



Code less.
Create more.
Deploy everywhere.

Getting your Qt based application on OVI and more

NOKIA

Espen Riskedal

Teamlead / Senior Software Engineer

Welcome to Ovi Store

Get apps on the go

Install the Ovi Store app on your Nokia and download apps, games and more with ease.

[» Download now](#)

Home Search for content for your mobile

Recommended Applications Games Audio & Video Personalisation



Your App!

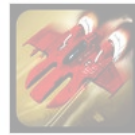
Social Networks



Maps Booster
City guides & Maps



AP 2010 World Cup
Coverage



Sky Force Reloaded
Action



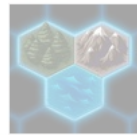
Roskilde Festival
2010



Own Voice for Ovi
Maps



Pure Gold
Themes



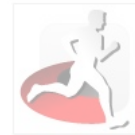
UniWar
Strategy



RealFootballManager
Edition 2010



Tattoo Tycoon
Strategy



Sports Tracker
Utilities



Veikkaus
News & Info



Conspiracy For Good
Entertainment



Nokia Point & Find
(Beta)



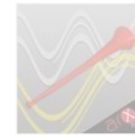
Warships - Sea on
Fire!



PhoneTorch
Utilities



National Geographic
Photos



The Vuvuzelas !!
Ringtones



Agenda

- Developing apps with the Nokia Qt SDK
- Building and deploying for your phone
- Signing your app – if needed
- Getting your app on the OVI store and more





About me

- Espen, Norwegian, 35
- Worked on Qt since 2002
- Qt developer (Linux mostly)
- Qt release manager (3.1.x – 4.1.x)
- Teamlead *Qt for Windows CE*
- Teamlead *Qt for Symbian*
- Founding my own Qt based company in three weeks





Developing apps with the Nokia Qt SDK



What is Qt doing on your phone?



- Existing S60 3.1 – 5.0 phones
- Nokia Smart Installer
- Software updates



- All coming Nokia smartphones
- Already included
- Firmware updates



- Official Windows CE / Mobile support
- Community Android port
- Community iPhone port



Nokia's mobile platforms



- Dominating with 40% worldwide sales
- High-to-mid range
- HW-accelleration on some devices



- Collaboration between Nokia and Intel (MeeGo)
- Linux based
- High-end phones
- Always HW-accelerated



Installing Nokia Qt SDK

- Download

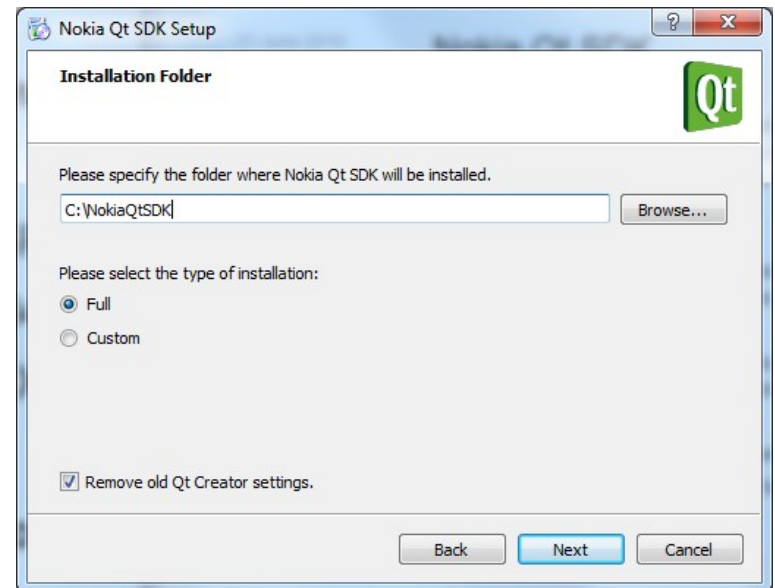
<http://www.forum.nokia.com/Develop/Qt/Tools/>

- Install

- WinXP SP2 or later (32/64 bit)
- Linux 7.04 or later (32/64 bit)
- Mac OS X 10.6 or later (beta)

