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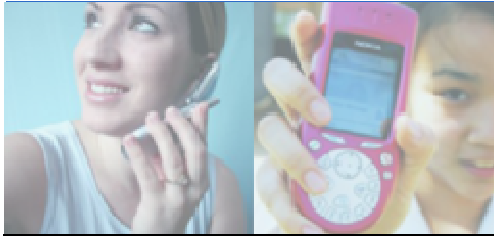


Android vs. iPhone

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April 27, 2009





Self Introduction



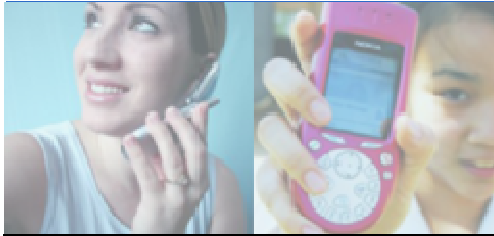
- Motorola
 - UI designer on Android platform
- Hand Interactive: www.hand-interactive.com
 - Freelance UI design for mobile software & services



- Formerly at:
 - **iSkoot:** Skype client for mobile phones
 - **Nokia** Enterprise Solutions
 - **SavaJe Technologies:** Mobile OS platform startup
 - **FloSpace:** www.FloSpace.com
 - FloPrompter: Teleprompter software



- M.S.I. in Human-Computer Interaction, University of Michigan, 1999

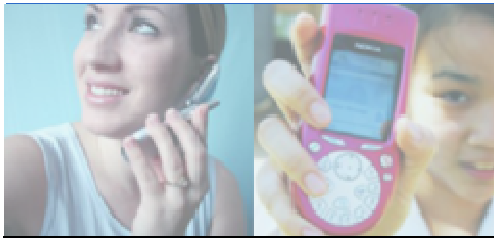


iPhone & Android

Both are game-changing mobile platforms

- Apple broke all the rules
 - Next-generation mobile experience
 - Impact on operator-manufacturer dynamics
 - “Open mobile platform” with walled garden attributes
- Google benefits from iPhone’s long shadow
 - Next generation mobile experience
 - Heavily customizable UI: heavy uptake by manufacturers and operators
 - “Open mobile platform”: Big walled garden?

What does this all mean for a 3rd party software/services developer?

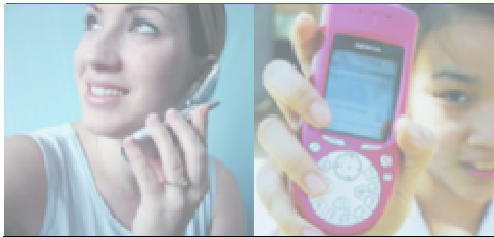


The Market



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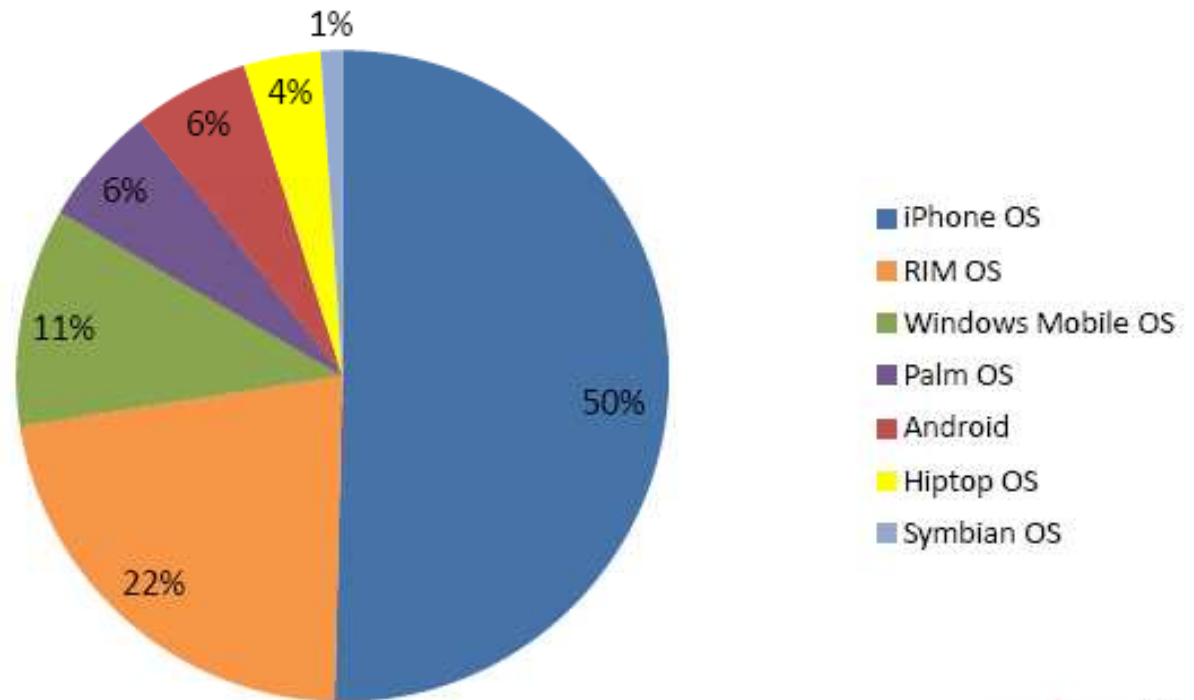


