

Mobile Websites

Abstract

Government information is often not mobile friendly; increasing accessibility (especially of local information) is one way libraries can serve diverse users. Some libraries are providing services of this type in a desktop-oriented way already. This chapter discusses tools that can be used to make such sites more mobile friendly, including ones requiring little funds or technical background.

The most obvious way to leverage patrons' mobile devices is to put content on the Web. This chapter will address some examples of content librarians have put online specifically to serve underserved populations and then discuss how to make that content (and the rest of your library site) mobile-friendly. While examples tend to focus on smartphones, much of the information is relevant to web browsers on older phones as well.

Mobile-Friendly Portals

One of the core skills of librarianship is researching and organizing information. This naturally suggests creating portals for online information specially relevant to underserved populations—and making them mobile-friendly. The latter part of this chapter will address mobile site building; this part gives some examples of portals designed for underserved populations.

One example of a library-created portal for an underserved local population is the SkokieNet Community Information Network's New Immigrants site. The main page is a blog with news and events specially relevant to this population: citizenship classes, ethnic festivals, information about organizations providing

services. There are also subportals geared toward specific populations, such as the Russian, Chinese, and Filipino communities. The main page of each subportal is automatically generated from the main blog, using just the posts tagged for the relevant community. There are also links under each community to culture and language schools, places of worship, Skokie library resources, and other useful items (though unfortunately most of those links are not populated at this time).

SkokieNet New Immigrants site

www.skokie.net.org/community/newimmigrant

The content on the site is all in English, which presents a barrier to some new immigrants. However, there is a form allowing community members to submit events (which must be approved before they are posted), and the blog has multiple authors; it is easy to imagine a multilingual version. The site is built in Drupal, which makes it easy to allow for these user submissions and to build subportals around specific tags or categories.

Another library-created portal is Get Help Florida. According to its About Us page, “The site is intended to be a statewide portal to valuable e-government resources for those in need of help. With many government resources increasingly available online, it can be difficult for users in need of aid to find the help they need.”¹ The portal arose out of their experience as librarians, helping patrons navigate government information online and discovering where they encountered hurdles, as well as the core library value of access to information. In their words, “those who need the most

help are often the least technically capable of finding the correct services.”²

Get Help Florida
www.gethelpflorida.org

In order to help people find the services they need even if they are not adept at searching, the site is organized along several dimensions, with relevant resources showing up wherever they are applicable (which may be in multiple categories). A topic applicable has non-jargony categories like Job Help, Food Help, and Legal Help. People can also browse by county to find services near them. An Ask a Librarian button on every page links to chat, text, and e-mail options, while also gently reminding users of the site’s library origins.

Many of the tools used in building this site are open source, and the values, tools, and processes that went into the site are extensively document on the About Us page.

Get Help Florida: About Us
www.gethelpflorida.org/aboutus.shtml

If you are like me, the first thing you did when you saw the URLs for these sites was test them out on your phone. If you’re reading this after late 2012, you should be able to see a mobile version of SkokieNet, as a conversion project is in the works. As of this writing, though, neither site has a mobile version. They are presented as examples, not of mobile sites, but of the kinds of resources librarians can make available to mobile users from diverse populations.

Mobile Library Websites

If you’ve built such a site, how do you make it mobile? How can you make your whole library site more mobile-friendly?

This can be a lengthy process if you want to make a top-notch mobile site. The process involves studying site analytics to choose the key content to display on a mobile device and the most important devices to support; potentially purchasing vendor solutions for some mobile content (like your OPAC) and developing software in-house for others; designing a mobile theme that integrates with the branding of your desktop site; and more. However, I want to focus on mobile-friendly steps you can take even with limited time, budget, or expertise. While it takes significant investment to build an outstanding mobile site, you may be able to make

a good enough one with scarcely more than the push of a button. The three options I’ll explore are plugins; free and proprietary tools for automatically building mobile sites; and mobile stylesheets.

Plugins

If you’ve built your website on top of a well-supported content management system, like Drupal or WordPress, there are plugins that will take care of mobile-izing your site for you. This includes automatically detecting mobile devices; redirecting them to your mobile URL or displaying your site with a mobile theme; and supplying that theme.

The process is especially simple for WordPress, requiring no special knowledge and almost no work. Many people have already written plugins to make your site mobile, which can be found via the standard plugin installation page at <http://yourwordpresssite/wp-admin/plugin-install.php> and installed with a one-click installation process, without ever leaving the WordPress administration dashboard—no need to be an IT expert (see figure 3). As an example I’ll discuss WPTouch, which I use to provide the mobile theme for my blog.

