &contentRect, &theWindow);

    SetWindowTitleWithCFString(theWindow, CFSTR("U++ Carbon Example"));
}

```

```

    handlerUPP = NewEventHandlerUPP(MyWindowEventHandler);

    InstallWindowEventHandler(theWindow, handlerUPP,
                            GetEventTypeCount(eventList), eventList,
                            theWindow, NULL);

    ShowWindow(theWindow);

    InitCursor();
}

void Finalize(void)
{
}

using namespace UPP;

CONSOLE_APP_MAIN
{
    Initialize(); // Do one-time-only initialization

    RunApplicationEventLoop(); //Process events until time to quit

    Finalize(); // Do one-time-only finalization
}

```

Extra link flags, and post-link step added:

UPPCarbon.upp:

```
flags(OSX11) "-framework carbon";
```

```
uses
    Core;
```

```
link(OSX11) "-framework carbon";
```

```
file
    UPPCarbon.h,
    UPPCarbon.cpp;
```

```
mainconfig
    "" = "",

custom(OSX11) "post-link",
    "mkdir -p $(OUTTITLE).App/Contents/MacOS\ncp $(OUTPATH) $(OUTTITLE).App"
    "/Contents/MacOS",
    "",
```

And yes, creating the UPPCarbon.App/Contents/MacOs/ is required for it to fully function.

Looks like:

<http://netbsd.interq.or.jp/~lundman/carbon.jpg>

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## File Attachments

1) [carbon.jpg](#), downloaded 943 times

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Subject: Re: MacOS X woes

Posted by [mirek](#) on Fri, 29 Dec 2006 06:34:41 GMT

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lundman wrote on Thu, 28 December 2006 23:41 While looking into your "No 1" task, I discovered PackageOrganiser/Add/Remove-Flags.. siigghh.. all my complaining about no link-options Anyway, it would be nice if the "WHEN" could also sense the BuildEnvironment-name used. "GCC32" and "GCC32CARBON" or what not.

I believe that would not be very systematic, because end users can use any name for build method they want to (unlike build flags)....

Carbon app in U++ is cool Looking forward to get my hands on it....

Mirek

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Subject: Re: MacOS X woes

Posted by [lundman](#) on Sat, 30 Dec 2006 08:16:29 GMT

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Thanks, that was quite fun, and the apple docs are pretty good.

But yes, we need someway to be able to specify linker flags, I think you should just add link options, next to compile options in the build environment, but I guess I can also get around that with -Wl,flags but that is very noisy.

Also, the ide leaves a lot of zombies around when compiling, are you calling wait(3) properly on the children?

Lund

---

Subject: Re: MacOS X woes  
Posted by [mirek](#) on Sat, 30 Dec 2006 08:32:13 GMT  
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lundman wrote on Sat, 30 December 2006 03:16

Also, the ide leaves a lot of zombies around when compiling, are you calling wait(3) properly on the children?

Yes, I am aware of the problem. No, most likely not (I mean, I am not calling wait properly

Starting another thread about this problem.

Mirek

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Subject: Re: MacOS X woes  
Posted by [lundman](#) on Sun, 31 Dec 2006 10:32:06 GMT  
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Well, for those who want to play with the IDE on OsX, or yourself, since it is easier to build U++ when you have a working u++ ide, I put this together:

```
# file Ultimate++-612dev3/ide.App/Contents/MacOS/ide
Ultimate++-612dev3/ide.App/Contents/MacOS/ide: Mach-O fat file with 2 architectures
Ultimate++-612dev3/ide.App/Contents/MacOS/ide (for architecture ppc):  Mach-O executable ppc
Ultimate++-612dev3/ide.App/Contents/MacOS/ide (for architecture i386):  Mach-O executable
i386
```

Which can be fetched from here:

<http://www.lundman.net/ftp/Ultimate++-612dev3.dmg>

Which is the 612dev2 ide+patches, with the 612dev3 sources "as-is".

Lund

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#### File Attachments

1) [idescrn.jpg](#), downloaded 2713 times

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Subject: Re: MacOS X woes

Posted by [mirek](#) on Tue, 17 Apr 2007 08:11:43 GMT

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lundman wrote on Sat, 23 December 2006 19:58Great. Do I need to send you that file?

Also, possible bug, on my colleague's machine, which don't have much of the X11 stuff, he dies in XftCharExists(), from DrawTextXftp.cpp:86.

BTW, as I was stucked a day or two at the same trouble, the one thing that heals this issue is:

sudo fc-cache

After that, TheIDE finally starts again...

Mirek

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