

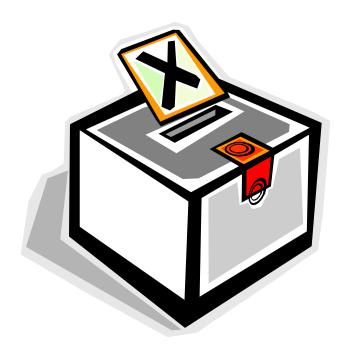
Thursday, March 14, 2013 an Infopeople webinar presented by Chad Mairn





### Today's Agenda

- Know 3 innovative library mobile website designs.
- Understand how HTML, CSS, and JavaScript work together to build mobile websites.
- Know what a mobile framework is and why they are used.
- Know 3 existing mobile services/apps that can be included in library-created mobile websites.
- Know the best practices in mobile Web development.
- Have a step-by-step guide for implementing a mobile website.



**Quick Poll** 

# Some Mobile Examples

#### A simple mobile-optimized Website can work on all devices!



<a class="call" href="tel:17273417177" accesskey="0">Call the Library</a> | (727) 341-7177<br /> <a href="wtai://wp/ap;+17273417177; SPC%20Library">[Add to Phone Book]</a><br /> <a href="wtai://wp/ap;+17273417177; SPC%20Library"</a>

### Learn and borrow from sites you like.

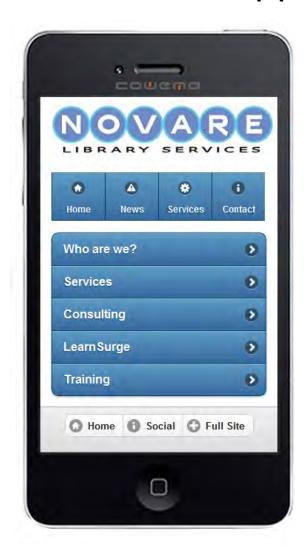


http://m.novarelibrary.com/

# Or you can build something using HTML, CSS, and JavaScript that acts like a native app!



**Built using jQTouch** 



**Built using jQuery Mobile** 

# jQuery Mobile is ...

a unified, HTML5-based user interface system for all popular mobile device platforms.

Source: <a href="http://jquerymobile.com/">http://jquerymobile.com/</a>

# jQuery Mobile is well-documented and there are great demos to get you started

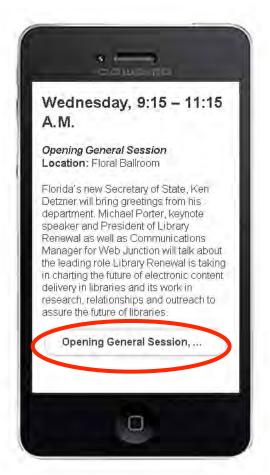


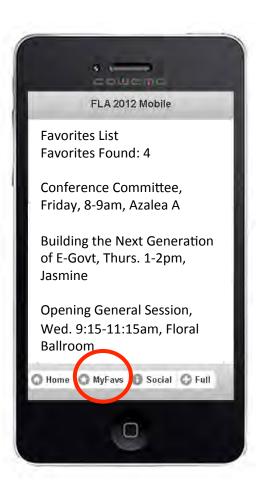




# Advanced Example (Web SQL Database stores data within user's browser. No cookies!) HTML5 has offline storage capabilities!







http://novarelibrary.com/FLAmobile/

**Note:** this URL is not a best practice. More later.

Beware. This specification is no longer in active maintenance and the Web Applications Working Group does not intend to maintain it further.

http://www.w3.org/TR/webdatabase/

Although Web SQL Database worked on this Web app, the W3C recommends these storage-related specifications: Web Storage and Indexed Database API.



Main page

Community portal

Current events

Recent changes

Random page

Help

Toolbox

What links here

Related changes

Special pages

Printable version

Permanent link

Page Discussion

#### M-Libraries

#### Contents [hide]

1 Libraries offering mobile interfaces or applications

1.1 Mobile site development tools

1.2 Mobile site testing

1.3 Mobile interfaces (and/or OPACS)

1.4 Mobile OPACS only

1.5 Mobile applications

1.6 SMS notification services

1.7 Mobile collections

1.8 Mobile instruction

1.9 Mobile tours of the library

1.10 QR (Quick Response) 2D Codes

1.11 Augmented Reality

1.12 Other mobile applications

2 Vendors and Publishers

2.1 Evolving content delivery for mobile learners

2.2 Library Vendors offering mobile interfaces or applications

2.3 Vendors offering mobile tours

2.4 Publishers offering databases/interfaces for mobile devices

2.5 Publishers offering mobile collections

3 Suggested Reading

3.1 Books, reports and journal articles

3.2 Blogs and Posts

3.3 Other Resources

3.4 Possible Health Effects

www.libsuccess.org

What is HTML, CSS, and JavaScript and how do they all fit together?



