Designing Mobile Experiences:
Building Mobile Web Sites and Apps

Metropolitan Library Service Agency (MELSA)
Tech Training Workshop
October 15, 2012

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Montana State University Libraries

pinboard.in tag

http://pinboard.in/u:jasonclark/t:melsa/

A Look Ahead...

- Native Apps versus Browser Apps
- Mobile Design Trends
- Mobile Design Case Studies
- Mobile Development Tips
- Demos and Code Templates
- Codelab and Walkthrough

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

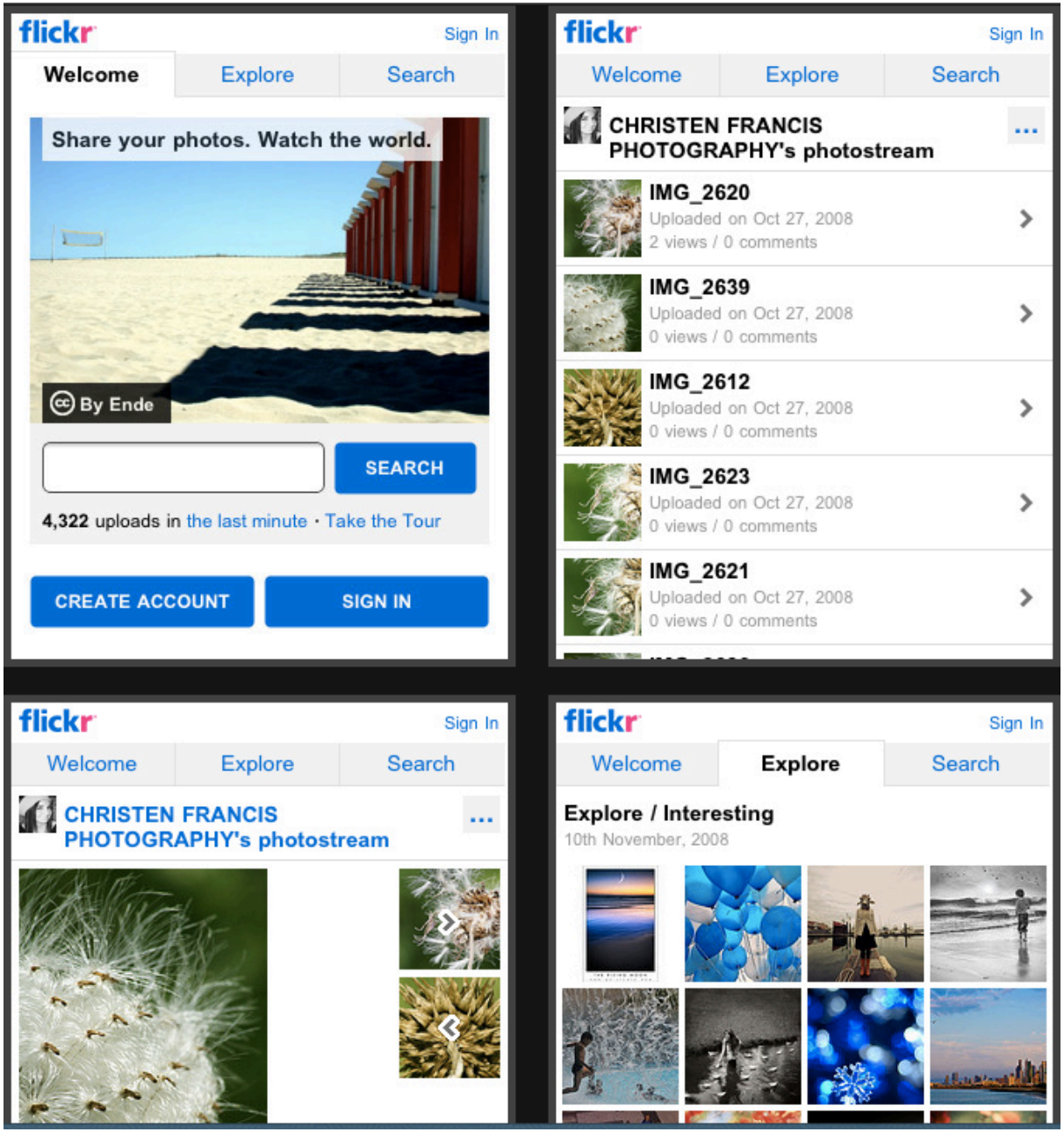
Shiny App Syndrome?

