Qt in MeeGo

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Agenda

- MeeGo for Nokia
- Why and What is Qt
- Going N-Screens
MeeGo is the next big thing

Building a modern OS with no strings attached for multiple device segments, merging the best of Moblin and Maemo.

Consolidating the power, resources, and innovation of the leaders in communication and computing.

Facilitating operating system convergence.
The Nokia Software Strategy

- S40, Symbian and MeeGo
- Qt the default SDK for smartphones and mobile computers
MeeGo developer promise: One API – multiple device categories

Lighting fast Qt Creator IDE
One MeeGo Qt API
Building installed base across segments
Proven Qt track record in CE devices
What is Qt

Qt Development Tools
- Qt Designer
- Qt Assistant
- Qt Linguist
- qmake

Qt Cross Platform Support
- Windows
- Mac OS X
- Linux/X11
- Embedded
- Win CE/Mobile
- Maemo/MeeGo
- Symbian
Qt - the API Framework for MeeGo Apps
Qt - the API Framework for MeeGo Apps

Netbook UX
- UI + Apps
- UI Framework

Handset UX
- UI + Apps
- MeeGo Touch Framework

Other UXs
- UI + Apps
- Other UI Framework

MeeGo APIs
- WRT
- Core
- GUI
- Multimedia
- GraphicsView
- Scripting
- Declarative
- XML
- Benchmark
- Unit Tests

Comms Services
- Connection Mgmt
- ConnMan

Internet Services
- WebKit
- Web Runtime
- WebKit

Visual Services
- 3D Graphics
- OpenGL / GL ES
- 2D Graphics
- Q Painter
- X

Media Services
- Media Framework
- GStreamer
- Camera
- GStreamer Plug-In
- Codec
- GStreamer Plug-In
- Audio
- PulseAudio
- UPnP
- GUPnP

Data Management
- Content Framework
- Tracker
- Context Framework
- Context Kit
- Package Manager
- Package Kit

Device Services
- Device Health
- DSME
- Sensor Framework
- sensorFW
- Resource Manager
- Ohm-Ng
- Backup & Restore

Personal Services
- PIM Storage
- Tracker / QSparkQL
- Device Sync
- Buteo
- Device Sync

System Libraries
- libc, glibc, etc

Message Bus
- D-Bus

Platform Info
- landslide

Settings Database
- GConf

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Why Qt

1. Use Qt to build apps for MeeGo

2. Qt evolves to make it easier to use MeeGo

- Qt API & Developer Tools
- MeeGo Project APIs
- Other Upstream Project APIs
Qt Speeds up Product Development

1. Better way to build User Interfaces
   - WRT
   - WebKit
   - Core
   - GUI
   - Multimedia
   - GraphicsView
   - Declarative
   - Benchmark

2. Productive Application Logic
   - Network
   - Database
   - OpenGL
   - Scripting
   - XML
   - Unit Tests

3. Cross Platform APIs
   - Qt Cross Platform Support
     - Windows
     - Mac OS X
     - Linux/X11
     - Embedded Linux
     - Win CE/Mobile
     - Maemo/MeeGo
     - Symbian

Qt Development Tools
   - Qt Creator
     - GUI designer
   - Qt Designer
   - Qt Assistant
     - Help reader
   - Qt Linguist
     - I18N Toolset
   - qmake
     - Cross-Platform Build Tool

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Qt Quick

- **Qt Quick** = QtDeclarative + QML + Qt Creator tool plugin
  - Qt Quick is easy to **LEARN, ITERATE, RENDER, EXTEND**

- Qt Meta/Markup/Modeling Language
- A new way to create Qt UI’s
- Declarative Language (JSON inspired)
- Build your own widgets/components/items
- Each item is independently accessible
- Supports States and Animated Transitions
Differentiated UI Widgets

Platform UI Widgets
Qt Quick

Differentiated UI Widgets

Platform UI Widgets
Qt Quick Designer
The Qt API Set is Comprehensive

- Over 800 C++ classes to build your Application!
- The Qt class libraries encompass all the functions needed to build robust, high-end applications
- The API is separated into several modules
- Core classes are used in all Qt apps. GUI is used everywhere there’s a GUI.
Support Industry Standard Web Apps

Qt Webkit Integration
- Support HTML5
- Support CSS3
- Develop web apps using HTML, CSS, JS, AJAX
- Javascript access to platform services
- Access to native user experience elements
Cross Device APIs

Qt APIs and Developer Tools

MeeGo (Linux) Platform

Handset
Slate
IVI
etc.,
Qt – The Single Super-Toolbox

• Qt, Qt Quick
  – Tools for native apps
• QtWebkit, browser apps
  – Tools for HTML5 apps
• Also as Nokia mobile development offering
Many Screens

New Computing Cycles Supported by 10x More Devices
Opportunities for Semiconductor / Hardware / Software / Services

Computing Growth Drivers Over Time, 1960 – 2020E

- Car Electronics
- GPS, ABS, A/V
- Mobile Video
- Home Entertainment
- Games
- Wireless Home Appliances
- Smartphone
- Kindle
- Tablet
- MP3
- Cellphone / PDA
- 10B+ Units??
- 1B+ Units / Users
- Desktop Internet
- Mobile Consumer
- Increasing Integration

Morgan Stanley

Note: PC installed base reached 100MM in 1993, cellphones / Internet users reached 1B in 2002 / 2005 respectively.
Source: ITU, Mark Lipics, Morgan Stanley Research.
One MeeGo stack for Multiple Segments

Easy integration to multiple Application Stores

MeeGo + Qt

Multiple hardware architectures
Some design wins recently
What Qt does for Customers

- Connectivity, web & media
- Access to rich context
- High performance
- Manageable cross platform
- Immersive User Experience
- Web integration
- Developer productivity

Qt is the best choice for addressing these challenges.
What MeeGo does for Customers

• “MeeGo simplifies our development effort by pre-integrating and pre-testing all the components we need to build our product which allows us to focus our development efforts on differentiating features.”

• “MeeGo’s applicability to a range of device types allows us as an operator to deliver our service to all the screens around our end users.”

• “MeeGo’s support of a diverse array of devices types allows us as a service provider to take applications and services to an entirely new level of innovation.”

*MeeGo constitutes the CE device industry’s state of the art for building a converged device*
1. Disciplined “Upstream First” Methodology
2. User Experience for User Context
3. Hardware-optimized for user context
4. Cross device platform
5. Compliance process
6. Choice of App stores

MeeGo with Qt Addresses the Development Challenges of Delivering the Modern User Experience for Consumer Electronics & Applications.
Get Started now

• Download the MeeGo 1.1 package @ meego.com

• Start building applications using Qt Creator IDE

• Get familiar with Qt Quick by downloading the Qt 4.7 SDK @qt.nokia.com

• Learn more about Qt, become part of the community @qt.nokia.com.cn
  @qt.csdn.net
  @Qt Conference Beijing 2010 – Dec. 3rd
mauruuru  Kiitos  mahalo  Köszí  Merci
snacubó  Grazie  Thank you  Dank U  obrigado
Takk  Děkuju  Dziękuję  Gracias  danke