wxWidgets PDA/Embedded System Emulator

======================================

This is a simple display emulator for embedded

applications (wxWidgets or other) that use

an X server. The Familiar Linux distribution

is one such environment, using Tiny-X.

wxEmulator uses Xnest, which is the XFree86

X server compiled to show a virtual X desktop

in a window. wxEmulator hijacks the Xnest

window by reparenting its window, and shows

this window with appropriate PDA-style decorations

surrounding it.

No real emulation is done, apart from the work

that Xnest does. You compile your apps on your

host as usual and test them out with the emulator

to get an idea of the constraints of the embedded

system display. Then compile the apps for your

target system with a suitable cross-compiler,

or if you have the luxury of lots of space on

your target device, compile natively on the

target.

It is intended to create a tarball of the

emulator, wxX11 and maybe some other useful

components such as a simple window manager so that

people can quickly start developing embedded

GUI applications without the need for actual

target hardware.

Running wxEmulator

==================

Make sure Xnest is in your PATH. You can download

a binary from the XFree86 ftp server or a mirror,

or you can compile Xnest from source -- but this

downloading XFree86 source in its entirety and

compiling it. Say goodbye to half a gig of disk

space if you take this option.

Then run wxEmulator:

% emulator &

or

% emulator mydevice.wxe &

to specify a configuration file. Run emulator --help

to show what options are available, such as --use-display

for specifying a display other than :100.

After a brief flicker in which wxEmulator steals

Xnest's window, you should see an emulated iPAQ with

a checked screen that indicates raw X with nothing else

running.

Running any X applications with the Xnest display

number (currently 100) will show those applications

in the emulator window instead of the normal desktop.

For example:

% xeyes -display :100 &

Before running any other programs, run a window

manager such as twm:

% twm -display :100 &

If the X program or WM you want to run doesn't support the

-display argument, try exporting the DISPLAY variable

before running it. E.g.:

% export DISPLAY=:100

% xterm &

For details on the configuration file format, please

see default.wxe. Eventually it will support

device buttons.

Compiling wxEmulator

====================

You need to use wxX11 -- no other port is supported.

Configure and make wxX11 in the usual way (see docs/x11/install.txt

at the wxWidgets top level), then compile wxEmulator

using the makefile that configure created.

Have fun!

Julian Smart, March 2002