HyperText Markup Language (HTML) is the skeleton.

Cascading Style Sheets (CSS) are the skin, clothes, cologne etc.



JavaScript is the personality. The character. The pizazz!

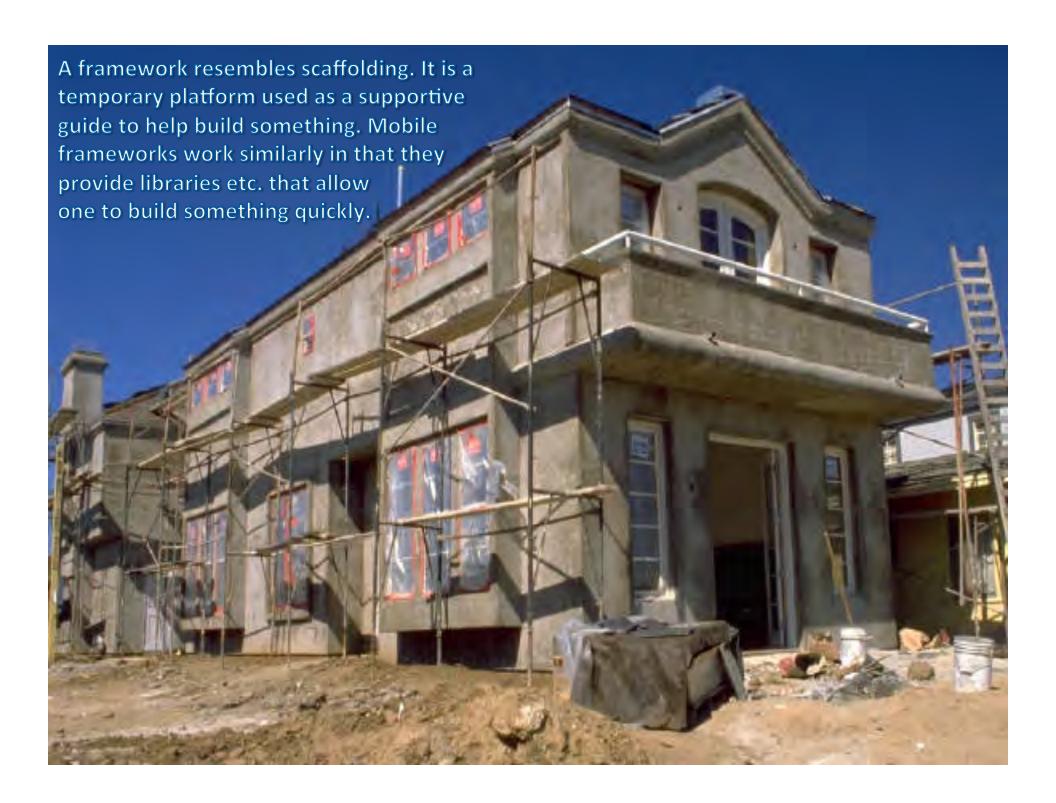
Source: <a href="http://goo.gl/kWzET">http://goo.gl/kWzET</a>

