Designing Mobile Experiences:
Building Mobile Web Sites and Apps

Offline Montana
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pinboard.in tag

http://pinboard.in/u:jasonclark/t:offline13/
twitter hashtag

#offline13
A Look Ahead...

• Native Apps versus Browser Apps
• Mobile Design Trends
• Mobile Design Case Studies
• Mobile Development Tips
• Demos and Code Templates
Mobile Expectations

“13% of those ages 16 and older have visited library websites or otherwise accessed library services by mobile device.”

Pew Research Center’s Internet & American Life Project
Released: December 31, 2012
http://libraries.pewinternet.org/2012/12/31/mobile-connections-to-libraries/
*Person in this room* added 4 photos to the album iOS Photos.
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.simonandschuster.mobi/
Current Exhibitions

Yaddo: Making American Culture
Humanities and Social Sciences Library

Jill Kupin Rose Gallery - Ongoing
Humanities and Social Sciences Library

Jill Kupin Rose Gallery - Ongoing
ONGOING EXHIBITION
This ongoing exhibition consists of large wall panels with photographs, text, objects, and videos illustrating

http://m.nypl.org
<table>
<thead>
<tr>
<th>Explore</th>
<th>Bookmarks</th>
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<tbody>
<tr>
<td><strong>Search Results</strong></td>
<td>(1000+ results)</td>
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<tr>
<td><strong>PhoneGap</strong></td>
<td>Cross platform <strong>mobile</strong> framework</td>
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<td>iphone</td>
<td>mobile</td>
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<tr>
<td><strong>fring</strong></td>
<td>Make free <strong>mobile</strong> calls, IM with Skype, M...</td>
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<td>mobile</td>
<td>voip</td>
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<td><strong>jQTouch</strong></td>
<td>jQuery plugin for <strong>mobile</strong> web develop...</td>
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<td>iphone</td>
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<tr>
<td><strong>QIK</strong></td>
<td>Streaming video right from your phone</td>
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<tr>
<td>video</td>
<td>streaming</td>
</tr>
<tr>
<td><strong>Twitter</strong></td>
<td>What are you doing?</td>
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<tr>
<td>twitter</td>
<td>social</td>
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<tr>
<td><strong>Android</strong></td>
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<td>android</td>
<td>google</td>
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<tr>
<td><strong>QR-Code Generator</strong></td>
<td></td>
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<td>qrcode</td>
<td>generator</td>
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</tbody>
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[http://m.delicious.com/](http://m.delicious.com/)
Mobile App Design, Case Studies

Demos:

MSU Historical Photos Walking tour app
http://arc.lib.montana.edu/msu-photos/app/

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/

Downloads:

http://www.lib.montana.edu/~jason/files.php
2 live mobile web apps...

Terra - lifeonterra.com becomes Terra mobile - lifeonterra.com/m/

MSU Libraries - www.lib.montana.edu becomes MSU Libraries mobile – www.lib.montana.edu/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 crucial 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 to mitigate these effects...

Date Uploaded: Fri, 23 Jul 2010 03:14:51 +0000

View Full Details: http://flip.tv/file/3916885
TERRA 719

TRUST Pennsylvania
produced by WITNESS

Ashley, an 18-year old from western Pennsylvania, is asking the government to come up with a climate recovery plan that does not destroy our single most essential resource...the atmosphere. Check it out.

Welcome to TERRA: the nature of our world

Recent Episodes

TERRA 719: TRUST Pennsylvania
Produced by WITNESS

TERRA 718: Passing It Down
Produced by Christopher J. Carter

TERRA 717: Whiteout
Produced by Katie Jepson

TERRA 716: Chasing Birds in Beringia
Produced by Stephani Gordon
MSU Library (Mobile)

Search
Databases
Hours
Ask a Librarian
About
Where

Home Search Ask Full site
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/
functional

essence

necessary

primary

essential

core

simple
Exercise

• Pick a web site
• Define primary mobile actions
• Choose mobile entry points (links)

• What do library patrons want to do with library services in the mobile setting?
Mobile Analytics

- Web metrics and statistics
- Mobile search logs

“Data is your friend. Take out the guesswork.”
Mobile Optimization

• Minify scripts, html, css …
• Reduce HTTP requests
• Compress files with gzip
• Cache static resources

“Speed matters.”

https://developers.google.com/speed/pagespeed/insights
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
  - Limit HTML pages to 25KB to allow for caching
- "Minify" your scripts and CSS
  - JSLint, CleanCSS
- Take Advantage of HTML5, CSS3
  - <!DOCTYPE html>
Respect the URL

• Follow the "m" convention
  o 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
  o geolocation
  o offline storage
  o 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 - Demos

Demos:

Responsive Design Template (custom)
www.lib.montana.edu/~jason/files/responsive-design/

Mobile Template (jQuery Mobile)
www.lib.montana.edu/~jason/files/touch-jquery/

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
  - jQtouch, iUI, Sencha Touch, PhoneGap
- MIT App Inventor
  - http://appinventor.mit.edu/
- Mobile Web Apps - Apple
- Mobile Web App Design: Getting Started
  - Michael Doran, Code4Lib 2010
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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