



Qt and Tizen together can do more

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Why Qt and Tizen?



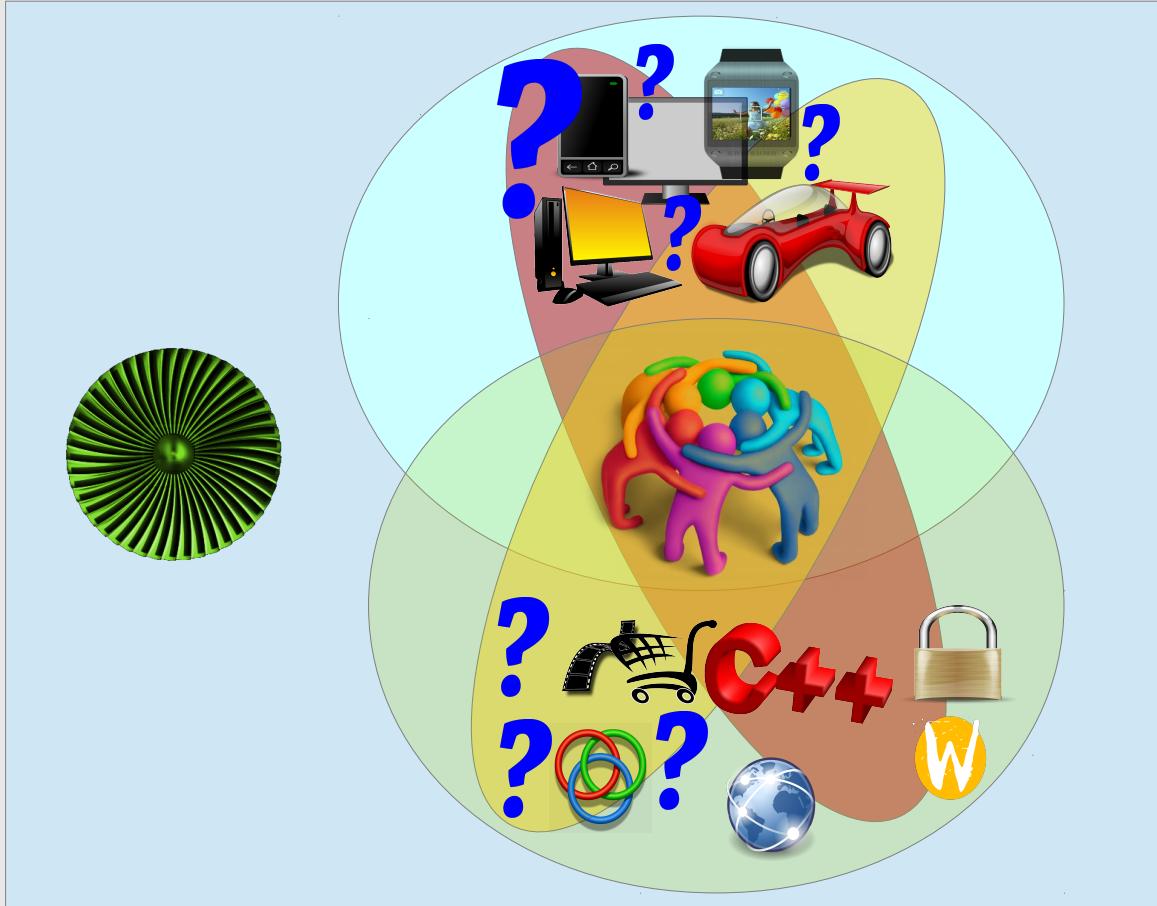
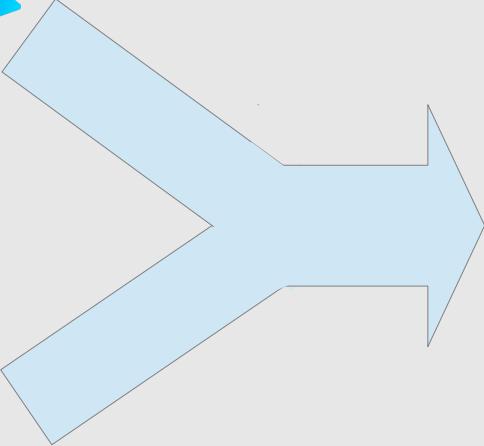
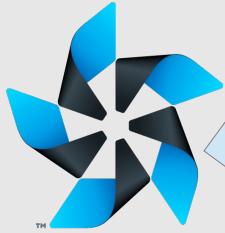
Why Tizen?



