UCSB Web Standards Guide
Brown Bag Series

GOING MOBILE WITH
MOBILE WEB FRAMEWORK
(MWF)
May 25, 2012
PRESENTERS

- Joe Sabado, Associate Director, Information Systems and Software Development, SIS&T
- Ian Lessing, Software Development Manager, Library
- Logan Franken, Application Developer for Financial Aid Information Systems, SIS&T
- Josh Andersen, Student Services Information Systems Manager, SIS&T
- Eric Mayes, User Experience and Interface Designer/Developer, SIS&T
- Keri Bradford, Marketing, Design & Social Media Coordinator, SIS&T

Special thanks to WSG Co-Chairs, Heidi Straub and Tiye Baldwin, for planning and coordination.
Takeaways

- Mobile is the way of the future (and now)

- Our current and future customers are using mobile and we, in higher education, need to adapt to their needs and expectations

- Different options with mobile development (each with pros/cons)

- Learn about Mobile Web Framework (MWF) and why/how we use it on this campus

- Hands-on experience with building a mobile website using MWF
Overview of Mobile Trends and in Mobile in Higher Education (Joe)
Different Approaches (Logan)
  - Native app, hybrid, web
  - Designs/Frameworks including MWF
MWF (Keri/Ian)
  - History, Roadmap
  - MWF at UCSB
    - Usage/Support/Governance/Contributions
    - Library Hosting
    - Drupal
Break
Demos (Logan, Eric, Joshua)
  - Finaid, Arts and Lectures, SGD, SHS
  - Intro to Afternoon Session
Hands-On Session (Afternoon) - Logan
“By 2013, mobile phones will overtake PCs as the most common Web access device worldwide.” – Gartner, 2010.

http://www.gartner.com/it/page.jsp?id=1278413
Mobile Trends

Sales of Smartphones and Tablets to Exceed PCs

Computing Devices - Yearly Sales

Source: Gartner, iSuppli Market Intelligence

Practicalecommerce.com – 2011 (from Gartner, iSuppli.com data)
There are more iPhones sold per day (402k) than people born in the World per day (300k). twitter.com/#!/asymco/stat...
Mobile Trends

Large variation of mobile devices – a challenge for development/support.
MOBILE IN HIGHER EDUCATION
<table>
<thead>
<tr>
<th>Technology</th>
<th>Students Own</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop</td>
<td>87%</td>
</tr>
<tr>
<td>Printer</td>
<td>81%</td>
</tr>
<tr>
<td>DVD Player</td>
<td>75%</td>
</tr>
<tr>
<td>USB Thumbdrive</td>
<td>70%</td>
</tr>
<tr>
<td>Wi-Fi</td>
<td>67%</td>
</tr>
<tr>
<td>Stationary Gaming Device</td>
<td>66%</td>
</tr>
<tr>
<td>iPod</td>
<td>62%</td>
</tr>
<tr>
<td>HDTV</td>
<td>56%</td>
</tr>
<tr>
<td>Smartphone</td>
<td>55%</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>55%</td>
</tr>
<tr>
<td>Webcam</td>
<td>55%</td>
</tr>
<tr>
<td>Desktop Computer</td>
<td>53%</td>
</tr>
<tr>
<td>Handheld Gaming Device</td>
<td>38%</td>
</tr>
<tr>
<td>Netbook</td>
<td>11%</td>
</tr>
<tr>
<td>iPad</td>
<td>8%</td>
</tr>
<tr>
<td>Other tablet</td>
<td>2%</td>
</tr>
</tbody>
</table>

The ECAR Study of
**Mobile IT in Higher Education, 2011**
### Mobile Device Activity

