
Subject: Re: MILESTONE: gtk3 replaces gtk2 as default linux backend

Posted by [Sender Ghost](#) on Tue, 21 Jan 2020 23:05:27 GMT

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Hi, Amrein.

amrein wrote on Tue, 21 January 2020 21:19

If U++ uses GTK3 only, x11 or libnotify are not required.

<..>

So if I'm not wrong, this part of the patch is incorrect:

<..>

and should be replaced by

```
-pkg_config((LINUX | FREEBSD) !X11) "gtk+-3.0 libnotify";  
+pkg_config(POSIX !X11 (!OSX | OSX11)) "gtk+-3.0 libnotify";
```

If use

```
pkg_config(POSIX !X11 (!OSX | OSX11)) "gtk+-3.0 libnotify";
```

or

```
pkg_config(POSIX !X11 (!OSX | OSX11)) "gtk+-3.0";
```

in uppsrc/CtrlCore package to build examples/AddressBook for GUI main package configuration, then there is following linker error:

Linking...

/usr/bin/ld: undefined reference to symbol `XFlush' (try adding -lX11)

//usr/local/lib/libX11.so.6: could not read symbols: Bad value

c++: error: linker command failed with exit code 1 (use -v to see invocation)

The XFlush function is used in GetProperty function in uppsrc/CtrlCore/GtkX11Util.cpp file for GUI_GTK define. This is why !X11 (GTK 3) case requires x11 pkg-config dependency (at least on FreeBSD, where other specified pkg-config dependencies didn't include x11 implicitly).

```
% ldd -a ./AddressBook | sed 's/ (.*)$// ; s|^\.*/||' | head -27
```

AddressBook:

```
libgtk-3.so.0 => /usr/local/lib/libgtk-3.so.0
```

```
libgdk-3.so.0 => /usr/local/lib/libgdk-3.so.0
```

```
libpangocairo-1.0.so.0 => /usr/local/lib/libpangocairo-1.0.so.0
```

```
libpango-1.0.so.0 => /usr/local/lib/libpango-1.0.so.0
```

```
libatk-1.0.so.0 => /usr/local/lib/libatk-1.0.so.0
```

```
libcairo-gobject.so.2 => /usr/local/lib/libcairo-gobject.so.2
```

```
libcairo.so.2 => /usr/local/lib/libcairo.so.2
```

```
libthr.so.3 => /lib/libthr.so.3
```

```
libgdk_pixbuf-2.0.so.0 => /usr/local/lib/libgdk_pixbuf-2.0.so.0
```

```
libgio-2.0.so.0 => /usr/local/lib/libgio-2.0.so.0
```

```
libgobject-2.0.so.0 => /usr/local/lib/libgobject-2.0.so.0
```

```
libglib-2.0.so.0 => /usr/local/lib/libglib-2.0.so.0
```

```
libintl.so.8 => /usr/local/lib/libintl.so.8
```

```
libX11.so.6 => /usr/local/lib/libX11.so.6
```

```
libfontconfig.so.1 => /usr/local/lib/libfontconfig.so.1
```

```
libfreetype.so.6 => /usr/local/lib/libfreetype.so.6
```

```
libpng16.so.16 => /usr/local/lib/libpng16.so.16
libz.so.6 => /lib/libz.so.6
librt.so.1 => /usr/lib/librt.so.1
libexecinfo.so.1 => /usr/lib/libexecinfo.so.1
libc++.so.1 => /usr/lib/libc++.so.1
libcxxrt.so.1 => /lib/libcxxrt.so.1
libm.so.5 => /lib/libm.so.5
libgcc_s.so.1 => /lib/libgcc_s.so.1
libc.so.7 => /lib/libc.so.7
libgtk-3.so.0:
```

Some example of pkg-config output for libnotify and x11 on FreeBSD 10.4:

```
% pkg-config -cflags -libs libnotify
-I/usr/local/include -I/usr/local/include/gdk-pixbuf-2.0 -I/usr/local/include/glib-2.0
-I/usr/local/lib/glib-2.0/include -pthread -L/usr/local/lib -lnotify -lgdk_pixbuf-2.0 -lgio-2.0
-lgobject-2.0 -lglib-2.0 -lintl
% pkg-config -cflags -libs x11
-I/usr/local/include -D_THREAD_SAFE -pthread -L/usr/local/lib -lX11
```

Edit:

But after build test for reference/TrayIcon package, there was following linker error:

```
<../CtrlLib/CLANG.Gui.Shared/CtrlLib.a(TrayIconGtk.o): In function `Upp::TrayIcon::Message(int,
char const*, char const*, int)':
<../uppsrc/CtrlLib/TrayIconGtk.cpp:(.text._ZN3Upp8TrayIcon7MessageEiPKcS2_i+0x1b):
undefined reference to `notify_is_initted'
<../uppsrc/CtrlLib/TrayIconGtk.cpp:(.text._ZN3Upp8TrayIcon7MessageEiPKcS2_i+0x27):
undefined reference to `notify_init'
<../uppsrc/CtrlLib/TrayIconGtk.cpp:(.text._ZN3Upp8TrayIcon7MessageEiPKcS2_i+0x59):
undefined reference to `notify_notification_new'
<../uppsrc/CtrlLib/TrayIconGtk.cpp:(.text._ZN3Upp8TrayIcon7MessageEiPKcS2_i+0x6b):
undefined reference to `notify_notification_set_timeout'
<../uppsrc/CtrlLib/TrayIconGtk.cpp:(.text._ZN3Upp8TrayIcon7MessageEiPKcS2_i+0x77):
undefined reference to `notify_notification_show'
c++: error: linker command failed with exit code 1 (use -v to see invocation)
```

where mentioned functions are used in TrayIcon::Message method in uppsrc/CtrlLib/TrayIconGtk.cpp file.

