

Programming Android for fun and profit

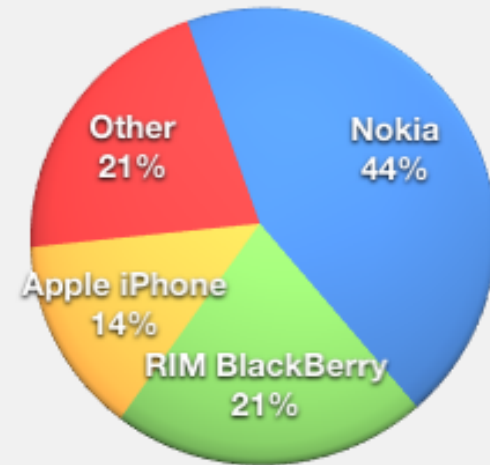


Tristan Roddis, Cogapp. Barcamp Brighton

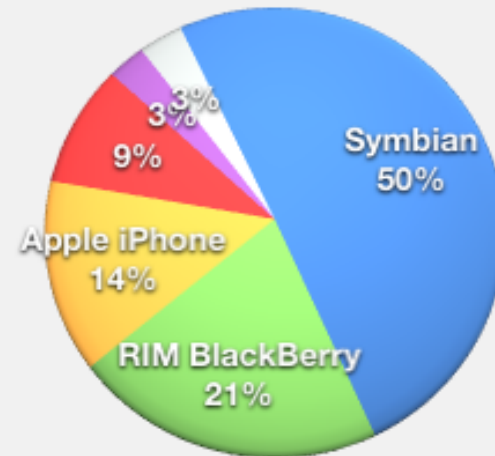
New kid on the smartphone block

Canalys: Global Smartphones Sales Q2 2009

Global Smartphone Market by Manufacturer	
Nokia	44.3%
RIM BlackBerry	20.9%
Apple iPhone	13.7%
Other	21.1%

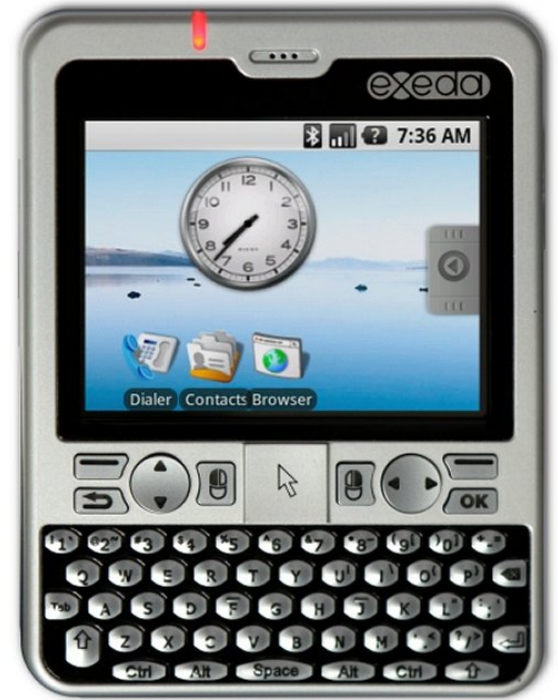


Global Smartphone Market by Operating System	
Symbian	50.3%
RIM BlackBerry	20.9%
Apple iPhone	13.7%
Microsoft Windows Mobile	9.0%
Google Android	2.8%
Other (Palm, Linux)	3.3%



Source: http://www.appleinsider.com/articles/09/08/21/canalys_iphone_outsold_all_windows_mobile_phones_in_q2_2009.html

Handsets

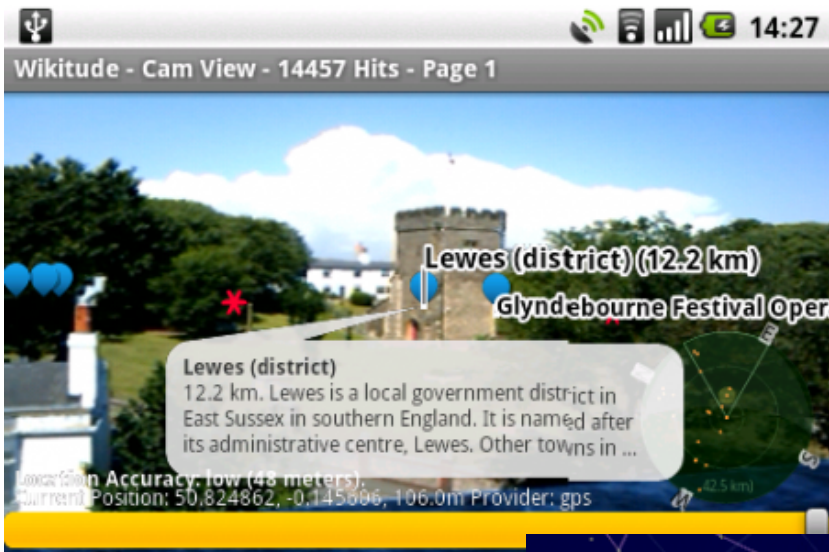


G1 Hardware

- 528 Mhz processor
- 192Mb RAM
- 256Mb ROM + 2Gb SD card
- wifi + 3G
- (not multi)touchscreen
- GPS
- accelerometer + compass
- keyboard

An aside: location-based AR

- wiktitude, Google Sky Map, Gamaray, Layar



Interface

- menu button
- back button
- notification bar
- slidey drawer thing
- slidey homescreen with widgets
- context menu (press and hold)



That's great, but...