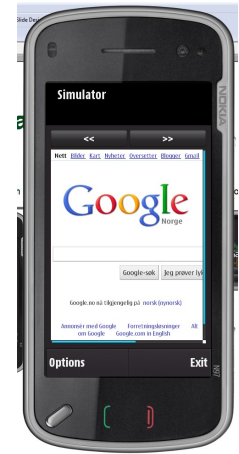
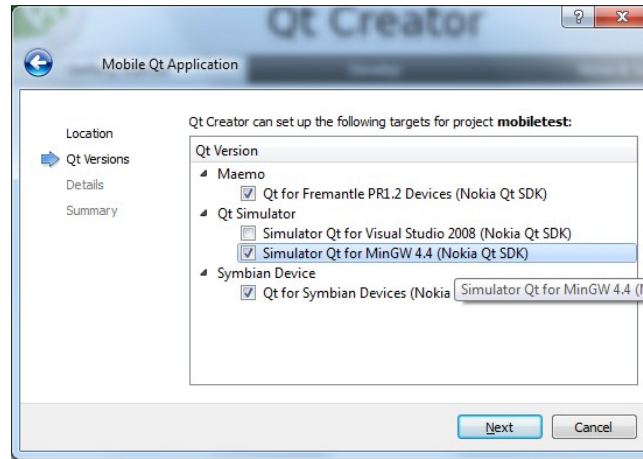
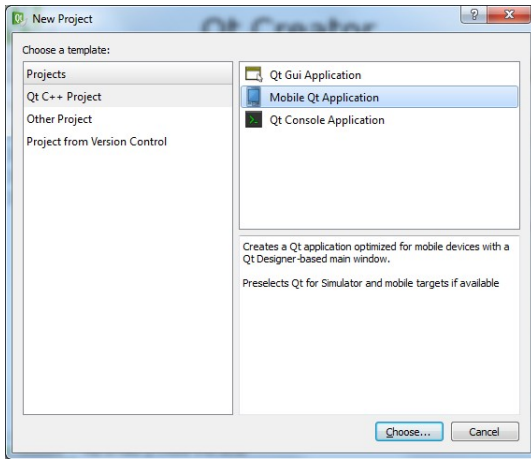
- Contains

- Qt Creator
- Qt APIs
- Toolchain for Symbian and Maemo
- Lightweight simulator
- Smart Installer





Developing with Qt Creator



Demonstrate simple app creation in Qt Creator



Qt Simulator

Maemo touch



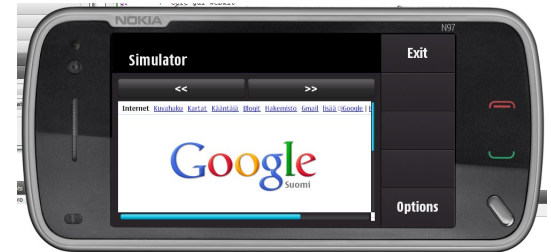
Symbian touch



Symbian keypad



Symbian touch (*landscape*)