Market Share Stats

Mobile Ad Market Share

US Operating Systems

March 2009

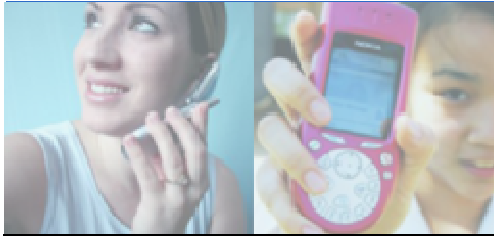


Worldwide OS Market Share (CY 2008)

- Symbian: 52.4%
- RIM: 16.6%
- WinMo: 11.8%
- iPhone: 8.2%
- Palm: 1.8%
- Android: N/A

Gartner, "Market Share: Smartphones, Worldwide, 4Q08 and 2008"

admob



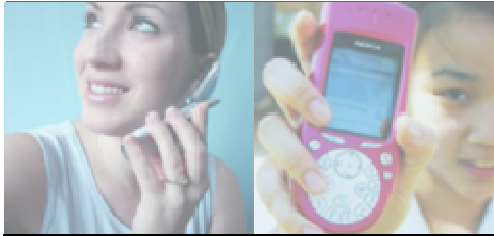
iPhone Market Stats

- Cumulative sales of iPhone & iPod Touch:
37 million devices (Q1 2009)
 - iPhone: 21 million; iPod Touch: 16 million
- Almost all iPhone owners have flat rate data plans
- 60% browse the web at least once per day*
- ~60% use device for reviews & comparison shopping while in the store***
- 72% have 5+ apps on their device**

*Rubicon, "The Apple iPhone: Successes and Challenges", March 2008

**Compete, Smartphone Intelligence, November 2008

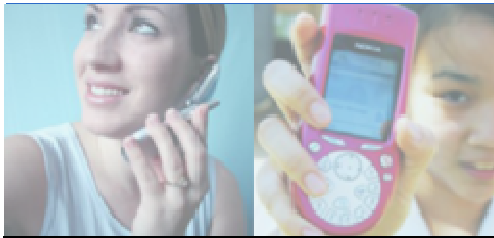
***Compete, Smartphone Intelligence, March 2009



Android Market Stats

- Cumulative sales: **1 million** devices (Q1 2009)
 - HTC G1 is currently the only Android device
 - Accounts for 2/3 of T-Mobile's 3G phones
 - About ½ traded up from a Feature Phone*
- Flat rate data plans common (though not universal)
 - Use data services 50x more than voice-centric customers*
- 80% browse web at least once daily*
- Average of 40 apps downloaded by each user*
- More devices coming soon...
 - HTC, Motorola, Samsung, LG, Sony Ericsson, Asus, Huawei, Toshiba, Acer, Dell, E28
 - Mobile Internet Devices (MIDs), Netbooks, etc....

