Library Services for Mobile Devices

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Library Services for Mobile Devices

ILA 2009 - Peoria, Illinois
October 7, 2009

Toby Greenwalt - Skokie Public Library
Jacob Hill - Elmhurst College
Colin Koteles - College of DuPage
Skokie Public Library
- FY 2008-2009 LSTA Grant Project to develop a platform for current and future mobile library services
- Stressing multiple levels of access to traditional library offerings

College of DuPage
- 2007 "experiment" to create low-cost, low-maintenance mobile web access to basic Library services
- Marketing is just beginning; looking at "next steps"

Elmhurst College Library
- mobile resources grew out of a winter 2008/09 collaboration between Jacob Hill & Kyle Jones
  - Our overall goal was finding ways to support the mobile population on our campus, at no cost.
## The Mobile Wave

### Mobile data and communications activities: by Age

(Those who have a cell phone or personal data assistant who have ever done one of listed activities)

<table>
<thead>
<tr>
<th>Activity</th>
<th>18-29</th>
<th>30-49</th>
<th>50-64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Send or receive text messages</td>
<td>85</td>
<td>65</td>
<td>38</td>
<td>11</td>
</tr>
<tr>
<td>Take a picture</td>
<td>82</td>
<td>64</td>
<td>42</td>
<td>22</td>
</tr>
<tr>
<td>Play a game</td>
<td>47</td>
<td>29</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Send or receive email</td>
<td>28</td>
<td>21</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Access the internet for news, weather, sports, or other information</td>
<td>31</td>
<td>22</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Record a video</td>
<td>34</td>
<td>19</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Play music</td>
<td>38</td>
<td>16</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Send or receive instant messages</td>
<td>26</td>
<td>18</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Get a map or directions to another location</td>
<td>18</td>
<td>16</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Watch video</td>
<td>19</td>
<td>11</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Percent who have done at least one of these activities</td>
<td>96%</td>
<td>85%</td>
<td>63%</td>
<td>36%</td>
</tr>
<tr>
<td>Median number of activities ever done</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Number of cases</td>
<td>311</td>
<td>616</td>
<td>456</td>
<td>310</td>
</tr>
</tbody>
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Pew Internet & American Life Project, **3/5/2008**
# The Mobile Wave

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</thead>
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<tr>
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<td>92%</td>
<td>76%</td>
<td>50%</td>
<td>17%</td>
</tr>
<tr>
<td>Take a picture</td>
<td>87</td>
<td>71</td>
<td>59</td>
<td>29</td>
</tr>
<tr>
<td>Play a game</td>
<td>46</td>
<td>32</td>
<td>12</td>
<td>6</td>
</tr>
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<td>7</td>
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<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Percent who have done at least one of these activities</td>
<td>93%</td>
<td>80%</td>
<td>59%</td>
<td>27%</td>
</tr>
<tr>
<td>Median number of activities ever done</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Number of cases</td>
<td>296</td>
<td>578</td>
<td>506</td>
<td>399</td>
</tr>
</tbody>
</table>
The Mobile Landscape

(via Lance and Erin)
Mobile Technologies : Devices

- Voice calls (hopefully)
- Address book/Caller ID
- Calendar
- Text Messaging

Generally assume "flip" or "candybar" shape.
Intermediate Mobile Features

- Still and video cameras
- Microphone/note recording
- Audio/video playback
- Some Web integration
- Full keyboards on many
- Not much customization
Advanced Mobile Features

- Possess true "operating systems"
- Advanced Web capabilities
- PC integration
- Utilize built-in GPS
- Downloadable applications
- Many use wireless as well as mobile networks
Mobile Web Usage

Worldwide Smartphone Share Comparison

- Symbian: 52% (Handset Sales), 36% (Mobile Web)
- RIM: 17% (Handset Sales), 9% (Mobile Web)
- Windows: 12% (Handset Sales), 5% (Mobile Web)
- iPhone: 8% (Handset Sales), 43% (Mobile Web)
- Android: 1% (Handset Sales), 3% (Mobile Web)
- Palm: 2% (Handset Sales), 2% (Mobile Web)
- Other: 9% (Handset Sales), 2% (Mobile Web)