Why Qt?



Freedom of choice



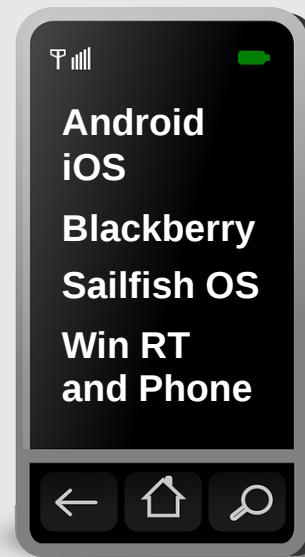
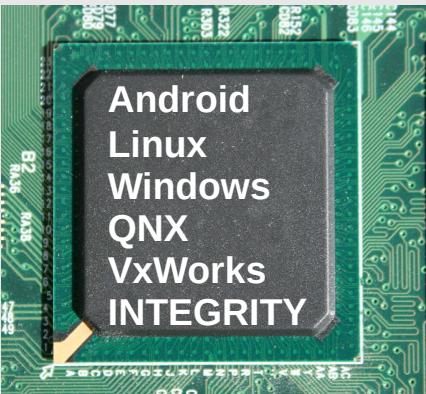
Overview of Qt (FAQ)



Recent Qt history

Year	Description
2005	Qt 4.0 was released
2008	Nokia buys Qt
2009	Qt became free to use for open source and commercial projects (LGPL 2.0 license)
2011	Qt Project under open governance started
2012	Digia buys Qt trademark from Nokia
December 2012	Long awaited Qt 5.0 released
May 2014	Qt 5.3 released

Supported platforms

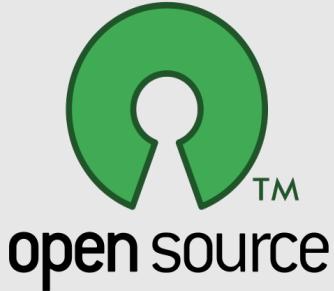


Community ports



Licensing Model

- **LGPL 2.1**
- **GPL 3.0**



- **Qt Enterprise**
- **Qt Mobile**



Qt modules/technologies

- **QtCore** - Core non-graphical classes used by other modules.
- **QtTest** – Classes for unit testing Qt applications and libraries..
- **QtSql** - Classes for database integration using SQL.
- **QtQML** - The Qt QML module provides a framework for developing applications and libraries with the QML language.
- **QtWebkit/QtWebEngine** - Classes for a WebKit2/blink based implementation and a new QML API.
- **QtGui** – Base classes for graphical user interface (GUI) components. Includes OpenGL.
- **QtNetwork** - Classes to make network programming easier and more portable.
- **QtWidgets** - Classes to extend Qt GUI with C++ widgets.
- **QtQuick** – A declarative framework for building highly dynamic applications with custom user interfaces.
- **QtMultimedia** - Classes for audio, video, radio and camera functionality.



Qt modules/technologies

Addons:

- **Qt D-Bus**
- **Qt Positioning** – maps and geolocation integration
- **Qt Sensors**
- **Qt OpenGL**
- **Qt Concurrent**
- **Qt Bluetooth**
- **Qt NFC**
- **Qt WebSockets**
- **Qt Graphical Effects** – OpenGL shader based components for use with Qt Quick
- **Qt Image Formats** - plugins for additional image formats: TIFF, MNG, TGA, WBMP.
- **Qt Print Support**
- **Qt SVG**
- **Qt Serial Port**
- **Qt XML Patterns** - support for XPath, XQuery, XSLT.
- **Enginio** - a Backend-as-a-Service solution to ease the backend development for connected and data-driven applications.

Qt for Tizen



What is Qt for Tizen?