WPTouch automatically detects mobile devices and presents them the mobile theme. The theme is clean and attractive, presenting the most crucial features of a blog (like post titles, number of comments, and tags) with a nice color scheme. Thumbnail versions of the blog posts let viewers scan quickly; drop-down arrows provide access to the full posts. While WPTouch leaves some of the information out—mobile sites need to be streamlined—it provides an easy link back to the desktop version so that content is still available. You can see the differences in figures 4 and 5, which are screenshots of (respectively) the desktop and mobile versions of my blog. (The top blog post differs because the screenshots were taken on different days.)

As you can see, all of the blog content is available and well presented in the mobile version. My sidebar widgets and top menu links are missing, so if I wanted to provide easy access to other pages on my mobile site, I’d have to put a little more thought into it—for instance, leveraging the category system (which WPTouch preserves) or selecting another plugin. However, installing WPTouch was literally less than a minute of work, so the return on investment is phenomenal. Keeping the plugin up-to-date is similarly easy. In fact, while I was writing this paragraph, I looked at WPTouch in my blog’s admin menu, noticed it was out of date, and upgraded it in less time than it took me to finish one sentence. It’s that easy.

If you’re using Drupal, there are also mobile modules available, though they take a little more work and knowledge to install. (They’re called “plugins” in



Figure 3
The plugin installation page at <http://andromedayelton.com/wp-admin/plugin-install.php>. This search returns 406 results.



Figure 4
Desktop version of the author's blog.

WordPress and “modules” in Drupal, but it’s the same idea: extra units of functionality you can bolt onto your site.) The Mobile Tools module is the best supported today and can be configured either to present a mobile theme or to redirect users to a mobile site. Both of these can be configured through a simple admin interface in Mobile Tools. However, the mobile theme option can interfere with Drupal caching, and to exercise the mobile site option you need to have enough back-end access to your webserver to set up the mobile URL. You don’t need to redesign your site—Mobile Tools will figure that out—but you need an address to serve the pages from.

Tools for Rapidly Building Mobile Sites

Tools to help you rapidly build mobile sites fall into two basic categories. Some take your existing site and apply a mobile-friendly presentation to it; others provide you with a set of user-friendly tools for selecting or creating content you want to have in your mobile



Figure 5
Mobile version of the author's blog.

site. This may entail typing (or cutting-and-pasting) content, such as your library hours, into the interface. It can also mean choosing widgets that pull in existing library content, like a blog, Facebook page, or Flickr account.

These tools come from a wide range of business models. Some (like Boopsie and LibraryThing’s Library Anywhere) are designed for the library community and can work with your OPAC as well as your website. Some are paid services (for design, subscription to hosting, or both); some have both free (though sometimes ad-supported) and paid service tiers. In general, there is no reason you should need to pay (or accept ads) in order to have a basic mobile library site, not including your catalog. If you want to include library-specific tools like your OPAC and databases, expect to pay—but you may not have to pay very much.

Here, I’ll give you an example of two tools: the first, a free tool that prompts you for content and then encodes it into a mobile version; the second, a paid tool to make your catalog mobile-friendly.

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Mobile Accessibility of Government Information

As the designers of Get Help Florida noted, government information is an important resource for a variety of underserved populations, but it is not always easy to access. How well does the federal government stack up in terms of mobile accessibility?

There is a movement to make government sites more mobile-friendly. The General Services Administration is sparking interagency discussions on challenges and best practices. Its [HowTo.gov](http://www.howto.gov) site provides additional resources and a gallery of mobile government apps.

GSA Mobile Government site
www.gsa.gov/makingmobilegov

HowTo.gov: Mobile resources
www.howto.gov/tech-solutions/mobile

However, many government sites still do not perform well on mobile devices. I accessed the ten most-visited government sites* on my Android phone. I also looked at the Spanish-language e-government portal (<http://usa.gov/gobiernousa>). On each of them, I checked to see if I was automatically redirected to a mobile site (or failing that, if an m.site.gov version was available), looked at a variety of subpages, and tried to see if I could use some key searches, forms, or documentation. I also checked the homepage of each at the W3C mobileOK validator (<http://validator.w3.org/mobile>).

