



Code less.
Create more.
Deploy everywhere.

Overview of recent developments in Qt and its learning offerings

NOKIA

or why Qt rocks and how you can rock with it!

by Vladimir Minenko, Qt DF Nokia, Germany
@ 7th FRUCT conference, St. Petersburg, Russia

NOKIA



Agenda

- What is Qt?
- Qt Roadmap
- Contribute and rise your hand
- Learning Qt



Qt: A brief introduction

Founded in 1994

- Trolltech acquired by Nokia in 2008
- More than 250 employees in eight locations worldwide
- Trusted by over 5,000 customers worldwide

Qt: a cross-platform application and UI development framework

- For desktop, web and embedded development
- Used by more than 250,000 commercial and open source developers
- Backed by Qt consulting, support and training



Qt is used everywhere

From embedded devices to desktop applications

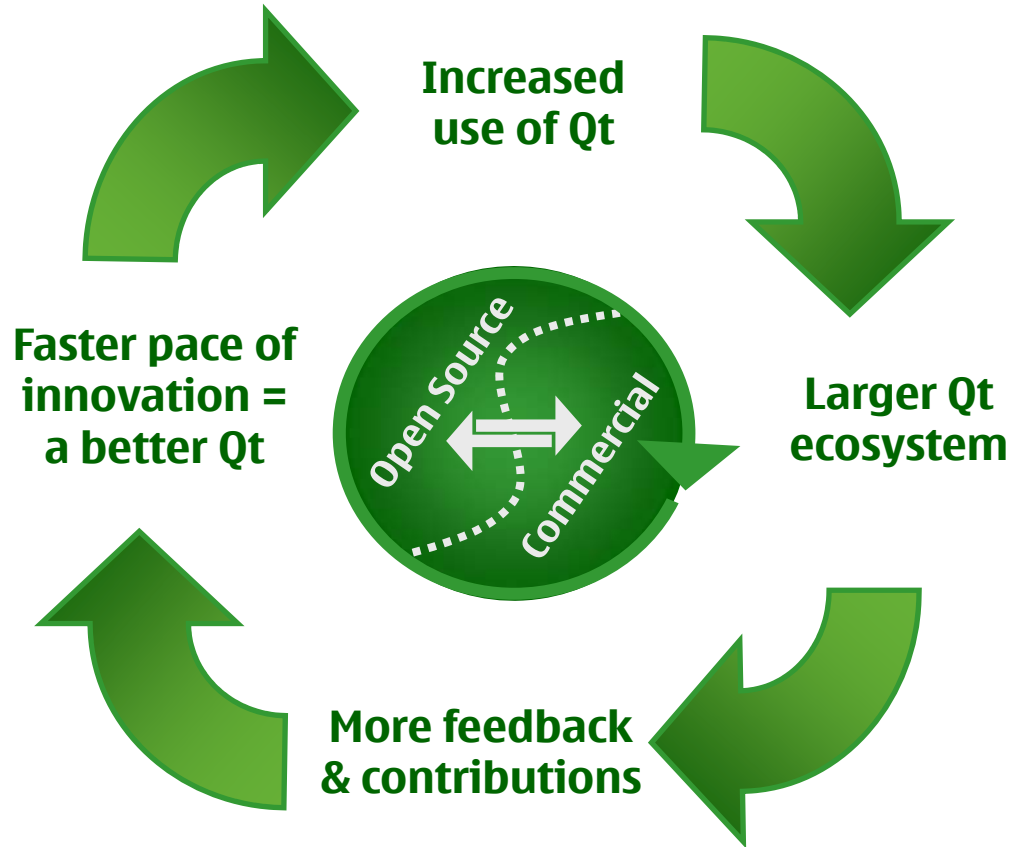


By companies from many industries





The virtuous cycle





Why Qt?

