



GTK+ State of the Union

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Agenda

- **Past**
- **Present**
- **Future**



Past

- **GTK+ releases**
- **Project Ridley**
- **Miscellaneous**



What has happened since last year?

- **GTK+ 2.10 released in July 2006**
- **2.10 had a longer release cycle than expected**
- **Several stable releases, current is 2.10.13**
- **Development very slowly started on 2.12**



Project Ridley

- **Consolidate a number of small, buggy, unmaintained libraries into GTK+**
- **Making the platform leaner and cleaner**
- **Big part of GTK+ 2.10: printing, assistant, HREF button, recent files**
- **<http://live.gnome.org/ProjectRidley>**



Project Ridley (cont.)

- **Progress in 2.12**
 - libglade replaced by GtkBuilder
- **Outstanding:**
 - GnomeApp/GnomeClient/GnomeProgram
 - Bug buddy integration: ongoing
 - A canvas ...
 - Multiple row DnD in GtkTreeView ...



Miscellaneous

- New book out on GTK+ (<http://www.gtkbook.com>)
- Website in the process of being redesigned
 - New simple look
 - Volunteers welcome, talk to Martyn Russell
<martyn@imendio.com>



Now

- **2.12 release**
 - **Time frame**
 - **Features & Improvements**



2.12 development

- **Again took longer than expected: original target for 2.12 was January 2007**
 - 2.10 was late due to optimizations in GLib, Pango
 - 2.12 will be late due to shortage of man power, increasing difficulty of maintenance



GtkTasks

- **Maintainers overworked**
- **Designed tasks to help decrease workload of core maintainers**
- **<http://live.gnome.org/GtkTasks>**
- **Clearly defined tasks, there is something for everybody**
- **Come help us out!**



2.12 time schedule

- **Upcoming 2.11.6 and later releases will be fully API frozen**
- **Expect 2.12.0 in the coming 3 to 4 weeks**
- **GLib 2.14, Pango 1.18 will be released earlier**
- **All in time for GNOME 2.20**
- **Next release will be 2.14: target for release is next GUADEC**



Improvements in the library stack

- **GLib 2.14**
- **Pango 1.18**
- **GTK+ 2.12**



GLib 2.14

- **GSequence**
 - Moved here from GTK+
 - List implemented using balanced binary tree
- **GRegex**
 - Perl regular expressions based on PCRE



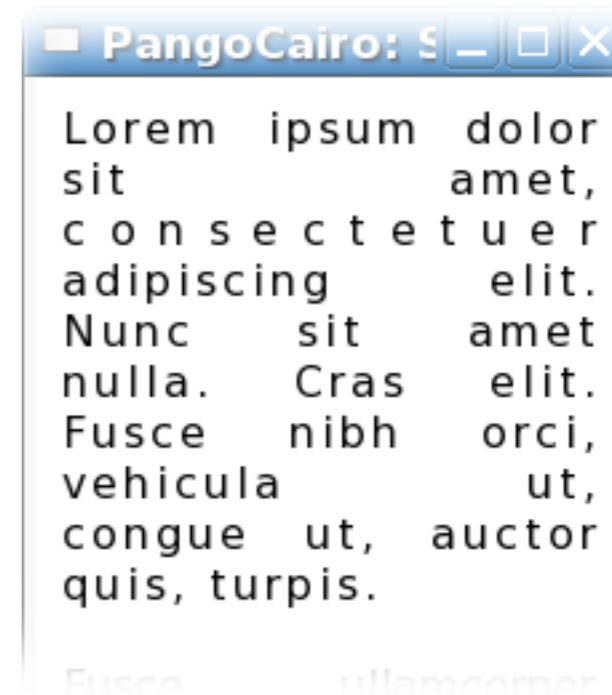
GLib 2.14

- **xdg-user-dirs** (`g_get_user_special_dir ()`)
- **Lots of useful small new API here and there**
 - Enables thread-safe `_get_type()` implementations
- **Lots of bug fixes**
 - Unicode
 - GKeyFile



Pango 1.18

- **Text justification**
- **Arbitrary glyph shapers for PangoCairo**
- **All shapers use OpenType**
- **Misc. optimizations and fixes**