My notes (see table 2) cover my subjective experience of trying to use these sites. If you've done a lot of mobile web browsing, you'll probably recognize the frustrations I talk about. If you haven't, I hope these details will help you understand how different the Internet can appear to mobile and desktop users and to see which details matter in considering mobile design.

As you can see, major government sites are not very mobile-friendly. There is, of course, nothing a library can do to make the forms or interactions on these sites more usable on mobile devices. However, as with Get Help Florida, librarians can do a lot to select high-priority information and present it in a mobile-friendly format.

What government information should be presented? While the answer always depends on local needs, the Pew Internet & American Life Project provides some guidance. Its 2010 report, *Government Online*, found that around half of online government users dealt with local government services; a quarter with state government; and fewer still with federal government.[†] Therefore—as is so often the case—libraries can have the greatest impact by considering their communities. Both SkokieNet (local resources) and Get Help Florida (state government) are examples of this.

How does this relate specifically to underserved populations? While a large percentage of Internet users have used government websites, their usage patterns vary tremendously. People with lower educational attainment are much less likely to use online government than those with higher educational levels. And whites are enormously more likely than blacks and Hispanics to use government websites—the percentage of whites who use e-government services is six to eight times as high as the percentage of blacks or Hispanics.

This is striking because we saw some of the opposite patterns with mobile Internet use. Blacks and Hispanics are more likely than whites to have smartphones; nonwhites and people with lower education are more likely to have the phone as their primary Internet access than are whites and college-educated people. In other words, the mobile-unfriendliness of government websites makes these populations *less* likely to use e-government services, even as government and civic discourse increasingly move online.

It is important that these services be mobile-accessible lest already vulnerable groups be further disenfranchised. Libraries have a role to play, not only in terms of collecting and presenting information in a mobile-friendly format, but also advocating for the online information needs of their patrons (especially at the local level) and educating them about the options available.

* comScore, "Government Sites Reach 40 Percent of Americans but Lag behind Overall Internet Growth," news release, Sept. 12, 2011, www.comscore.com/Press_Events/Press_Releases/2011/9/Government_Sites_Reach_40_Percent_of_Americans_but_Lag_Behind_Overall_Internet_Growth.

† Aaron Smith, *Government Online* (Washington DC: Pew Internet & American Life Project, April 27, 2010), xx.

Government Website	Mobile version?	W3C score (%)	Notes on mobile experience
nih.gov National Institutes of Health	no	0	Some aspects hard to use (large tables; flyout menus cover up content).
ed.gov Department of Education	no	0	Mostly usable but overcrowded; would benefit from editing to highlight key info. Some documents are in PDF or Word, not phone-friendly. answers.ed.gov does have mobile version; it's not clear what this page is for. (FAQ? site search results? search of a knowledge base?) Its design is nice though Call Us link doesn't work.
commerce.gov Department of Commerce	no	0	Design is clean enough to be fairly readable. Nested drop-down menus hard to use.
www.irs.gov Internal Revenue Service	no	0	irs.gov does not resolve; must use www.irs.gov. Extremely overcrowded for phone use. Documents default to PDF; some HTML available but hard to find and organized in a big, hard-to-read table. Layout obscures some functions. However, I did successfully order a tax return transcript via my phone.
ssa.gov Social Security Administration	no	0	Fairly navigable due to clean design—requires panning to see everything, but most individual content areas fit on my screen. The #1 item on the list of top services (getting or replacing a card) cannot be completed on the phone as it requires printing out a PDF. Online forms hard to use.
usajobs.gov USAJOBS	no	3	Wide, table-based layout requires lots of panning for basic functions. Job application process involves printing, PDFs, and the need to consult multiple windows—cannot be completed on a phone.
state.gov Department of State	yes!	63*	Detects device and redirects to m.state.gov, which provides a stripped-down set of site functions oriented around news and country information. Simply presented, resizes well; subpages are also mobile-formatted. Offers an iPhone app for travelers. Provides link to full site (could be marked more clearly); full site has obvious link to mobile version.
uscis.gov Citizenship and Immigration Services	no	0	Crowded. Many links are to PDFs.
nps.gov National Park Service	no	0	Big, splashy slideshow is gorgeous on a desktop but works poorly on a phone. Map-based Find a Park is hard to use (and doesn't use geolocation—what a missed opportunity!). Facebook, iTunes, Twitter, and YouTube presence provides some mobile-friendly options to connect, but doesn't help with accessing core site resources. Hard to click on the correct menu item.
www.nasa.gov NASA	yes!	72†	nasa.gov does not work; must use www.nasa.gov (but this redirects to mobile.nasa.gov appropriately). Provides stripped-down but visually compelling set of menus; need to scroll a ways to see all options. Provides obvious link to full site—which does not then link back. Integrates Twitter and free e-books (!) available in a variety of formats (!). Centered on info—news, videos, TV, etc. TV not accessible on all mobile phones (Flash) but clearly communicates this.
usa.gov/ gobiernousa Spanish language portal	yes!	93‡	Very brief: top info, contact information, like on Facebook and Twitter; links to Web and English version. Not much indication what it's for. Search results are mobile-friendly and mostly Spanish-language results.