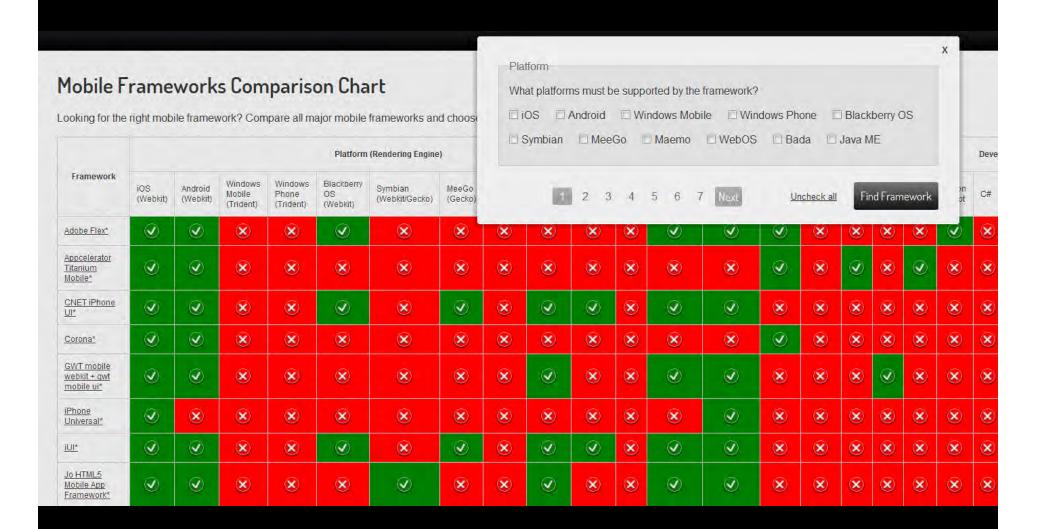
```
<html>
<head>
 <title>NCSU Libraries Mobile Web</title>
 <meta charset="utf-8" /5
 <meta name="format-detection" content="telephone=no" />
 <meta name="viewport" content="initial-scale=1, maximum-scale=1, user-scalable=0">
   < rel="apple-touch-icon-precomposed" sizes="57x57" href="http://m.lib.ncsu.edu/lib/images/homescreen-icon-57x57.png" />
                             precomposed sizes="/2x/2" href="http://m. http://m. do//15b/images/homescreen-icon-72x72.ong" />
            cor apple-touch-icon-precomposed" sizes="114x114" href="http://m.lib.ncsy.edu/lib/imea-
                                                                                              "homescreen-icon-114x114.png" />
              <link rel="stylesheet" href="http://code.jquerv.com/mobile/1.0/jquerv.mobile-1.0.min.css" />
   k rel="stylesheet" href="http://m.lib.ncsu.edu/lib/themes/ncsu-libraries-mobile-theme.min.css" />
 <script src="http://code.jguery.com/jguery-1.6.4.min.js"></script>
                            d("mobileinit", function() |
                     S.mobile.ajaxEnabled = false;
                     $.mobile.pushStateEnabled = false;
                     S.mobile.hashListeningEnabled = false;
              1);
       </script>
       <script src="http://code.jguery.com/mobile/1.0/jguery.mobile-1.0,min.js"></script>
              <script type="text/javascript">
```

## Native Apps vs. Web/Browser Apps

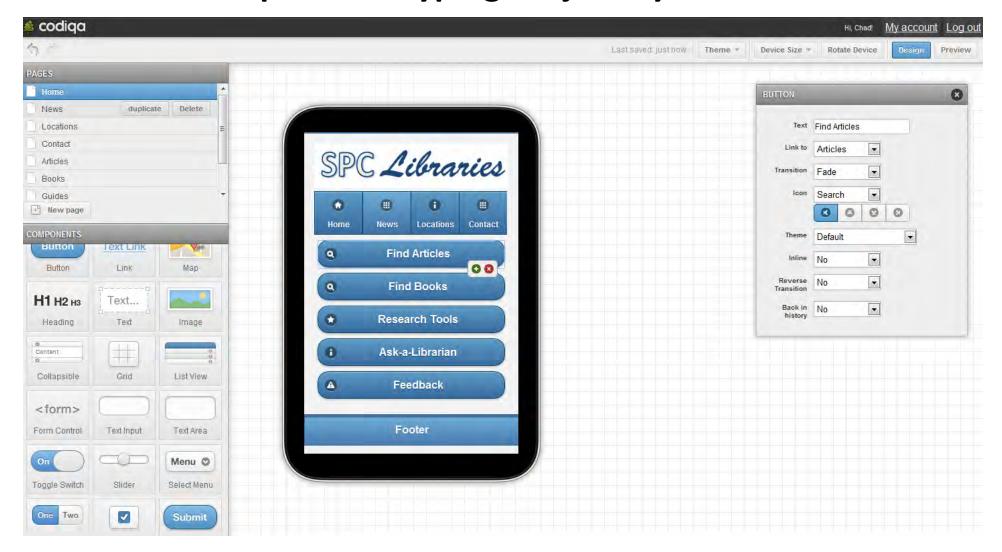
Issues	Native apps	Web apps
Internet access	Not required	Required, except for apps written in HTML5 (offline capabilities)
Shareable content (Twitter etc.)	Only if it is built in to the app	Web links can be shared. Social API's allow 1-click posting
Access to hardware sensors	Yes: camera, gyroscope, microphone, compass, accelerometer, GPS	Access thru browser is limited. Geolocation works!
Development	Build app for target platform (Android, iOS [Objective-C] etc.)	Write/publish once using standard Web technologies, view it anywhere with URL. Speedy debugging and development.
Distribution	Most app stores require approval.	No hassles.