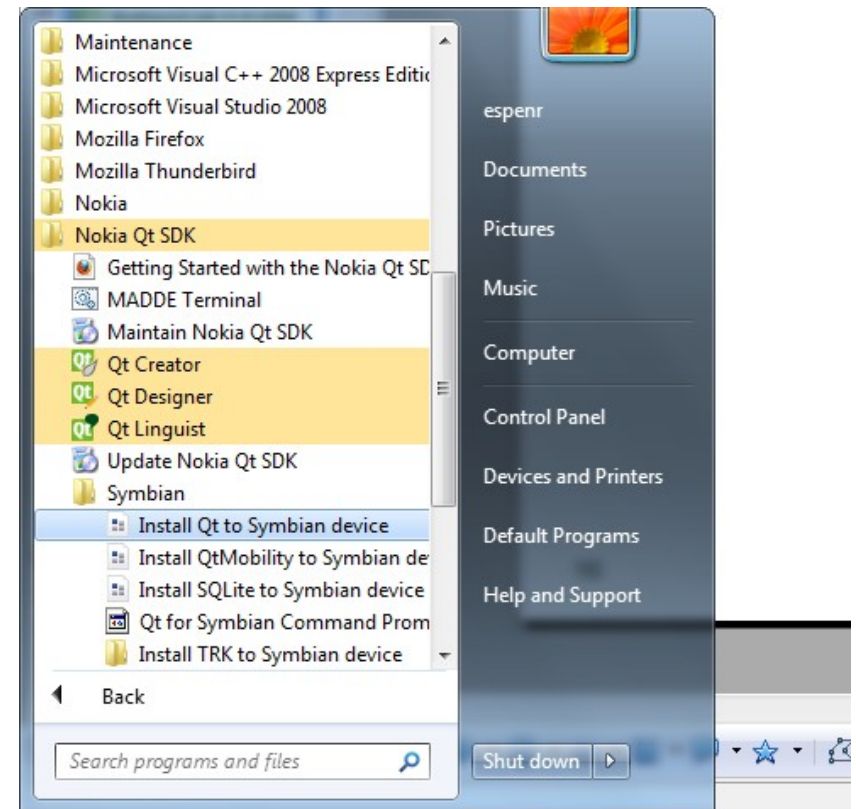


Building and deploying for your phone



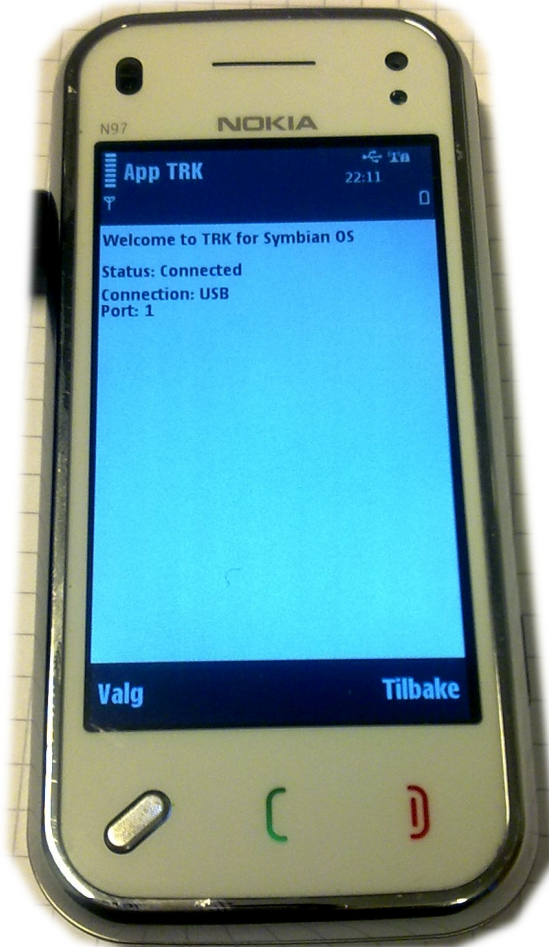
Setting up Qt on your Symbian phone

- Click on «Install Qt to Symbian...»
- Click on «Install TRK to ...»
 - Install the one that fits your device
- Start App TRK
- Switch to USB connection





