



Mobility Initiative



iPhone and iPod Touch Development Environment

Larry Michele
Paulo Shakarian
Geoff Stoker
Patrick Roos



Mobility Initiative



Components



- Apple OS X 10.5 development computer
 - iPhone SDK
 - Xcode IDE
 - Objective-C
 - Cocoa
-



OS X Development Computer



- iPhone SDK only runs on OS X
- No plans to port to Windows or Linux
- OS X does not run reliably in VwWare VM



iPhone SDK



- Free
 - Download from:
<http://developer.apple.com/iphone/>
 - Download requires login
 - Includes X-Code, Objective-C, application signing, debugger, iPhone emulator
-



Mobility Initiative



Xcode IDE

- Integrated Development Environment (IDE)
- Same as used for development on OS X Mac
 - Comes with every Mac
 - Latest version installed with iPhone SDK
- Editor, Compiler, Debugger



Objective-C

- Object-oriented extensions to C
- Created by Brad Cox and Tom Love at ITT
 - Licensed to Next Computing (Steve Jobs)
 - NextStep/OpenStep user interface compiler
 - Apple used OpenStep in Cocoa
- Based on C and smalltalk
- gcc contains Objective-C compiler
 - gcc does not include Cocoa, so not a cross-platform development environment for OS X or iPhone



Cocoa



- Application programming environment for OS X operating system
 - Classes and libraries
 - Model-view-controller implementation
 - Quartz graphics framework
 - PDF like internal image model – easy conversion to PDF
 - Memory management – automatic garbage collection
-



Mobility Initiative



iPhone Emulator





Alternatives – Android?

- Requirements:
 - Mobile device
 - Geolocation – Cellular, GPS, WiFi...
 - Prefer no recurring subscription costs
 - Like iPod touch
 - Only commercial implementation is T-Mobile G1 cell phone by Google
-



Conclusion



- The iPhone & iPod application development is similar in complexity and difficulty to Java programming for programmer with other OO programming experience
 - iPhone emulator is a powerful tool
 - iPhone and iPod touch implement geolocation
 - iPhone – cellular + GSM + WiFi
 - iPod touch – only WiFi (if available)
-



Mobility Initiative



Thank you!