- Write code once to target multiple platforms
- Produce compact, high-performance applications
- Focus on innovation, not infrastructure coding
- Choose the license - Commercial, LGPL or GPL - that fits you
- Count on professional services, support and training
- Take part in an active Qt ecosystem

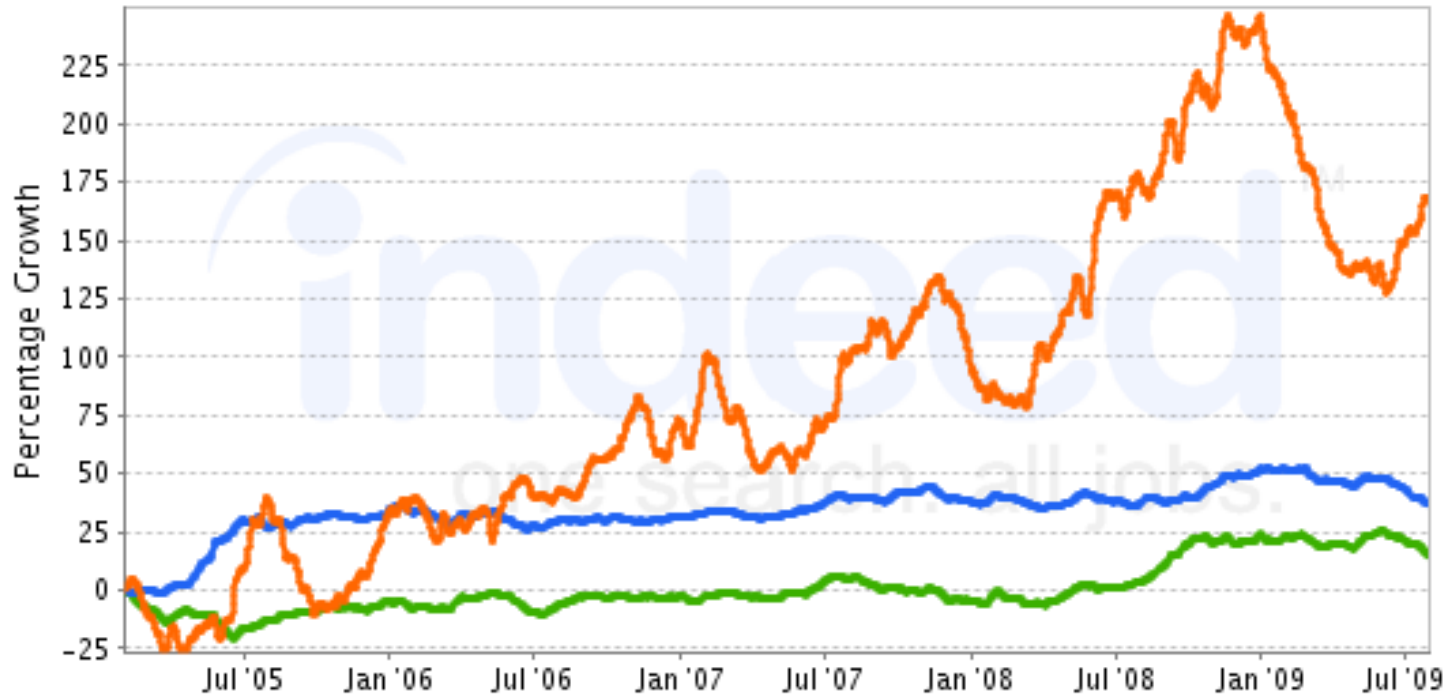
15 years of customer success and community growth



Why Qt?

Job Trends from Indeed.com

qt c++ .Net Java





Qt architecture



Qt modular class library

Core	XML
GUI	Multimedia
WebKit	Database
Graphics View	Network
Scripting	Unit Tests
OpenGL	Benchmarking

Qt development tools



Qt Creator
Cross-platform IDE



Qt Designer
GUI



Qt Assistant
Help reader



Qt Linguist
I18N Toolset

qmake
Cross-Platform
Build Tool

Cross-platform support

Windows

Mac

Linux/X11

Embedded
Linux

Win CE

S60

Chipsets



Roadmap in brief

Up to Qt 4.5

- Cross-platform requirement
- Improve developer efficiency
- Shorter time to market



Qt 4.5

- Better out-of-the-box experience for developers
- Best possible runtime performance



Qt 4.6

- Expanded support for embedded and smartphone development
- Enablers for cutting edge UI development



