Mobile Development Tips: Building Mobile Apps for Digital Libraries

Handheld Librarian III
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A Look Ahead...

- Native Apps versus Browser Apps
- A Conversion Story
- Mobile Development Tips
- Getting Started
Native Apps

- Installed on the iPhone or Device
- Access to the hardware (speakers, accelerometer, camera, etc.)
- Written with Objective-C (Apple)
- "App Store" or Proprietary Distribution
Browser (Mobile) Apps

- Web site that is specifically optimized for the iPhone or mobile device
- Built with standard web technologies
- Available at a URL
- Speedy debugging and development
Browser v. Native
A live mobile web app...

Demos:
Terra - lifeonterra.com
Terra mobile - lifeonterra.com/m/

Download:
Mobile template - www.lib.montana.edu/~jason/files/m/
Explanation & blog post - http://wp.me/p8yR-1J

Code Samples:
http://www.lib.montana.edu/~jason/files.php
A live mobile web app...

Terra - lifeonterra.com

becomes

Terra mobile - lifeonterra.com/m/
Now Playing at LIFEONTERRA

TERRA 537: A Winning Scenario
13:16mins | 2010-07-22 | Produced by: Jenny Sherman

A WINNING SCENARIO is a short film about the agricultural implications of climate change in Kenya. Despite the adverse effects of global warming in Kenya, local communities are adapting farming practices for improved crop production. Soil health is critical in a changing climate and this film explores the importance of protecting Kenyan soil for future generations.
TERRA 537: A Winning Scenario

A WINNING SCENARIO is a short film about the agricultural implications of climate change in Kenya. Despite the adverse effects of global warming in Kenya, local communities are adapting farming practices.

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View Full Details: http://blip.tv/file/3916865
Making the Move to Mobile...
functional essence necessary core essential simple primary
Narrow your Focus

- Do a few things really well
- What are the core actions?
Know your Audience

- Run the Analytics
- Research for Mobile Browser Types
Learn from the Masters

- View Source -> m.flickr.com
- "Be Mobile" with User Agent Switcher
Study the Interface & Device

- Scalable Design, Think Percentages
  - 320px AND 480px
- Tactile navigation
  - touch, pinch, spread, flick, spin (gyrometer)

Apple recommends a minimum target size:
29px wide 44px tall
Speed FTW, Performance First

- Limit Images and Markup
- "Minify" your scripts and CSS
  - JSLint, CleanCSS
- Take Advantage of HTML5, CSS3
Respect the URL

- Follow the "m" convention
  - m.delicious.com OR lifeonterra.com/m/
- Keep Categories (directories) Short

It's a touch environment, not a typing environment.
Mobile Browsers = Cutting Edge

- WebKit Browser Engine
- Supports many HTML5 and CSS3 features
- Native app functionality
  - geolocation
  - offline storage
  - web workers
Know Mobile Design Conventions

- One Column Layout
- Whitespace is Your Friend
- Embrace an Economy of Language
- "Quick Visit" Architecture
Getting Started, Learning More

- Don't Ignore Frameworks and Libraries
  - jQtouch, iUI, Sencha Touch, PhoneGap
- Google App Inventor
  - http://appinventor.googlelabs.com/about/
- Mobile Web Apps - Apple
- Mobile Web App Design: Getting Started
  - Michael Doran, Code4Lib 2010
Mobile Development in Libraries

- Chad Haefele, Mobile Site Generator
  - http://www.hiddenpeanuts.com/msg/
- Jason Casden, WolfWalk at NCSU
  - http://www.lib.ncsu.edu/dli/projects/wolfwalk/
- Laurie Bridges and Kim Griggs
  - http://ir.library.oregonstate.edu/jspui/handle/1957/16437
Mobile First as Strategy

Google programmers are doing work on mobile applications first, because they are better apps and that's what top programmers want to develop.

- Eric Schmidt, Google CEO

Mobile Screen Resolutions

- Android (Motorola Droid) 480x854
- Android (MyTouch) 320x480
- Android (Nexus One) 480x800
- Apple iPhone 320x480
- Apple iPad 1024x768
- Palm Pre 320 x 480

Source: http://insideria.com/2010/05/building-web-sites-optimized-f.html
Contact Information

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