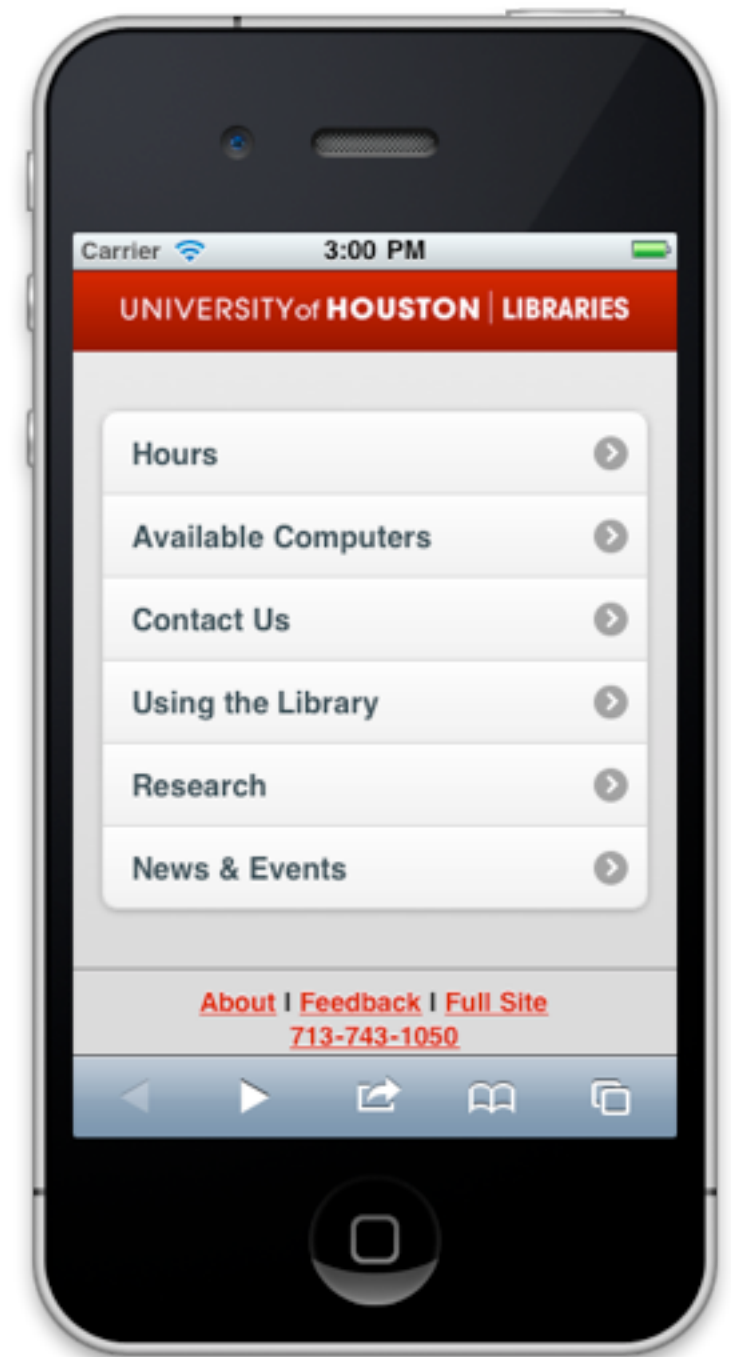


Library Mobile Web Design: Tips, Tricks and Resources



Rachel Vacek, Head of Web Services

University of Houston Libraries

Berika Williams, Web Services Librarian

Victoria College/University of Houston – Victoria

Texas Library Association District 8 Fall Conference
October 22, 2011



The mobile phone is history's *fastest* growing communication device

A light blue world map with white outlines of the continents, serving as a background for the text.

In 2009,
530 million people
used a cell phone or smartphone
to access the mobile web

Strategy Analytics, March 2010



By 2015,
that number is expected
to rise to over
ONE BILLION people

Strategy Analytics, March 2010

Smart phones have even
overtaken the **PC** in sales



How smartphone owners describe their phones



<http://www.pewinternet.org/Reports/2011/Smartphones.aspx>, July 11, 2011



It's not just
about the
phones.

It's about the
experiences
they have with
their phones.



Name 5 things your users
do when they visit your
physical library.

Name 5 things your users
do when they visit your
library's website.



The screenshot displays the Decatur Public Library website. The header features the library's name in a large, stylized font, with the tagline "Grow Learn Enjoy" to the right. Below the header is a navigation bar with links for "SEARCH THE CATALOG", "RENEW BOOKS", "TEXSHARE DATABASES", and "NEWS & EVENTS". The main content area is divided into several sections. On the left, there is a vertical menu with links for "LOCATION & HOURS", "ABOUT THE LIBRARY", "LIBRARY SERVICES", "FOR CHILDREN", "RESEARCH & LITERACY", "READER RESOURCES", "LOCAL INFORMATION", "ASK A LIBRARIAN", and "LIBRARY HOME". The central part of the page features a large image of two children reading a book, with a smaller image of a woman reading a book above it. To the right of the central image, there is a section titled "Dig Up a Good Book!" which promotes the "Summer Reading Club" from June 14 to August 2nd, with a link to "View the Schedule>>". Below this is a section for "BookStock" (Online Teen Summer Reading Club) with a link to "Join here>>" and another link to "Read about it here>>". At the bottom right, there is a section for "New Ebooks and Downloadable Audio!" with a link to "Learn more>>". The footer contains contact information, including the address "1700 Hwy. 51 South, Decatur, TX 76234", the phone number "940-627-5512", and the fax number "940-627-6763". The hours of operation are listed as: Sunday - Closed, Monday - 10 am - 8 pm, Tuesday - 10 am - 8 pm, Wednesday - 10 am - 6 pm, Thursday - 10 am - 8 pm, Friday - 10 am - 6 pm, and Saturday - 10 am - 2 pm.

Decatur Public Library

Grow
Learn
Enjoy

SEARCH THE CATALOG RENEW BOOKS TEXSHARE DATABASES NEWS & EVENTS

LOCATION & HOURS
ABOUT THE LIBRARY
LIBRARY SERVICES
FOR CHILDREN
RESEARCH & LITERACY
READER RESOURCES
LOCAL INFORMATION
ASK A LIBRARIAN
LIBRARY HOME

Dig Up a Good Book!
Summer Reading Club
June 14 - August 2nd
[View the Schedule>>](#)

BookStock
Online Teen Summer Reading Club
[Join here>>](#)
[Read about it here>>](#)

New Ebooks and Downloadable Audio!
[Learn more>>](#)

Story Time
Wednesday at 10:00 am

Address
1700 Hwy. 51 South
Decatur, TX 76234

Phone
940-627-5512
Fax: 940-627-6763

Hours
Sunday - Closed
Monday - 10 am - 8 pm
Tuesday - 10 am - 8 pm
Wednesday - 10 am - 6 pm
Thursday - 10 am - 8 pm
Friday - 10 am - 6 pm
Saturday - 10 am - 2 pm



Should the resources and services that are in your **physical building** and on your **website** also be offered on your **mobile website?**

Yes

No

It depends





With **so many options**,
how do you begin to plan
for a mobile website?

Get to know your users

- Conduct surveys or interviews of library users who use mobile devices
- Ask in different geographic regions and cover all your demographics
- Understand their mobile habits
- Learn their device ownership trends



Get your users more involved in the process

- Look at focus group alternatives
- Create a “Developer’s Lab”
- Create Internships
- Conduct mobile evaluations, testing, and marketing through embedded librarianship

Ask questions

- Why does your library want a mobile presence?
- What are your peer libraries doing?
- Do you know what your users want?
- What defines success?





You want your
users to **feel good**
using the services
and resources you
provide on your
mobile library site

Which do you choose?

mobile website

or

native application

	Mobile Application	Mobile Website
Performance	Runs locally, resulting in quick loading time	Relies on the Internet, resulting in slower load and response time
Access	<ul style="list-style-type: none"> • An app has to be developed for each platform, pushed to each platform's app store, and then downloaded to a smartphone for users to access 	<ul style="list-style-type: none"> • Device agnostic, so only one website needs to be built • Access is through a web browser • Can be viewed on many devices, including feature phones
Supportability	<ul style="list-style-type: none"> • Updates are deployed through an app store that has a multi-week submission and approval process • Updates require users to download new versions 	<ul style="list-style-type: none"> • Relatively simple to support as there are less things to go wrong on the user's device • Potential to become more complex • No interaction with an app store • Updates to server are instant for users
Application Evolvment	<ul style="list-style-type: none"> • Mobile platforms such as Android, Apple iOS, Symbian, RIM and Windows Mobile are evolving rapidly 	<ul style="list-style-type: none"> • HTML standards evolve more slowly

	Mobile Application	Mobile Website
Quality of User Experience	<ul style="list-style-type: none"> • Runs locally, resulting in quick loading time • Made for mobile so it has fluid interaction and intuitive interface • Can access sensors such as GPS and accelerometers • Can take advantage of touch screens and gestures • Can take advantage of augmented reality 	<ul style="list-style-type: none"> • Potentially less satisfying depending on Internet connection and speed • If a mobile stylesheet is applied, users might have usability issues with access to webpages that are not mobile-friendly • With the exception of social media and games, users still prefer mobile sites over apps
Technical Risk	<ul style="list-style-type: none"> • More risky because they can be more complex, riskier to develop and harder to test 	<ul style="list-style-type: none"> • Less risky because site exists • A mobile version can be created by applying a mobile stylesheet or by building a simplified site
Testing	<ul style="list-style-type: none"> • Testing for native apps is slower and more complex if multiple platforms are supported • Testing might involve UX such as touchscreens or GPS 	<ul style="list-style-type: none"> • Only one site has to be tested • Quality assurance and usability testing is simpler because there is less involved

	Mobile Application	Mobile Website
Cost	<ul style="list-style-type: none"> • More investment because it requires more resources, time and skills • Have to develop for multiple platforms 	<ul style="list-style-type: none"> • Less investment because it's quicker and easier to build • Can support any device that has a web browser
Marketing	<ul style="list-style-type: none"> • Thousands of mobile apps available on each platform's store, making the audience smaller and more focused 	<ul style="list-style-type: none"> • Users can find your mobile website via search engines, links from other websites, and links embedded in emails
Operational Issues	<ul style="list-style-type: none"> • Must have room on the smartphone to download 	<ul style="list-style-type: none"> • Good cellular or wifi signal is required
Skill Set	<ul style="list-style-type: none"> • Application development demands more sophisticated skills • Developers with these skills are harder to find 	<ul style="list-style-type: none"> • Knowledge of HTML and CSS for basic mobile theming • Skills in HTML5 and PHP are useful for creating more engaging websites, but not all smartphone browsers support HTML5 yet

Summary of features

	Mobile Application	Mobile Website
Pros	<ul style="list-style-type: none">• Easy to locate in an app store• Faster speed because it's installed locally• Specialized functionality	<ul style="list-style-type: none">• Platform agnostic• Flexible and easier control over maintenance of content• Can be built in HTML & CSS
Cons	<ul style="list-style-type: none">• Requires specific knowledge and skills to develop• Built differently for each platform• Approvals are required to place in app store	<ul style="list-style-type: none">• Slower than a mobile app• Less functionality than a mobile app, but HTML 5 is changing that



Which is best for
your library?