Future direction

- Deeper support for web/native hybrid development

2009

2010



Roadmap details

No NDA is required

Delivered in 2009	Delivery in 1H 2010	Active Research Projects
<p>Enabling cutting edge UI development</p> <ul style="list-style-type: none">■ Qt Kinetic project ■ Animation API ■ States & Transitions ■ Multi-touch ■ Gestures ■ OpenVG ■ 3D enablers <p>Web and hybrid development</p> <ul style="list-style-type: none">■ JavaScript Engine Unification ■ jQuery-inspired DOM access ■ XML Schema support <p>Qt Tools</p> <ul style="list-style-type: none">■ Continue and enhance Eclipse and Visual Studio plug-ins <p>New Qt platforms</p> <ul style="list-style-type: none">■ Qt for Symbian■ Windows 7 support	<p>Improved performance</p> <ul style="list-style-type: none">■ New metrics showing performance improvements <p>Enabling cutting edge UI development</p> <ul style="list-style-type: none">■ Declarative UI programming <p>API Completeness</p> <ul style="list-style-type: none">■ Bearer Management API ■ Contacts API* ■ Messaging API* ■ Location API* ■ Service Framework API* ■ Publish and Subscribe API* ■ Multimedia API ■ System Information API* <p>Tools research</p> <ul style="list-style-type: none">■ Tool support for Declarative UI construction <p>New Qt platforms</p> <ul style="list-style-type: none">■ Qt for Maemo development (Technology Preview)	<p>Framework research</p> <ul style="list-style-type: none">■ Hybrid application development ■ Memory and resource handling ■ Qt 3D portability API ■ New embedded Linux architecture ■ Improved build system ■ Next generation widgets ■ HTTP improvements for Rest ■ File IO improvements <p>API Completeness</p> <ul style="list-style-type: none">■ Document gallery■ Calendar■ Sensors■ Location/landmarks <p>Tools research</p> <ul style="list-style-type: none">■ Hybrid application development ■ Community and collaboration tools



Contribute!

Help Shape Qt: Contribute!

Help shape the future of Qt by contributing your own code to the framework or tools. Open repositories for Qt, Qt tools and various Qt research projects are hosted at <http://qt.gitorious.org> – there, you'll find:

- Full source code for Qt, tools and projects for you to inspect, check out and modify
- Instructions on how to get started
- Qt contribution guidelines

[Start Contributing Now!](#)

Contributions Needed

There are several areas where we'd like to improve or add to Qt, but don't have enough resources to do the research ourselves. If any of these items are of particular interest to you, we'd welcome your [contributions!](#)

- UDP multicast 
- Image IO improvements 
- Benchmark improvements 

<http://qt.nokia.com/developer/qt-roadmap>



Your voice counts!

Feature Details

Declarative UI programming

Part of the Qt Kinetic project, the declarative UI provides a unique way of building user interfaces, encouraging developer-designer collaboration, vibrant and organic user interfaces, and fast time-to-market with rapid prototyping. It uses an expressive declaration language to allow describing how UIs should look and behave instead of how they are constructed.

[Provide Feedback](#)

Animation API

Part of the Qt Kinetic project, the Animation API allows users to create complex animations of an arbitrary set of components using intuitive states and transitions, requiring fewer lines of code. Early version currently available as a [Qt Solution](#).

[Provide Feedback](#)

States and Transitions

Part of the Qt Kinetic project, States and Transitions provide a robust state chart implementation based on Harel statecharts and SCXML that simplifies complex application semantics with states to reduce code and improve maintainability.

[Provide Feedback](#)

Multi-Touch & Gestures

Enables user interaction with more than one finger, and combines sequential touch inputs to a 'gesture'.



Got curious? Learn it!

- We know, Qt rocks! Our mission is to get more people rock with Qt
- Learning & partnering is one of the key factors to boost the use of any technology
- Qt has a dedicated team working on this



How to start to rock

- Download and try!
- Hear a new voice: “programming is fun again!”
- Books, docs, code, IRC, community...
- We support you with more:



Helping hands in learning Qt

- Qt in Education
- Qt Training
- Qt Certification
- Qt online learning



Qt in Education

- Engagement with top universities to let students to have “fun in programming again” and rock 😊
- Developing “Open Courseware” – a base material for (re)use in teaching



Qt Training

- Maintain and expand a global network of professional training partners
- Design, develop and maintain training materials (hundreds of slides and labs)



Qt Certification

- Award people showing proved knowledge of Qt
- Pass an exam and become ***Nokia Certified Qt Developer***. Available world-wide



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Thank You

Find out more at

qt.nokia.com

in general, and in particular

qt.nokia.com/developer/learning

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