GTK+ 2.12

- **Improvements for end-users**
- **Improvements “under the hood”**



Improvements for users

OS X Backend

Printing

Tango

Windows backend

GtkFileChooser

Mobile devices

Keyboard navigation

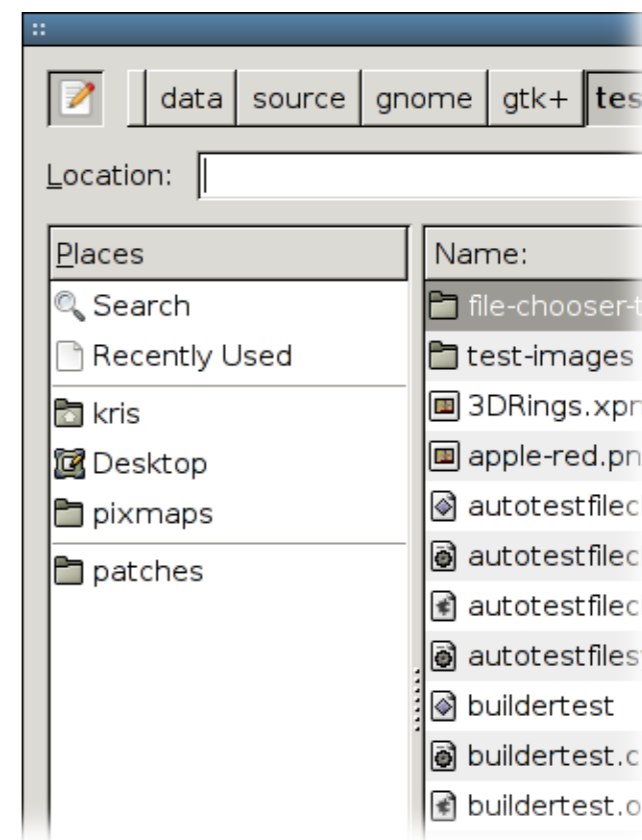
Maemo

Tooltips



GtkFileChooser

- **Recent file support**
- **Search support, different backends**
- **Misc. UI improvements**
 - **Better sizing logic**
 - **Time display**





Printing improvements

- **Support half-open ranges**
- **Several CUPS backend improvements**
- **API to list paper sizes**
- **API to (de)serialize page setups and print settings**



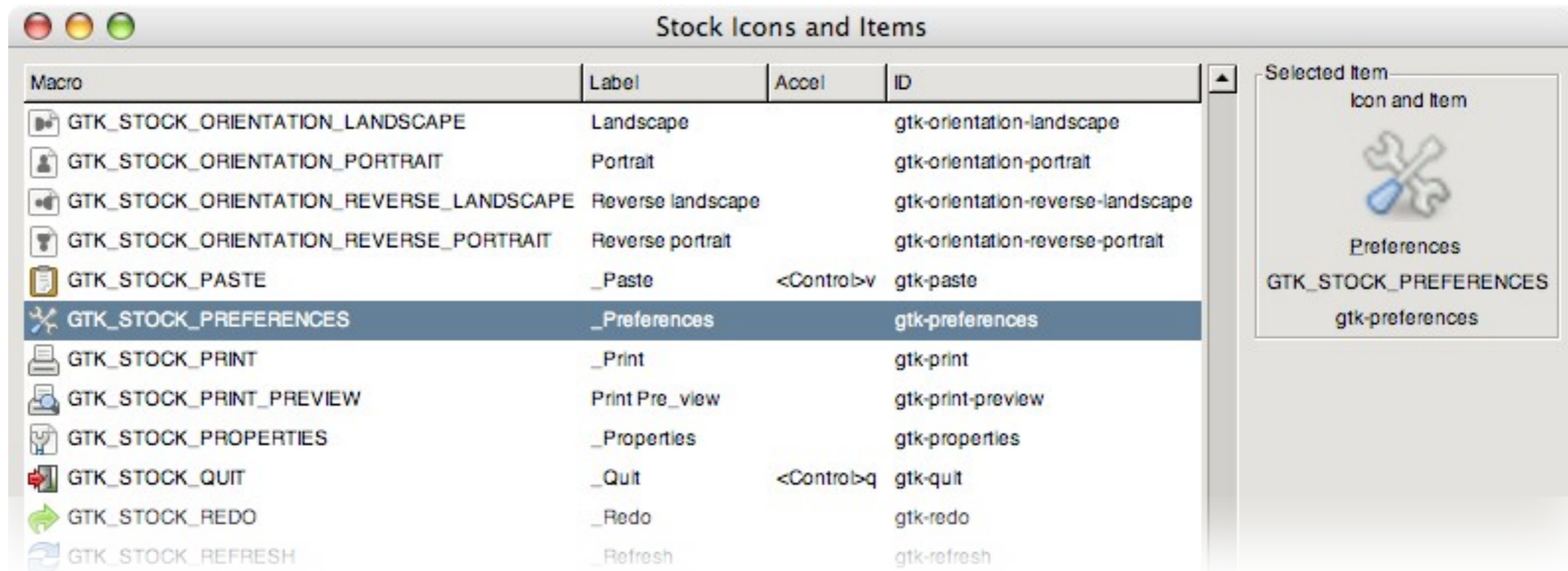
Keyboard navigation

- **Notification of failed keyboard navigation**
- **Better support for restricted sets of keys, cursor-only navigation**
- **Accelerators and mnemonics can be disabled**