Mobile Website

Mobile Application

Both

Neither

 You know what's on your website You know the needs of your users You know what tech skills you have available to you You know the limitations of your library's wifi

A close-up photograph of a silver metal shovel digging into a mound of dark brown, granular soil. The shovel's blade is partially buried in the soil, and its handle extends upwards and to the left. The background is a clear, bright blue sky. The text "Let's dig in!" is overlaid in the center of the image.

Let's dig in!

Options for building mobile native apps

- Native platform SDK (software development kit)
- General purpose multi-platform tools - attempts to “write once, run anywhere”
- Outsource the development, or hire a developer with mobile app development experience on each platform you want to create



android
developers



Options for building mobile **websites**

- Develop a mobile CSS
- Do nothing - users will still see your site, but it won't be optimized for the best mobile user experience
- Google sites - mobile templates
 - <http://sites.google.com/mobilize>
- Have an open-source cms like Wordpress or Drupal that power your website? Find a mobile friendly theme!



Mobilize your business

Your customers are mobile; how about you? With Google Sites, you can build a professional mobile landing page in just minutes.

1 Choose template:

Restaurant Local Business Lead Generation **Social** eCommerce Custom

The **social** mobile template lets people engage socially with your business. Simply adding the social button links your mobile site to Facebook, Twitter, LinkedIn and YouTube. [Learn more ...](#)

2 Select color:



Try this template

Options for building mobile **websites**

- Mobile application tool with web capability
 - Completely home-grown approach
- JavaScript framework and code libraries
 - jQuery Mobile, iUI, jQtouch, iWebKit
- Use Chad Haefele's Mobile Site Generator
 - <http://www.hiddenpeanuts.com/msg/>



Hybrid Approach

You can do **more than one** of the methods for creating your library's mobile presence

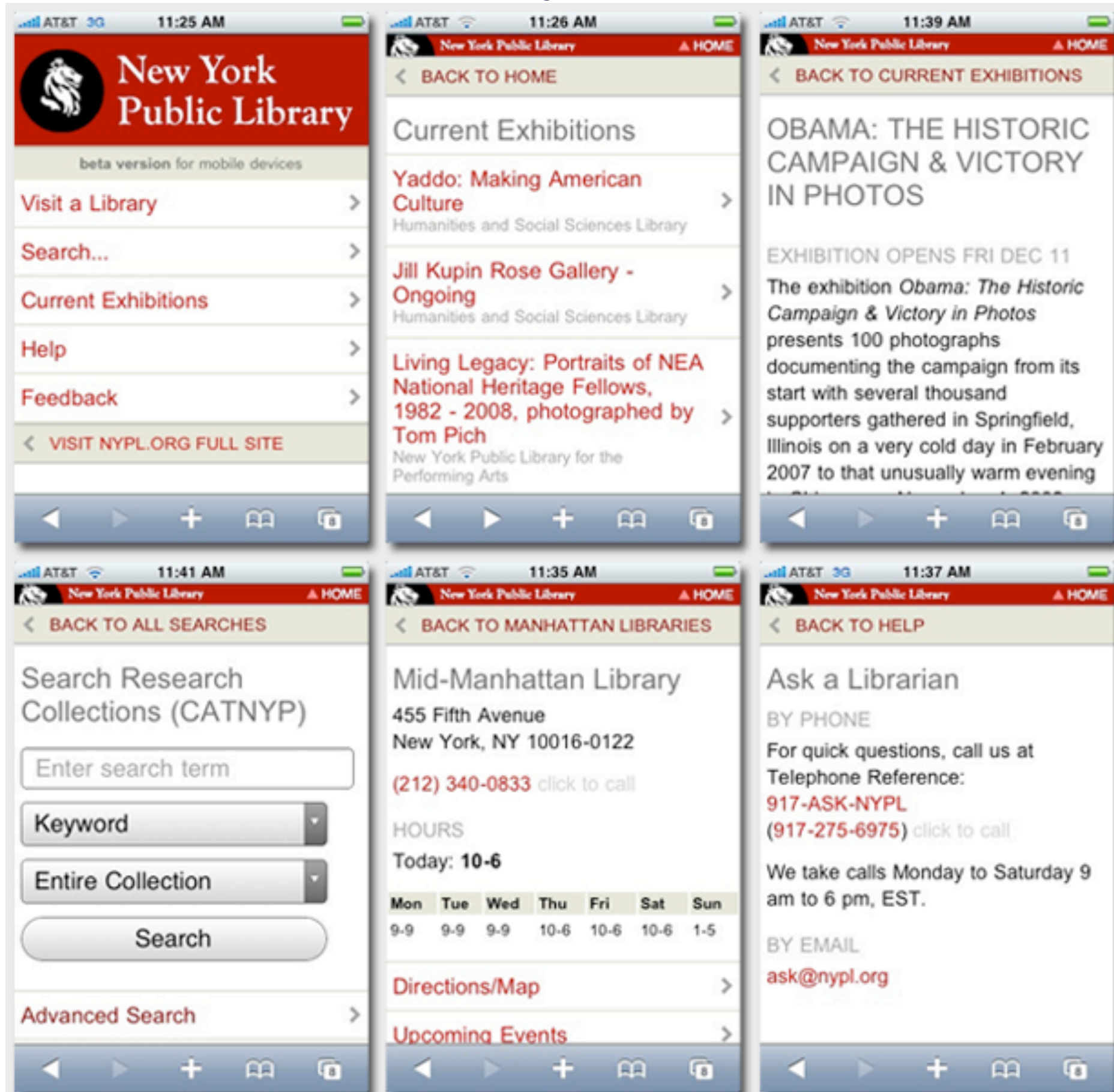


Managing your mobile site

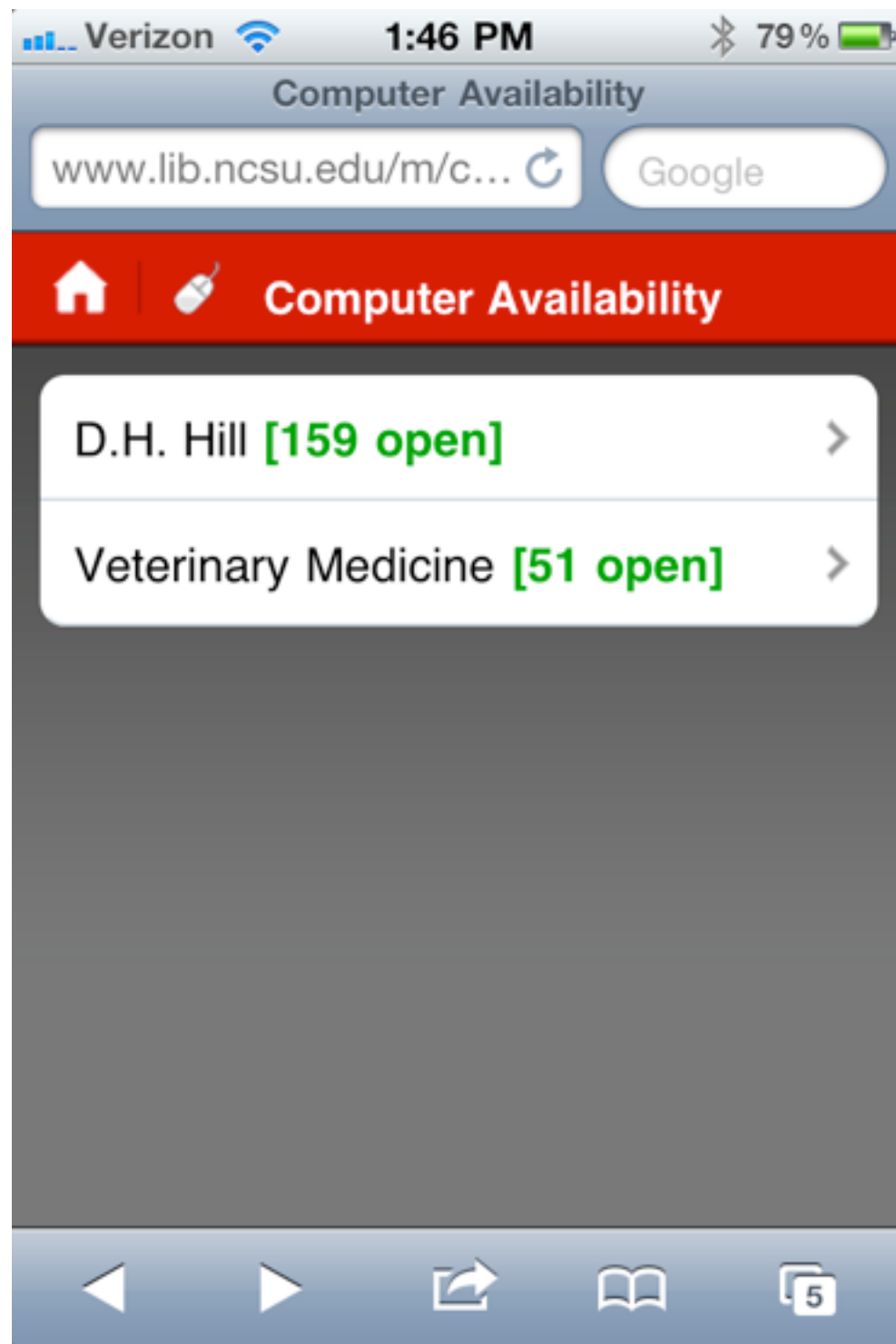
- Design & Functionality
 - Can be determined by the stylesheet or the framework chosen
 - Keep your branding consistent
- Content
 - Have a strategy for maintaining the content
 - Pull in content from other systems if you can (RSS feeds, APIs, etc.)