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

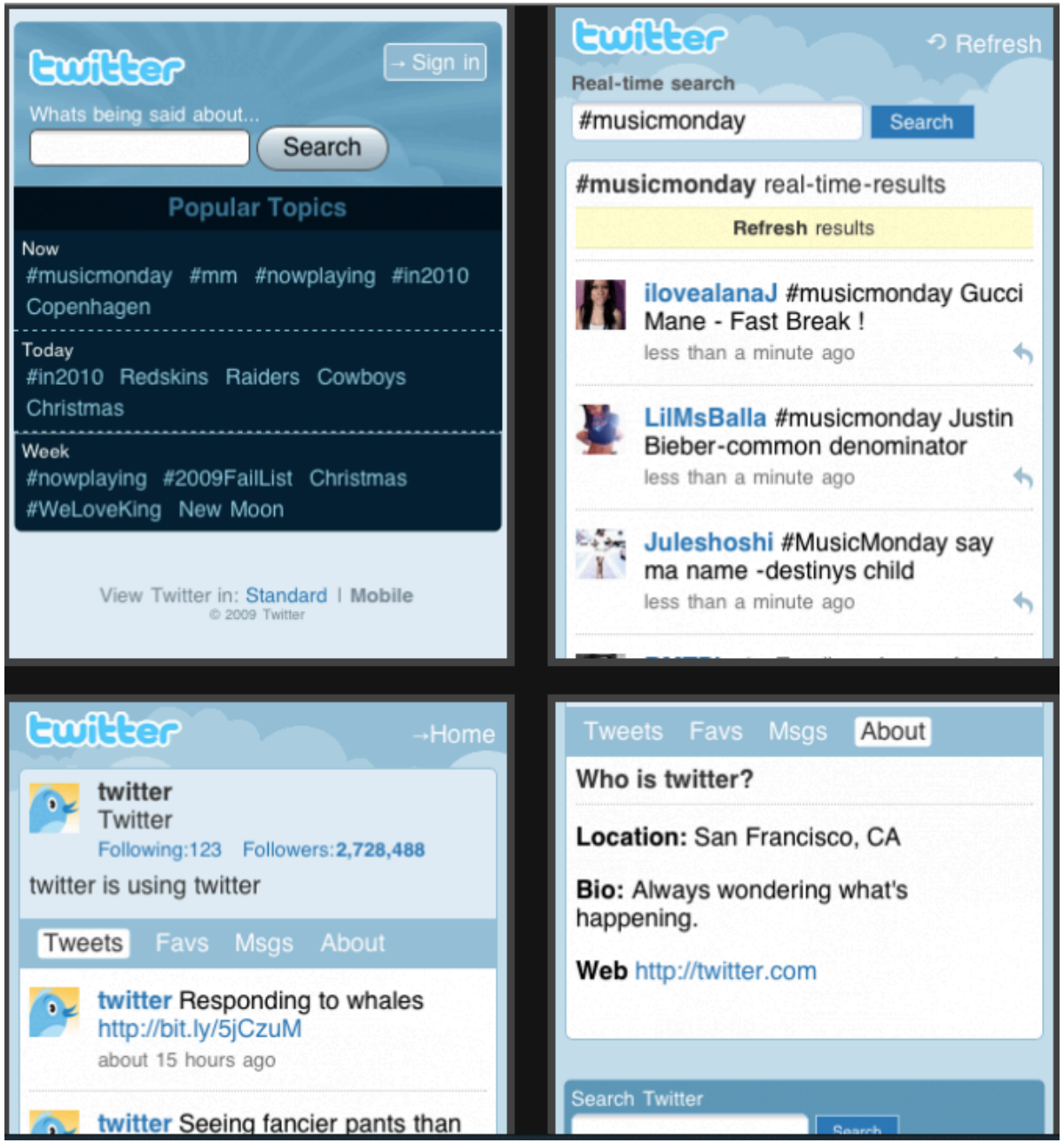
Source: "Shiny app syndrome" and Gov 2.0” by Alex Howard from O’Reilly Radar
http://radar.oreilly.com/2010/10/is-there-a-government-app-for.html