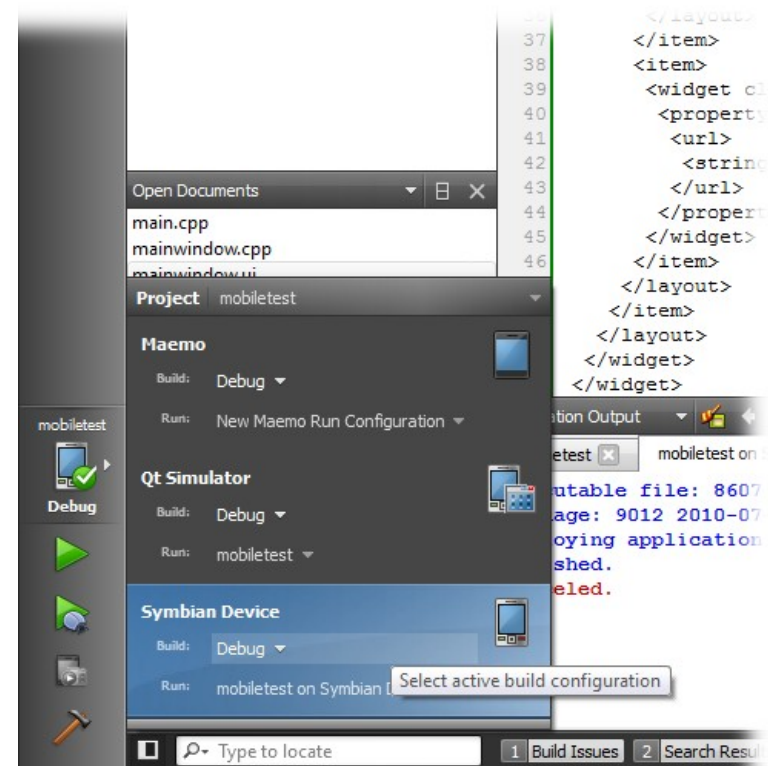
Setting up Qt on your Symbian phone





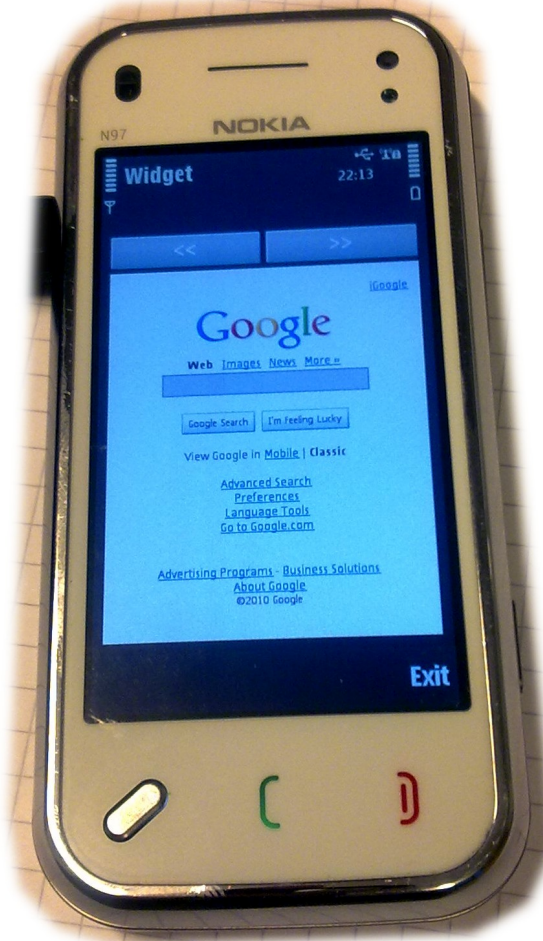
Running the app on your Symbian phone

- Switch to «Symbian Device»
- Click the *Run* button (Ctrl-R)





Running the app on your Symbian phone





Debugging on your Symbian phone

- Press F9
 - Toggle breakpoint
- Press F5
 - Deploys and runs

```
12     w.show();
13 #endif
14
15     qDebug() << "heihei!!";
16
17     return a.exec();
18 }
19
```

Threads: Stopped at breakpoint 1 in thread 1.

Level	Function	File	Line	Address	Name	Value
0	qMain	main.cpp	15	0x004013fb	a	QCoreApplication
1	WinMain@16	qtmain_win.cpp	131	0x00401ba2	argv	<1 items>
2	main		0	0x004018c8	[0]	"C:/Users/espenr/Doc
					w	QWidget
					children	<4 items>
					parent	0x0
					properties	<58 items>
					signals	<1 items>
					slots	<22 items>
					ui	0x114ddc10