Examples of mobile library **websites** and **applications**

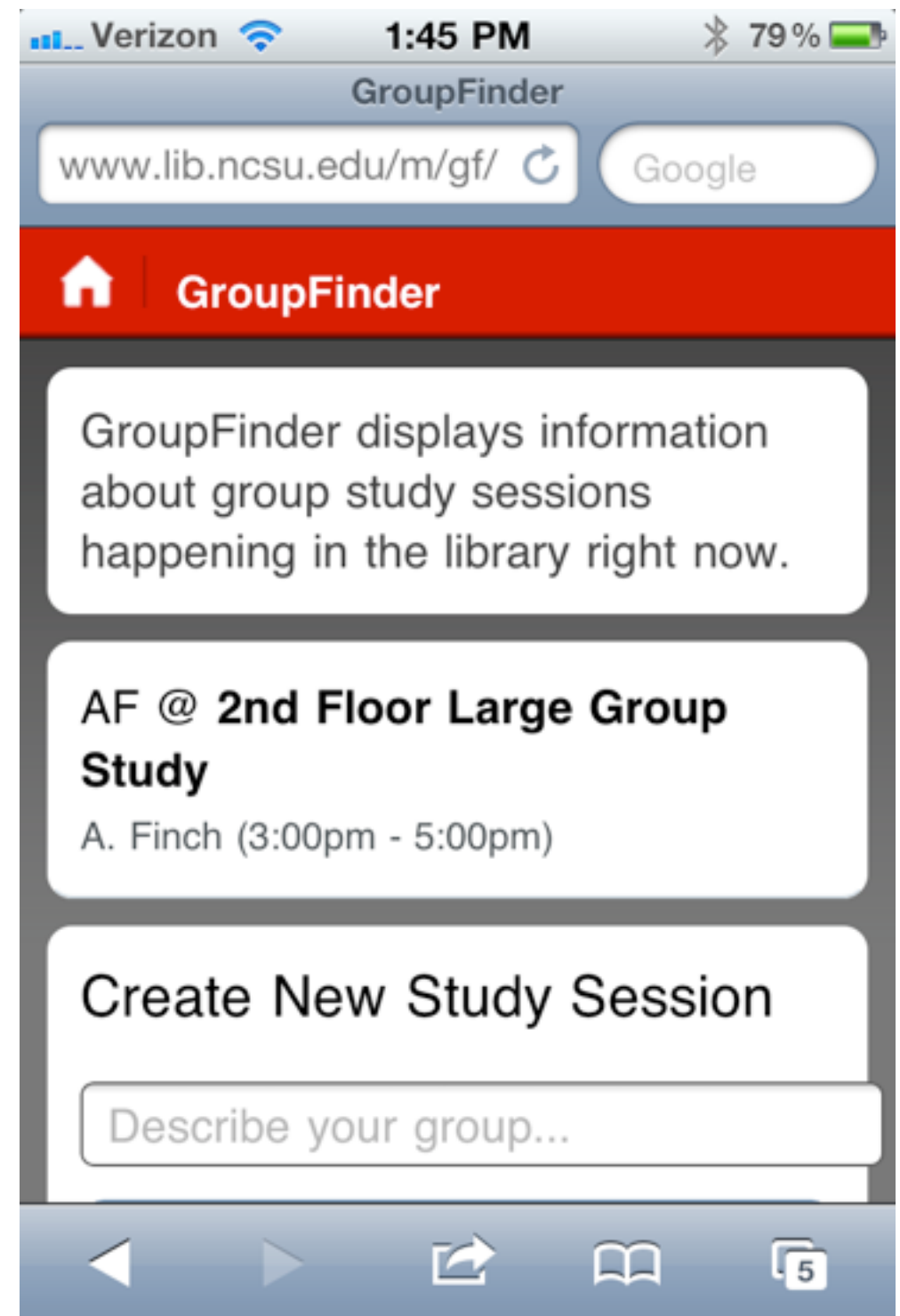
New York Public Library



NCSU Libraries

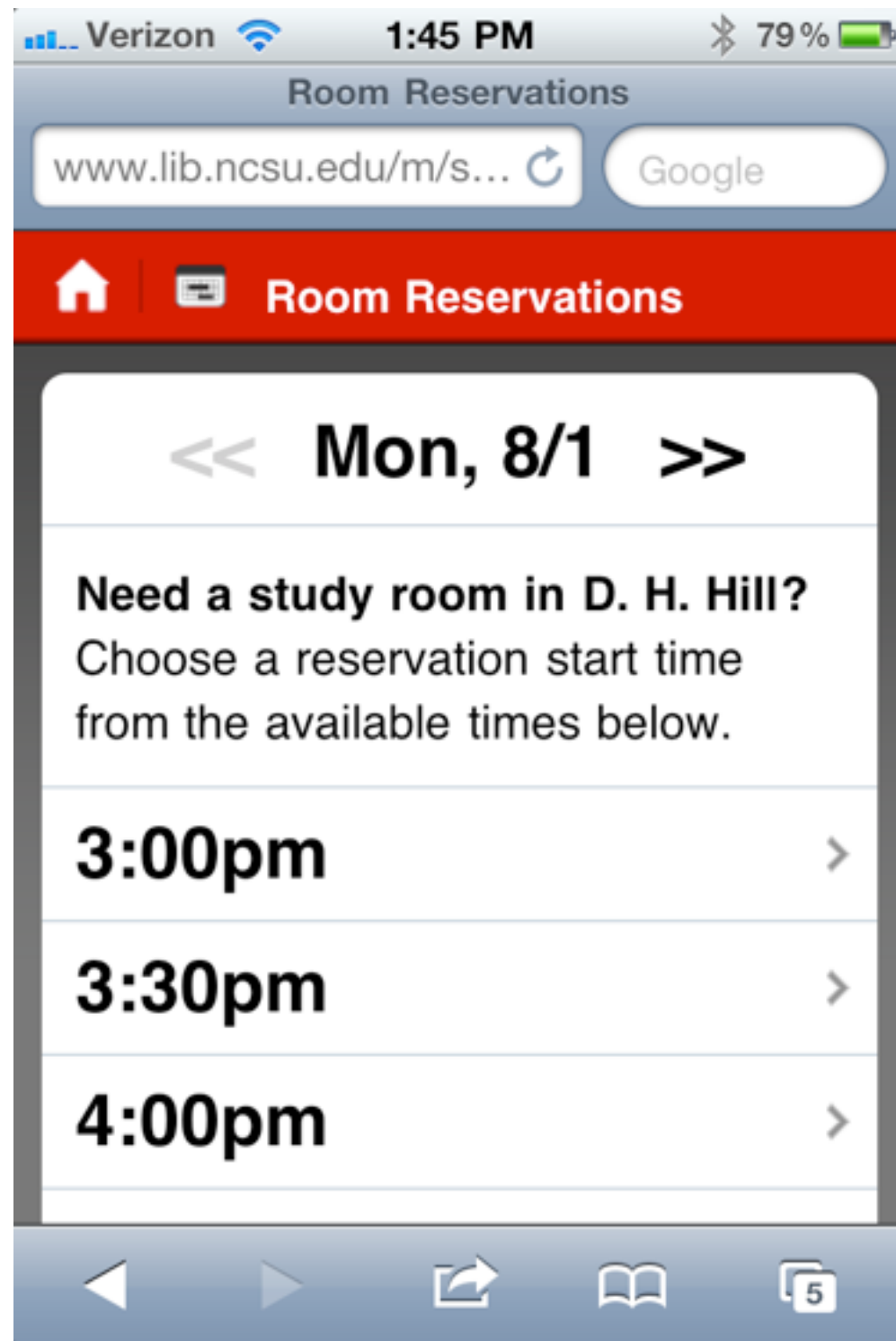


Computer Availability

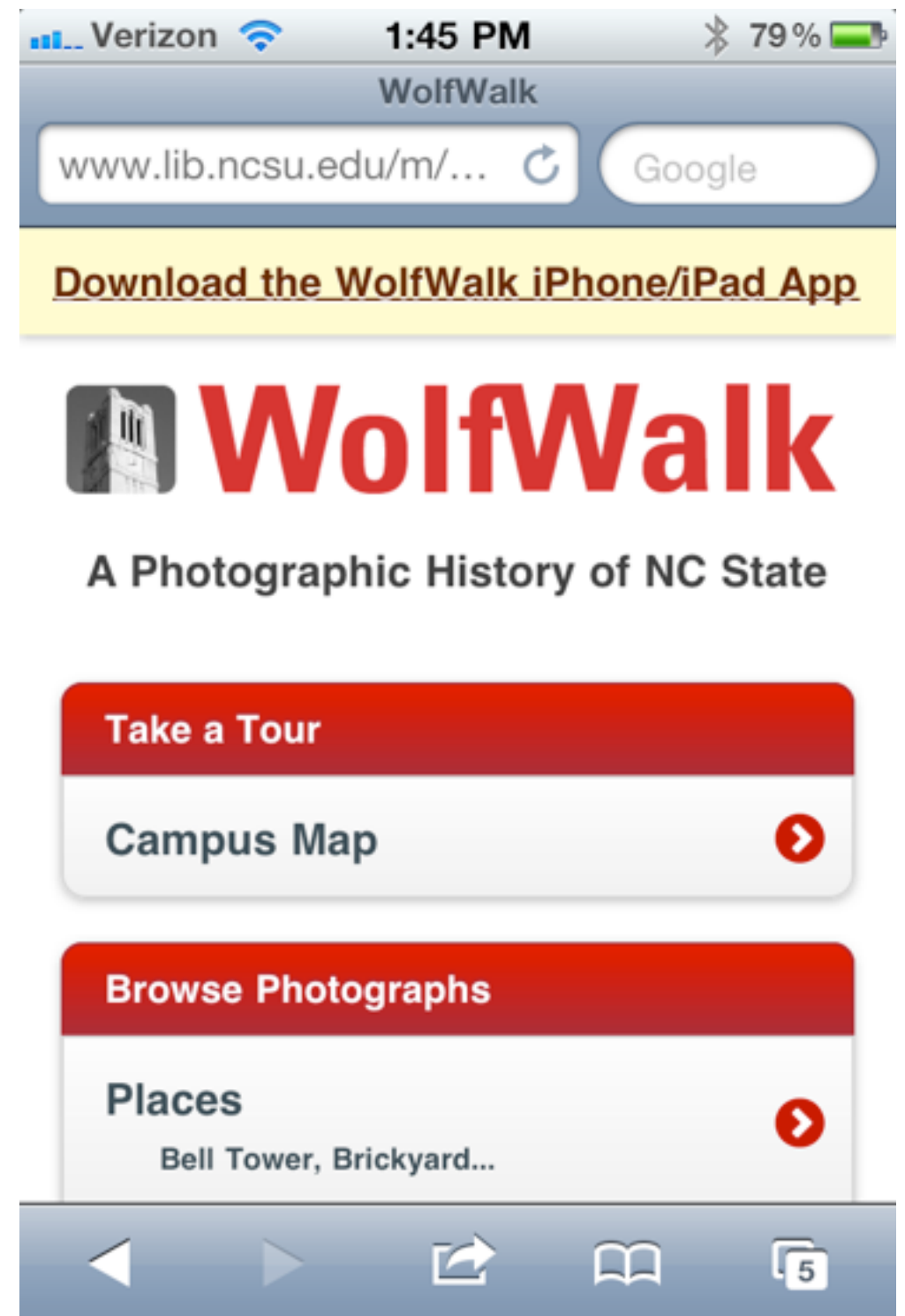


Find your study group

NCSU Libraries



Reserve a room



Historic image collections

Seattle Public Library

SPL MOBILE APP

Can I use the Library from my smart phone or other Web-enabled mobile device?