OS X backend

- Really getting usable now
- Native status icon
- Search via spotlight
- Tiger only for now, runs on both PPC and Intel Macs





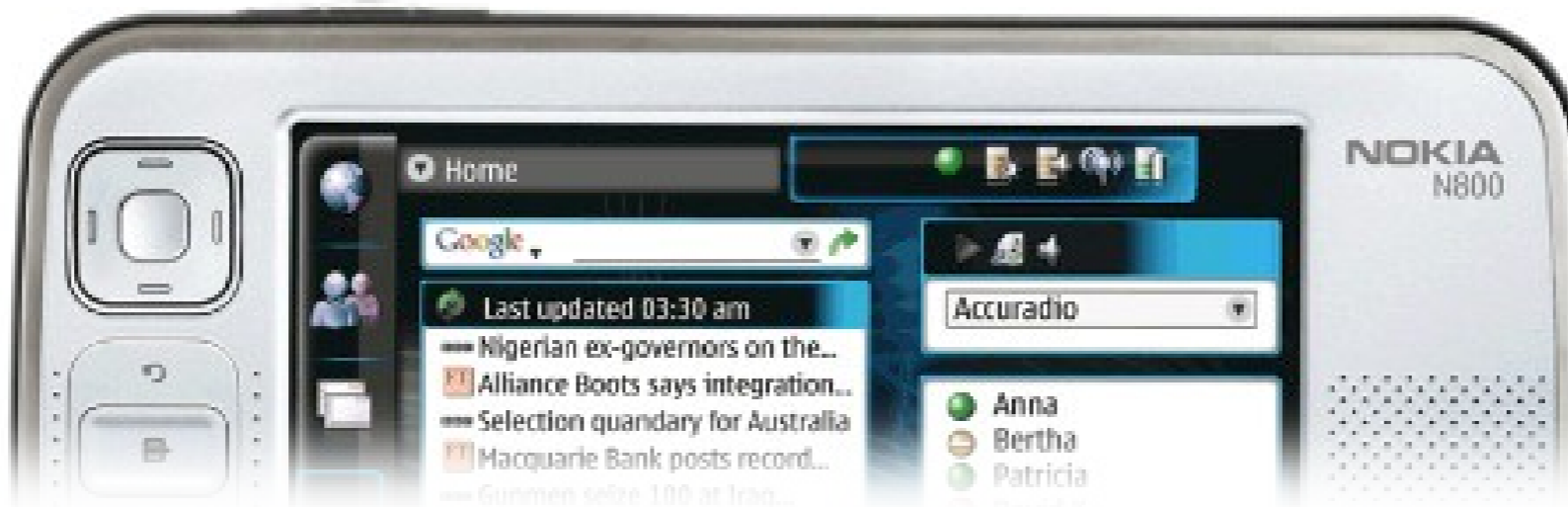
Windows backend

- **No more Windows 9x/ME support**
- **MS theme improvements**
- **Native icons in the file chooser**
- **Native cursors, drop shadows**



Mobile devices

- **Multi press input method**
- **Keyboard navigation**
- **Theming**
- **Menu behavior with touch screens**