* 63% is for mobile version, m.state.gov. The full version, state.gov, is 0% mobile-friendly.

† 72% is for mobile version. The full version, www.nasa.gov, is 30% mobile-friendly.

‡ 93% is for mobile version. The full version, usa.gov/gobiernousa, is 40% mobile-friendly.

Table 2
Notes on mobile accessibility of government information

There are many more tools for building mobile sites than the ones mentioned in this section. They include:

Boopsie

www.boopsie.com/libraries.html

Google Sites

<http://sites.google.com/mobilize>

Mobify

<http://mobify.com>

mobiSiteGalore

www.mobisitegalore.com

Mofuse

www.mofuse.com

Winksite

<http://winksite.com>

Wirenode

www.wirenode.com

Zinadoo

www.zinadoo.com

Your ILS and database vendors may also offer their own mobile options.

First, the Mobile Site Generator. Developed by Chad Haeefe, Emerging Technologies librarian at UNC–Chapel Hill, this tool automatically generates the code to provide a mobile site. To use it, you'll need to:

- Download the software it runs on (the iUI framework) and install it to your webserver. Note that it was designed for iUI version 0.31, which is not the latest version, but is still available at the iUI site as of this writing.
- Fill out the Mobile Site Generator page with your page titles and menu links. (You can optionally pull in content from RSS feeds, but this feature is still experimental.) Click Submit, and copy the resulting code into a file on your webserver.
- Fill in this file with any additional needed content. For example, the Mobile Site Generator will generate an Hours page if you ask it to; you'll then need to fill in your hours. The file will make it clear where that information goes.

Mobile Site Generator

www.hiddenpeanuts.com/msg



Figure 6
Mobile site of the Fayetteville (NY) Free Library

When I tried this, I had a test site running in under twenty minutes. A library site would take longer to generate as it would have more content, but the additional work would be in selecting appropriate content and writing in English (or some other human language), not in code—no special technical knowledge is required after the first ten or so minutes. For an example of a library (not UNC!) using this mobile site generator in the wild, see figure 6.

Our second mobile web tool example is Library Anywhere, part of the LibraryThing for Libraries suite of tools. Library Anywhere is a yearly subscription service that creates a mobile version of your website and OPAC. You can make a simple website quickly from a range of preset features, including an events feed, Google Maps, and ask a librarian. You can also customize your site further if you're comfortable with XML. The mobile catalog is automatically created from your existing catalog and stays in sync with it as you make changes. It allows patrons to do the standard things they'd expect to in a catalog—search, place holds, renew items—as well as some mobile-specific things, like use geolocation to find nearby libraries. It's Section 508-compliant and works on any phone with a web browser (not just smartphones), so you can use it to reach out to a wide range of patrons. You can see what it looks like in figure 7, or try out the demo page on your phone or computer.

Library Anywhere
www.librarything.com/forlibraries

Library Anywhere demo page
www.libanywhere.com

Stylesheets

Finally, you can create your own mobile-optimized skin for your site using CSS. Again, this has the advantage that you don't have to redesign your underlying site; you can just present it differently for different devices. (In fact, you could have different versions for different kinds of mobile devices, including smartphones versus feature phones or phones versus tablets—though you might find that more work than it's worth.)

The idea of the mobile stylesheet is that you consider the limitations of a small screen and eliminate or restyle elements that would cause problems in that medium. The major limitations are:

- small screen size (The MacBook I'm writing this on has a 13.3-inch diagonal, 1280 × 800 pixel display; my phone, a Samsung Galaxy S Android phone, has a 4-inch diagonal, 480 × 800 pixel display.)
- low bandwidth
- no mouse
- video is unreliable

What this means for your stylesheet in practical terms is as follows.