Yes. The Library has a free mobile application (app). Access your Library account, find the nearest branch, search the catalog and browse for books, CDs and DVDs while on the go!

Will it work on my phone?

The app works on all major smart phones, including iPhone, Android, Blackberry, Windows Mobile, Palm, Symbian and J2ME.

How do I get the app?

To download the app for:

- Most devices - Visit spl.boopsie.com  on your mobile device or scan the QR code on the right
- iPhones - Visit the iTunes App Store. Search for "SPL Mobile"
- Android Phones - Visit the Android Market. Search for "SPL Mobile"
- Windows Mobile - Visit spl.boopsie.com/webapp 

The app is free from any source.

What does it do?

- Smart prefix search - Enter the first few letters of a word or phrase to search the catalog. For example, entering "ha pot g" into the search box finds "Harry Potter and the Goblet of Fire"
- Search the Library's Calendar - For upcoming events and classes
- Library locator - All Library locations include links to an interactive map
- Ask a Librarian - by IM, text message or phone
- Check your account - Reserve and renew books, CDs and DVDs
- Download Library podcasts - Featuring your favorite authors
- Stay connected - With links to the Library's blogs and Facebook page



LEARN ABOUT OUR MOBILE APP.

- [Watch our video!](#)



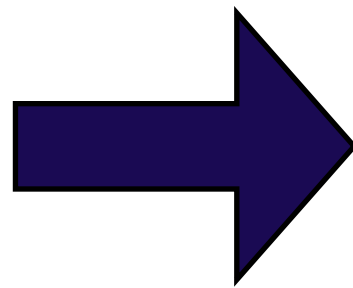
Need help? Ask us!

Your Question/Message

Send

Nashville Public Library

They have a mobile website, but it includes links to device specific apps



VC/UHV Library

Mobile Web Presence



Library Website

**VC/UHV
Library**

Serving Victoria College and University of Houston-Victoria



[About the Library](#)

[Services for Students](#)

[Services for Distance Students](#)

[Services for Faculty](#)

[Services for Area Residents](#)

Start Research by Choosing a Subject Area Below

Connect to article databases and other research sources

General
Accounting/Tax
Biography
Biology
Business
Careers
Chemistry
Communications

Computer Science
Consumer Info
Criminal Justice
Current Events
Education
Fine Arts
Geography
Geology

Government
History
K-12
Languages
Law
Library Science
Literature
Mathematics

Newspapers
Nursing/Allied Health
Philosophy/Religion
Psychology
Science
Sociology
Spanish
Texas/Victoria

Search the Library Catalog for Books & Media

(use one of the subject links above to search for journal articles)

General Keyword



Search

Power Search

Renew Materials Online 

Ask A Librarian



Email



Chat

Quick Links

[List of all databases A to Z](#)

[Frequently Asked Questions](#)

[Off-Campus Access](#)

[Library Instruction](#)

[Reserves](#)

[Media Center](#)

[Regional History Center](#)

[Spaces for Group Study](#)

[Grants Information](#)

[RefWorks](#)

[Library Hours](#)

[Contact Us](#)

What's New

[Library at UHSSL Update](#)

[Library at UHSSL](#)

[On Chesil Beach](#)

[Wireless Network & Online Catalog](#)

[Michael Vey: The Prisoner of Cell 25](#)

[Think Pink](#)

Search the Journals List (TDNET)

Enter the title of the journal

Find

Try the article finder. [Search Here](#)

[Advanced Journals List Search](#)

interlibrary loan

We don't have it?
Get free materials
from other libraries



Study Guides & Help

[How to Cite Your Sources](#)

[Research Workshops](#)

[How to Find the Harvard Business Videos](#)

[What is a Scholarly Article?](#)

[Mental Measurements Yearbook](#)

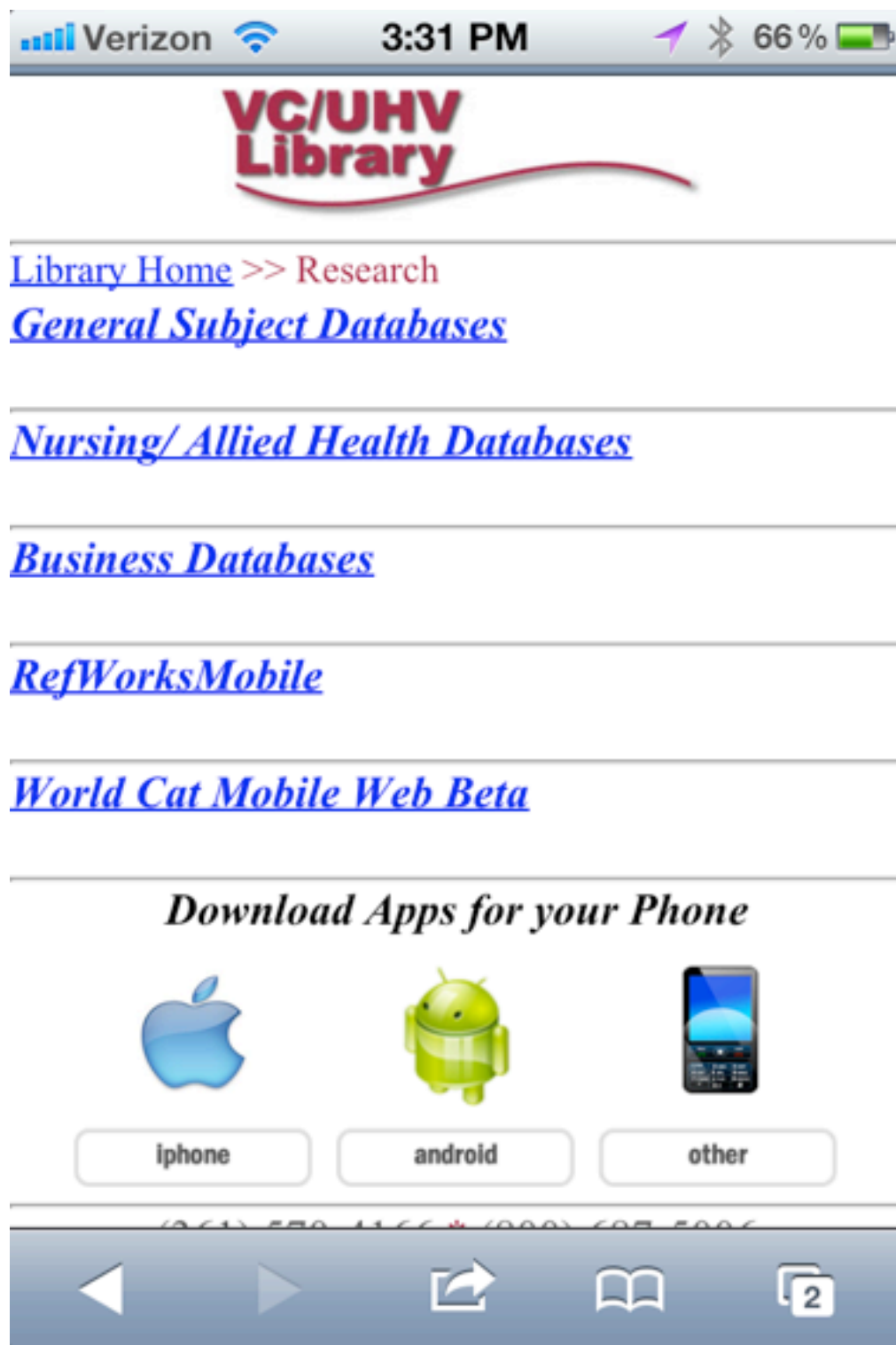
[Making a Persistent URL](#)

[more help](#)