The Qt for Tizen project was founded in May 2013. Initiative is addressed to developers and by developers. It exists under Qt Project umbrella.

The main goal is to enable Qt for 3rd parties, developers and project founders involved in Tizen by:

- Support Tizen Community (blog, G+, twitter, facebook, irc)
- Deliver Qt binaries
- Deliver Qt integration
- Deliver Qt Creator based SDK

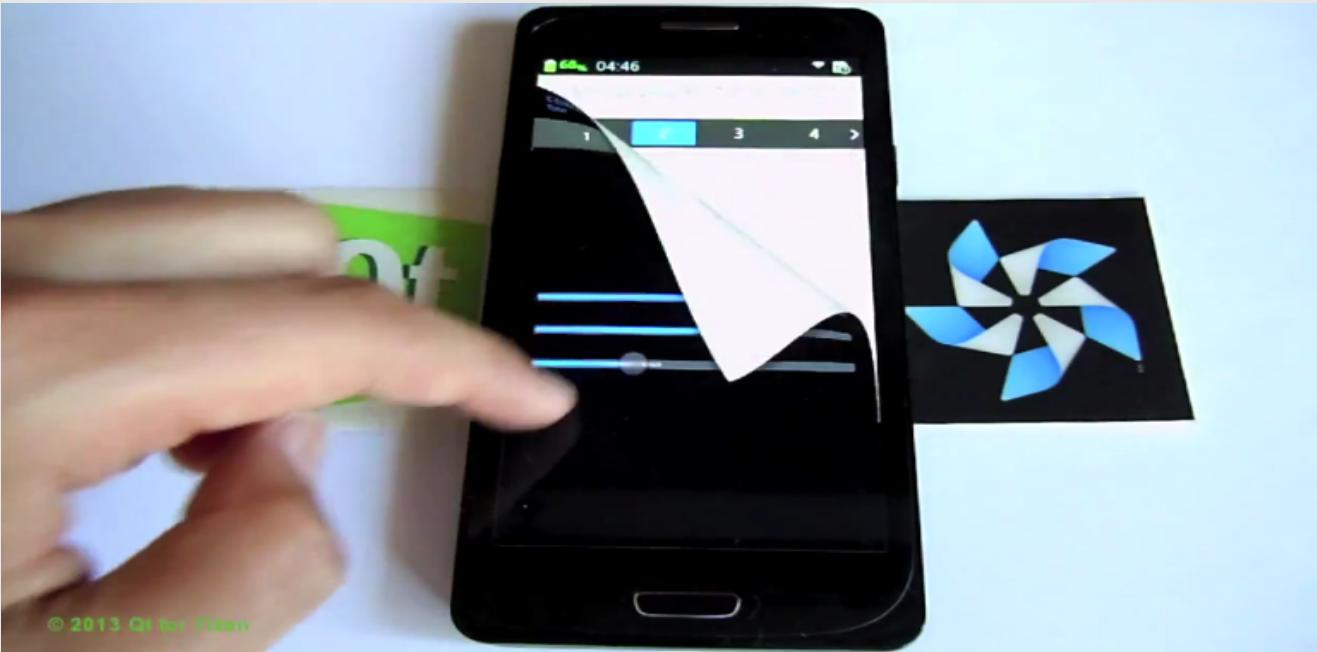
Achievements

Qt ported to Tizen Mobile RD PQ device and Emulator



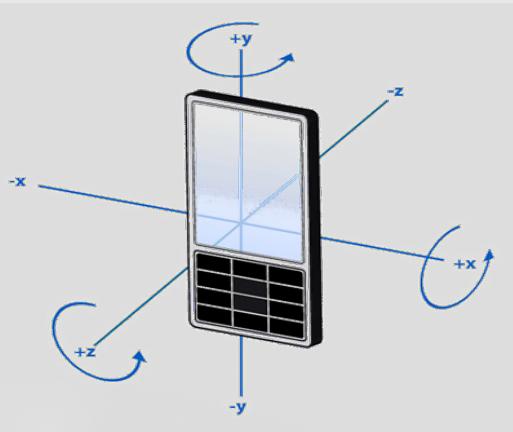
Achievements

Qt Quick Controls Tizen Mobile style



Achievements

Qt for Tizen enabled submission of many applications to Tizen App Challenge



Integration with Tizen Mobile sensors

Achievements

Qt Creator integration with Tizen Mobile, IVI and Common



The screenshot shows the Qt Creator IDE interface. On the left, the Projects panel lists a project named "touch (Tizen)" with files like main.qml, main.cpp, and main.c. In the center, the Tizen configuration dialog is open, showing fields for Tizen SDK Path, SDK data directory, SDB executable, native-packaging executable, Author certificate, and Author certificate password. On the right, the code editor displays a C++ file with Qt code, including imports for QtQuick.Window and a class definition with an enum. Below the code editor is a terminal window showing build logs for Tizen profiles.

```
main.qml [100%] touch -tizen
File Edit Build Debug Analyze Tools Window Help
File Edit Build Debug Analyze Tools Window Help
Line: 24 Col: 3
Q (NUMS(_)
This macro registers one or several enum types to the meta-object system.
For example:
class MyClass : public
{
    Q_OBJECT
    Q_ENUMS(Priority)
public:
    MyClass(QObject *p = 0) : priority(p) { }
    enum Priority { Hi = 1, Med = 2, Low = 3 };
    Priority priority;
};

If you want to register an enum that is not part of your class, then the enum must be fully qualified with the name of the class defining it. In addition, the class defining the enum has to inherit QObject. Then you can use the enum using Q_ENUMS(...).

See also Q's Property System.

