Qt Project and Qt 5

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Lars Knoll, Qt Chief Maintainer
Thiago Macieira, Qt Core Maintainer
Qt Project live for 3 months!
Qt Project

Fair

Inclusive

Transparent

Meritocratic
Benefits of Qt Project

- Broader Qt Ecosystem
- Richer releases
- Increased stability
- Increased visibility to the future of Qt
- More opportunities for Qt experts
- You can make Qt fit your needs
Project Roles

- **Chief Maintainer**: Leads maintainers with ultimate decision making power.
- **Maintainers**: Final responsible for a given module or port.
- **Approvers**: Approves / rejects contributions.
- **Contributors**: Contributes code to Qt.

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Some Numbers

• Since launch of Qt Project (3 months)
  - ~1000 new accounts
  - >7000 merged commits
  - ~30% non Nokia contributions on qtbase
  - >10% non Nokia contributions on qt-creator
  - Top contributors: Nokia, Many individuals, Digia, KDAB, Accenture, Collabora, KDE, Moji Mobile, Woboq
Non Nokia commits

Qt-project launched
Qt 4.8 - What is in the box?

- Qt Quick 1.1
- Performance Improvements
- New HTML5 features
- Easier porting to new platforms
Qt 5
Qt 5 - Goals

• Works for whole ecosystem

• State-of-the-art UIs

• Modular

• Small footprint

• Compatible with Qt 4.x
What is new in Qt 5.0?

• Qt Quick 2
• New structure
• New graphics stack
• All platforms use QPA and share more code
A taste of new features...

• JSON support
• MimETYPE support
• Performance improvements
• QStandardPaths
• XCB instead of Xlib
• QRegex based on PCRE
• New Signal/Slot connection mechanism
• C++11 support
• WebKit2 architecture in QtWebKit
• V8 as JS engine
• ...

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Structure of Qt 5

SDK

Tools

Qt Add-Ons

Qt Essentials

Platforms

- Linux
- Wayland
- X11
- Windows
- Mac OS X
- Your Platform
- ...

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<table>
<thead>
<tr>
<th>Essential</th>
<th>Qt Core</th>
<th>Qt Network</th>
<th>Qt OpenGL</th>
<th>Qt Qml</th>
<th>Qt Quick</th>
<th>Qt WebKit</th>
<th>Qt Multimedia</th>
<th>Qt Sql</th>
<th>Qt Location</th>
<th>Qt Sensors</th>
<th>Qt Service Framework</th>
<th>Qt Publish &amp; Subscribe</th>
<th>Qt System Information</th>
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![Linux](image1) ![Windows](image2) ![Mac](image3)
# Add-On Modules

<table>
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<tr>
<th>Qt Widgets (desktop)</th>
<th>Qt WebKit (WebKit1)</th>
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<td>Qt ActiveQt (Windows)</td>
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Scope of Qt 5

- Combines modules of Qt 4 and Qt Mobility
- Qt Essentials
  - Modules available on all platforms
  - Functionality most commonly used in applications
  - Binary compatible through Qt 5 series
  - QML, Webkit, OpenGL, multimedia, location, maps, etc.
- Qt Add-on Modules
  - Modules used in specific contexts only
  - Widgets, many former Qt 4 and Qt Mobility modules, QML components, 3D, graphical effects, etc.
Qt 5 supports two rendering paradigms
  - Software rasterizer/QPainter: used by QWidgets
  - OpenGL (ES): used by Qt Quick 2

QPainter
  - Optimised for many years

Qt Quick 2 is built and optimized for OpenGL
  - Even SW rasterization can give great performance
Qt 5.0 Platforms

• Reference platforms:
  - Windows
  - Mac OS X
  - Linux/X11
  - Linux/Wayland

• Other platforms expected as well
  - Direct FB backend contributed right after Qt Project launch
  - Android and iOS ports actively being worked on
  - QNX port
Qt 5.0 Milestones

• Feature frozen
• Alpha beginning of March
• Beta in early spring (April)
• Done in 1st half 2012
Migrating from Qt 4 to Qt 5

- Compatible with Qt 4 with very few exceptions
- Qt Widgets are supported in Qt 5
- Doesn’t require migration to Qt Quick
- Doesn’t require OpenGL
- Doesn’t require JavaScript
After Qt 5.0

• Time based release schedule
  - 2 feature releases per year
• Possible focus areas
  - Full Desktop support in Qt Quick
  - Integrated Software OpenGL renderer
  - Continue to evolve the WebKit2 based Qt WebKit
  - More processor architectures for JavaScript
Summary

• Qt Project
  - Fully open and transparent
  - Join us to drive Qt forward
  - Fully backed by Nokia

• Qt 4.8
  - Released in mid December 2011
  - Supported for a long time

• Qt 5
  - Adapts Qt to a changing world
  - Very easy transition from Qt 4
  - QWidgets still fully supported
  - QML offers innovative ways to build UIs
Thank you!