Source: <a href="http://goo.gl/zSeDU">http://goo.gl/zSeDU</a>

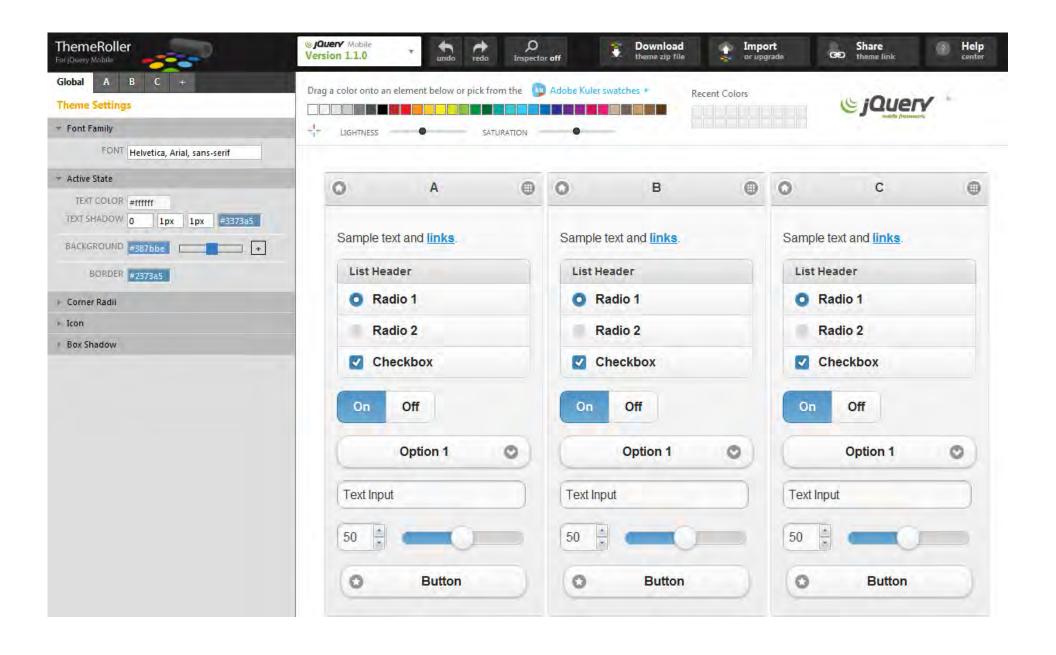




### Rapid Prototyping for jQuery Mobile



Try it at <a href="http://codiqa.com/">http://codiqa.com/</a>



Try it at <a href="http://jquerymobile.com/themeroller/">http://jquerymobile.com/themeroller/</a>



# **Codiqa Demo**

# 3<sup>rd</sup> Party Apps/Services



#### **AML Special Edition**

AccessMyLibrary Special Library Edition provides Government, Military, Business, Health and other special libraries with information solutions from our diverse and respected products.

Available on the

App Store<sup>SM</sup> »

Android™ Market »



#### **AML Public Edition**

AccessMyLibrary Public Edition uses GPS to find public libraries within a 10-mile radius of the user's location then provides free access to credible Gale online resources.

Who are you?

Librarian »

Patron »

Available on the

App StoreSM »

Android™ Market »



#### AML School Edition

After a one-time log-in,

AccessMyLibrary School Edition
supplies students with free,
unlimited access to their school
library's Gale online resources.

Who are you?

Librarian »

Student »

Available on the

App Store<sup>SM</sup> »

Android™ Market »



#### AML College Edition

Using your college e-mail address, AccessMyLibraryCollege gives you unlimited, 24/7 access to your college library's Gale online resources.

Who are you?

Librarian »

Student »

Available on the

App Store<sup>SM</sup> »

Android™ Market »



#### Memoirs of a Goldfish

Not just another fish story book! Memoirs of a Goldfish Interactive is a digital read-along version of the acclaimed print book!

Learn more about this fish story.

Available on the

App Store<sup>SM</sup> »



#### Jungle Speak

Welcome to the Jungle Speak app, where you'll find access to sounds, videos, pictures, activities and quick facts relating to the animal kingdom.

How does Jungle Speak sound to you?

