



Bubbles!
and a quick look at Google Android

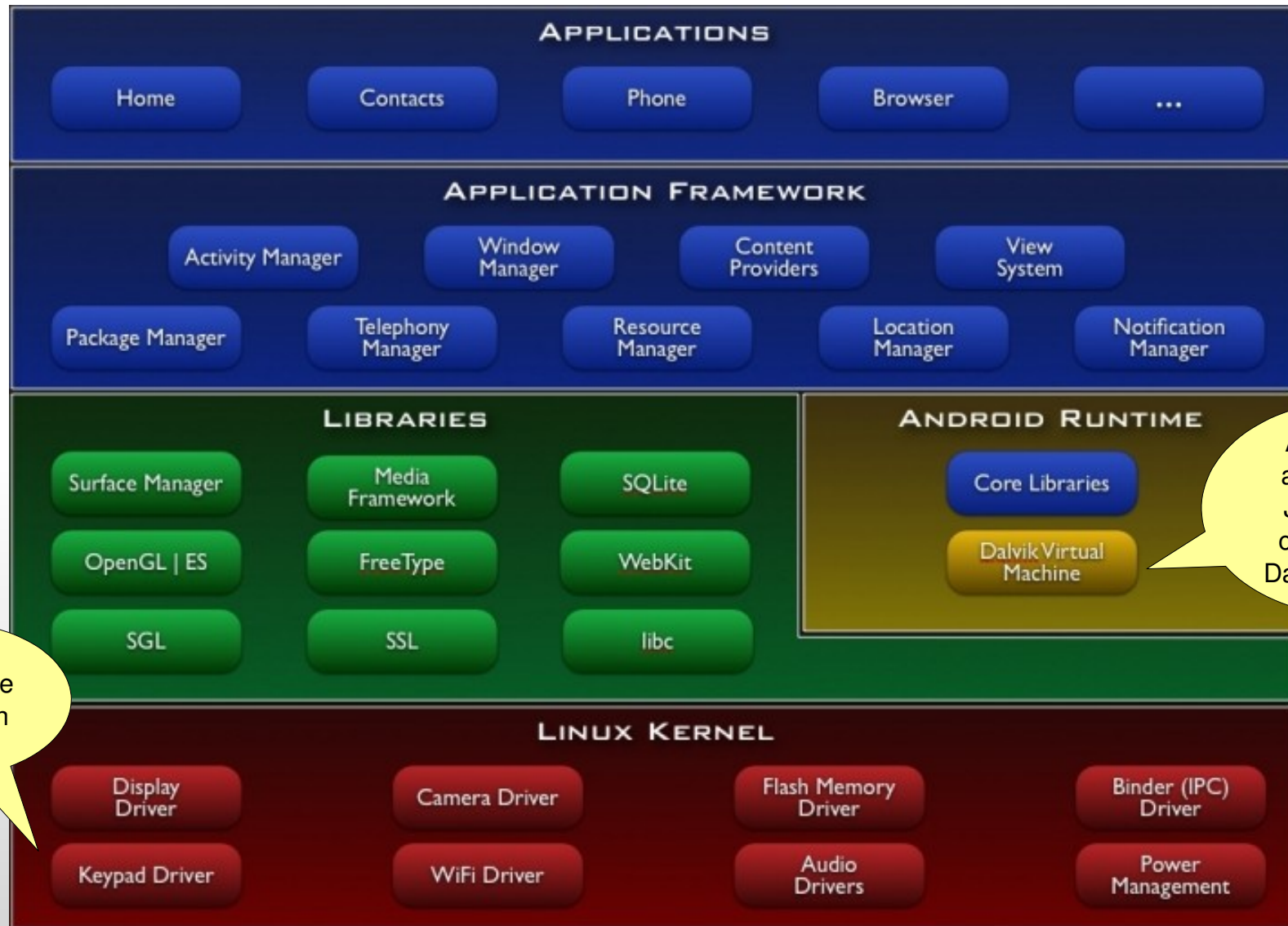
What is Android?

- Google Android is an open source operating system for mobile devices
- Flagship OS for the Open Handset Alliance which has 30 members including:
 - HTC, LG, Samsung, Motorola, DotCoMo, T-Mobile, Sprint, Intel, nVidia, Qualcomm, Texas Instruments

Features of Android

- Application framework enabling reuse and replacement of components
- Dalvik virtual machine optimized for mobile devices
- Integrated browser based on the open source WebKit engine
- Optimized graphics powered by a custom 2D graphics library; 3D graphics based on the OpenGL ES 1.0 specification (hardware acceleration optional)
- SQLite for structured data storage
- Media support for common audio, video, and still image formats (MPEG4, H.264, MP3, AAC, AMR, JPG, PNG, GIF)
- GSM Telephony (hardware dependent)
- Bluetooth, EDGE, 3G, and WiFi (hardware dependent)
- Camera, GPS, compass, and accelerometer (hardware dependent)
- Rich development environment including a device emulator, tools for debugging, memory and performance profiling, and a plugin for the Eclipse IDE