Building and deploying for your Maemo/MeeGo phone

- Swap to Maemo target in Qt Creator and build app
- Upgrade N900 to 1.2 (V10.2010.19-1 or later)
- Install Mad Developer on N900 and launch it
 - Swap driver USB driver used when on Windows
 - Set password
- Configure USB «ethernet» connection from PC-to-N900
- Enter password and IP settings into Qt Creator run settings
- Ctrl-R or F5 :D

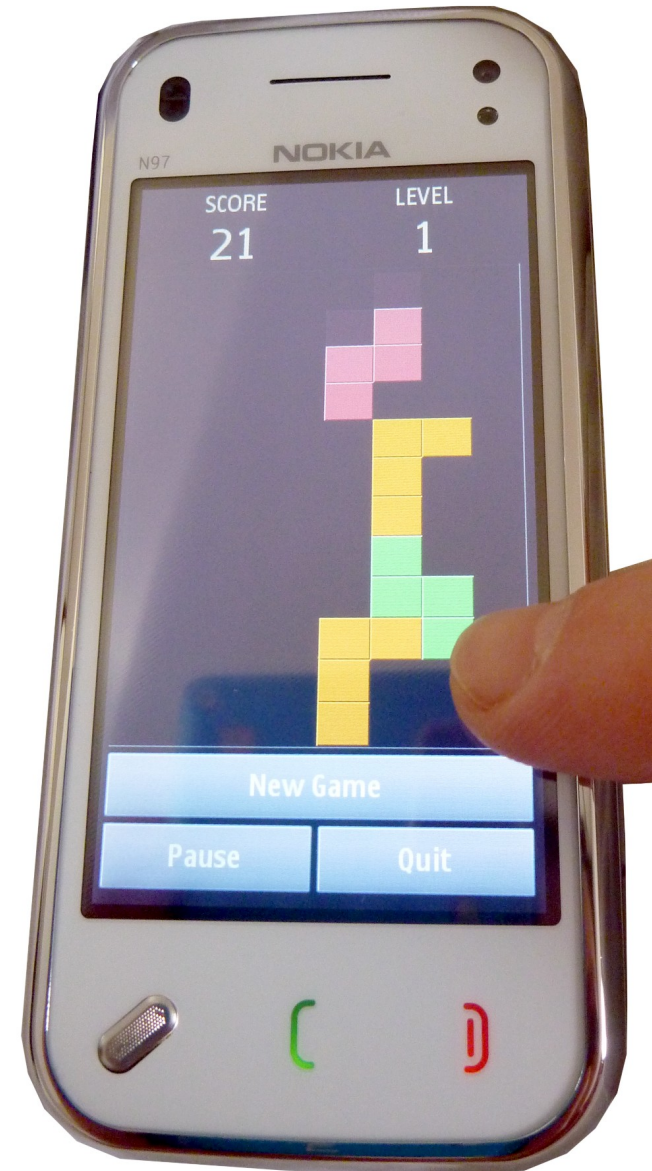


Signing your app – if needed



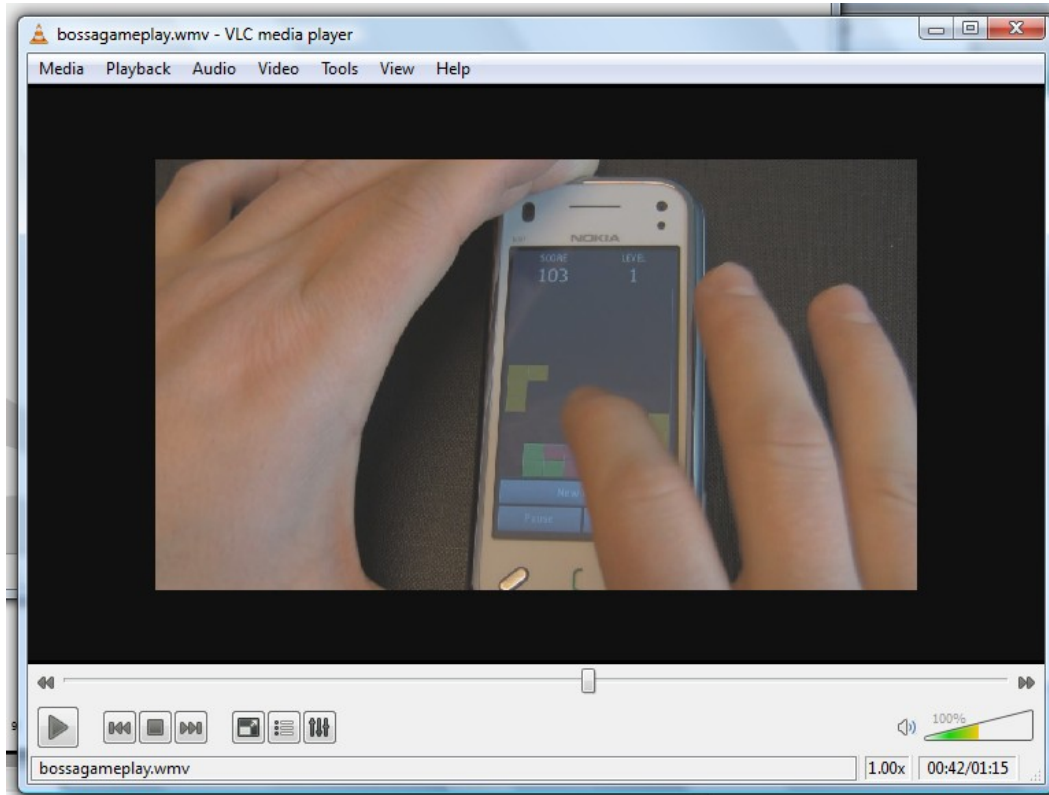
An example app: BossaTetrix

- Stolen from examples/widgets/tetrix
- Slightly massaged to fit a smaller screen
- Added some simple gesture hacks
 - Coming versions of Symbian will have multitouch and Qt already supports this