Available on the

App Store<sup>SM</sup> »

### **Mobile OPACs**





#### Basic principles of music theory

• Clearwater: Circulation : MT6.B899 B4

Joseph Brye

New York: Ronald Press Co. c1965

## Practical music theory; : how music is put together from Bach to rock.

 St. Petersburg: Circulation : MT6 .C65 1970

James Lincoln Collier 1928-

New York,: W.W. Norton 1970]

#### Introduction to the theory of music.

Clearwater: Circulation : MT6 .B648

**Howard Boatwright** 

New York, : W.W. Norton 1956]

## Perspectives on contemporary music theory

Clearwater: Circulation : ML197 .B65

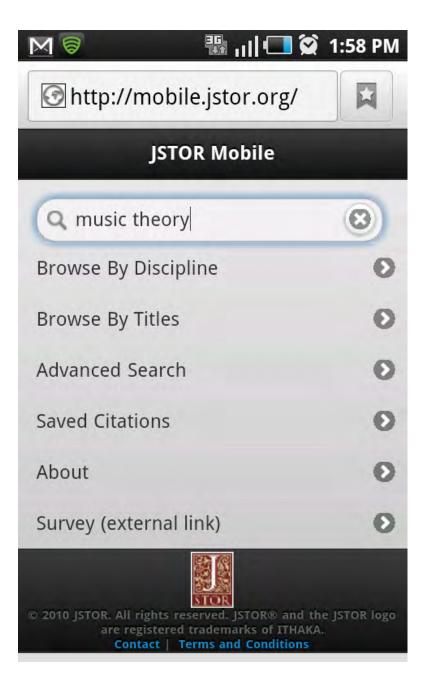
Benjamin Boretz

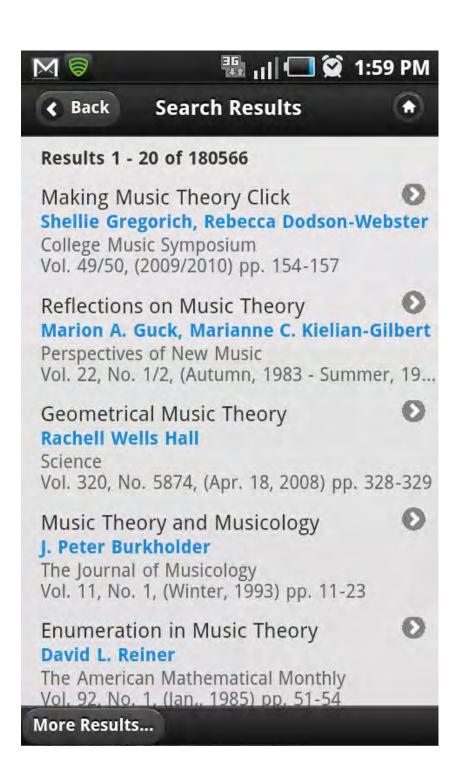
New York: W. W. Norton c1972]

#### Materials and structure of music; Workbook

St. Petersburg: Circulation : MT6
 M347 1972 Suppl

### Mobile Databases







# Music Theory and Musicology J. Peter Burkholder

The Journal of Musicology Vol. 11, No. 1, (Winter, 1993) pp. 11-23 View in full JSTOR site