Q_FLAGS(_)
OK Apply Cancel
appleWithEnumArgNotWorkingFrontend...
main.qml:138: Error: Unknown method parameter type: Foo::Feature
main.qml:138: Error: Unknown method parameter type: Foo::Feature
/home/toluzak/workspace/build/build-cppstlWithenumArgNotWorkingFrontendDesktop_01_5_3_0_GCC_64bit-Debug/CppStlWithTheEnumArgNotWorkingFrontend exited with code 0
Starting /home/toluzak/workspace/build/build-cppstlWithenumArgNotWorkingFrontendDesktop_01_5_3_0_GCC_64bit-Debug/CppStlWithTheEnumArgNotWorkingFrontend...
QTC: Debugging is enabled. Only use this in a safe environment.
/home/toluzak/workspace/build/build-cppstlWithenumArgNotWorkingFrontendDesktop_01_5_3_0_GCC_64bit-Debug/CppStlWithTheEnumArgNotWorkingFrontend...
/home/toluzak/workspace/build/build-cppstlWithenumArgNotWorkingFrontendDesktop_01_5_3_0_GCC_64bit-Debug/CppStlWithTheEnumArgNotWorkingFrontend...
Starting /home/toluzak/workspace/build/build-cppstlWithenumArgNotWorkingFrontendDesktop_01_5_3_0_GCC_64bit-Debug/CppStlWithTheEnumArgNotWorkingFrontend...
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/home/toluzak/workspace/build/build-cppstlWithenumArgNotWorkingFrontendDesktop_01_5_3_0_GCC_64bit-Debug/CppStlWithTheEnumArgNotWorkingFrontend...
/home/toluzak/workspace/build/build-cppstlWithenumArgNotWorkingFrontendDesktop_01_5_3_0_GCC_64bit-Debug/CppStlWithTheEnumArgNotWorkingFrontend exited with code 0

```

12 Qt packages available for all public
Tizen 3.0 profiles

Current state

Feature	State
Integration with Tizen 2.2.1	Alpha
Qt Quick Controls Tizen Style	Technology preview
Qt Creator Integration	Alpha
Qt Sensors integration with Tizen 2.2.1 mobile	Alpha
Qt Multimedia Integration	Technology preview
Packaging recipes	Done

Future challenges

- Full Qt Creator integration including remote debugging
- Integration with future Tizen's security enhancements (cyanara)
- Compliance with Tizen Store policy
- Qt Quick Automotive Message Broker plugins
- Qt Web Engine
- Qt Wayland Compositor API
- Further integration: maps, nfc, bluetooth...

Q & A



Thank you



References

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