This may mean, that libnotify package dependency is required for some cases in uppsrc/CtrlLib package.

Possible to add following check for uppsrc/CtrlLib package:

```
pkg_config(POSIX !X11 (!OSX | OSX11)) libnotify;
```

Example of ldd output for TrayIcon and AddressBook executables for this case, which library dependencies are the same:

Click to expand

```
% ldd -a ./TrayIcon | sed 's/ (.*)$// ; s|^\./||' | head -28
```

TrayIcon:

```

libnotify.so.4 => /usr/local/lib/libnotify.so.4
libgdk_pixbuf-2.0.so.0 => /usr/local/lib/libgdk_pixbuf-2.0.so.0
libgio-2.0.so.0 => /usr/local/lib/libgio-2.0.so.0
libgobject-2.0.so.0 => /usr/local/lib/libgobject-2.0.so.0
libglib-2.0.so.0 => /usr/local/lib/libglib-2.0.so.0
libintl.so.8 => /usr/local/lib/libintl.so.8
libgtk-3.so.0 => /usr/local/lib/libgtk-3.so.0
libgdk-3.so.0 => /usr/local/lib/libgdk-3.so.0
libpangocairo-1.0.so.0 => /usr/local/lib/libpangocairo-1.0.so.0
libpango-1.0.so.0 => /usr/local/lib/libpango-1.0.so.0
libatk-1.0.so.0 => /usr/local/lib/libatk-1.0.so.0
libcairo-gobject.so.2 => /usr/local/lib/libcairo-gobject.so.2
libcairo.so.2 => /usr/local/lib/libcairo.so.2
libthr.so.3 => /lib/libthr.so.3
libX11.so.6 => /usr/local/lib/libX11.so.6
libfontconfig.so.1 => /usr/local/lib/libfontconfig.so.1
libfreetype.so.6 => /usr/local/lib/libfreetype.so.6
libpng16.so.16 => /usr/local/lib/libpng16.so.16
libz.so.6 => /lib/libz.so.6
librt.so.1 => /usr/lib/librt.so.1
libexecinfo.so.1 => /usr/lib/libexecinfo.so.1
libc++.so.1 => /usr/lib/libc++.so.1
libcxxrt.so.1 => /lib/libcxxrt.so.1
libm.so.5 => /lib/libm.so.5
libgcc_s.so.1 => /lib/libgcc_s.so.1
libc.so.7 => /lib/libc.so.7
libnotify.so.4:
% ldd -a ./AddressBook | sed 's/ (.*)$// ; s|^\.*/||' | head -28
AddressBook:
libnotify.so.4 => /usr/local/lib/libnotify.so.4
libgdk_pixbuf-2.0.so.0 => /usr/local/lib/libgdk_pixbuf-2.0.so.0
libgio-2.0.so.0 => /usr/local/lib/libgio-2.0.so.0
libgobject-2.0.so.0 => /usr/local/lib/libgobject-2.0.so.0
libglib-2.0.so.0 => /usr/local/lib/libglib-2.0.so.0
libintl.so.8 => /usr/local/lib/libintl.so.8
libgtk-3.so.0 => /usr/local/lib/libgtk-3.so.0
libgdk-3.so.0 => /usr/local/lib/libgdk-3.so.0
libpangocairo-1.0.so.0 => /usr/local/lib/libpangocairo-1.0.so.0
libpango-1.0.so.0 => /usr/local/lib/libpango-1.0.so.0
libatk-1.0.so.0 => /usr/local/lib/libatk-1.0.so.0
libcairo-gobject.so.2 => /usr/local/lib/libcairo-gobject.so.2
libcairo.so.2 => /usr/local/lib/libcairo.so.2
libthr.so.3 => /lib/libthr.so.3
libX11.so.6 => /usr/local/lib/libX11.so.6
libfontconfig.so.1 => /usr/local/lib/libfontconfig.so.1
libfreetype.so.6 => /usr/local/lib/libfreetype.so.6
libpng16.so.16 => /usr/local/lib/libpng16.so.16
libz.so.6 => /lib/libz.so.6

```

librt.so.1 => /usr/lib/librt.so.1
libexecinfo.so.1 => /usr/lib/libexecinfo.so.1
libc++.so.1 => /usr/lib/libc++.so.1
libcxxrt.so.1 => /lib/libcxxrt.so.1
libm.so.5 => /lib/libm.so.5
libgcc_s.so.1 => /lib/libgcc_s.so.1
libc.so.7 => /lib/libc.so.7
libnotify.so.4:

Thanks for your attention.
