Designing Mobile Experiences:
General Principles, Tips, Code Samples, & Downloads

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Mobile App Templates

Take them, break them, and learn...
Demos:
  Terra - lifeonterra.com
  Terra mobile - lifeonterra.com/m/
  Mobile template 1 - www.lib.montana.edu/~jason/files/m/
  Mobile template 2 (jQtouch) - www.lib.montana.edu/~jason/files/touch/

Explanation & blog post - http://wp.me/p8yR-1J

Downloads:
  http://www.lib.montana.edu/~jason/files.php

Mobile Design Thinking

"Create a product, don’t re-imagine one for small screens. Great mobile products are created, never ported."
- Brian Fling, author of Mobile Design and Development (O'Reilly Publishers)

"In iPhone apps, the main function should be immediately apparent. Minimize the number of controls from which users have to choose."
- iPhone Interface Guidelines

Mobile Development Thinking - The new platform includes:

- Multiple screen sizes & densities
- A Need for Performance optimization
- Touch targets, gestures, and actions
- Access Location systems
- Varying Device capabilities
Mobile Development Tips

Tip #1: Narrow your Focus
- Do a few things really well
- What are the core actions?

Tip #2: Know your Audience
- Run the Analytics
- Research for Mobile Browser Types

Tip #3: Learn from the Masters
- “View Source” of m.flickr.com
- Be Mobile with User Agent Switcher (Firefox add-on)

Tip #4: Mobile User Interface = targets, gestures, actions
- New forms of interaction
- Tactile Navigation
- Touch, pinch, spread, flick, spin (gyrometer)
- Apple recommends a minimum target size: 29px wide by 44px tall

Tip #5: Speed FTW, Performance First
- Limit Images and Markup
  - Limit HTML pages to 25KB to allow for caching
  - Limit images to under 1KB when possible
- "Minify" your scripts and CSS
  - JSLint - http://www.jslint.com/
  - CleanCSS - http://www.cleancss.com/
- Take Advantage of HTML5, CSS3
  - <!DOCTYPE html>

Tip #6: 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.”

Tip #7: Take Advantage of Mobile Browsers’ Capabilities
- Mobile Browsers = Cutting Edge
- WebKit Browser Engine runs Mobile Safari and Android
- Supports many HTML5 and CSS3 features
- Native app functionality
  - geolocation
  - offline storage
  - web workers
Tip #8: Allow for User Choice
- Link to Full Site
- Consider “sniffing” for User Agent - Detection (Javascript sample below...)

```javascript
<script type="text/javascript">
if ((navigator.userAgent.indexOf('iPhone') !== -1) || (navigator.userAgent.indexOf('iPod') !== -1)) {
  document.location = "#";
}
</script>
```

Tip #9: Use Mobile Templates, Libraries, and Software Development Kits (SDK)
- Vetted and tested across platforms
- Common user interaction tasks are built-in
- Javascript Libraries
  - jQtouch - http://jqtouch.com/
  - JQuery Mobile - http://jquerymobile.com/
- Native/Mobile Web App Packages
  - PhoneGap
- Android App inventor - http://appinventor.googlelabs.com/about/

Tip #10: Know Mobile Design Conventions
- One Column Layout
- Whitespace is Your Friend
- Embrace an Economy of Language
- "Quick Visit" Architecture

**Mobile Validators**
- W3C Mobile Site Validator
  - http://validator.w3.org/mobile
- Mobile App Validator from mobiforge
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


List of Common Mobile Interactions - An Evolving User Interface (UX)

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

Mobile Development in Libraries

- Chad Haefele, Mobile Site Generator
- Jason Casden, WolfWalk at NCSU
- Laurie Bridges and Kim Griggs
  - [http://ir.library.oregonstate.edu/jspui/handle/1957/16437](http://ir.library.oregonstate.edu/jspui/handle/1957/16437)
- Mobile Development - Library Success Wiki

Getting Started, Resources to Learn More about Mobile Design

- Check out mobify.me for free site conversion
  - [http://mobify.me/features/](http://mobify.me/features/)
- *Mobile Design and Development* (O'Reilly) by Brian Fling
  - ISBN: 9780596155445
  - [http://www.worldcat.org/oclc/318413920](http://www.worldcat.org/oclc/318413920)