Gnome 3 (r)evolution

Tomáš Bžatek <tbzatek@redhat.com>
Where are we now?

- GLib 2.28.0 released on February 08
- GTK+ 3.0 released on February 10
- Gnome 3.0 planned for April 06
- Fedora 15 planned for May 10
Desktop

- no desktop icons?
- changing the way users work with documents
- desktop as a storage place, work place, "reminder" files → chaos
- windows covering desktop space
- cloud storage? (Google, Dropbox)
- unfinished story for 3.0
gnome-shell

- new font (Cantarell), new theme (Adwaita)
- mutter tweaks: drag to maximize, sticky transient dialogs
- persistent notifications, Rhythmbox play buttons
- system tray
- Dash
- symbolic icons
- drag&drop
- future Zeitgeist and Tracker integration
Fedora 15

- fallback: `gnome-session-is-accelerated` helper
- `gnome-panel` still available, not actively maintained anymore
- `gnome-power-manager` default to suspend on lid close
Nautilus

- removed emblems
- removed per-folder backgrounds
- browser mode by default
- sidebar redesign
Glib new API - G(tk)Application

- set of utilities related to an application running in a desktop session
- uniqueness: replaces libunique
- manages top-level windows
- application can export actions
  - "The action support is not complete yet."
Glib new API - GSettings

- multiple backends (dconf, gconf, memory, null)
- dconf is default, fully supported
  - dconf-service for writing
  - automic replace
  - NFS workarounds
- dconf-editor
- convenient API: notification, binding
- gsettings command-line tool
Glib new API - GDBus

- a thread-safe D-Bus library
- clean implementation, written from scratch, GIO streams-based
- creates a private (shared) worker thread for IO
Glib new API

- GIO+TLS (SSL)
- `x-scheme-handler` mimetypes
Gtk3 changes - rendering cleanup

- all drawing in GTK+ 3 is done via cairo
- possibilities for drawing redirection - PDF, web (broadway branch)
- Gdk is now almost X11-independent
Gtk3 changes - pluggable backends

- GDK_BACKEND environment variable
- internal frontend/backend separation in GDK
- allowing to build a single gdk library that contains multiple backends (interesting combinations are x11+wayland or quartz+x11)
Gtk3 changes - theming

- CSS syntax for theme configuration
- XDG_CONFIG_HOME/gtk-3.0/gtk.css
- $HOME/.themes/theme-name/gtk-3.0/gtk.css

```css
GtkButton, GtkEntry {
    color: #ff00ea;
    font: Comic Sans 12
}
```
Gtk3 changes

• added support for Xinput2
• mouse wheel scrolling has been removed from GtkNotebook
• the directfb backend has been removed
Wayland

- a compositor, an actual implementation and a library - not a X server fork!
- a protocol between a compositor and its clients
- standalone display server running on Linux kernel modesetting and evdev input devices
- reuses DRI drivers, KMS, Mesa
- does not define rendering API
- integrates the display server, window manager and compositor into one process
Wayland architecture
Wayland architecture
Wayland architecture

Wayland Client --> X server

Wayland Compositor

KMS  evdev

Kernel

X Client

Diagram showing the architecture of Wayland with various components and their connections.
Wayland

- gdk-backend-wayland gtk3 branch
- qt-wayland branch on gitorious
- support in Clutter since 1.5.4

- remote X (and ssh tunnelling) concerns
  → use vnc and/or spice
Q's?