Developing with Qt for the BlackBerry 10 platform

Vladimir Minenko, Qt team lead, Research in Motion
Qt Developer Conference 2012
Thank you for making this event happen!
Points to convey

- A story …
- What the heck is …
- Where and how to start
A story of...
A story of...
A story of…

Qt 4.8.3
“BYO”

Qt friends@RIM

Nov 2011 – May 2012 – Today – Q1 2013
A story of…

Qt 4.8.3
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Nov 2011

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Q1 2013
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4.8.3 “BYO”

friends@RIM  KDAB
A story of…

Qt 4.8.3 “BYO”

Qt friends@RIM

Nov 2011

Qt KDAB

May 2012

Qt team@RIM

Today

Q1 2013
BlackBerry 10 for developers
BlackBerry 10 development

Native SDK
- C/C++
- Cascades

WebWorks SDK
- HTML5

Android SDK
- Java

AIR SDK
- AS3
- Flex
BlackBerry 10 NDK

Qt on BlackBerry 10

Qt UI apps (C++ and Qt Quick)

Cascades UI apps (C++ and QML)

Qt-based Platform API

Cascades UI framework

QtQuick

QNX + BlackBerry Platform API

QtWebKit (temporarily)

Qt Creator plugin

QPA plugin

QNX adaptations

BlackBerry adaptations

QtWebKit specific style

QtScript

QtDeclarative

QtSql

Qtxml

Qtxmlpatterns

QtCore

QtCore

QtNetwork

QtSvg

QtSql

Qtxml

Qtxmlpatterns

QtQuick

QtDeclarative
What the heck is Cascades?
No worries at all!

If you know Qt, starting with Cascades is just a piece of cake!
What the heck is Cascades?

- Cascades is native BlackBerry 10 UI framework
- Allows writing apps in C++ or/and QML in a Qt way!
- It is based on Qt but…
- Has an own client-server scenegraph-based rendering backend (does not use Qt for this)
- More – tomorrow at 9:00am in Asgabad and under:

https://developer.blackberry.com/cascades/documentation
Qt on BlackBerry 10, again

Qt UI apps (C++ and Qt Quick)

Cascades UI apps (C++ and QML)

Qt-based Platform API

Cascades UI framework

Qt Quick

QtScript

QtSvg

QtCore

QtNetwork

QtDeclarative

QtSql

QtXml

QtXmlPatterns

QPA plugin

QNX adaptations

BlackBerry adaptations

QNX + BlackBerry Platform API

QtWebKit

QtGui

(temporarily)

QtCreator plugin

QNX + BlackBerry Platform API

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QtGui

specific style

Items and elements

QtQuick

QTPatterns

QNX adaptations

BlackBerry adaptations

QtCreator plugin
Cascades apps

Cascades UI apps
(C++ and QML)

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Pure Qt apps

Qt UI apps
(C++ and Qt Quick)

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QtxmIPatterns

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specific style

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QtDeclarative

QPA plugin

QNX adaptations

BlackBerry adaptations

QNX + BlackBerry Platform API

QtCreator plugin
Pure Qt UI on BlackBerry 10

- Qt Quick custom UI
- BYO

- Qt C++ widgets
- BlackBerry 10 style
  (prototype developed by KDAB)
Mobile related stuff 😊...

- Full touch devices: 1280 x 720
- Keyboard devices: 720 x 720

- Tons of sensors
- Bluetooth
- NFC
- Camera
- GPS
- and more…
Your first steps

- Check [http://qt-project.org/wiki/BlackBerry](http://qt-project.org/wiki/BlackBerry)
- Register @RIM and get signing keys
- Download and setup QtCreator 2.6.x
- Get an “Hello World” app done
Your tools

- BlackBerry 10 NDK
  - Cross-compile toolchain
  - Qt 4.8.x
- Momentics IDE
- BlackBerry 10 Simulator
- QtCreator 2.6.x or newer
- DevAlpha device
Packaging

BAR Descriptor (XML) + Files = BAR

Debug Token + RIM certificates + BAR = Signed BAR

Developer Certificates + Signed BAR = BlackBerry App World™
Metadata about your app

- Mandatory!
- Written in the “BAR descriptor file”, XML based
- Versions (build, platform, etc)
- Names and IDs (author, app, package, etc)
- Assets (files your app uses, incl. libs)
- The icon and the splash-screen
- Entry point
- Permissions needed
Sandbox

- data
- logs
- tmp
- app
- shared

Application Installation

User Shared
Get a simple Qt app on BB10
Fully open source

- Focus on Qt4 mid-term
- We work fully upstream!
  - Need(ed) to revert/add a commit in a few cases
- Use internal branches for integration and image builds
- Run local Jenkins-based CI
What is next?

- Launch BlackBerry 10!
- Launch BlackBerry 10!!
- Launch BlackBerry 10!!!
- Revive Qt Mobility for Qt4
- Get integrated with Qt’s CI
- Qt5 as an add-on lib
- Explore Qt5 on BlackBerry 10
- Get BlackBerry WebKit into Qt
- And more…
Easy to port. Hard to resist.

- Get a DevAlpha device for free if you convince us your plans are serious
- Participate in the “10k Developer Commitment” program
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BlackBerry on Github: [https://github.com/blackberry](https://github.com/blackberry)
Group @Qt: [http://qt-project.org/groups/qt-blackberry-and-qnx](http://qt-project.org/groups/qt-blackberry-and-qnx)
Wiki @Qt: [http://qt-project.org/wiki/BlackBerry](http://qt-project.org/wiki/BlackBerry)

Next key event: **BlackBerry Jam Europe 5-6 February, Amsterdam**
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Thank you! Questions?

Vladimir Minenko