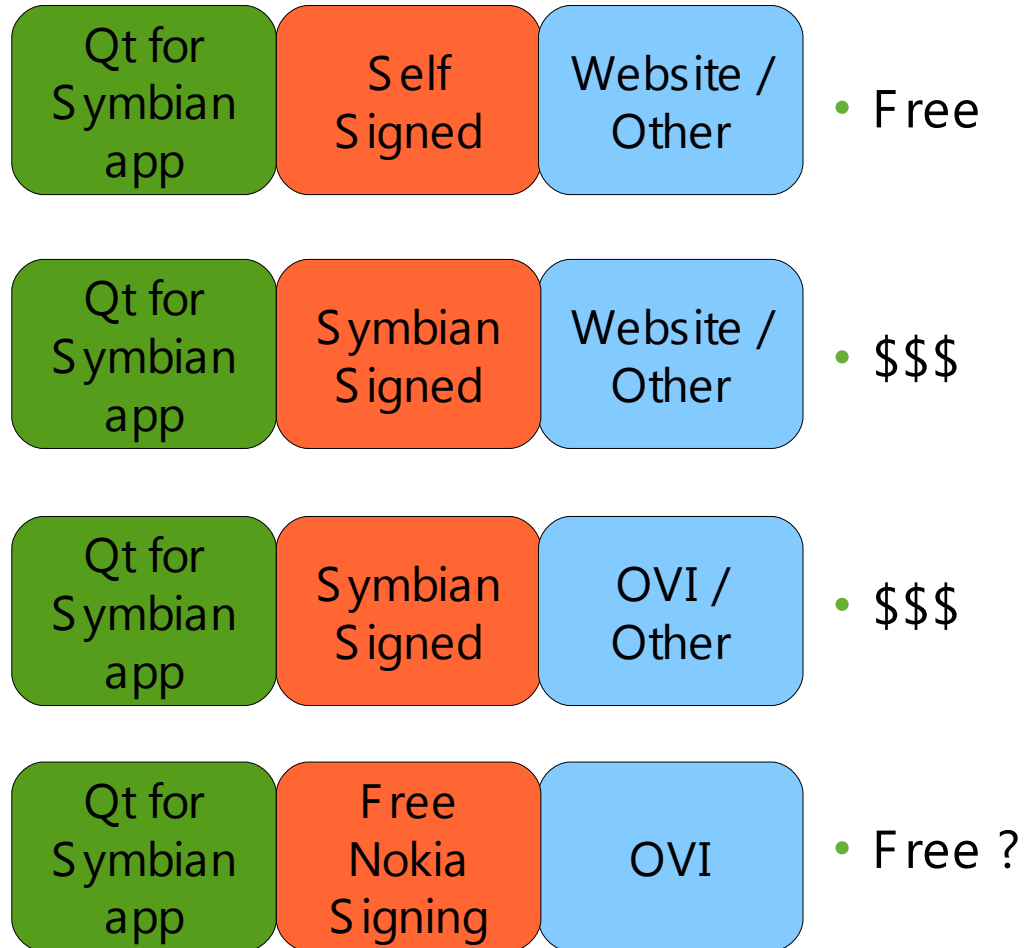
BossaTetrix: In action



<http://bit.ly/espenbosstetrix>

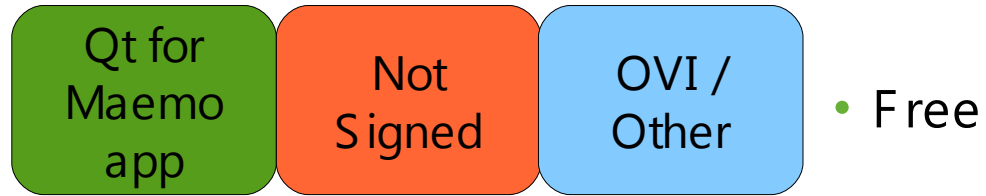


Symbian alternatives





Maemo alternatives





What is signing?

- Way to identify who the creator of the package / binary is
- Prevents man-in-the-middle attacks
- Typically implemented with public – private – keys
- Examples:
 - Windows drivers
 - Firefox extensions
 - Symbian applications
 - Debian packages



Security models

- Phone manufacturers want control
 - Return rates, App stores, Protect users
- Operators want control
 - App stores
- Content providers want control
 - Piracy, DRM
- Symbian
 - No application will run unless it is signed
 - Around 20 capabilities
- MeeGo
 - Application will run unsigned :)
 - «Signing» only happens to verify packager



Self Signed

- The good
 - Free
 - Easy to automate
 - Default when making Qt apps
 - Works on *all* Symbian devices
 - Nokia, Samsung, Sony Ericsson etc.
- The bad
 - More prompts
 - Only grants 5 capabilities
 - Cannot be uploaded to OVI (or other commercial) stores



Symbian Signed

- The good
 - Less prompts
 - Proves the software is genuine
 - Grants more capabilities
 - Works on *all* Symbian devices
 - Nokia, Samsung, Sony Ericsson etc.
- The bad
 - Costs money
 - Need a company / org number
 - Hard to automate the signing process



Nokia Free Signing (beta)

- The good
 - Free
 - Less prompts
 - Proves the software is genuine
 - Grants more capabilities
 - No company / org number needed
- The bad
 - Only works on Nokia phones

Send an email to publishtoovi.support@nokia.com with your Ovi Publish username and you'll receive more details.