Trends in Mobile Design

- A Survey of Major Web Sites



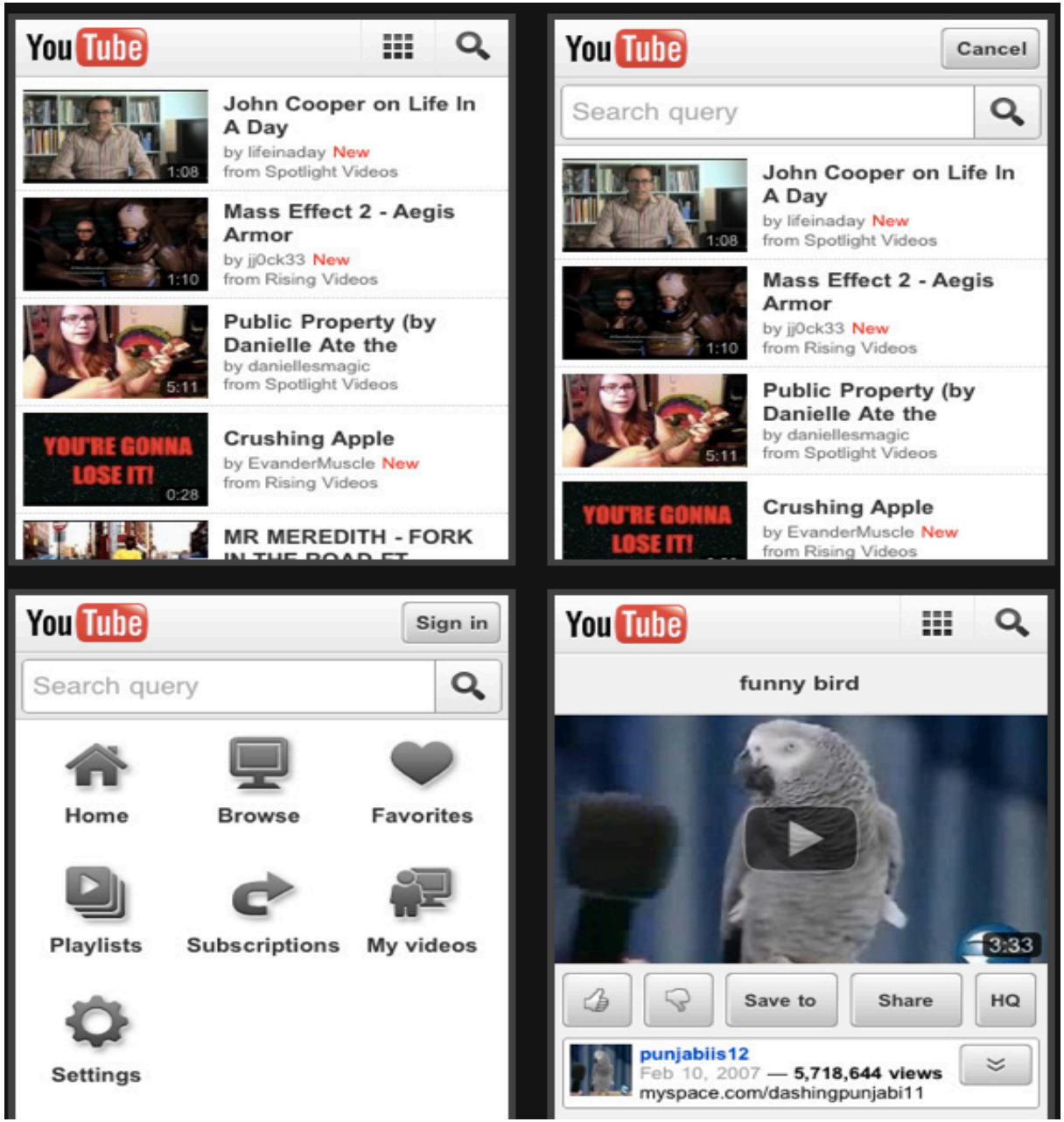
http://m.flickr.com



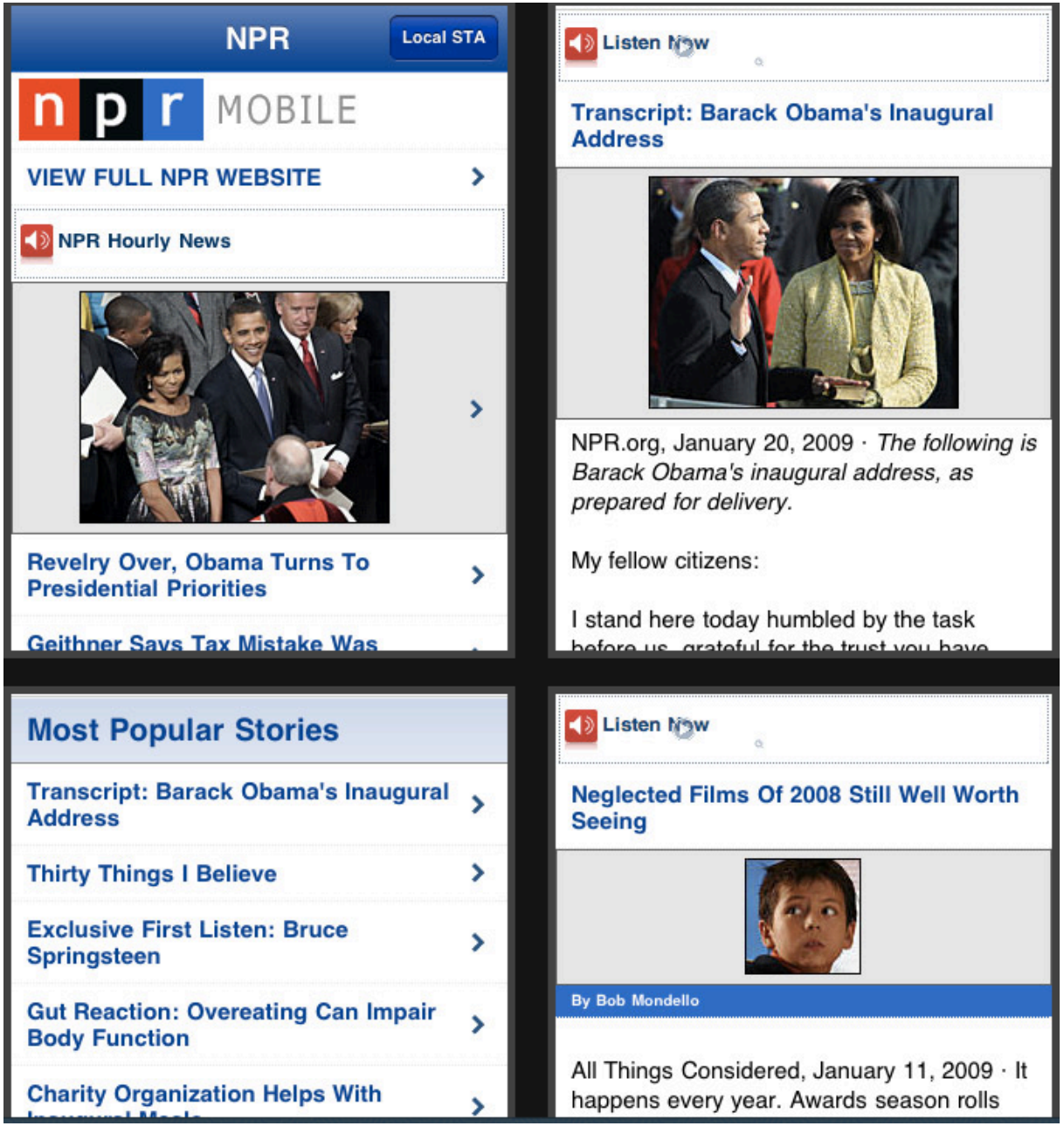
http://mobile.twitter.com