- sometimes confusing interface
- sometimes buggy (apps crash, caller-ID FAIL)
- poor battery life
- low internal memory on G1 means you can't install all the apps you want

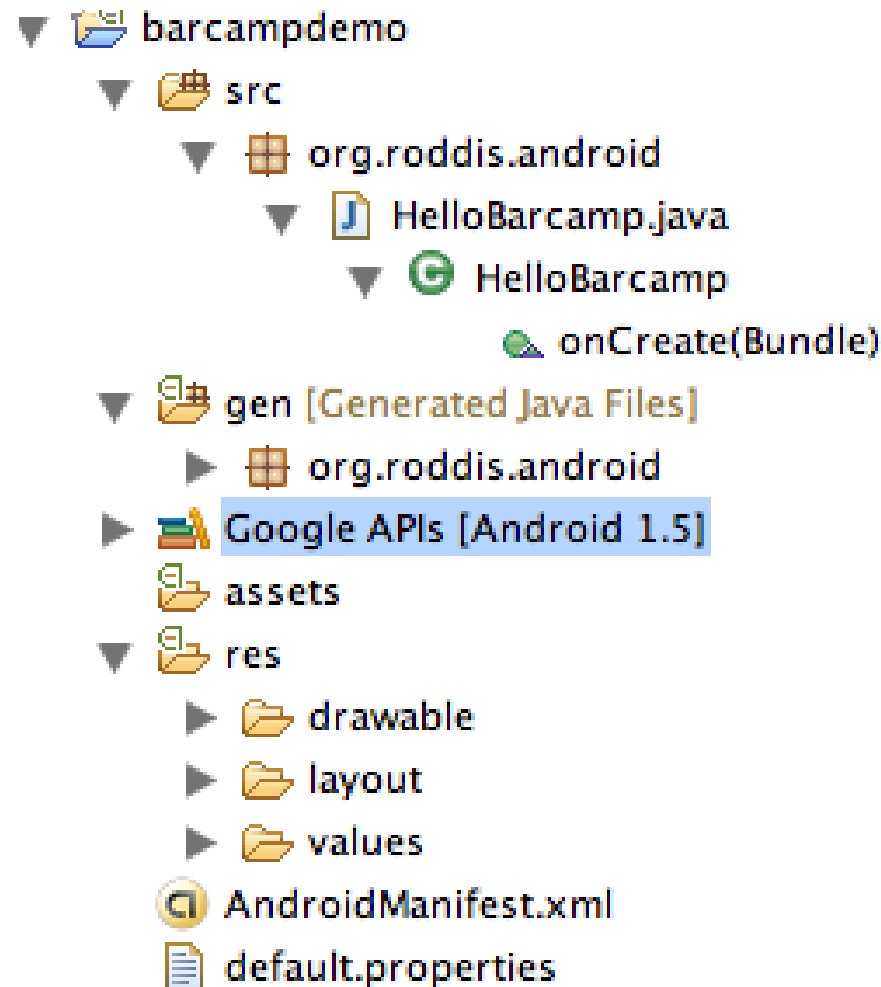
Software stack

- It's Java...
- ...but not as you know it
- Custom 'JVM' - Dalvik
- Most of J2SE (minus GUI)
- Bundled libraries (android.*) for telephony, location, animation, OpenGL ES, SQLite, etc.
- Apache XML libraries

Core Components

- Activities
 - Intents
 - Content Providers
 - Services
-
- All provide the illusion of constantly running applications

Enough talk, let's demo!



Publishing your app

- Package as .apk file
- Install on any phone (with “untrusted apps”)
- Can publish to Marketplace for \$25 joining fee
- Marketplace currently has 8000+ apps

Another aside: ASE

- Android Scripting Environment
- Program on your phone, in Python, Perl, JRuby, BeanShell, Lua...
- E.g. serve the contents of your SD card in 4 lines of Python:

```
import SimpleHTTPServer
from os import chdir

chdir('/sdcard/')

SimpleHTTPServer.test()
```

Conclusions

- Modern, flexible development framework
- Open source
- Low barrier to entry
 - programming
 - publishing

Further information

- Code + SDK <http://code.google.com/android>
- Development forums <http://www.anddev.org/>
- ASE <http://code.google.com/p/android-scripting/>

- Books



- Slides available at www.roddis.org/android

Thanks

- Questions?
- tristan@roddis.org