Misic Fleory and





#### Powered by:



# Some e-reading Apps

















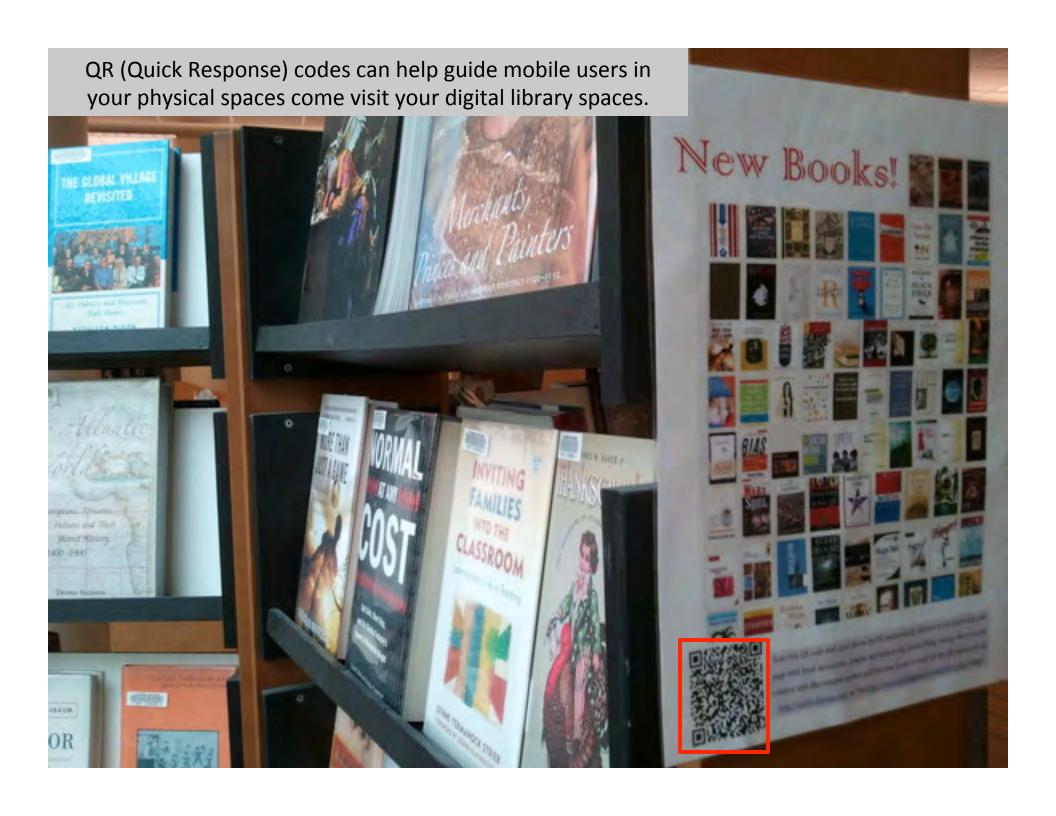








# QR Codes etc.







Check with your vendors to see if they have apps and/or mobile-optimized resources.

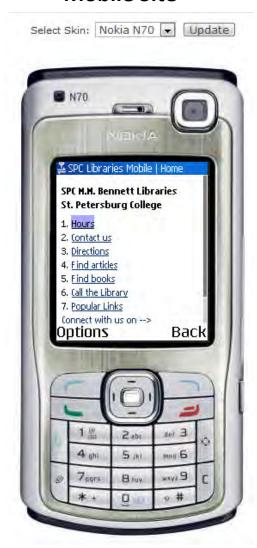
If they don't, put some pressure on them to build something quickly!

# **Getting Started!**

"Fundamentally, 'mobile' refers to the user, not the device or application."