<table>
<thead>
<tr>
<th>Mobile Device Activity</th>
<th>Smartphone Owners (n = 688)</th>
<th>Other Cell Owners (n = 1,226)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Send or receive text messages</td>
<td>92%</td>
<td>59%</td>
</tr>
<tr>
<td>Take a picture</td>
<td>92%</td>
<td>59%</td>
</tr>
<tr>
<td>Access the Internet</td>
<td>84%</td>
<td>15%</td>
</tr>
<tr>
<td>Send a photo or video to someone</td>
<td>80%</td>
<td>36%</td>
</tr>
<tr>
<td>Send or receive e-mail</td>
<td>76%</td>
<td>10%</td>
</tr>
<tr>
<td>Download an app</td>
<td>69%</td>
<td>4%</td>
</tr>
<tr>
<td>Play a game</td>
<td>64%</td>
<td>14%</td>
</tr>
<tr>
<td>Play music</td>
<td>64%</td>
<td>12%</td>
</tr>
<tr>
<td>Record a video</td>
<td>59%</td>
<td>15%</td>
</tr>
<tr>
<td>Access a social networking site</td>
<td>59%</td>
<td>8%</td>
</tr>
<tr>
<td>Watch a video</td>
<td>54%</td>
<td>5%</td>
</tr>
<tr>
<td>Post a photo or video online</td>
<td>45%</td>
<td>5%</td>
</tr>
<tr>
<td>Check your bank balance or do any online banking</td>
<td>37%</td>
<td>5%</td>
</tr>
<tr>
<td>Access Twitter</td>
<td>15%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Participate in a video call or video chat</td>
<td>13%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Mean Number of Activities (out of 15)</strong></td>
<td><strong>9</strong></td>
<td><strong>2.5</strong></td>
</tr>
</tbody>
</table>

The ECAR Study of

**Mobile IT in Higher Education, 2011**
2,300 college bound-high school students surveyed.

- 94% use a mobile device at least once a week.

- 52% have viewed a school website on mobile.
Students & Technology

A typical day at the University Center (Ucen)
The State of the Mobile Web in Higher Ed - February 2012

A total of 281 professionals working mainly in the marketing, communication (40%) and web offices (41%) of 267 institutions of higher education completed the second online survey about the state of the mobile web in higher education from January 9, 2012 to February 13, 2012. This survey was completed online on a voluntary basis and thus doesn’t rely on a scientifically determined dataset. However, the resulting sample of surveyed institutions seems fairly representative of the Carnegie Classification breakdown. (see Surveyed Institutions, p3).
Any Mobile Solution?

- Implemented a mobile solution: 59%
- Plan to provide a mobile solution: 39%
- No plan for any mobile solution: 2%
Mobile Web in Higher Education

Supporting campus life, marketing & branding

Mobile Solution Goals (2012)

- Supporting campus life
- Branding/Marketing
- Student recruitment
- Supporting alums
- Supporting on-campus transactions
- Fundraising
- Supporting academic life
- Other

- Already have implemented a solution
- Plan to implement solution

The State of the Mobile Web in Higher Ed - February 2012
Mobile Web in Higher Education

[Bar chart showing mobile solution target audiences (2012)]

- Current students
- Prospective students
- Faculty members
- Staff members
- Alums
- Parents and Family of students
- Prospective donors
- Current donors
- Other

Red bars: Already have implemented a solution
Blue bars: Plan to implement solution

higheredexperts.com - The State of the Mobile Web in Higher Ed - February 2012
Mobile Web in Higher Education

Mobile strategy & Supported mobile devices

Adopted institutional mobile strategies (2012)

- Dedicated mobile solution(s), 56%
- Progressive enhancement for the existing website, 35%
- Microsite(s) targeted to mobile users only, 33%
- Native application(s) for specific devices, 28%
- Mobile First approach with RWD, 15%

Source: higheredexperts.com - The State of the Mobile Web in Higher Ed - February 2012
MOBILE WEB DEVELOPMENT
OVERVIEW
Approaches to Mobile Development

APP VS. MOBILE WEB

PhoneGap
Approaches to Mobile Web Development

Mobile Site/Device Experience

Separate website catered to the needs/capabilities of a device (has some server-side components)

Advantage:
- Can completely shape the experience to target the device

Disadvantage:
- Need to maintain duplicate sites
Approaches to Mobile Web Development

Responsive Web Design

Use fluid grid & media queries to dynamically change the layout based on browser side (completely client-side)

Advantage:
- One layout that works on any browser size/device resolution

Issues/Considerations:
- Images
- Tables
- Content
- Design
- CMS
Approaches to Mobile Web Development

Bootstrap, from Twitter

Simple and flexible HTML, CSS, and Javascript for popular user interface components and interactions.

Examples:
- http://twitter.github.com/bootstrap
Approaches to Mobile Web Development

Adaptive Design

Uses media queries, but only targets a few specific breakpoints (resolutions).