Small Screen Size

Multicolumn layouts don't work; the user won't be able to see more than one column (at an acceptable size) at a time. In particular, this means that each column has to contain whatever explanation and navigation elements are necessary to understand and interact with it. If you have main content in one column and navigation in a right sidebar, the user may not even notice the navigation.

Small font sizes will be unreadable. Avoid them.

Low Bandwidth

Mobile device users may be getting decent bandwidth via a Wi-Fi hotspot, or they may be desperately lapping up the trickle of Internet they're getting with one bar of service, but they're definitely not getting the firehose of an Ethernet cable plugged into the wall. A stylish, image-heavy site that looks beautiful on a desktop or laptop may be unusably slow on a mobile device. Therefore, don't make your mobile users download anything they don't absolutely have to.



Figure 7
Library Anywhere, Portland (ME) Public Library

Images should be kept small (like a logo)—and make sure they actually have small file sizes and aren't huge images being resized for display by the CSS! Images should not be used for navigation buttons; use text or CSS effects (like color) instead. Have a class in your mobile stylesheet including `display: none` and apply it to as many images as possible.

Your CSS file should be as small as possible, too. Style as few elements as you can get away with (and style them as simply as possible), avoid redundancy, and use a CSS minifier (there are free tools online) to strip unnecessary characters.

No Mouse

The lack of mouse has two effects.

First, with no mouse, there are no mouseovers. If you have flyout menus or explanatory text that depend on mouseovers, your mobile users will never see them. Limit your navigation and other interactions to things that can be accomplished by clicking.

Second, users' pointing devices are, literally, pointers—their fingers. If the clickable elements of your page are too small or too close together, people will have trouble activating them; fingers are surprisingly large compared to mobile screens. Set `display: block` and add padding to clickable elements to ensure good spacing; make sure the font size or CSS box is not too small.

Video Iffy

Apple's iOS is famously hostile to Flash, and Android devices may lack it as well (though it's much easier to install). Even if a device has Flash or you're using a non-Flash technology to display video, bandwidth and screen size limitations may make it display poorly. Feature phones won't display video. And if people are using a browser on an eInk device, not only is it black-and-white, but it can't rewrite the display fast enough for any sort of video.

If you've written a mobile stylesheet, how do you get mobile devices (and only mobile devices) to use it? The easy way is to add a line to your website that looks something like this³:

```
<link media="only screen and
max-device-width: 480px) "
href="mobile.css" type="text/css"
rel="stylesheet" />
```

In theory, this means that anything with a screen width of 480 pixels or fewer will use this stylesheet; bigger screens (laptops, desktops, tablets) will look for another stylesheet. In practice, mobile device browsers vary tremendously in their adherence to this part of the CSS specification. If you want to ensure that all mobile devices use your mobile presentation, you'll have to write a bunch of fallback rules (see the Resources section below). Alternately, you might decide that it's not worth it to you to be comprehensive; you may be able to cover the devices your patrons use most with much less work.

Picking a Tool

Clearly, there are a lot of options for making your website mobile-friendly. How can you choose the one that's right for you? As I read through the features provided by various tools and the accounts of librarians who had been active in mobile technology initiatives in their own libraries (see the Resources section), five questions emerged. Ask yourself these to clarify your priorities and guide tool selection.

Is the tool providing a mobile presentation of your existing site or helping you build a new site? There are advantages and disadvantages to each. A mobile presentation can be incredibly easy to set up,

and it instantly reflects whatever changes you make to your desktop version. However, you need software that works with your existing site. It's easy (and free) to set up a mobile presentation of a WordPress site, for example, but you're going to need something more specialized (and not free) to make your catalog and databases mobile-friendly. Mobile stylesheets are easy and free if you can use one of the ones referenced in the Resources section, but if you want something customized, you're going to have to spend a fair amount of time writing it and possibly rewriting your site's HTML to dovetail with it. Furthermore, mobile users often don't need all the features of your website, or even want to sort through them on a small screen; reskinning your site may not provide the best usability. And, of course—while having a mobile site is a gesture of friendliness and goodwill to many users—it doesn't particularly target diverse populations, unless you are mobile-izing a site already targeted at their needs.

