Designing Mobile Experiences: Building Mobile Web Apps

Internet Librarian
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A Look Ahead...

- Native Apps versus Browser Apps
- Mobile Design Trends
- Mobile Design Case Study
- Mobile Development Tips
- Demos and Code Templates
- Getting Started
Hello, My Name is…

- Background, Position
- HTML, Programming experience?
- Experience with Mobile Design
- What do you want to learn most?
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
Shiny App Syndrome?

• Mobile web first?
• Incorporate what you learn into App development
• Your thoughts?

Source: "Shiny app syndrome" and Gov 2.0" by Alex Howard from O'Reilly Radar
Trends in Mobile Design

• A Survey of Major Web Sites
http://mobile.twitter.com
http://www.amazon.com/gp/aw/kindle/storefront/
http://mobile.usc.edu/
Transcript: Barack Obama’s Inaugural Address

My fellow citizens:

I stand here today humbled by the task before us, grateful for the trust you have

Most Popular Stories

Transcript: Barack Obama’s Inaugural Address

Thirty Things I Believe

Exclusive First Listen: Bruce Springsteen

Gut Reaction: Overeating Can Impair Body Function

Charity Organization Helps With Inaugural Masks

Neglected Films Of 2008 Still Well Worth Seeing

By Bob Mondello

All Things Considered, January 11, 2009 · It happens every year. Awards season rolls

http://m.npr.org/
Jill Kupin Rose Gallery - Ongoing

ONGOING EXHIBITION

This ongoing exhibition consists of large wall panels with photographs, text, objects, and videos illustrating...
http://m.delicious.com/
Mobile App Design – Case Study

Demos:
Terra - lifeonterra.com
Terra mobile - lifeonterra.com/m/
MSU Extension - arc.lib.montana.edu/msu-extension/
MSU Extension mobile - arc.lib.montana.edu/msu-extension/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/
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 adopting 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.

Now Playing at LIFEONTERRA

10:15 mins | 2010-07-22 | Produced by: Jenny Sherman
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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Making the Move to Mobile...

“My goal was initially just to make a mobile companion for the facebook.com mothership, but once I got comfortable with the platform I became convinced it was possible to create a version of Facebook that was actually better than the website.”

Joe Hewitt, lead developer for touch.facebook.com
Source: http://joehewitt.com/post/ipad/
Mobile Development Tips

- A different design mindset
- Development with new limitations

- 10 tips to get us “mobile design” thinking
Narrow your Focus

• Do a few things really well
• What are the core actions?

Delta Desktop != Delta Mobile
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
  o 320px AND 480px
Mobile UX = targets, gestures, actions

- New forms of interaction
- 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
  o Limit HTML pages to 25KB to allow for caching
• "Minify" your scripts and CSS
  o JSLint, CleanCSS
• Take Advantage of HTML5, CSS3
  o <!DOCTYPE html>
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
Allow for User Choice

• Link to Full Site
• Sniff for User Agent - Detection
Know Mobile Design Conventions

• One Column Layout
• Whitespace is Your Friend
• Embrace an Economy of Language
• "Quick Visit" Architecture
Mobile Development - Demo

Demo:
Mobile Prototype built with jQtouch Library
www.lib.montana.edu/~jason/files/touch/

Code Samples and Downloads:
www.lib.montana.edu/~jason/files.php
Mobile Validators

• W3C Mobile Site Validator
  • http://validator.w3.org/mobile

• Mobile App Validator from mobiforge
  • http://mobiready.com/launch.jsp?locale=en_EN#fragment-1
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

* See Mobile Development - Library Success Wiki
Getting Started, Learning More

• Don't Ignore Frameworks and Libraries
  o jQtouch, iUI, Sencha Touch, PhoneGap
• Google App Inventor
  o http://appinventor.googlelabs.com/about/
• Mobile Web Apps - Apple
  o http://developer.apple.com/safari/
• Mobile Web App Design: Getting Started
  o Michael Doran, Code4Lib 2010
  o http://code4lib.org/conference/2010/doran
Getting Started, Resources

• mobify.me for site conversion (page limit)
  • http://mobify.me/features/

• *Mobile Design and Development* (O’Reilly)
  by Brian Fling
  ISBN: 9780596155445
  http://www.worldcat.org/oclc/318413920

• Use the provided templates, bang on rocks, ask me questions…
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
Common Mobile Interactions

- Tap
- Double Tap
- Drag
- Flick
- Pinch
- Spread
- Press
- Press & Tap
- Press & Drag
- Rotate
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

Contact Information

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