Admob Mobile Metrics Report, April 2009
Mobile Technologies - Capabilities

In terms of Libraries:

- Mobile Websites
  - News & basic information
  - Library & staff contacts
- Mobile search
  - Web
  - OPAC
  - Databases
- Mobile communication
  - Phone
  - SMS/IM
  - Web (Facebook, Twitter, etc.)
  - E-mail
"Myths" of mobile usability

- “It’s really do-or-die when it comes to SMS and libraries”
  - Presenter comment at Handheld Librarian conference, July 2009
- Training
  - Services can be bundled with extant tools
- Set it and forget it...
  - Mobile uses thrive on dynamic content
More Myths

- Marketing - don't assume they'll find it
- Texting: the perceived vs. actual
  - Texting plans cost $
  - Texting not ideal medium for reference interview
  - Response time, brevity crucial
- Switching communication methods
  - Knowing when to end the text conversation
- Has Texting "replaced" the phone call?
Texting outpacing calling

### Average Number of Monthly Calls vs. Text-Messages Amongst U.S. Wireless Subscribers by Age (Q2 2008)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Calls</th>
<th>Texts</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Subs</td>
<td>204</td>
<td>357</td>
</tr>
<tr>
<td>12 &amp; Under</td>
<td>137</td>
<td>428</td>
</tr>
<tr>
<td>Ages 13-17</td>
<td>231</td>
<td>1742</td>
</tr>
<tr>
<td>Ages 18-24</td>
<td>265</td>
<td>790</td>
</tr>
<tr>
<td>Ages 25-34</td>
<td>239</td>
<td>331</td>
</tr>
<tr>
<td>Ages 35-44</td>
<td>223</td>
<td>236</td>
</tr>
<tr>
<td>Ages 45-54</td>
<td>193</td>
<td>128</td>
</tr>
<tr>
<td>Ages 55-64</td>
<td>145</td>
<td>38</td>
</tr>
<tr>
<td>Ages 65+</td>
<td>99</td>
<td>14</td>
</tr>
</tbody>
</table>

*Source: Nielsen Telecom Practice Group*
EPL Text questions, Aug 08-June 09

- August: 0
- September: 4
- October: 4
- November: 8
- December: 1
- January: 1
- February: 2
- March: 3
- April: 5
- May: 3
- June: 1
Other myths: Mobile websites

- Mobile devices can’t display standard web content optimally.
  - However, in a 2009 web usability test, sites designed for mobile devices had a "successful use" rate averaging 64% (vs. 53% when using standard sites).

- Even the iPhone’s "ideal" large display parses content, and requires tedious scrolling.

Mobile Content

Varying levels of commitment

- Transcoded design
- Universal design
- Mobile design
- OPAC (currently limited by vendor)
Mobile Content: Transcoded Design

- Transcoded design
  - "Automagic"
  - Little effort
  - Content somewhat changed
  - Transcoder determines design
  - Little control
- Out of the box services - Mobilesitegalore, Winksite, Google Mobile Sites
  - Examples: Fremont
  - C.O.D. Library mobile OPAC search
Mobile Content: Universal Design

- Universal design
  - Up-front effort
  - Content unchanged across platforms
  - Device determines design
  - More control
Mobile Content: Universal Design

- Universal design
  - Comply with Web standards
  - Separate content from presentation (CSS)
  - Use semantic markup
  - Provide text alternatives to images and multimedia

- Design "degrades gracefully" across platforms
  - Content usable in "standard" browsers, mobile devices, voice browsers, etc.
  - Can enhance accessibility
Mobile Content: Mobile Design

- Mobile design
  - Up-front effort; possible ongoing effort
  - Content optimized for mobile
    - Concise, single-purpose, spatial, etc.
  - Designer/content-creators determine design
    - <div class="handheld_only">
    - <a href="tel:+#########">
      - Most control
        - But what's your target device?
  - Can enhance accessibility
SMS (text messages)