## Take an emulated look at your desktop site.

#### **Mobile Site**



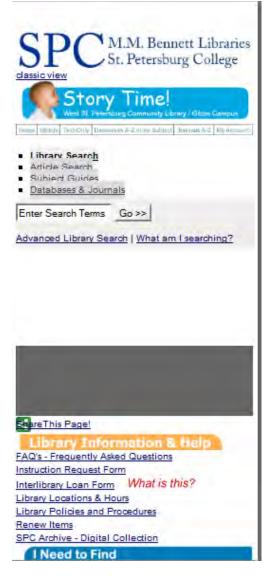
### **Desktop Site**

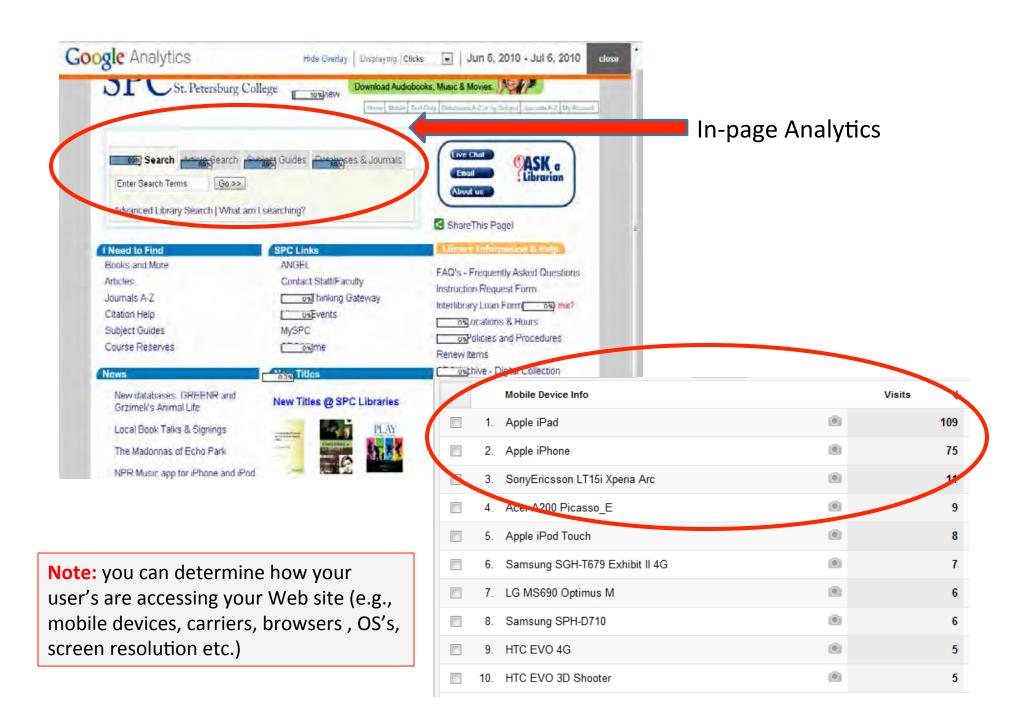


# Small Screen Rendering (260 px) using the Web Developer add-on in Firefox



#### **Small Screen**







Sketch ideas

# Some Best Practices

- Follow the "m" convention (m.novarelibrary.com OR lifeonterra.com/ m/)
- Keep categories (directories) short. Remember that you are creating a page that people touch without much typing
- Limit image and markup sizes
- Limit HTML pages to 25KB to allow for caching
- "Minify" your scripts and CSS (JSLint, CleanCSS)
- Link to Full Site
- Sniff for User Agent Detection (allow the user to decide where to go)
- One Column Layout with some whitespace
- Mobile refers to the user!

# Minified CSS Code

```
body{background: #fff; color: #000; font: 12px/18px Arial, 0; padding: 0; } #wrapper{width: 960px; margin: auto; } img{bo decoration: none; } a: hover{color: #fa9c3a; } blockquote{ma 10px; background: #e8e8e8; border-top: 2px solid #000; bor #000; } #header{width: 960px; height: 100px; margin: 0 auto 0; } #headerleft{width: 740px; float: left; padding: 20px 0 10px; } #headerright{width: 130px; float: right; text-align 0; } #headerright #feed{display: block; border-bottom: 1px size: 24px; color: #000; padding: 0; margin: 0; } #title h1 a{ a: hover{color: #fa9c3a; } #description{color: #ccc; paddin 10px; } #navbar{width: 960px; text-align: right; height: 28p bottom: 1px solid #404040; } #navbar ul{margin: 0; padding 1i/display: inline: list-style-type: none: height: 28px: ma
```

# Redirecting Mobile Users

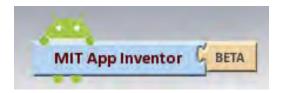
```
1. <script type="text/javascript">
    <!--
    if (screen.width <= 699) {
        document.location = "YOUR-MOBILE-SITE.com";
    }
    //-->
    </script>
```

```
4. <? if (
    stristr($ua, "Windows CE") or
    stristr($ua, "Mobile") ) {
    $DEVICE_TYPE="MOBILE";
    }
    if (isset($DEVICE_TYPE) and $DEVICE_TYPE=="MOBILE") {
        $location='YOUR-MOBILE-SITE.com/index.php';
        header ('Location: '.$location);
        exit;
    }
    ?>
```

Using WordPress? <a href="http://wordpress.org/extend/plugins/wordpress-mobile-pack/">http://wordpress.org/extend/plugins/wordpress-mobile-pack/</a>