*T-Mobile Announcement at CTIA, March 2009

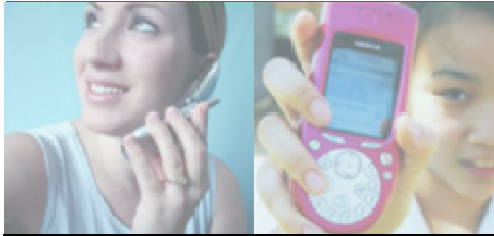


Development



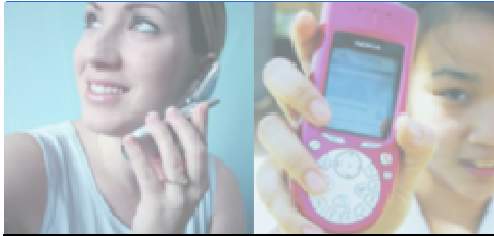
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iPhone & Android: Similarities

Key differentiators from legacy mobile platforms	iPhone	Android
“Compelling user experience”	✓+	✓
“Simplicity is key” <ul style="list-style-type: none"> • UI design & available features • Setup & management 	✓+	✓
“Data access is a right, not a privilege”	✓	✓
“Web browsing is a core experience”	✓	✓
“Location awareness makes the UX better”	✓	✓
“Open to innovation”	✓	✓+
“Bring apps to the user”	✓	✓
“Seamless sync”	✓	✓
“User customization”		✓
“Media consumption is a core experience”	✓	
“Visual design makes the UX better”	✓	



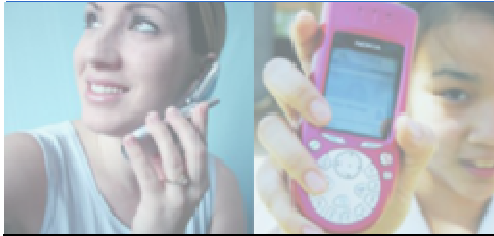
Client Software: iPhone

- MacOS X for iPhone
 - Objective-C
- Developer resources
 - Excellent iPhone Developer Center
 - Excellent Human Interface Guidelines
 - \$99 to join register & download the SDK
 - Plethora of 3rd party books & resources
- Device features
 - Excellent UI components
 - **Technologies:** geolocation, accelerometer, WiFi, Bluetooth PAN, A/V support, graphics, network access, multi-touch
 - **Limitations:** No background processes, limited access to core apps (e.g., SMS, music), memory management



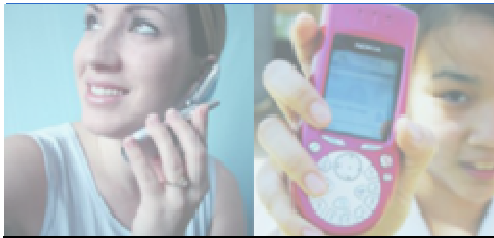
Client Software: Android

- Java
 - An Android-specific flavor of Java based on Dalvik
- Developer resources
 - Good developer center
 - Free SDK download integrated with Eclipse
 - Plethora of 3rd party books & resources
- Device features
 - Good UI components: Extremely customizable
 - **Technologies:** Vary by device, but generally: WiFi, geolocation, A/V support, graphics (OpenGL), background processes, integration with core apps
 - **Limitations:** still maturing, lack of clear UI guidelines, too much customizability?



Web Apps: Android & iPhone

- Mobile Safari & Android browsers based on WebKit
 - If it works for iPhone, it'll work for Android (mostly)
- Developer resources
 - Plethora of 3rd party books & resources
 - **Wanted:** Cross-mobile platform UI component library
- Device features
 - Rich support for JavaScript, CSS (AJAX)
 - Best mobile platforms for web apps
 - iPhone-optimized UIs work well on Android
 - Good apps include Google Reader, Yahoo! (<http://new.m.yahoo.com>)
 - **Technologies:** Integration with core apps (maps, phone, email, YouTube), orientation hooks
 - **Limitations:** Integration with device info (geolocation, battery, Bluetooth), no Flash, no Java
- **Hand Interactive:** Detect mobile devices using PHP, Java, JavaScript
 - www.hand-interactive.com/resources/