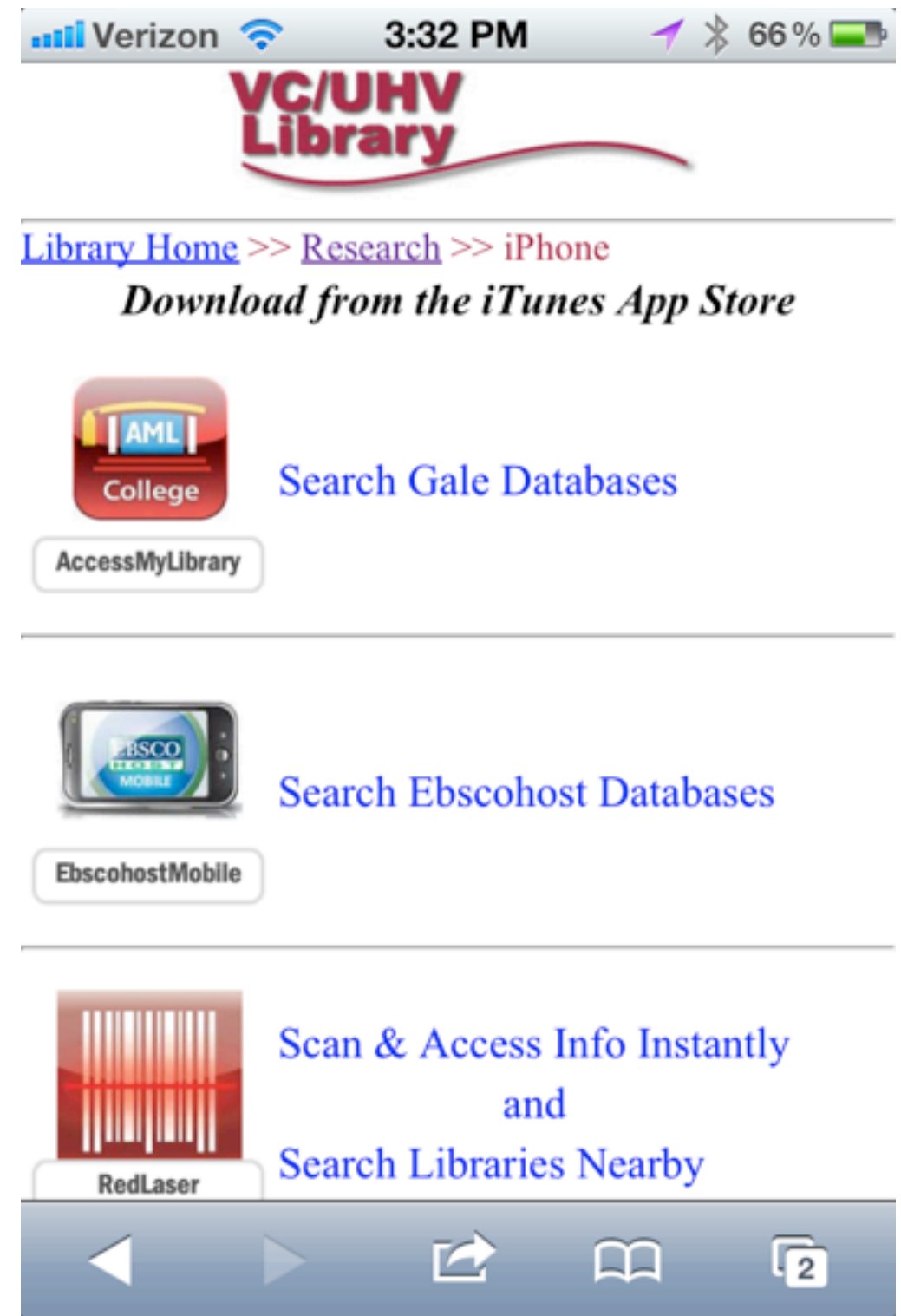
Mobile Website -

vcuhvlibrary.uhv.edu/mobile

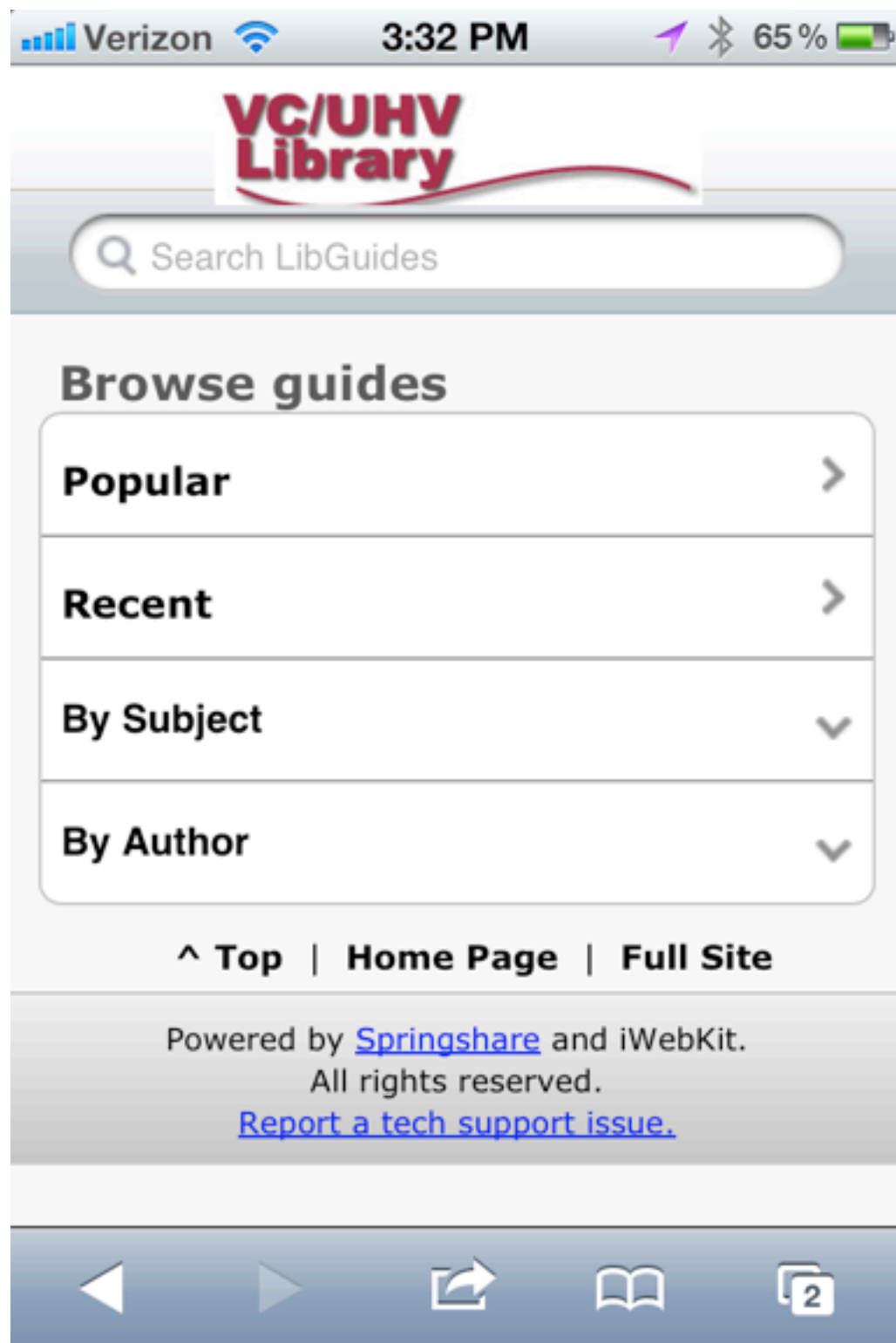




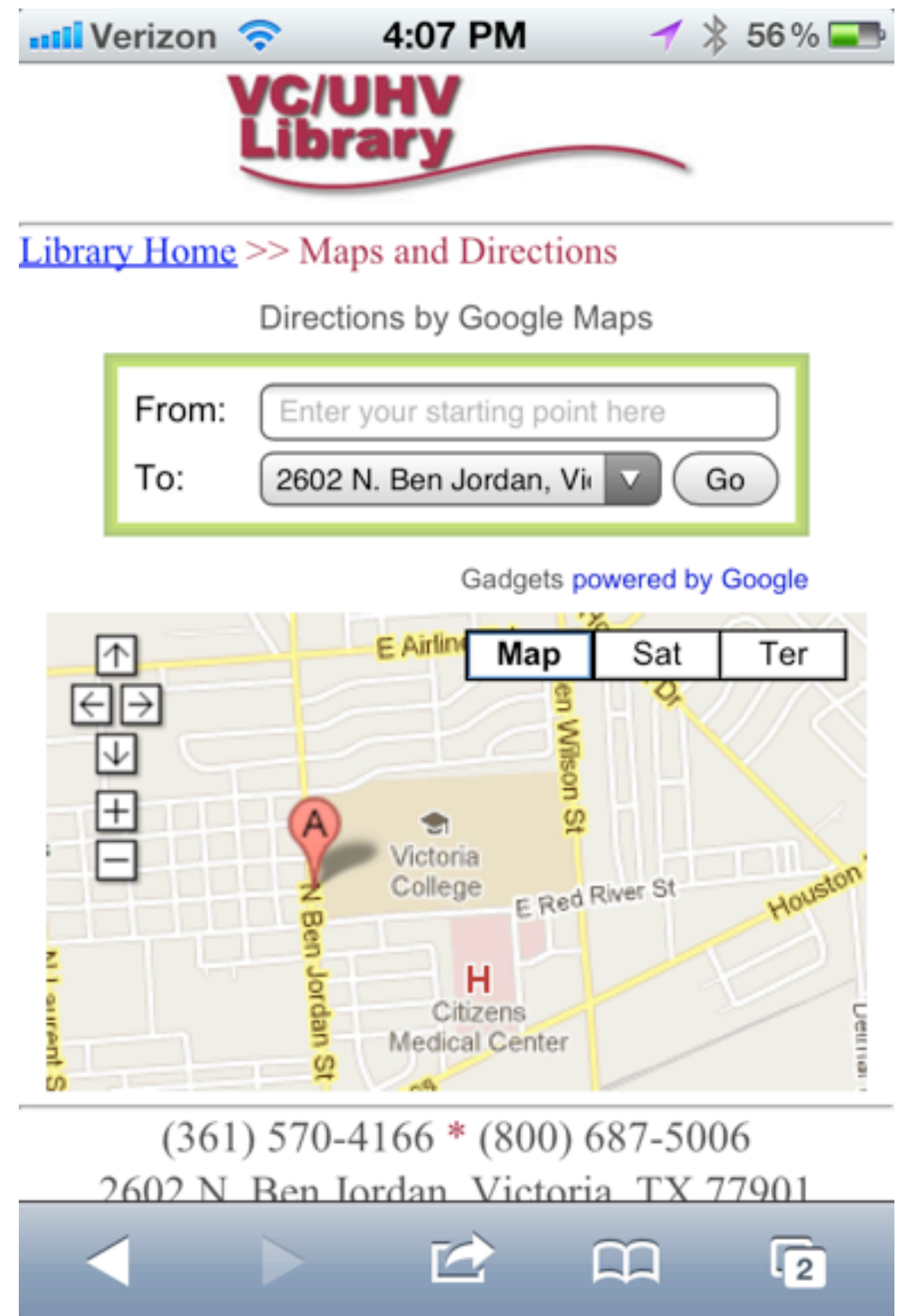
Mobile-friendly
research tools



Research applications users