http://www.amazon.com/gp/aw/kindle/storefront/

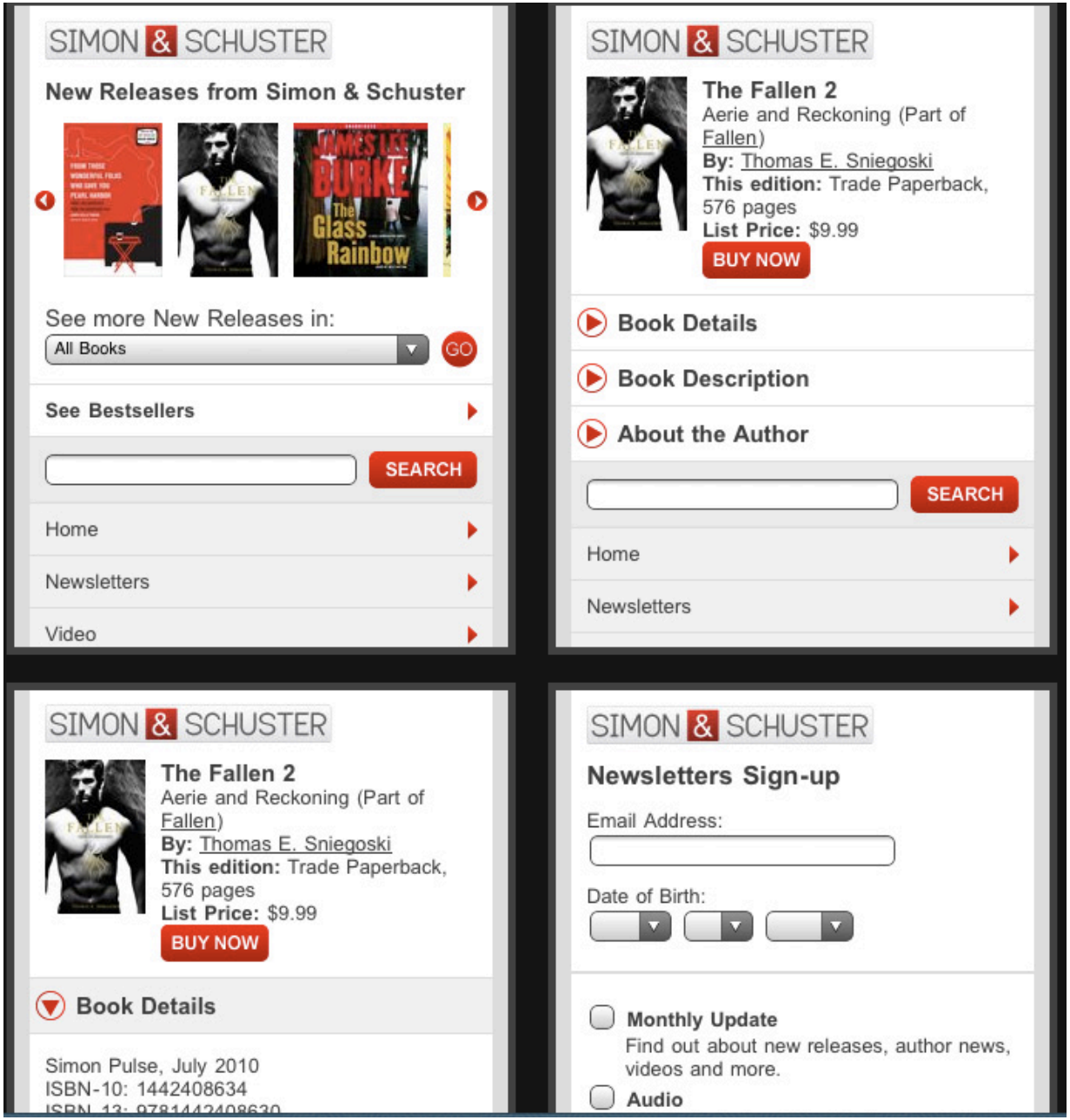
http://mobile.usc.edu/



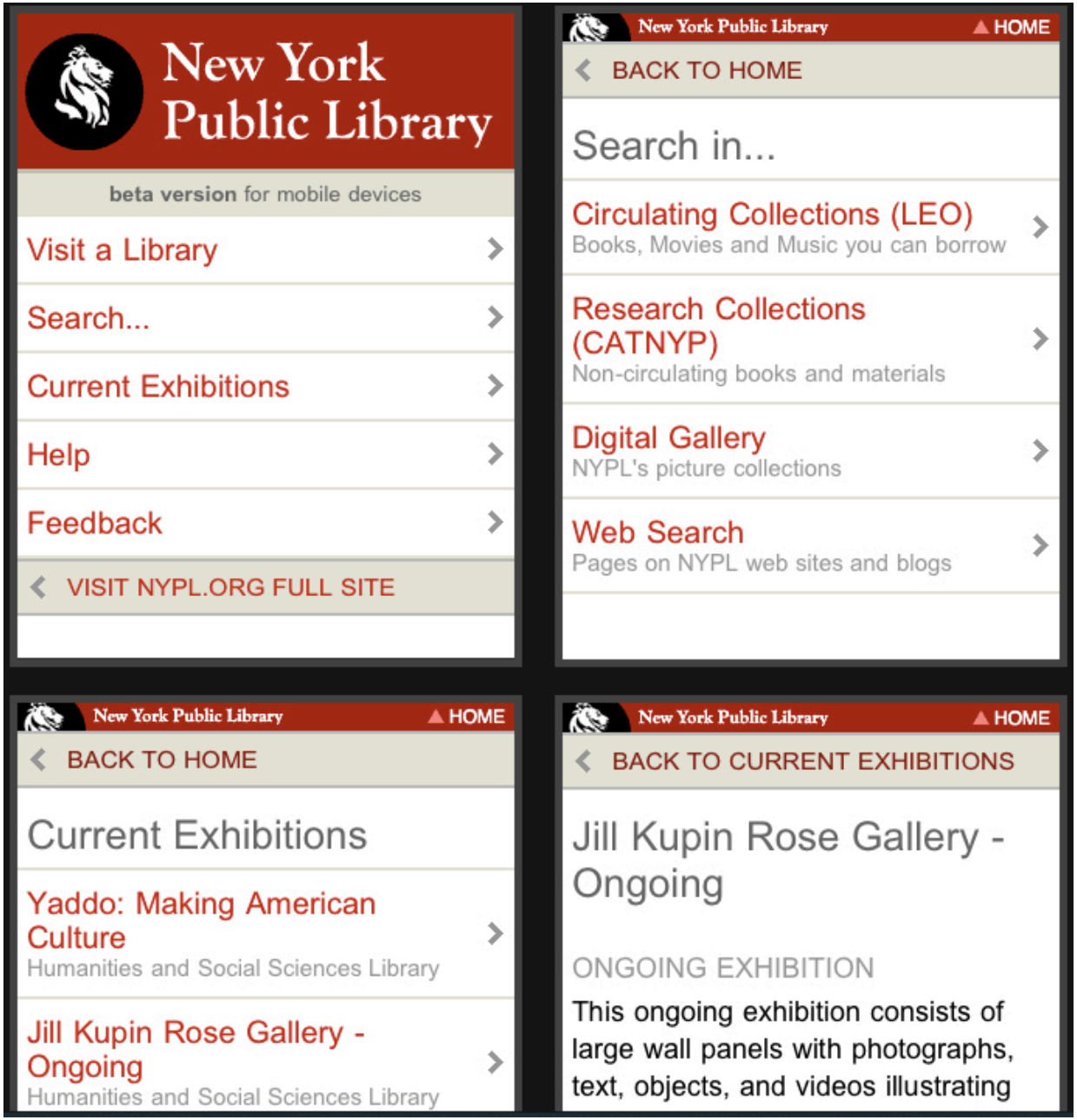
http://m.youtube.com



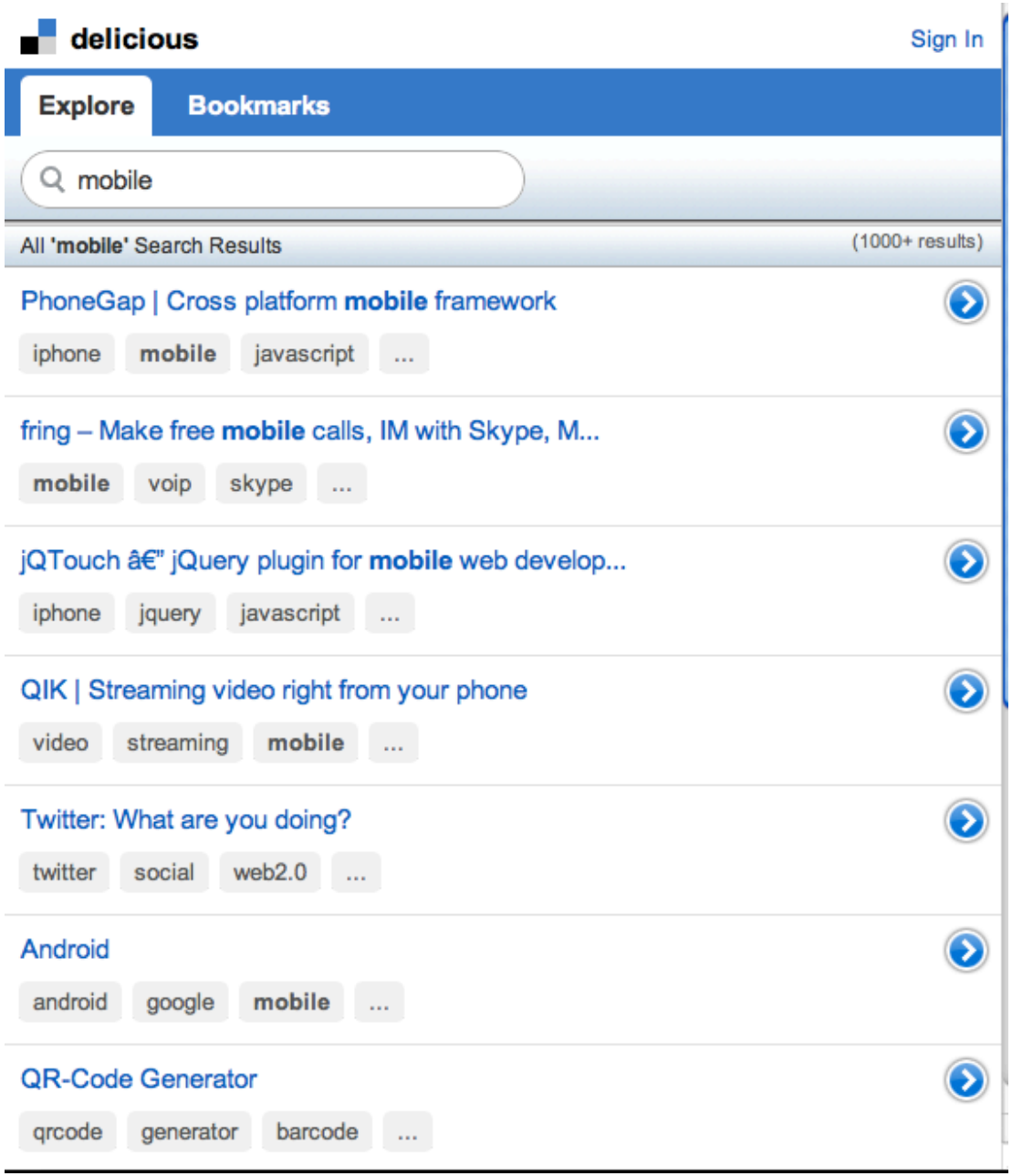