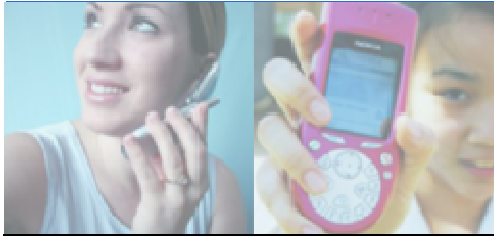


App Distribution



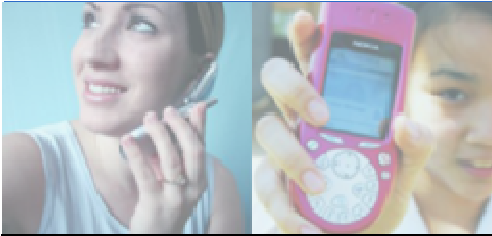
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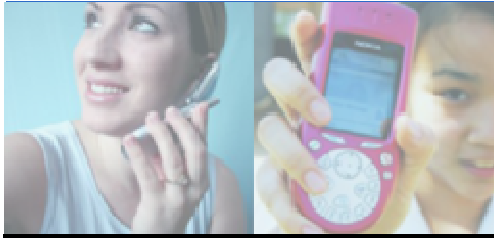
App Distribution: iPhone

- Sell apps on the iTunes App Store
 - 70% goes to software publisher (reasonable!)
 - But if a user requests a refund, developer pays 100%
 - Delayed payments
 - 30,000+ apps (Fortune, March 2009)
 - 1 billion apps in 9 months
- App store features
 - Free vs. paid tensions
 - Mean price of a paid app is \$2.55 (O'Reilly, March 2009)
 - Excellent search & browse
 - For each app: Long description, picture, reviews
 - Apple handles Tier 1 support
 - Virtually painless app update notification & installation features
 - Many small publishers have found success: Tap Tap Revenge
 - *New York Times*, "iPhone Gold Rush," April 5, 2009
 - App approval issues
 - Mysterious process, requirements; arbitrariness
 - Long delays for approval



App Distribution: Android

- Sell apps on the Android App Market
 - \$25 fee to register
 - 70% goes to software publisher (reasonable!)
 - Customer has 24 hours to request refund
 - Payment through Google Checkout (has some bumps...)
- App store features
 - Decent search & browse
 - Not as sexy or pleasant overall as the iPhone's App Store
 - For each app: Short description (~325 chars), no picture, reviews
 - App publisher handles all customer support
 - Virtually painless app update notification & installation features
 - App approval process
 - No approval. Publish & it's immediately live!
 - Google reserves right to remove apps from market. See recent scandal when T-Mobile USA requested removal of a tethering app

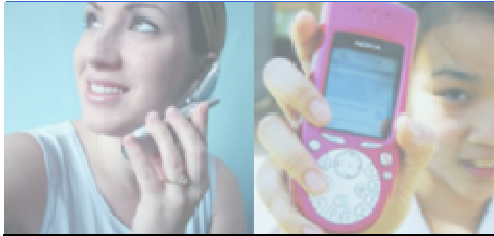


Quick Summary



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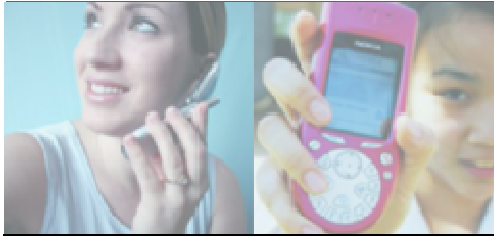
Android vs. iPhone

- Market positioning
 - **iPhone:** Premium user experience → BMW
 - **Android:** Affordable touchscreen user experience for the people → Honda
 - *And VW – and Audi – and Chevy – and Cadillac – and Mini...*

- iPhone and Android represent the most consumer-friendly smartphone platforms on the market
 - Easy to learn and use
 - Seamless data connectivity
 - Compelling & innovative user experiences

→ Together are leading to the mass market adoption of smartphone devices

- Revolutions present opportunities
 - Great opportunities for innovative software and services
 - Get started!!



Thank you!

Anthony Hand

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- **Hand Interactive:** www.hand-interactive.com
 - Free code for detecting mobile devices using PHP, Java, JavaScript:
www.hand-interactive.com/resources/
- **FloSpace:** www.floSPACE.com
- **Twitter:**
 - @AnthonyHand : Personal
 - @HandInteractive : Mobile industry & user experience