Source: <a href="http://goo.gl/Amfj2">http://goo.gl/Amfj2</a>

# Other mobile development tools/frameworks













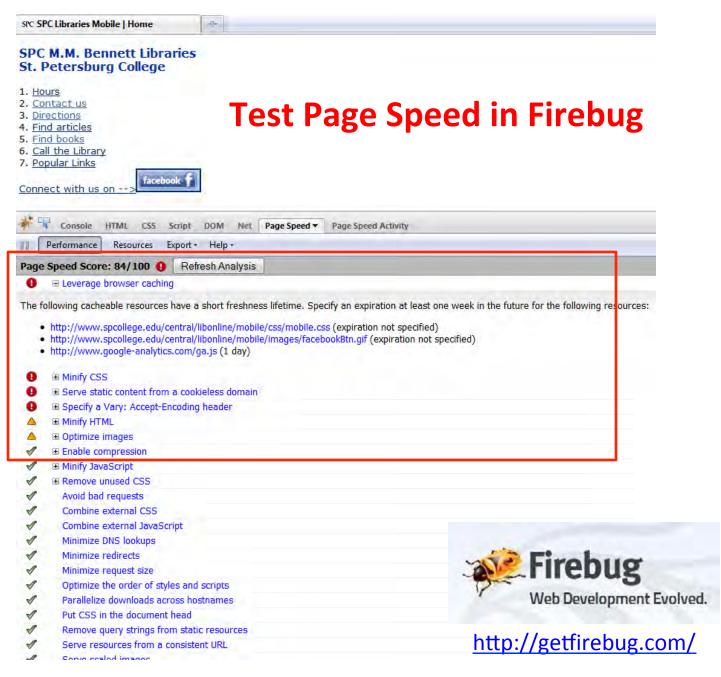




The Future of Mobile Web App/Site Development? Responsive Web Design?



# Testing and validation



# W3C mobileOK Checker <a href="http://validator.w3.org/mobile/">http://validator.w3.org/mobile/</a>



# http://ready.mobi

# mobiReady.

YOU ARE HERE: home > page results

## Username: Password: Lagim Use your mobiForge sign-in - Sign up®mobiForge - Lost password

## Page results

URL tested: http://www.spcollege.edu/central/libonline/mobile/index.html

# Overall Overall GOOD It will probably display well on a mobile phone. Your mobi.readiness score is calculated from the results displayed below. Failing tests and large page sizes both lower the score. Read through the report to understand how to improve your score - and your site.





## **Editors and Tools**

- You can use a simple text editor (e.g., Notepad) or a more sophisticated application (e.g., Dreamweaver).
- Adobe Device Central is part of Adobe's CS.
- iUI: <a href="http://code.google.com/p/iui/">http://code.google.com/p/iui/</a> for iPhone.
- MIT Mobile Web Open Source Project
   http://sourceforge.net/projects/mitmobileweb/
- Device detection? <a href="http://detectmobilebrowsers.mobi/">http://detectmobilebrowsers.mobi/</a>
- To see your browser's HTTP Headers. Works on mobile browsers.
   <a href="http://rabin.mobi/http">http://rabin.mobi/http</a>
- Web Developer Toolbar in Firefox: Select Miscellaneous >>> Small Screen Rendering (260 px) >>> the layout will be reformatted to simulate rendering by a mobile browser.

# **Emulators/Simulators:**

- Cowemo Mobile Emulator: http://www.mobilephoneemulator.com/
- dotMobi Emulator <a href="http://mtld.mobi/emulator.php">http://mtld.mobi/emulator.php</a>
- Opera Mini Simulator <a href="http://www.opera.com/mobile/demo/">http://www.opera.com/mobile/demo/</a>
- Mimic emulates European and Japanese models: N400i and N505i. http://pukupi.com/post/2059
- Android Emulator http://developer.android.com/guide/developing/tools/emulator.html
- BlackBerry Device Simulators https://www.blackberry.com/Downloads/entry.do?code=060AD92489947D410D897474079C1477
- iPhone Dev Center: http://developer.apple.com/iphone/
- Palm Pre <a href="http://developer.palm.com/">http://developer.palm.com/</a>
- Windows Mobile http://msdn.microsoft.com/en-us/windowsmobile/default.aspx
- JAVA ME Java Platform Micro Edition was termed J2ME. It is considered one of the most ubiquitous application platform for mobile devices.
  - http://java.sun.com/javame/reference/apis.jsp



# http://www.slideshare.net/chadmairn



Real-time notebook powered by Google Drive

at: http://goo.gl/NZAeG



# Virtual Petting Zoo

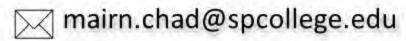


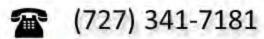
anymeeting.com/chadmairn

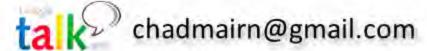


gplus.to/chadmairn

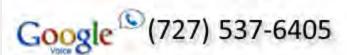
# Chad Mairn, M.L.I.S. St. Petersburg College



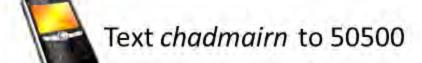
















gplus.to/chadmairn



Infopeople webinars are supported in part by the U.S. Institute of Museum and Library Services under the provisions of the Library Services and Technology Act, administered in California by the State Librarian. This material is licensed under a Creative Commons 3.0 Share & Share-Alike license. Use of this material should credit the author and funding source.