Panorama of GUI toolkits on Haiku

From ncurses to Qt5

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Haiku

- Free Software rewrite of BeOS

- An Operating System for the desktop

- A lot of POSIX

  – But we don't claim to be Unix®

- Some more funny things

  – Typed & indexable xattrs

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Native GUI

- InterfaceKit
  - C++ API (similar to Qt)
  - BMessage objects
- Multithreaded
  - 1 message loop / window + 1 app main thread
- Few bindings
  - yab (yabasic port)

Toolkit Pros/Cons

✔ More apps, less work

  ✔ More potential users

  ✔ More devs?

✔ It *can* be done right

✗ Never completely native

  ✗ No Scripting support

      ✗ `hey Foo get Frame of View …`

      ✗ `Screen reader…`

✗ Less incentive for native apps

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Toolkit usage in Debian GNU/Linux

- ```
  for t in $(debtags cat | tr ' ,' '\n\n' | grep uitoolkit:: |
  sort | uniq); do echo -en "$t\t"; debtags search $t | wc -l;
  done
  ```

uitoolkit::athena	92
uitoolkit::fltk	25
uitoolkit::glut	23
uitoolkit::gnustep	41
uitoolkit::gtk	2024
uitoolkit::motif	53
uitoolkit::ncurses	757
uitoolkit::qt	965
uitoolkit::sdl	488
uitoolkit::tk	135
uitoolkit::TODO	52
uitoolkit::wxwidgets	117
uitoolkit::xlib	254

- Whatever TODO means

- Probably not the best metric anyway

ncurses ▉▉▉▉▉

- So what, it's a toolkit 😜

- Works not too bad

hdialog

- Native implementation of [x]dialog
- Some missing features
- Shanty is a similar app (Zenity clone)

SDL 1.2

- Of course!

SDL 2

- What Else?™

nativefiledialog

- Native file selectors for Win32, GTK+3, OSX
- Ported during GCI 2014
- For use with SDL/SDL2/…

LibreOffice (VCL)

- Visual Class Libraries

- LibreOffice / OpenOffice's own GUI toolkit
  - Is it used anywhere else?

IUP

- Multi-platform GUI toolkit
  - GTK+, Motif and Windows
  - "Bindings for C, Lua and LED
  - Uses native interface elements
  - Simplicity of its API"
- WIP port by Adrien Destugues (PulkoMandy)

wxWidget

- Is this still in use?

- Oh, I need it for KiCAD!

- Port started long ago, nothing usable yet.

- But last month I made a very nice icon for it ^^^

Tk

- Tcl (the language): ported
- Tk: not yet. Make a `wish`, icon already there 😄
- Would be useful for Python's TkInter!

FLTK

- Not so much used, but why not
  - There's an XPilot branch using it ☺
- Started the port last December, already usable
- Subwindows: must replace with BViews

Lazarus (FreePascal)

- GUI toolkit of choice for FreePascal

- FreePascal ported by Olivier Coursière

- The Qt binding should probably be used

Java (AWT, Swing)

- We are officially supported by OpenJDK
- AWT should work
  - Still some crashes (using Arduino IDE)
- Swing uses AWT
  - NetBeans & ThinkFree Office work

Crazy Eddie's GUI (CEGUI)

- Someone posted a recipe last week
  - needs an update

GTK

- Anyone really needs this???

- Ok well…
    - GObject, really…

Qt 4 ███████ ▦

- Recipe + packages available

- Latest VLC requires Qt

- ⚠ No X11 to call for ugly hacks!

Qt 5

- Recipe + packages available

- Not stable yet…

- OpenGL not usable yet
  - SleepyHead works with GL disabled

- ⚠ No X11 to call for ugly hacks!

Conclusion?

- Lotsa hard work…

- Lotsa fun! ☺

- Thanks for sending patches…

- Questions?