Getting your app on the OVI store and more



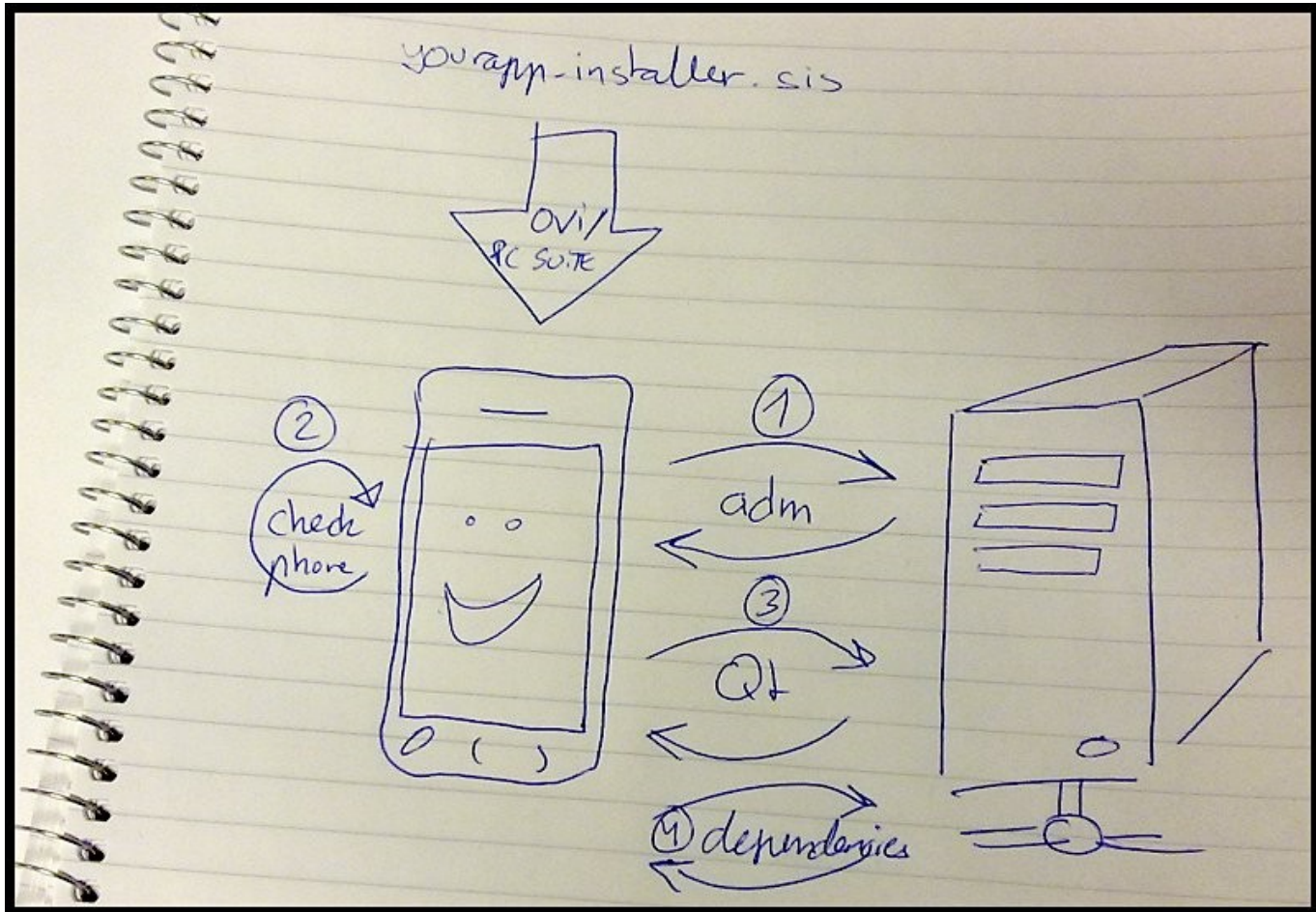
Getting on the OVI store

- Create your app
- Sign up as an OVI Publisher
 - Costs **50€**
 - Corporate or Personal
- Upload application
 - *Symbian needs signing!*
 - Add thumbnails :)
 - Set price/free
 - Check the «Qt» button
- Wait for approval
 - Pray
- Profit and/or fame!





Qt and the Smart Installer





Getting on other stores

- <http://horizon.symbian.org/>
 - Ovi Store by Nokia
 - Samsung Applications Store
 - AT&T's Media Mall
 - China Mobile
 - Handango
 - Orange
 - Sony Ericsson's Playnow



<http://horizon.symbian.org>



Summary

- Install Nokia Qt SDK
- Develop your app with the Qt Simulator
- Finetune on your Symbian or Maemo device
- Sign the app - if needed
- Upload to OVI or distribute yourself



Thanks! Any questions?

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