KDE Contributions to Qt

Knut Yrvin, Open Source Community Manager
Qt @ Nokia – August 6, 2011
Knut Yrvin
Open Source Community Manager

- Telenor in 1986 – technical assistant
- Engineer in electronics – 1992
- Telenor – project planning – 1993
- Master in system development – 2000
- Consultant for three years
  - Norwegian Central Securities Depository, different banks and other industries
- Co-founded Skolelinux in 2001
  - Now a part of Debian Edu
- Trolltech ASA – 2006-2008
- Qt DF, a Nokia Company – 2008 →
Agenda

• Ongoing contributions
  – Statistics by Robin Burchell and KDE
  – Specific areas
• Principles and reasoning
• As is → to be
• Work streams
Qt overview

Qt: a tool for software developers to make the user experience better on different types of displays (devices, desktops, machines...)

Using Qt, you can write applications once and deploy them across devices based on different operating systems reusing the source code.
Qt is used everywhere
10,000nds of companies uses Qt in +70 industries

From embedded devices to desktop applications

By companies from many industries

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Example of products categories with Qt

Digital theatre projector | Skype phones | HD video conference | Video desktop sw
Web enabled touch printer | Video IP Phone | Digital Photoframe | HD TV media center
Navigation devices & Phones | HD IP TV | Netbooks & E-books | DVR & Set Top Boxes
Accelerated Qt growth

The Qt SDK - downloads
2008: < 400,000
2010: > 1,500,000

Qt Developer Days
2008: 500 in Munich, 300 in San Fran
2010: 1000+ in Munich, 650 in San Fran
Qt roadmap in brief

Qt 4.7
- Introducing QML and Qt Declarative
- Established a new benchmark-driven development culture
- Increased focus on quality
- More complete tools for mobile development

Qt 4.8
- Lighthouse platform abstraction - port Qt to new platforms in a simpler and quicker way
- Qt Quick 1.1 gives an evolution to the Qt Quick revolution
- Qt WebKit updates

Qt 5 - the future
- Smooth graphics performance on limited hardware
- Simple, powerful UI creation with QML and JavaScript
- Make application web integration as powerful as possible
- Greater modularity in Qt framework
- Continue to reduce complexity to implement and maintain a port
- Open Governance
Responding to market changes

Accelerated hardware everywhere

From mouse/keypad to direct touch manipulation

More iterative co-operation between designers and developers

Web applications: solving deployment problems and increasing OS fragmentation

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Ongoing Contributions

Disclaimers:
Only including 4.7 branch and Phonon
Before Open Governance
Top lines changes 2010

Qt v 4.7. Source: Robin Burchell

Nokia

(Other)

KDAB

M. A. Brand Consulting

Tandberg

Wipro

BlankPage AG

Nomovok

Medical-Insight

Codeminded

Igalia

+4.600.000 lines changed -->
Top lines changes 2010

Qt v 4.7 + KDE/Phonon, Source: Robin Burchell, Aron Seigo
KDE

• While contributing to Qt from 3rd parties is still not as easy as it could be, KDE represents a significant contribution to upstream Qt
• One of the biggest external contributors
• ~ 46k lines of code in 2010 (20-30 man-year)
• At least 23 individuals (inc. David Faure)
• Low internal / high external value items being picked up by KDE, e.g. printing, Qt3Support
Technology Contributions

- Xquery/XPath support currently in Qt started as a KDE hosted project
- Phonon started as a KDE project, and continues to be maintained and developed primarily by KDE community members (Original inclusion of Phonon aided by A. Seigo)
Qt Refinement

- KDE are early adopters of new Qt technologies, providing actionable feedback.
- Key feedback and early adoption on QGraphicsView and QML (A. Seigo)
- 500+ reports currently in JIRA
- Ensures products release in much better form
3rd Party Developers: Outreach

- ~ 30% of developers using Qt first hear about it through OSS (as KDE)
- At one KDE event in 2010 (Akademy in Tampere), 80+ individuals took the Qt Cert test
- Present at dozens of tradeshows annually: smaller events and larger ones (CeBit, LinuxTag, FISL (Brazil), FOSS.in (India))
- Forums: 35,766 registered users, 185,295 posts, on average 200 active/online users per 10 minutes
The bigger picture
Fostering Industry Support I

• KDE got direct interface with many companies, promoting Qt both actively and by example (KDE e.V.)

• Inventec's work on Tablets based on MeeGo with Plasma UI

• Provinging Nokia CEO-level introductions to an Asian Linux provider (Red Flag)
Fostering Industry Support II

• KDE is a political ally of Qt in industry consortia
• Acceptance to LSB was aided significantly by KDE involvement
• Maneuvering accessibility infrastructure on Linux to be more friendly to Qt
• KDE sits on OASIS and other standards bodies
3rd Party Developers: Students

• Google Summer of Code and Code In. Drives hundreds of students to Qt. (A. Seigo)
  – 2010: 60+ in SoC, 86 in CodeIn

• Outreach via universities

• ~20% of students remain KDE / Qt devs according to KDE participant tracking
National Programs

• Getting Qt in the door at national level, following up at regular basis
• Benefits from a non-partisan, non-single-corporate face
• Brings Qt to millions as with the educational deployments in Brazil and Spain
KDE Contributions to Qt

• More than 46 k lines of code
• More than technology refinement and bug reports
• It's helps reaching out to developers, students and the industry as a whole
• Was instrumental to get Qt accepted in Linux Standard Base
• Getting Qt in the door in whole nations
Contributions to 4.7 in 2010

Source: Robin Burchell
As is → to be

T = Qt Nokia internal developer contributor
C = external contributor
CI = Continuous Integration System
Key practices

To empower developers using Qt, moving towards a system of Open Governance

Open Governance = **Nokia Qt developers** and **external contributors** being equal

- **Fair**: treat everyone under the same rules¹
- **Transparent**: no behind-the-scenes decisions
- **Inclusive**: everyone is welcome to join and contribute according to their skills
- **Meritocratic**: rights and duties according to dedication and work

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¹ Except where otherwise required by Law or current legal obligations
² You can talk as much as you want. Those who contributes decides
Governance Model

General:
Inspired on WebKit and kernel models
Anyone can be contributor
Easy to become approver
Maintainer only if needed

Open Governance
Open Governance summit
Mailing lists, Direct mails
Wiki's – Qt Dev.Net
Blogs, Qt Internet pages
Several parallel tracks

- Legal track
  - Handling licensing issues etc.
- Tooling track
  - Making external equal contributors
- Documentation track
  - Howto develop and contribute to Qt
- Web and Community
  - Engage and involve contributors
Your contribution Qt?

• Direct – spending time and/or money to make direct code contributions, unit tests, bug-reports, documentation and translations

• Indirect – by making applications (code, translate ++) which occasionally reveals Qt fixes and/or need for improvements, new features etc.
Thank You!

Q&A

Wiki: http://qt-labs.org
more users = better Qt = more users = better Qt ...

Qt Downloads, estimate

Additional LGPL licensing option

2007 Trolltech
2008 Trolltech
2009 Nokia
2010 Nokia
2011 Nokia

Open Governance

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The virtuous cycle strengthened by LGPL

- Increased use of Qt
- Larger Qt ecosystem
- Faster pace of innovation = a better Qt
- More feedback & contributions