can download themselves



Users love the popular LibGuides



Users can get directions to the library

Using QR codes to market mobile site

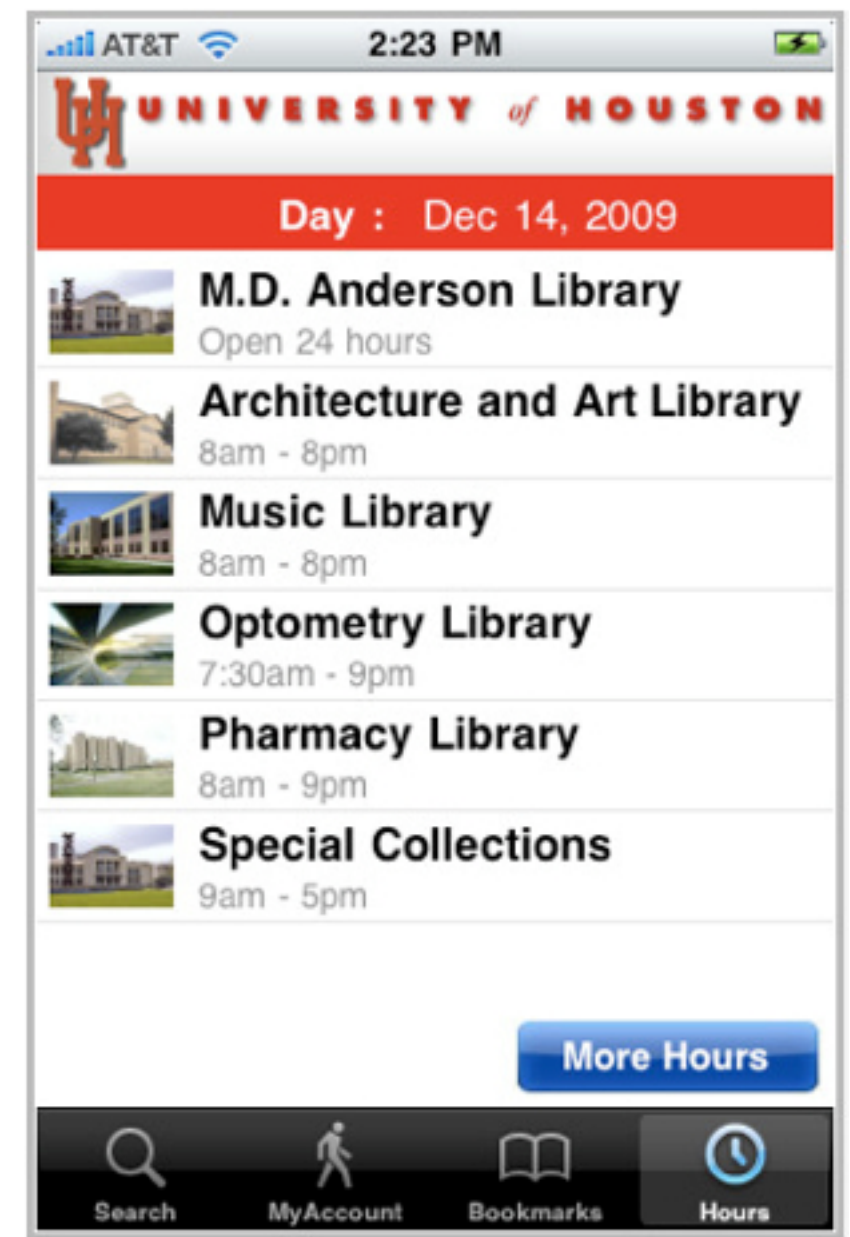
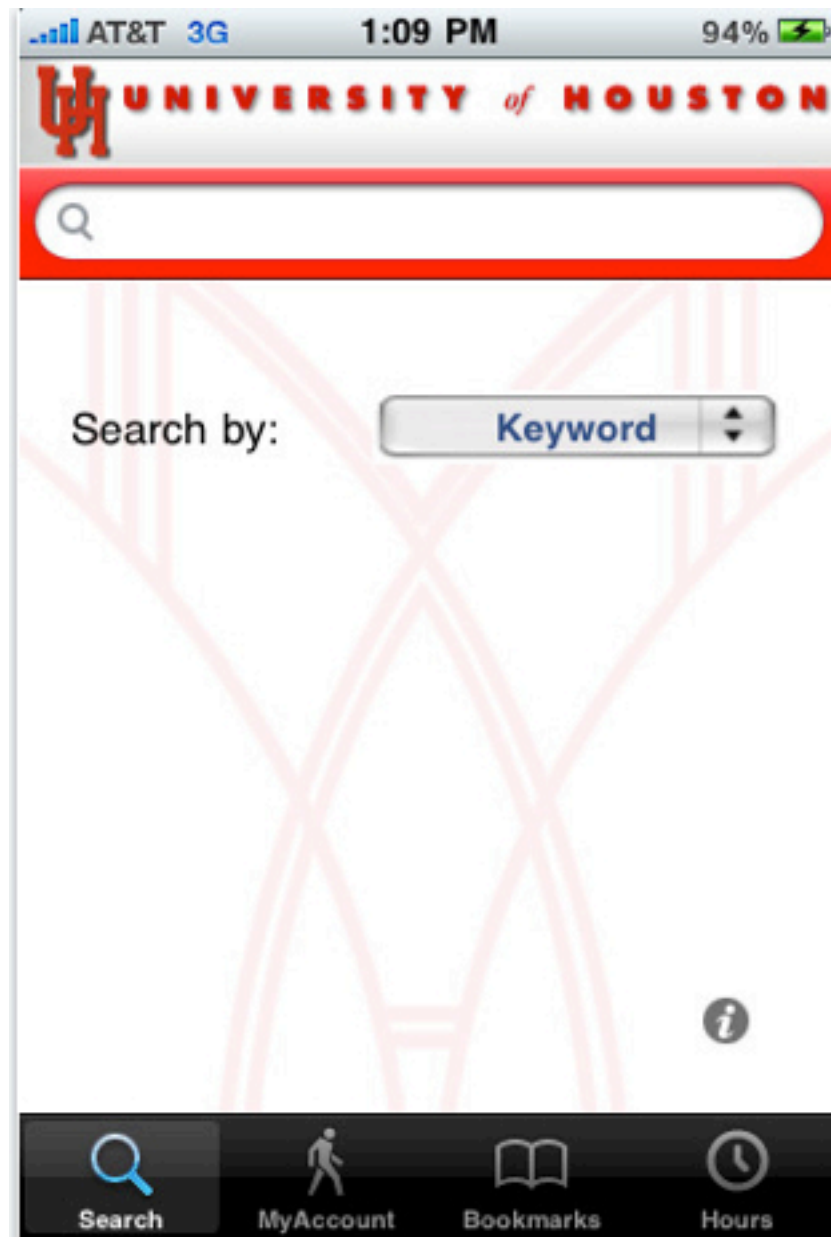