3 major choices for reading and responding to text messages:

1. Use a free instant messaging client as an intermediary (AIM, Google Voice).

2. Use a fee-based intermediary tool (Text a Librarian, LibraryH3lp, MyInfoquest, Shoutbomb)

3. Subscribe to your own mobile device plan, and use a mobile device to answer texted questions
The AIM Option

- AIM (America On-Line Instant Messaging) tool. Free to create a screenname account.
- Patrons dial 265010 from their mobile device, and type your screenname, a colon, and their question.
- Respond directly to text questions as you would a IM chat.
Issues surrounding Texting support

● Free tools can disappear at any time

● You need to market the service

● You need to identify and answer text questions quickly (nature of medium) and with brevity (screen size limitations)

● Funneling effect of IM/SMS traffic (most tools allow only 1 “responder” at a time)
Problematic SMS/IM reference model

- Email Query
- Phone Query
- FTF Query
- Text Query
- IM Query
LibraryH3lp and Text a Librarian

- TextaLibrarian and LibraryH3lp (fee services) are tools that enable IM and SMS **queuing**.
- Queuing is the future for mobile devices...several users can respond to a single texted question. (1st responder “wins”)
- Minimizes the funnel effect
- See also: Altarama/MyInfoQuest, Velti
(Patron IMing in library website chat box or texting w/mobile device)

(view of Staff member logged in to chat client)
Google Voice- New Player

- Free service that allows you to aggregate several phones under 1 Google number.
- Number is also a direct SMS portal- can receive SMS traffic and forward to email.
- LibraryH3lp.com can pull Google Voice messages, so they appear as IMs.
Shoutbomb SMS Alerts

- Holds, Overdues, Courtesy Notices, and Renewals
- Supplement to email or phone notices
- Single point of access for other library services
- Minimize use of keywords and shortcodes

Text SIGNUP to skokie@shoutbomb.com
The Shoutbomb Gateway

- Granted Shoutbomb tunnel access through Millennium
- Holds/Courtesy/Overdue reports generated daily
- Process automated using TCL script
- Files sent to Shoutbomb using SFTP
- Report resolved against list of opted-in patrons
- Records stored for 5 days and deleted
- Uses XMPP protocol for linkage with LibraryH3lp
Implementation, Training, Support

- Organizational buy-in
- Staff training up-front and ongoing
  - Awareness of and practice with multiple devices
- Marketing must be built into overall plan
Marketing and Promotion

- Newsletter
- Signage
- Website
- Moo Cards
- Brochure
- Lobby Card
- Blog posts
- Facebook advertising
- Twitter
Marketing and Promotion

- Newsletter
- Signage
- Website
- Moo Cards
- Brochure
- Lobby Card
- Blog posts
- Facebook ads
- Twitter
Creating a Mobile-Friendly Atmosphere

(Hugovk, via Flickr)
Future of Mobile Tools & Technology

- Possibly more extensive deployment of queuing tools for communication
- Possibly LESS mobile website design
- Google Wave
- Focus on meeting specific needs of your library users -> App driven
- Seamlessness - integrating with other modes of online communication
Patron enters book info (manual ISBN entry or via barcode scan w/camera)

ISBN is sent as a text message to server

Server queries III catalog

IS ITEM ON SHELF?

NO

Return Message: "Item is unavailable. Reply HOLD to place a hold."

YES

CAN PATRON PLACE HOLD?

NO

Return message: "<item> has been placed on hold for you."

YES

 DOES RECORD EXIST AT SPL?

NO

Return message: "<title> is available."

YES

Place hold
QR Codes

Make your own QR codes at Snappr

(photo credit: Michael Stephens)
Augmented Reality (AR)

Nearest Subway iPhone App by AcrossAir
Any Questions?

Thank You!

delicious.com/tgreenwalt/handheld