System Architecture



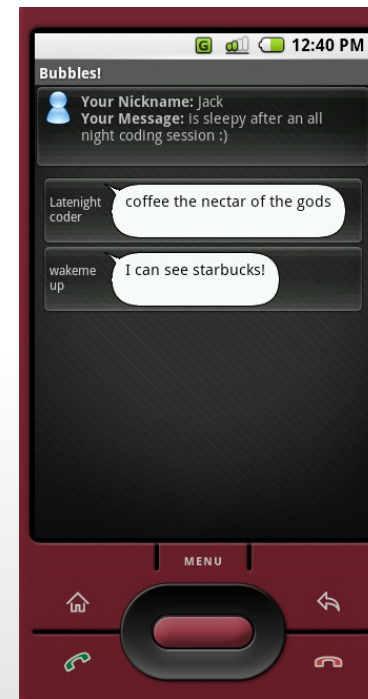
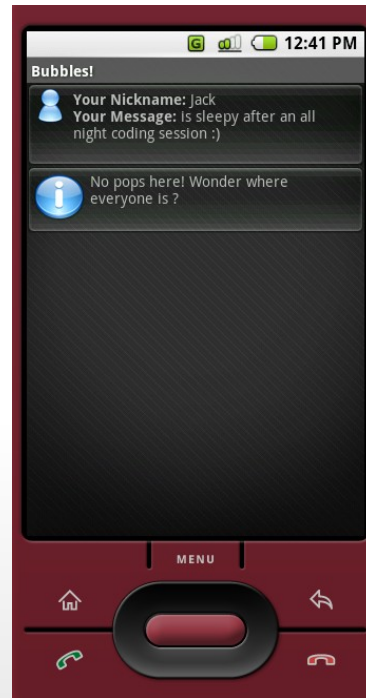
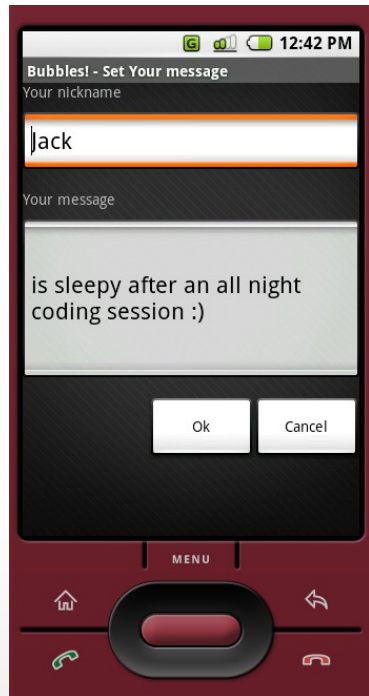
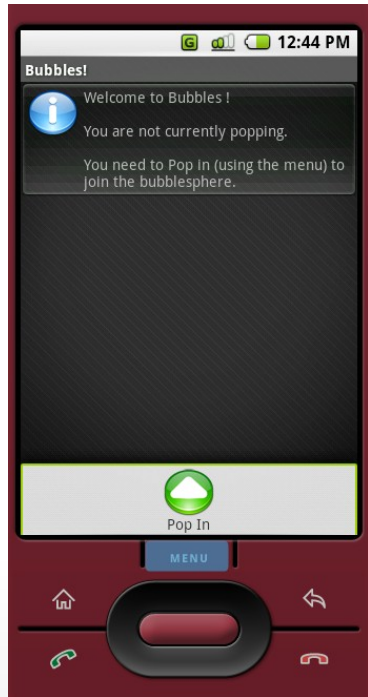
Linux is the foundation

Applications are written in Java but are compiled into Dalvik bytecode

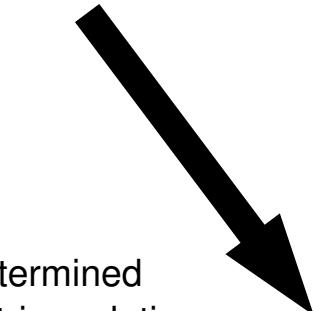
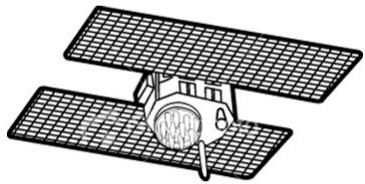
Bubbles!

- Bubbles! was my entry into the Android Developer Challenge
- It scored in the top 25% of 1700 applications but did not make the top 50 :(
- Bubbles! hooks into the location services of Android to provide a location-based Twitter
- It also allows messages to be attached to a physical location (or will soon)

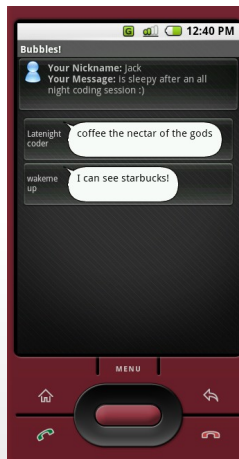
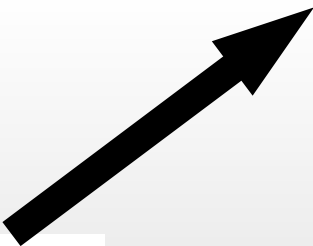
Bubbles! UI



Bubbles! Architecture



Location determined via GPS or triangulation



App sends current location and gets back POPs of nearby Bubbles! users

HTTP and JSON used for communications



Backend is using Google App Engine



Android in the real world

- Currently no actual Android devices
- Rumours are that T-Mobile and HTC will be releasing device in next few months
- LiMO started in 2007 already has 22 handsets
- iPhone 2.0 released
- Buzz has faded to some degree and poor comms from Google
- First beta of SDK just released (18/8/2008)

More info

- <http://code.google.com/android/>
- <http://code.google.com/android/roadmap.html>
- <http://blog.rabidgremlin.com/index.php/tag/bubbles/>
- <http://www.limofoundation.org/>