Qt: A Cross-Platform Application and UI Framework

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Who Am I?

http://qt-project.org/member/175

• Tasuku Suzuki
  • Qt Engineer, Nokia Japan
    - http://qt.nokia.com/title-jp
    - http://labs.qt.nokia.co.jp/
  • Qt user since 2002
  • Joined Trolltech in 2006
  • Nokia since 2008
Agenda

- Qt
  - Qt / C++
  - Qt / Quick
- Qt 5
- Qt Project
- Q&A
What is Qt?

- Application and UI Framework
  - C++ Class Libraries
  - Qt Quick for rapid UI creation
  - Qt Creator IDE
- Cross Platform
  - Desktop, Embedded and Mobile
- Open Source Project

http://qt.nokia.com/

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Cross Platform

- Linux/X11
- Windows
- Mac OS X

- Linux/QWS
- Windows CE
- T-Kernel

- INTEGRITY
- QNX
- vxWorks

- MeeGo
- Symbian
- iOS

- Android
- BlackBerry
- etc

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User Interface

- Widgets
  - C++ (with UI Designer)
  - for Desktop applications
- Qt Quick
  - QML
  - for Embedded and Mobile UIs
Getting Started!

- Download and Install Qt SDK
  - Qt v4.8, Qt Creator (IDE) and more

http://qt-project.org/downloads
Widgets/C++

- Traditional way to build UI
- Large scale application w/ static UIs

```cpp
#include <QApplication>
#include <QLabel>

int main(int argc, char **argv)
{
    QApplication app(argc, argv);
    QLabel label("Hello World");
    label.show();
    return app.exec();
}
```

http://qt-project.org/wiki/QtWhitepaper
Qt Quick/QML

- Rapid UI creation
- for touch based fluid UIs

```qml
import QtQuick 1.1

Rectangle {
    width: 200
    height: 200

    Text {
        text: "Hello World"
        anchors.centerIn: parent
    }
}
```

http://qt-project.org/doc/qt-4.8/qml-intro.html
Qt Everywhere

- KDE SC
- Ubuntu Unity 2D
- VLC

http://qt.nokia.com/qt-in-use
Qt Everywhere

- Google Earth
- Skype for Linux
- etc

http://qt.nokia.com/qt-in-use

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Qt Everywhere

- Home media
- IP Communication
- Automotive
- e-reader
- Refrigerator
- Coffee machine

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C++/Qt
Cascades

Cascades has been designed to allow you to easily
BlackBerry native application using an entire framework
integrated with core services which provide an

http://qt.nokia.com/qt-in-use

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Qt Everywhere

“Over 450,000 developers in more than 70 industries have chosen Qt to build advanced applications and devices.”

http://qt.nokia.com/qt-in-use/
Qt History

http://en.wikipedia.org/wiki/Qt_(framework)#History

1996: Qt 1
1999: Qt 2
2001: Qt 3
2005: Qt 4

2011: Qt 4.8
2012: Qt 5

- Adapt to a world that has changed
Qt 5 goals


- Competitive in multiple devices
- State-of-the-art user interfaces
- Modular libraries & repositories
- Small footprint
- Qt 4.x source compatibility
What is new in Qt 5

http://qt-project.org/wiki/Qt-5Features

- Code reorg: essential modules + add-ons
- Qt Platform Abstraction layer
- New graphics stack
- Qt Quick 2
Essential Modules

- QtCore
- QtNetwork
- QtGui
- QtSql
- QTest
- QtJSBackend
- QtQml
- QtQuick
- Qt3D
- QtMultimedia
- QtWebKit

http://qt-project.org/wiki/Qt-Essentials-Modules

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Add-On Modules

- QtBluetooth
- QtPim
- QtDBus
- QtGraphicalEffects
- QtImageFormats
- QtOpenGL
- QtOrganizer
- QtPrintSupport
- Qt Publish and Subscribe
- QtQuick1
- QtScript
- QtScriptTools
- QtSensors
- QtServiceFramework
- QtSvg
- QtSystemInfo
- QtTools
- QtVersit
- QtWayland
- QtWebKitWidgets
- QtWidgets
- QtXml
- QtXmlPatterns
- ActiveQt
- QtJsonDB
- Phonon
- QtQA
- QtLALR
- QtRepoTools
- QtTranslations

http://qt-project.org/wiki/Qt-Add-ons-Modules

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Qt 5 Status & Plans

- Alpha released on April 3
- Alpha2
- Beta1 expected in June
- Qt Contributors Summit on June 21 - 23
- Beta2 in beginning of August?
- Final in mid to end of August

http://qt-project.org/wiki/Qt_5.0
Long story short

http://en.wikipedia.org/wiki/Qt_(framework)#Licensing

- 1991?: FreeQt
- 1998: Free Qt Foundation
- 1999: QPL (OSI approved)
- 2000: GPL added (Linux)
- 2005: GPL added (Windows)
- 2008: Nokia acquires Trolltech
- 2009: LGPL added
- 2010: Qt Open Governance plan started
- 2011: Qt Commercial sold to Digia
- 2011: Qt Project is here!
Qt Project

http://qt-project.org/wiki/Qt_Project_Open_Governance

• NPO that hosts the code base
  • git repository, gerrit, CI, JIRA, ML, Wiki etc...

• Four principles

  Fair

  Transparent

  Inclusive

  Meritocratic
Qt Project Roles

http://qt-project.org/wiki/The_Qt_Governance_Model
Nokia is a main contributor in Qt Project

http://qt-project.org/groups/qt-contributors-summit-2012/wiki/Our-sponsors
Follow us! Join us!

2012 is gonna be fun

http://qt-project.org