Mobile Development Tips:
Building Mobile Apps for Digital Libraries

Handheld Librarian III
July 28, 2010

Jason A. Clark
Head of Digital Access and Web Services
Montana State University Libraries

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/

MFA IN SCIENCE & NATURAL
HISTORY FILMMAKING

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terra

TERRA 537: A Winning Scenario

PLAY FULL EPISODE

PLAY SHORT TRAILER

00:00 / 13:15

00:00
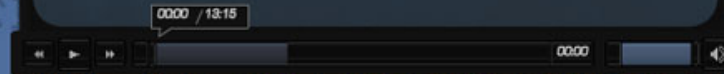
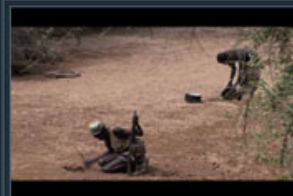MED. RES.   HIGH RES.

terra

THE NATURE
OF OUR WORLD

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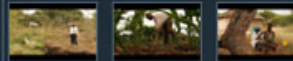About   More Info   Related Shows   Comments

Now Playing at LIFEONTERRA

TERRA 537: A Winning Scenario

13:15mins | 2010-07-22 | Produced by: Jenny Sharman

★★★★★

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.

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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 practi ...

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Making the Move to Mobile...

functional

essence

necessary primary essential

core

simple

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

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
  - http://developer.apple.com/safari/
- Mobile Web App Design: Getting Started
  - Michael Doran, Code4Lib 2010
  - http://code4lib.org/conference/2010/doran

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

http://www.eweek.com/c/a/Midmarket/Google-CEO-Eric-Schmidt-at-MWC-Mobile-First-694942/

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

Jason A. Clark

Head of Digital Access and Web Services

Montana State University Libraries

jaclark@montana.edu

twitter.com/jaclark

www.jasonclark.info