Example:
http://www.catswhocode.com/blog/

RESS

Responsive Design + Server Side Components
MOBILE WEB FRAMEWORK
OVERVIEW
Roadmap

History of MWF on campus

• Joe Sabado and Bill McTague bring MWF project to campus; find supportive host in Library

• Mid-2011, Student Affairs division puts new focus on mobile and social media

• WSG supports growing campus-wide interest in mobile web

• Pilot project given green light; begin working toward today’s presentation
January

- Core team identified, MWF requirements reviewed, deadline set
- Identified which case-study sites to pursue; decided on basic requirements for each site
- Began working with departments on content, media, and functionality
February-April

- Gave update at Jan. 31 UC MWF community meeting; agreed to contribute in the areas of .Net, Drupal, communication/planning
- Continued developing, enhancing pilot sites, collecting feedback from departments, making changes, putting redirects in place
- Contributed to UC MWF: geo-location, fixed bugs
May

- Core team set basic standards, available at it.ucsb.edu, under Mobile Development Group
- Core team able to support growing interest; team expands to 18 and now includes a Drupal branch
- New projects being explored or developed include: Housing, Career Services, Graduate Division, public course search, GOLD
Future: Reflect and Grow

• What role should MWF play at UCSB? What is needed so that MWF can continue to grow?
• Library to conduct load-testing this summer; have committed to continue supporting MWF
• Contribute to UC MWF: .Net, Drupal, fix bugs; Room to collaborate on MWF Online Polling Tool, other academic support tools; develop a CMS
• MWF conference September 5-7
Connect

Keri Bradford
Marketing, Design & Social Media Coordinator

• keri.bradford@sa.ucsb.edu
• 893-6006
• facebook.com/groups/ucsbmobile
MOBILE WEB FRAMEWORK
Hosting @ UCSB
Library is hosting the MWF for the UCSB Campus as a service to the UCSB community (since Oct. 2011)

Library is committed to hosting MWF until some central campus IT provider can take over the responsibility.

Hosting of content for MWF users (depts) not offered due to system admin resources but core features will be available.

Load Testing this summer for anticipated increased demands Fall Qtr

Technical Info:
  - On a server running Ubuntu OS (virtual machine as part of VMWare environment)
  - Behind proxy for security/flexibility
  - Currently in Library but plan is to move it to newly opened North Hall Data Center sometime this summer.
  - System deliberately structured for growth and portability. Virtual server can be provisioned with more memory/CPUs on the fly, per demand.

Contact info:
  Ian Lessing – Head of Software & Integrated Learning Systems Unit of Library IT
Demos
Site Demos
Hands-On Learning
Instructions and Materials located here:

https://it.ucsb.edu/groups/wsg/going-mobile-mwf
College-bound students flock to universities via mobile websites

Gartner Highlights Key Predictions for IT Organizations and Users in 2010 and Beyond
http://www.gartner.com/it/page.jsp?id=1278413

Morgan Stanley Research – Internet Trends

Mobile Web Resources
http://joesabado.com/2011/07/mobile-web-resources/

Mobile in Higher Ed

Pew Research Center’s Internet & American Life Project, April 26-May 22, 2011 Spring Tracking Survey.

Sales of Smartphones and Tablets to Exceed PCs
http://www.practicalecommerce.com/articles/3069-Sales-of-Smartphones-and-Tablets-to-Exceed-PCs-

StatsCounter Global Stats

The Mobile Browsing Behaviors and Expectations of College-Bound High School Students
https://www.noellevitz.com/papers-research-higher-education/2012/2012-mobile-expectations-report?item=11467

The 2012 State of the Mobile Web in Higher Ed Survey Report

There are now more iphones sold than babies born in the world every day
http://thenextweb.com/apple/2012/01/25/there-are-now-more-iphones-sold-than-babies-born-in-the-world-every-day/

Baby/iphone photo credit
A grasp of Vision Mobile Cross Platform Development Report
http://www.codefessions.com/2012/03/grasp-of-vision-mobile-cross-platform.html

Responsive Design + Server Side Components

App vs Mobile Web (photo credit)
http://60secondmarketer.com/blog/2012/03/06/do-you-need-a-mobile-site-or-an-app/