Android
Bird’s of a Feather
Meeting

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Agenda

• Android - basic intro
• Hot or Not
• Questions
• How to collaborate
• References
Android – Basic Intro
Android – Basic Intro

- **Android**
  - Linux-based OS mainly developed by Google, now deployed in mobile phones worldwide

- Is a new platform, not based on any existing Linux distribution
  - Kernel + Google stuff
  - Bionic libc
  - Dalvik JVM
  - Class libs galore
Hot or Not?

What interesting features of Android should we adopt as an embedded Linux community?
Kernel stuff

- Binder – new IPC mechanisms
- Wake locks – ability to hold the machine “awake”
  - Turns power management on its head
  - Default state of machine is off, and apps have to assert a lock to keep it awake
- amem
User-space

- Init
  - New
- Bionic
  - Small footprint, custom-purpose, C library
  - Has its own threading model
  - No support for multi-user
- Native libraries
  - ???
Build system

- Repo
  - Multi-project source management tool
  - Wrapper for ‘git’ for 100 repositories
- Build system (Android makefiles)
  - Doesn’t build kernel!!
  - Doesn’t keep patches separate
- Pre-built toolchains
Development tools

- Adb – Android Debug Bridge
  - Host/target control program
- Emulator
  - Can develop and test some applications prior to device availability
- Eclipse integration
- Logger
File system layout

- Recovery
- System
- Data
- SDcard
Java

- Dalvik
User-space pieces

- OpenGL
- App Manager
  - Application lifecycle
- Flash support?
Apps

- Market
- Browser (webkit?)
- Maps
- YouTube
How to collaborate

• Google doesn’t always welcome contributions
  • Ex: I haven’t signed their license agreement
• My suggestion:
  • Use e-linux wiki for non-Google sanctioned information and patches
• Can use existing Google lists, unless google people complain (?)
Questions and Discussion