http://m.npr.org/



http://www.simonandschuster.mobi/



http://m.nypl.org



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/

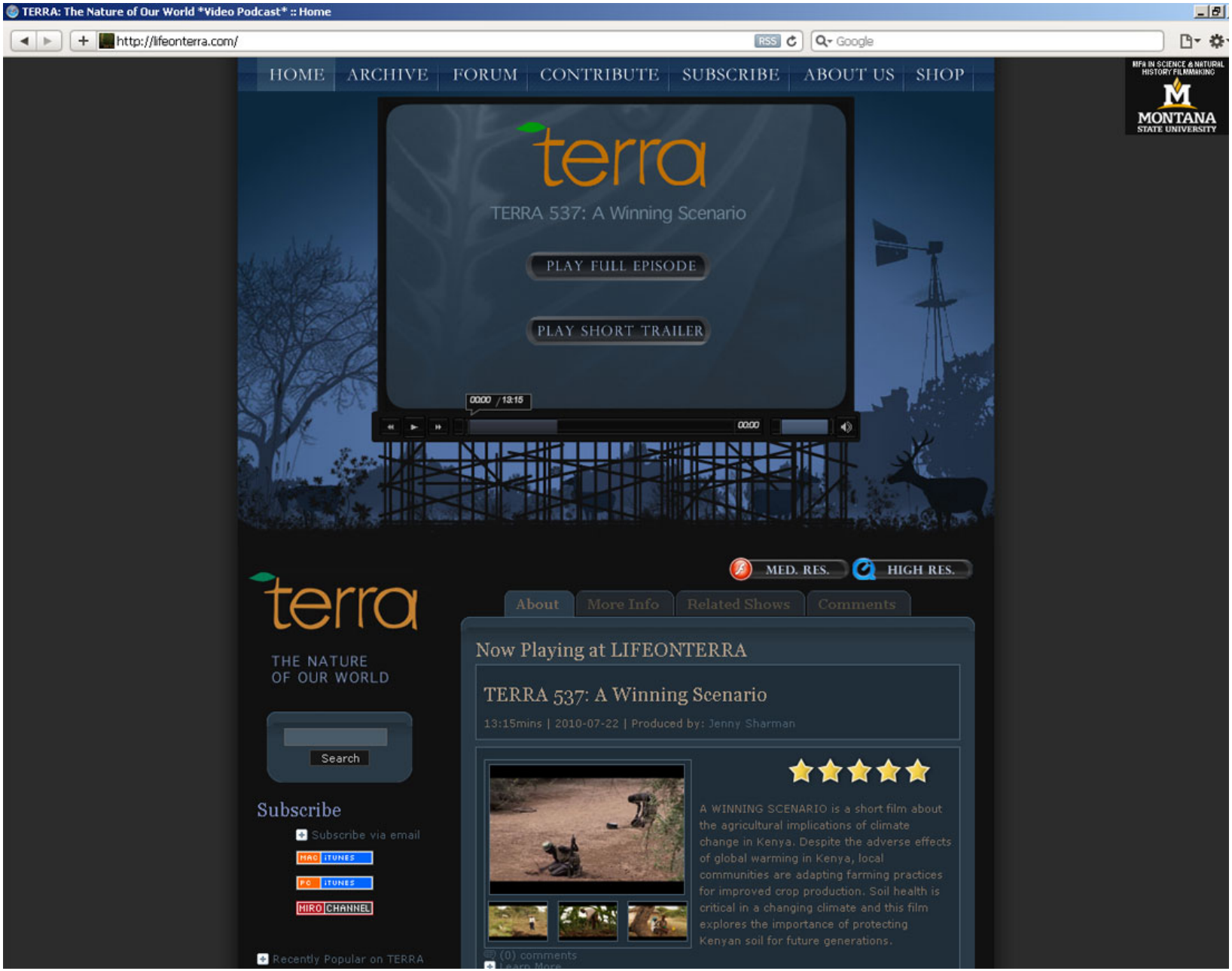
Downloads:

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/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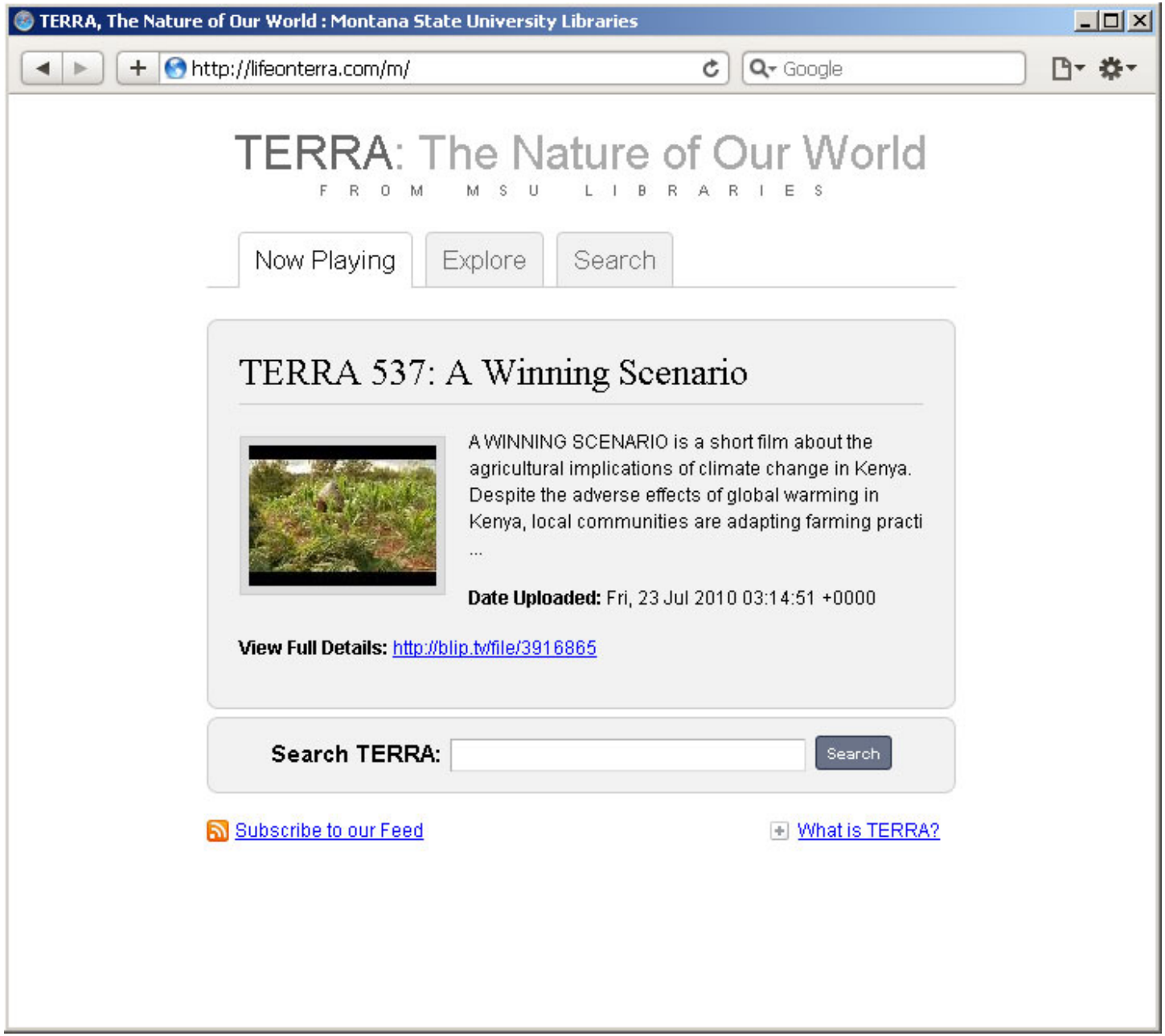
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TERRA 719

