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X bling, system-wide IPC, universal input, desktop integration

(a man, a plan, a canal – Panama!)

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freedesktop.org projects

- daniel@gabe:/projects% ls | wc -l
  58

- X work – X.Org, modular trees, DRI/Mesa, et al

- Cairo – 2D vector graphics framework, multiple backends

- D-BUS – system-wide IPC

- GStreamer – multimedia framework

- UIM/SCIM – universal input support

- HAL – platform-independent hardware layer

The X Factor

- KDrive is very shiny; good codebase for proofs-of-conept (e.g. Composite, new acceleration architecture).

- Modularisation is a win for virtually everyone.

- Investigating alternatives to CVS – mainly TLA.

- X.Org about to release X11R6.8; next release will be X11R7. Major changes afoot, including moving to /usr, modularisation, maybe changing SCM system.

I hate Xlib

- X is really not the problem; it's pretty much fine.

- But Xlib really sucks.

- Seriously.

- Tries to work for both app authors and toolkits, fails miserably at both.

- Often ends up trying to outwit people trying to optimise calls, sends toolkits down lots of blocking paths.

gasp, my hero!

- XCB is the X protocol, only in C form.
- Very, very low-level: unsuitable for apps, which should be using toolkits.
- Allows toolkits to hand-tune and optimise all codepaths.
- Supports most of the X extensions; Jamey Sharp working on improving this.
- libX11 being rewritten as a shim for XCB.
- DEATH TO XTRANS.

Cairo (The Vector Graphics Library Formerly Known As Xr)

- 2D vector graphics library.

- Backend-independent; supports rendering to X, OpenGL, images …

- Already supported by GTK and Qt 4.

D-BUS is love

- Universal IPC system.

- Separated system and per-session buses.

- Allows deep integration with the underlying system (lower-level parts of the OS, interaction with hardware) while remaining platform-independent, e.g. HAL.

- Allows closer integration between different desktops and other disparate components of today's desktop.

Input Methods

- UIM, SCIM: Universal Input Method, Shared Common Input Method.

- Allows far better input of non-Latin character sets; the current systems only really deal alright with ISO-8859-1/15 (hey, works for me).

- Will hopefully solve the 'CJK problem' of wheels being invented many times over for every different character set.

freedesktop.org Platform

- First release in 10 days!
- Common base of libraries, specifications, etc, for desktop developers, distributors, and ISVs to build upon.
- First release will contain many common components, and is guaranteed API-stable until the next major release.
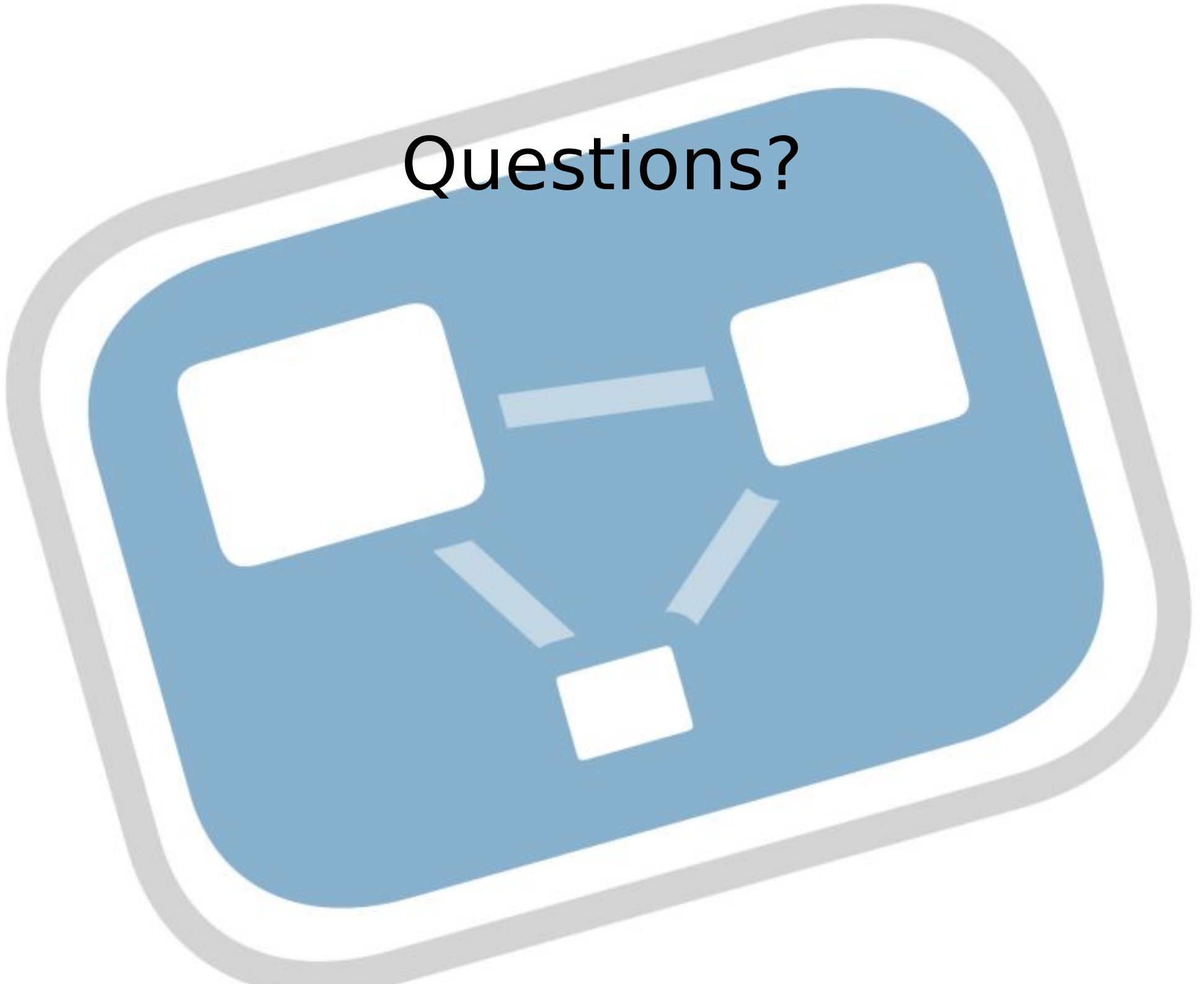
Services provided by fd.o

- Login with SSH access.
- CVS (anonymous pserver, authorised SSH), SVN (svnserve, WebDAV and SSH), Arch (via WebDAV) servers.
- Tinderbox and Bonsai setup for testing.
- Web, list, et al hosting.
- We're a nice bunch of people – ask if you need something.

HELP WANTED – INQUIRE WITHIN

- There are always projects needing help, and new projects are always welcome.

- If you have any questions, please contact either myself (in person, daniels on IRC, or daniel@freedesktop.org), or come into #freedesktop on IRC, or email freedesktop@freedesktop.org.

Questions?

Thankyou

- And congratulations on KDE 3.3! :)