UH Libraries Mobile Web Presence

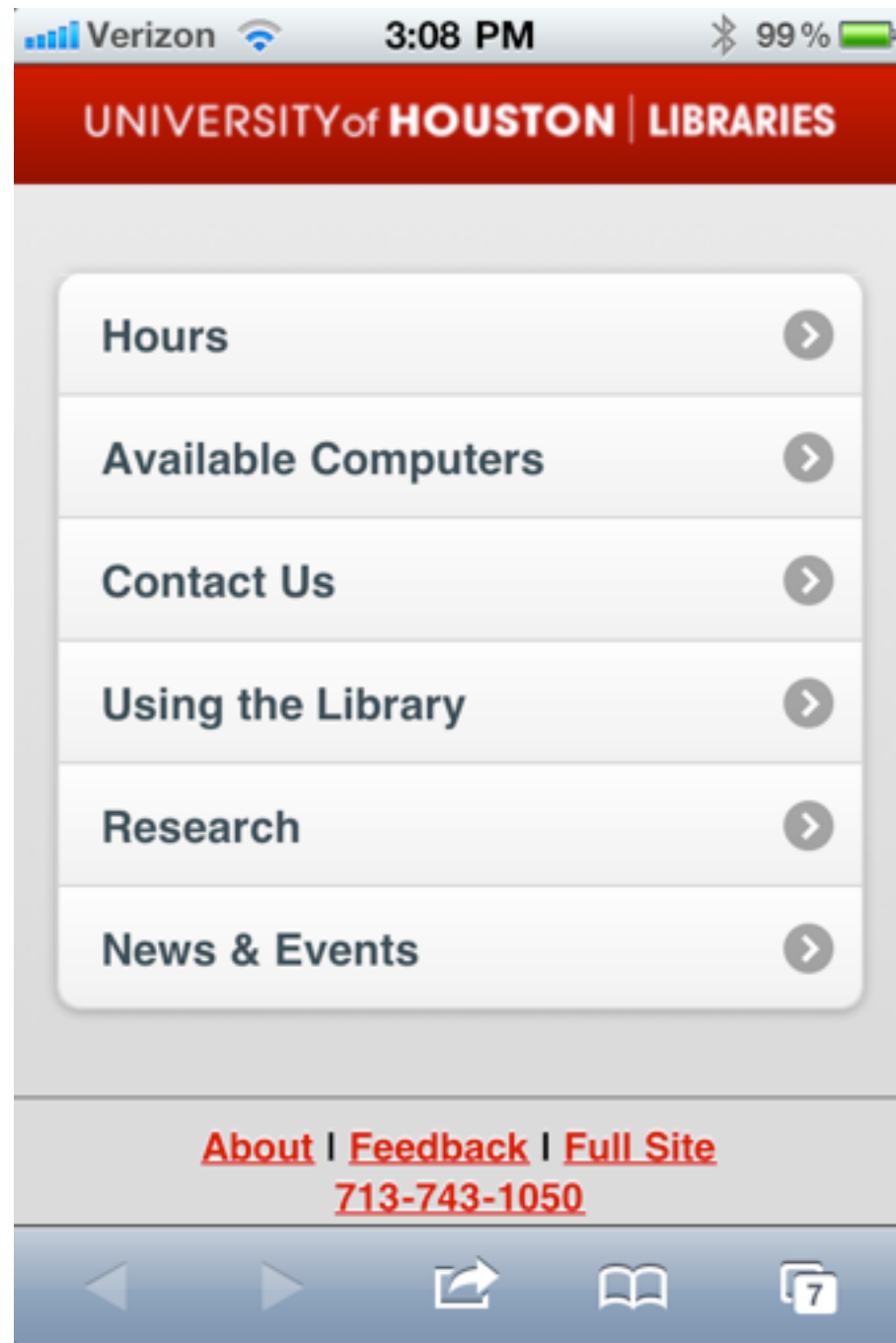
A different approach

iPhone App + Mobile Website

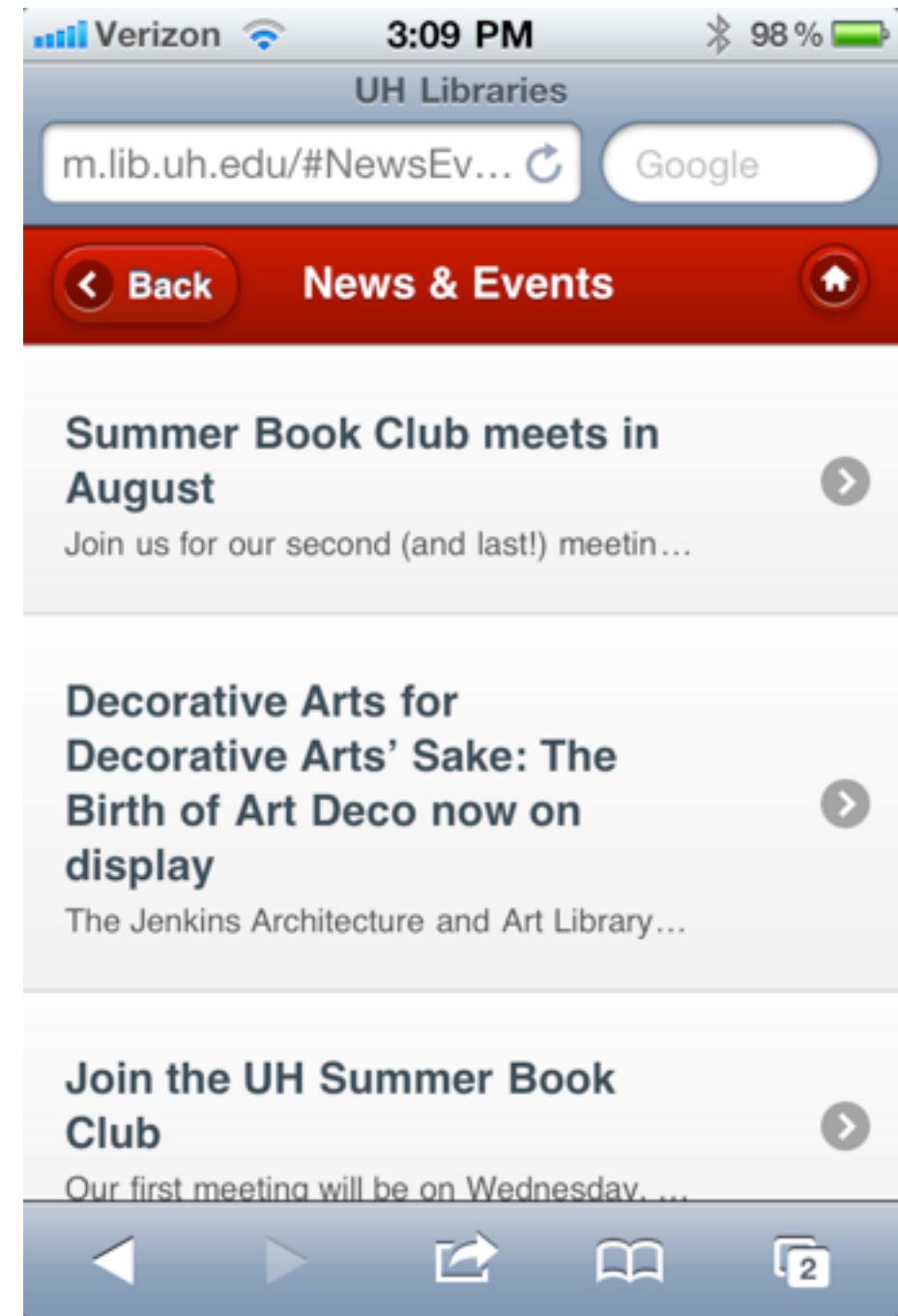


An iPhone app for searching the UH Libraries' Catalog was developed by graduate students in the the “Ubiquitous Computing” course in the University of Houston Computational Physiology Lab

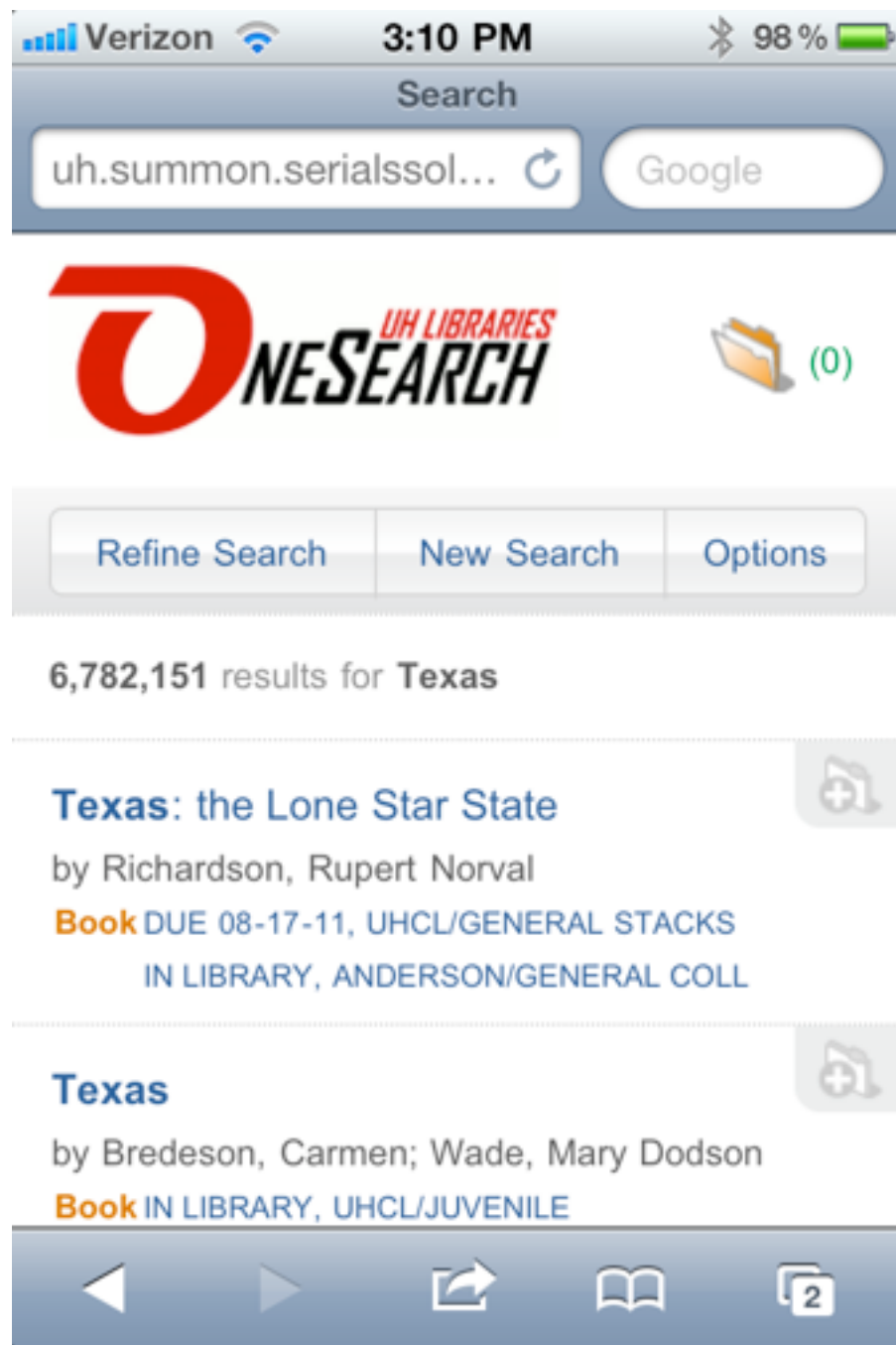
Mobile Website - m.lib.uh.edu



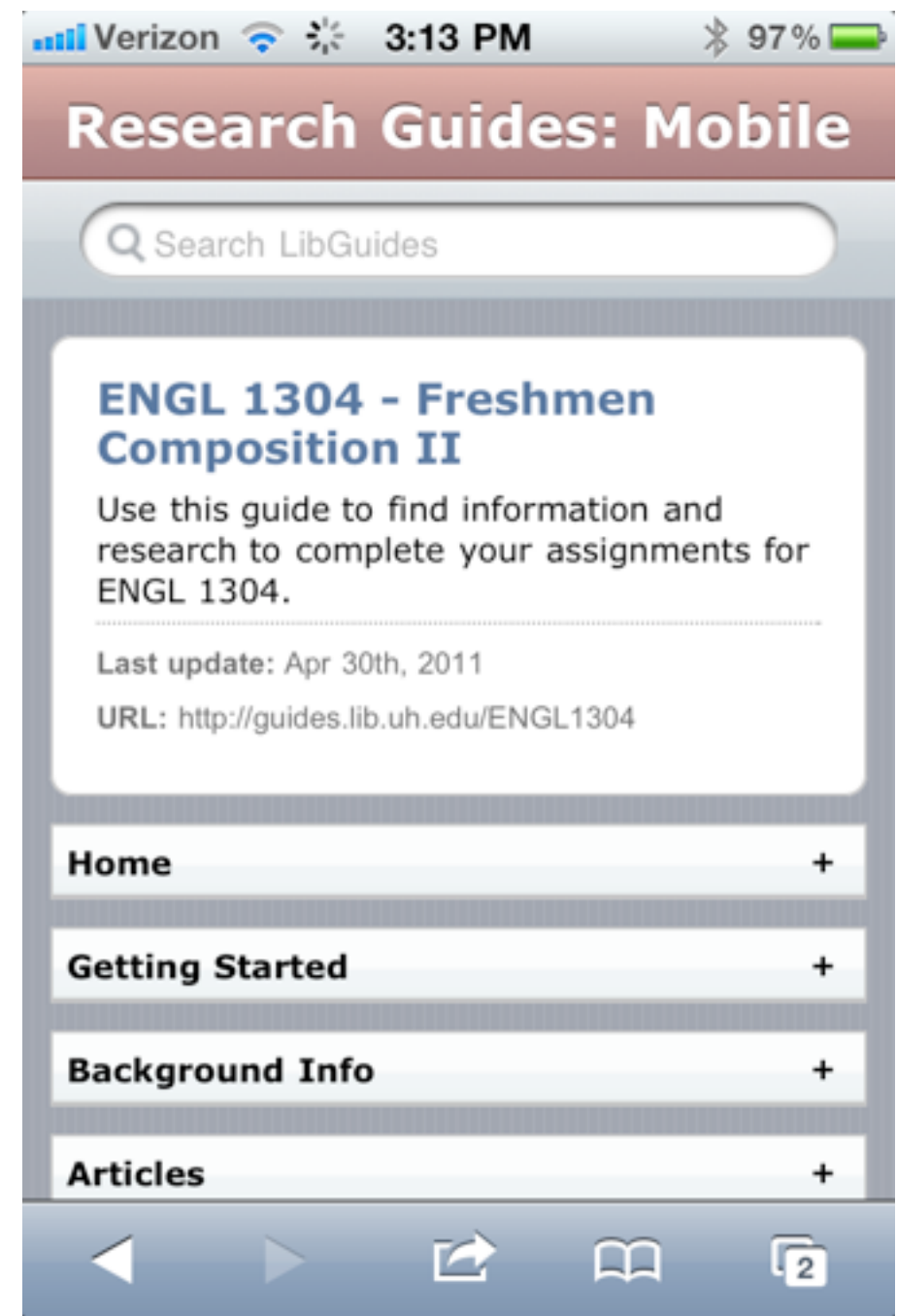
Think differently about the hierarchy of your homepage