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.**

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Produced by WITNESS

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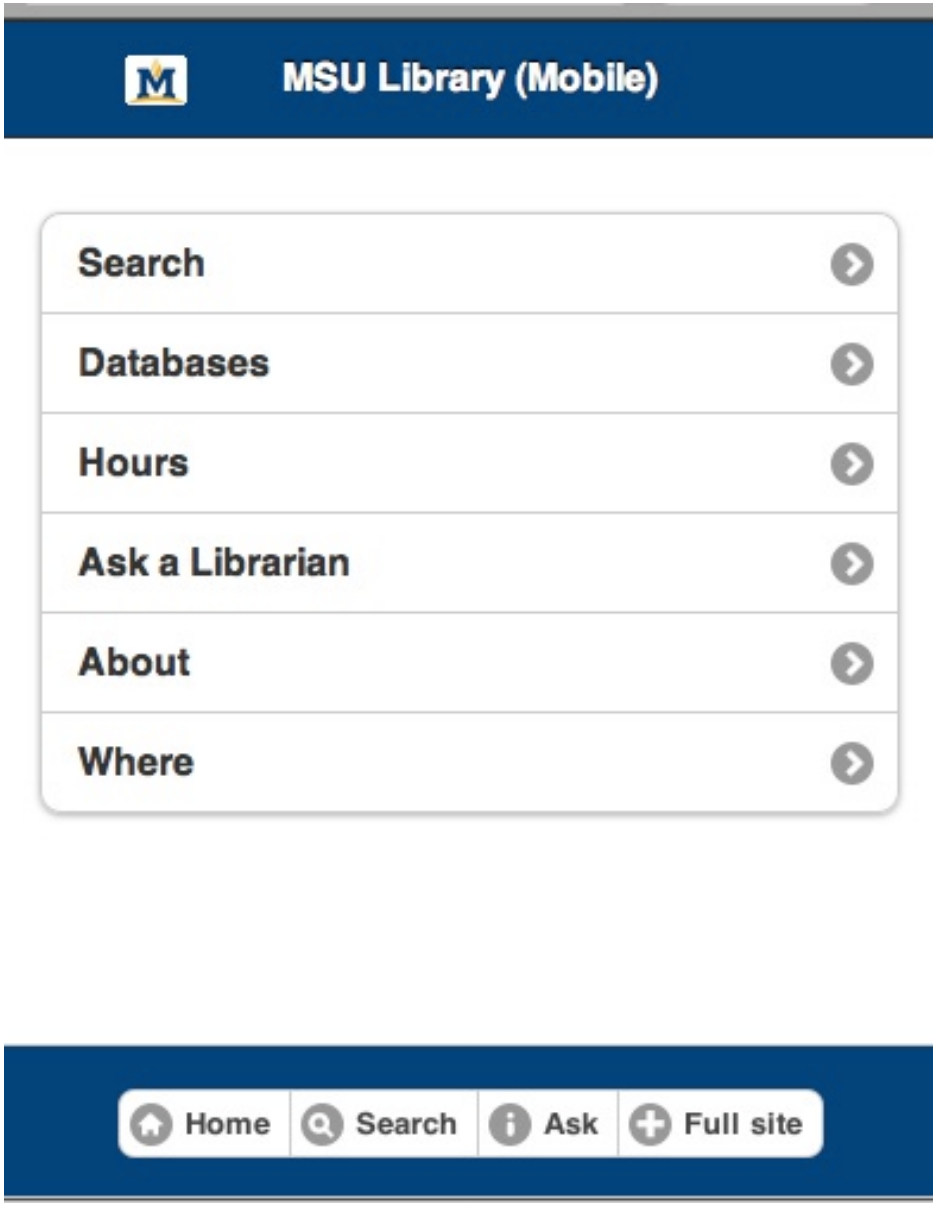
News & Events | Today's Hours

- 3/22 Free Workshop: Citing Sources Properly
- 3/14 Free Workshop: Exploring Wikipedia
- 4/12 Distinctive Dialogues
- Gothic & Horror in Fiction & Film

More News More Hours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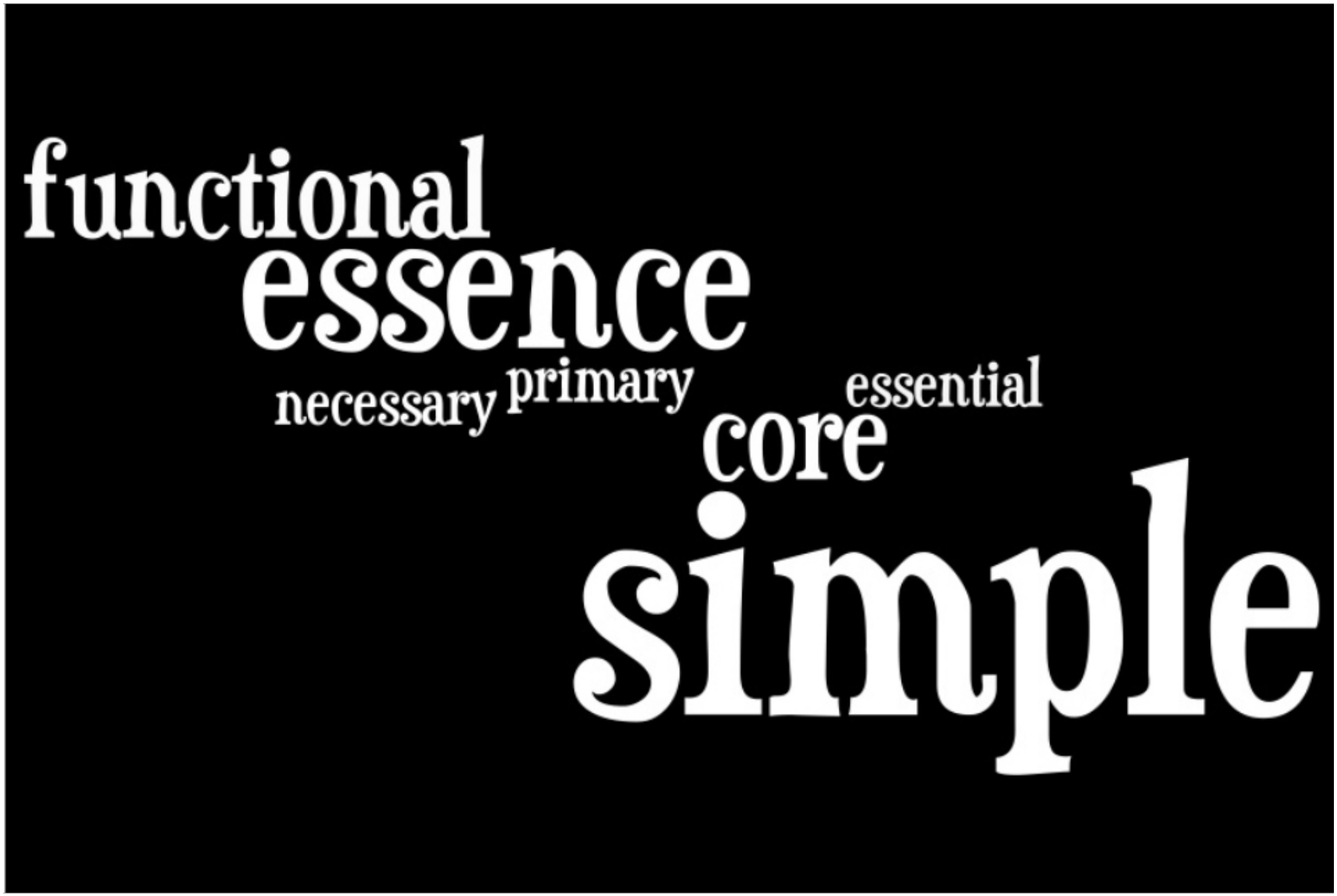
Database trial: IBISWorld Industry Research Reports

