State of the ${kit}

(kit=WebKitGTK+)

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WebKit Basics
Includes WebKitGTK+
What is WebKit?

Application

WebKit

WebCore

JavaScript Engine

“WebKit”
What is WebKitGTK+?

Application

WebKit

WebCore

JavaScript Engine

“WebKit”

GTK+ Application

WebKit / GTK+

WebCore

JavaScriptCore

“WebKitGTK+”

Cairo,
GST, ATK,
Soup...
What is WebKit2?

UI Process

Application

WebKit

WebCore

JavaScript Engine

UI Process

WebKit UI Process

WebKit Web Process

WebCore

JavaScript Engine
Who is using it?

Epiphany Browser

- Miro
- Shotwell
- Liferea
- Evolution
- WebKit EAL (Maemo)
- Handbrake
- Empathy
- Straw
- NewsKit
- GIMP help viewer
- Kazekakase
- Claws Mail
- Conduit
- Vala bindings
- DeforaOS Surfer
- Osmo
- Anjal
- Uzbl
- Pino
- Pidgin
- Gwibber
- Ubuntu software center
- Blam
- Rhythmbox
- Feed Reader (OpenMoko)
- Postler
- OLPC Sugar
- SWT
- Anjuta
- Balsa
- Midori
- ElementBrowser
- SeedKit

- Pyjamas Desktop
- Surf
- SFLphone
- gPHPEdit
- C++ / gtkmm bindings
- Perl bindings
- ilcontrast (Mono)
- ReSiStance (Maemo)
- GNUcash
- Yelp
- GNOME3 online accounts
- Monodoc
- Lekhonee
- RedNotebook
- Banshee
- Galaxium
- Evolution RSS Reader Plugin
- Sony PS browser
- xtrkcad
- Skipstone
- tinymail UI library
- Python bindings
- Web (Poky Linux)
Previously on WebKitGTK+...

Stable release 1.10.x

- Now enabled by default:
  - Geolocation
  - WebGL
  - Web Timing
- New features:
  - Accelerated compositing
  - Smooth scrolling
  - Full-screen mode
  - HTML5 History API
  - WebAudio
  - JSC LLint
- Boatloads of bugfixes.
- WebKit2GTK+ API augmented, nearing stabilization:
  - To happen with GNOME 3.8, including Epiphany.
  - WebKit1GTK+ API will still be maintained for a while.
WebKit2 now
State of the art

- WebKit2 announced in April 2010
- Apple has released Safari using it
- Cross-platform internal C API exists
- Two Qt browsers out there in the wild
  - N9 browser: uses the C API
  - Snowshoe: uses Qt5
- WebKitGTK+ is the next to have support ☺
So... How's WebKit2GTK+ doing?
The evil is in the details

Doing nicely:

- The basics have been working for quite a while
- Most of the small details are already in place as of 1.10:
  - Context menus
  - Web inspector
  - Favicons
  - On-disk cache
  - Spell checking
  - Printing support
  - Documentation, GI annotations...
WebKit2 changes
(For developers)
WebKit1GTK+

**Goal:** same API for WebKit1GTK+ and WebKit2GTK+

```c
GtkWidget *wt = webkit_web_view_new ();
WebKitWebSettings *settings = webkit_web_view_get_settings (WEBKIT_WEB_VIEW (wt));
/* Configure using the "settings" object */
GtkWidget *win = gtk_window_new (GTK_WINDOW_TOplevel);
gtk_container_add (GTK_CONTAINER (win), wt);
webkit_web_view_load_uri (WEBKIT_WEB_VIEW (wt), "http://fosdem.org");
gtk_widget_show_all (win);
gtk_main ();
```
WebKit2GTK+

**Goal**: same API for WebKit1GTK+ and WebKit2GTK+

```c
GtkWidget *wkt = webkit_web_view_new ();
WebKitSettings *settings = webkit_web_view_get_settings (WEBKIT_WEB_VIEW (wkt));
/* Configure using the “settings” object */
GtkWidget *win = gtk_window_new (GTK_WINDOW_TOPLEVEL);
gtk_container_add (GTK_CONTAINER (win), wkt);
webkit_web_view_load_uri (WEBKIT_WEB_VIEW (wkt), "http://fosdem.org");
gtk_widget_show_all (win);
gtk_main ();
```

- There are some changes, though!
- For simple uses changes are none or minimal
- Start porting your application now!
Differences are small(–ish)

- Some classes renamed (mostly removing “Web”):
  - WebKitWebSettings → WebKitSettings
  - WebKitWebPlugin → WebKitPlugin
  - WebKitWebHistoryItem → WebKitBackForwardListItem
  - ...

- Some new classes (mostly new features):
  - WebKitContextMenu
  - WebKitSecurityManager
  - ...

- Some classes gone away (no longer needed, or missing):
  - WebKitWebPluginDatabase
  - WebKitWebFrame
  - ...
What next?
A sneak peek
To the future... and beyond
Slicker media controls

New media controls

Old media controls
To the future... and beyond
WebKitGTK+ on Wayland with WebGL
To the future... and beyond

Epiphany overview

Epiphany overview

Epiphany overview
To the future... and beyond
Epiphany “UXperiments”
To the future... and beyond

And more!

- Text rendering with Harfbuzz
- GObject Introspection for WebKit2GTK+
- GStreamer 1.0 for multimedia
- HW accelerated video rendering
- WebP and Opus support
- Native notifications
- Web applications
- Print preview
- Win32 (printing, IPC, etc.)
- ...
- ${FEATURE}
Wrapping up
Conclusions, everybody ♥ these
Conclusions

tl;dr

- Mature port, widely used
- Released regularly, every ~6 months
- Well maintained
- Useable for developing serious browsers
- Scales from desktop to embedded
- WebKit2GTK+ API nearing completion, stabilization approaching
  - Beta since 3.6
  - Epiphany adopting it for 3.8
- WebKit1GTK+ API still being maintained
  - New features and improvements for WebKit2GTK+ first
Contributing
Every single bit matters

- bugs.webkit.org
- webkitgtk.org
- webkit.org

Mailing lists:
- webkit-gtk@lists.webkit.org
- webkit-dev@lists.webkit.org

IRC channels on irc.freenode.net:
- #webkitgtk+
- #webkit
Thank You!

...and enjoy the rest of FOSDEM

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