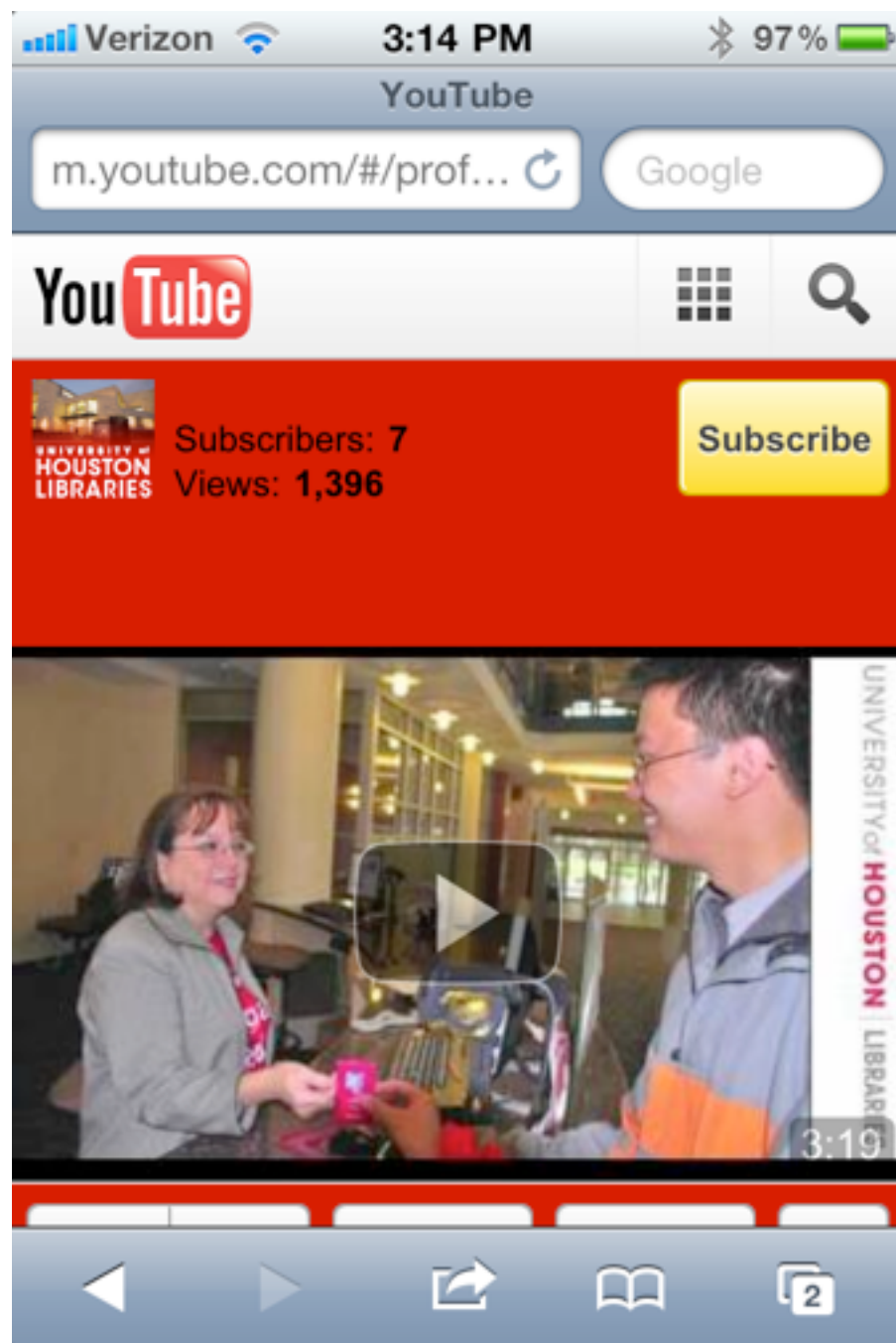
RSS feeds are quick and easy but have limitations



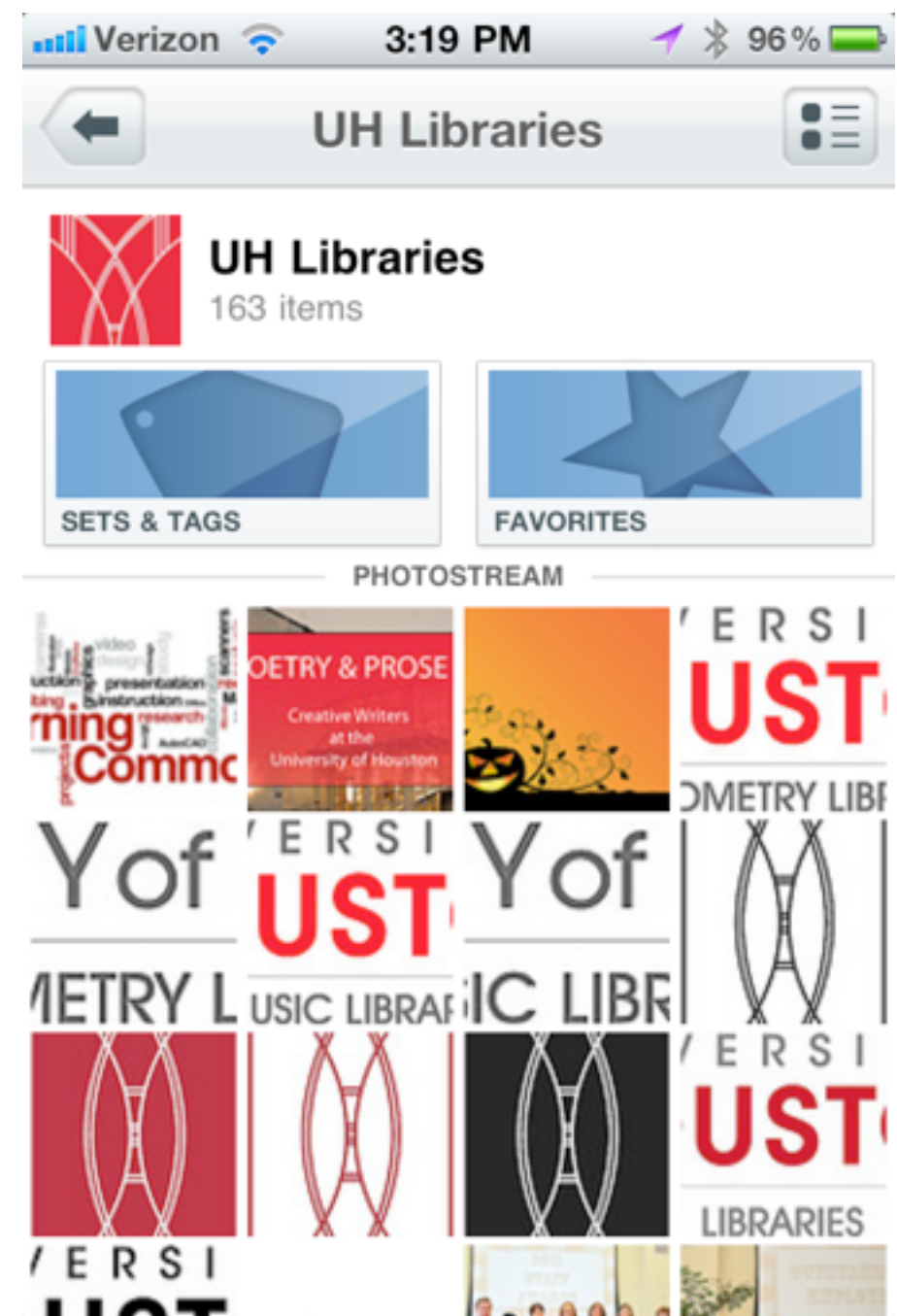
Include catalog and/or discovery platform, but be clear on tool's purpose



LibGuides comes with a mobile interface, too



You have videos? Create a channel and include them



Show off your images on your library's Flickr site

Carolina Moscoso
Bauer College of Business
Class of 2012

The LIBRARY is EVERYWHERE

GO MOBILE with UH LIBRARIES!
m.lib.uh.edu

Carolina can...

search the catalog
check library hours
find a spot to study

...and MUCH MORE!



UNIVERSITY of
HOUSTON

LIBRARIES

Features we're considering

- Mobile campus walking tour with historic images pulled from our Digital Library collection
- Mobile version of the Digital Library
- Expanded computer availability to other labs in the library, possibly branches
- Laptops available for checkout
- Room/computer reservation
- More research tools specifically made for mobile
- More social media integration
- Augmented reality layer



Final thoughts

- Understand your users' mobile behaviors and needs and look at the tools at your disposal before you decide between a mobile app or website
- Sometimes a simple mobile stylesheet is a good enough place to start
- Don't just recreate your entire website in a whole new mobile website
- Start small, add more complex features over time
- Walk a day in your users' shoes to get a feel for what services might be helpful on a mobile device

Helpful resources

- “Choosing Between Native and Mobile Web Applications.”
Gartner Report by Analyst Nick Jones. February 23, 2011.
- The Anywhere Library: A Primer for the Mobile Web.
Courtney Greene, Missy Roser, and Elizabeth Ruane. ACRL 2010.
- M-Libraries, Library Success Wiki -
<http://www.libsuccess.org/index.php?title=M-Libraries>
- Chad Haeefe's Mobile Site Generator -
<http://www.hiddenpeanuts.com/msg/>
- Google Mobile Sites - <http://sites.google.com/mobilize>

Thanks!

Rachel Vacek

Head of Web Services
University of Houston Libraries
revacek@uh.edu



Berika Williams

Web Services Librarian
Victoria College/University of Houston – Victoria
williamsbs@uhv.edu



Presentation available online:

slideshare.net/vacekrae