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

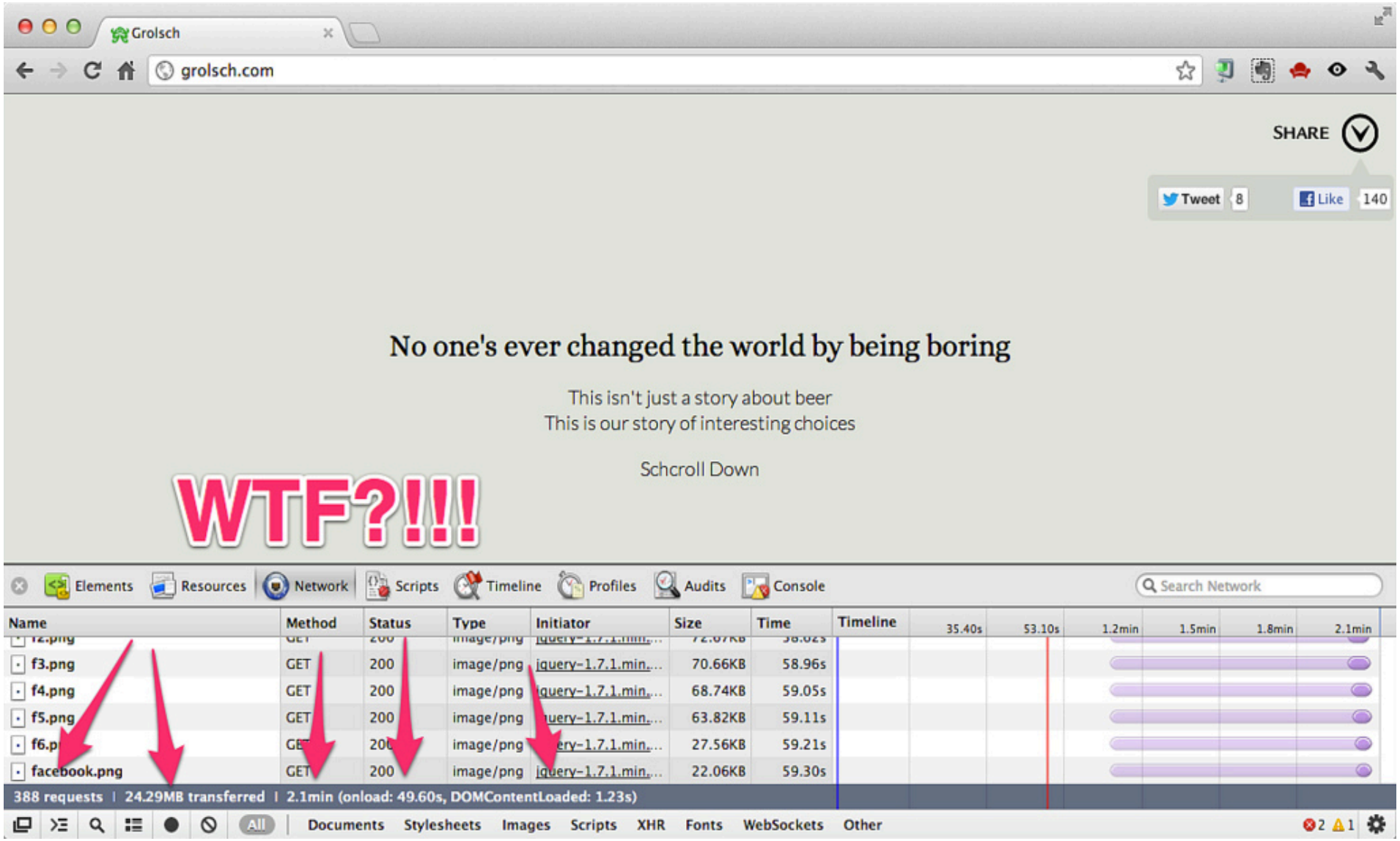
- Pick a web site
- Define primary mobile actions
- Choose mobile entry points (links)

- 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.”



"All sizes | Enough of this silliness | Flickr - Photo Sharing!." Last modified 10/15/2012 12:45:55. http://www.flickr.com/photos/philhawksworth/7562460356/sizes/l/in/photostream/ (accessed 10/15/2012).

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
  - https://addons.mozilla.org/en-US/firefox/addon/59/

http://woorkup.com/2010/01/10/best-practices-to-develop-perfect-websites-for-iphone-and-mobile-devices/

Study the Interface & Device

- Scalable Design
- Think Percentages
  - 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 cacheing
- "Minify" your scripts and CSS
  - JSLint, CleanCSS
- Take Advantage of HTML5, CSS3
  - <!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 - 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
http://www.libsuccess.org/index.php?title=M-Libraries#Mobile_applications

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
  - http://developer.apple.com/safari/
- Mobile Web App Design: Getting Started
  - Michael Doran, Code4Lib 2010
  - 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
http://www.eweek.com/c/a/Midmarket/Google-CEO-Eric-Schmidt-at-MWC-Mobile-First-694942/

Contact Information

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