



QtWebKit

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Agenda

- WebKit
 - Overview
 - History
 - Current State
 - Architecture
- QtWebKit
- Community
 - Communcation
 - Contributing

WebKit Overview

- Standards compliant web browser rendering engine
 - (X)HTML, CSS, JavaScript, SVG, AJAX, etc.
- Based on KDE Technology (KHTML, KJS)
- Openly developed at <http://webkit.org/>
- Industry acceptance: Apple, Nokia, Adobe
- Acceptance by content providers:
 - WebKit is the engine behind Apple's Safari Web browser

WebKit History

- Started by Apple Inc.
- Created as fork of KDE technology:
 - KHTML Rendering Engine
 - KJS JavaScript Implementation
- Announced (with source code) 2003

WebKit History continued

- In the beginning changes were contributed back in snapshots
- Development itself was closed
- Sharing code with KDE was difficult

WebKit Opens Up

- Apple announces the opening of WebKit development in 2005
- Public Bugtracker (Bugzilla)
- Public CVS Repository

WebKit Development Today

- WebKit is becoming a true Open Source project
- Many contributors outside of Apple
- Development community active on IRC and Mailinglists

WebKit Architecture

- JavaScript Implementation has only few OS dependencies
- WebCore includes
 - Platform/Toolkit abstraction layer
 - Core HTML/CSS rendering engine on top
- Client Classes provide interface to Application or High-Level API

QtWebKit

- WebKit ported to Qt
- Platform Abstraction Layer implemented using Qt:
 - Text Handling
 - Painting
 - Networking
- Easy-to-use public (Qt'ish) API
- Part of the WebKit project!
- Scheduled for inclusion into Qt 4.4

QtWebKit API

- **QWebPage**
 - Easy to use browser widget
 - `webPage->open(url);`
 - `webPage->goBack()` / `goForward()`, etc.
- **QWebSettings**
 - Fine tune behaviour
 - `setDefaultFontFamily`, `setPluginsEnabled`, etc.
- **QWebPageHistory / QWebHistoryItem**
 - Provides full history
 - Allows navigation

QtWebKit JavaScript Bridge

- `frame->evaluateJavaScript("...")`
 - Allows injecting JavaScript from C++
 - Permits document modifications
- `frame->addToJSWindowObject(myObject)`
 - Exposes custom QObject
 - Signals, Slots, Properties accessible from JavaScript

QtWebKit

- Integration with Qt makes it easy to
 - embed custom widgets
 - apply styles from HTML to Qt Widgets using the StyleSheet style
 - interact with custom objects through JavaScript

WebKit Community Communcation

- IRC, IRC, IRC :) #webkit on Freenode
- Apple provides infrastructure
 - WebSite
 - SVN
 - Bugzilla
 - Build bots
 - Externally hosted Qt and Gtk build bots
- Some communication on webkit-dev@webkit.org

Contributing Code to WebKit

- Initially patches are submitted to Bugzilla
- An approved WebKit reviewer needs to review the patch
 - The coding style needs to be followed
- A reviewed patch is landed by a WebKit committer

Getting your patches in...

- Find developers on IRC to review your change
- Frequent submitters may get SVN commit access and review rights
- Use git and git-svn to overcome Subversion slowness! :)
 - (prepare-ChangeLog supports git)

Conclusion

- WebKit Development is picking up speed
- QtWebKit combines the power of WebKit with the ease of Qt
- Both are openly developed