Improvements for developers

Multimedia widgets

GtkBuilder

New tooltip API

Fixed GtkNotebook DnD API

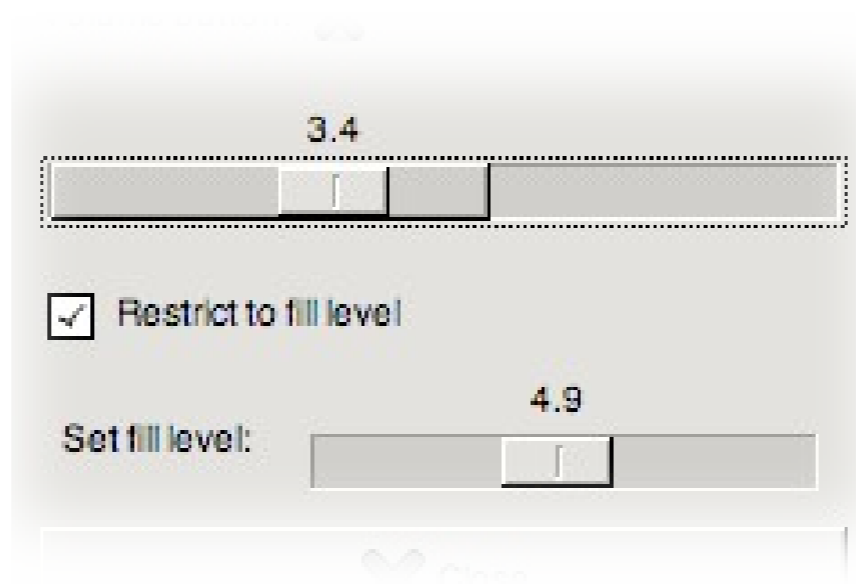
Convenience APIs

Composited child windows



Multimedia widgets

- **GtkScaleButton, GtkVolumeButton**
 - Very tedious to write yourself because of grabs
- **Support for range levels in GtkRange**
 - Nice to use in streaming media applications





GtkBuilder

- **Save your UI as XML, get it build during runtime**
- **Replacement for libglade**
- **Different file format, converter shipped with GTK+**
- **Custom syntax for complex widgets**



New Tooltip API

- **Much more flexible**
 - Works on complex widgets
 - Works on insensitive widgets
 - Complex tooltip layouts
- **Very easy to use**
 - `GtkWidget::tooltip-markup` property
 - `GtkWidget::query-tooltip` signal



Composited child windows

- Redirect exposures of child windows into offscreen buffers
- The expose handler of the parent window should handle drawing the child window
- Only works on X11 servers with the composite extension right now





Fixed GtkNotebook DnD API

- **Slight issues with the API**
- **Group identifier was an integer: now a pointer**
 - `gtk_notebook_[sg]et_group_id()`
 - `gtk_notebook_[sg]et_group()`
- **Window creation function is a global hook, but can now be overridden using the create-window signal.**



New small API

- **Lots of tiny, useful additions here and there**
 - **Vector-based List/Tree Store setters**
 - **GDK threads API**
 - `gdk_threads_add_idle()`
 - `gdk_threads_add_timeout()`
 - **Startup notification API in GDK**
 - **Recent files additions**



Future

- **GTK+ 2.14**
- **GTK+ 3.x**



GTK+ 2.14

- **So, what didn't make GTK+ 2.12?**
 - **Canvas – though discussions have started**
 - **Introspection**
 - **GtkEntry improvements**
- **We will try again for 2.14**



GTK+ 2.14 (cont.)

- **New items**
 - **GVFS**
 - **XrandR SoC work (Pascal Schoenhardt)**
 - **Press-and-hold API**
 - **Offscreen rendering**
 - **Layouting improvements (SoC, Mathias Hasselman)**
 - **Public GtkFileChooserIface**
 - **File type selector**
 - **GtkTreeView: test suites, stabilization**



GTK+ 3.x

- **What will it be anyway?**
- **Discussions every now and then**
- **Several different perspectives**



GTK+ 3.x (cont.)

- **Should we break API/ABI?**
- **Should we start from scratch?**
- **How do we get it done?**



GTK+ 3.x

- **Enough ideas around**
 - **Get rid of C structs, seal API**
 - **Rethink concept of a widget**
 - **Animation support, animations all over the place**
 - **Buttons don't always have to be square**
 - **Create tools to build applications first**
 - **Clean up, refactor**
- **Most of these need an experimentation phase first**



GTK+ 3.x (cont.)

- **Bottom line: nothing concrete at this point**
- **General discussion in the GTK+ 3.x BOF**
 - **Right after this talk, same room**



Summary

- **New releases in the coming weeks**
- **New useful features: GtkBuilder, GtkTooltip, etc.**
- **GTK+ 2.14: probably next GUADEC**
- **GTK+ 3.x discussions have been kicked off**



Thanks

- **The GTK+ and GLib team**
- **The Pango maintainers**
- **The Tango artists**
- **All translation teams**
- **And all other contributors**



Questions?

- Please save your 3.x questions for the BOF ;)
- <http://www.gtk.org/>
- gtk-devel-list@gnome.org
- <http://live.gnome.org/GtkTasks>
- <http://live.gnome.org/ProjectRidley>
- Blog entries on Planet GNOME