Building a new site, by contrast, lets you consider user needs more carefully. Who's the target audience for your mobile site, and what needs do they express? What do your site analytics tell you about the devices people are using and the content they access through those devices? Offering a non-English version of a mobile site may be less onerous than translating your full site since purpose-built mobile sites typically offer only a fraction of the content. On the other hand, building a site can be time-consuming (if you want it to be more than a skeleton version of the desktop site) and is less likely to be free.

What's the budget? Some of these tools are free, both to acquire and to run, though you may need to supply a bit of technical knowledge. Some are offered on a subscription basis, which includes hosting your site. This ranges from around \$10 per month to several hundred (among those that advertise their rates), depending on your traffic and the complexity of your site. Be aware that in some cases the lower cost subscription tiers include ads.

How much control do you need over branding? This includes the appearance of your site (e.g., color schemes, logos) as well as its domain name. Some services let you use your own domain name; some don't.

How much technical support do you need? While I've tried to avoid tools that require too much specialized knowledge, the more tech support you need, the less likely free tools are to work for you. Do you have access to your webserver (and know how to install things to it), or do you have to go through someone for that? Can you write CSS or XML—or learn how?

How library-ish do you want the site to be? If you want to display library-specific information resources such as the OPAC, databases, or LibGuides, you'll need to be talking to a library vendor, such as Boopsie or Library Anywhere (or your ILS, database, or LibGuides vendor). If you want to display more

general types of information resources such as blog posts, photos, an events calendar, or social media, you have more options.

Resources

Necessarily, in one chapter, I've only scratched the surface of how you can build a library mobile web presence and the issues you might want to think about in doing so. If you want to go into more depth on the topics in this chapter, here's an array of other resources to help.

“Auraria Library Goes Mobile”

<http://milehighbrarian.net/?q=auraria-library-goes-mobile>

Nina McHale's informative slide deck on how the Auraria Library site went mobile. This was a complete redesign, showing all the thought that can go into a sophisticated mobile site.

“Building a Mobile Website: One Block at a Time”

www.slideshare.net/chaefe/chaefe/building-a-mobile-website-one-block-at-a-time

Chad Haefele (who built the UNC mobile web generator) walks us through the issues to consider in building a mobile presence.

“Plugins Add New Screen”

http://codex.wordpress.org/Plugins_Add_New_Screen
Latest details on installing WordPress plugins.

Drupal Mobile

<http://groups.drupal.org/mobile>
Resources for, and discussion of, Drupal mobile sites.

Using Drupal: Choosing and Configuring Modules to Build Dynamic Websites.

Angela Byron, Addison Berry, Nathan Haug, Jeff Eaton, James Walker, Jeff Robbins. O'Reilly Media, 2008.

A fantastic resource for the Drupal beginner, and a useful reference for intermediate users too. While it doesn't specifically address mobile modules or theming, it does walk you through building a Drupal site, including selecting and configuring modules and customizing themes. If you're not familiar with Drupal but would like to be, this is an outstanding book for building your knowledge and confidence to the point that you can tackle mobile theming more independently. Check for an updated edition—the 2008 version covers Drupal 6 and will likely be useful through 2012, but Drupal 7 is rapidly becoming the standard, and Drupal 8 is in development.

Everything else by O'Reilly Media

No: really. These useful books, with their distinctive

pointillist animals for cover art, are a leading reference source for all manner of computer topics and an outstanding starting point for self-teaching. They are typically clearly written, practical, hands-on, and reliable. O'Reilly also makes all of them available—in DRM-free e-books—via a subscription to its Safari service. Maybe your library already has a subscription.

Mobile Library

<http://librarylounge.pbworks.com/w/page/25536600/Mobile%20Library>

Lengthy collection of links to mobile site generators and plugins; tools for seeing what your site looks like to mobile users; tools for providing library content that natively support mobile options; and books and articles to help you learn more.

“7 Tools to Create a Mobile Library Website (without Technical Knowledge!)”

<http://oedb.org/blogs/ilibrarian/2011/7-tools-to-create-a-mobile-library-website-without-technical-knowledge>

Comparison of the pricing and features of seven mobile site generators. Not only will it help you compare these seven; it'll give you ideas of features to look for as you investigate other tools.

Musings about Librarianship

<http://musingsaboutlibrarianship.blogspot.com>

Aaron Tay's blog often covers library technology issues in a thoughtful, in-depth way. Two particularly useful posts: “What Are Mobile Friendly Library Databases Offering? A Survey” (<http://musingsaboutlibrarianship.blogspot.com/2011/08/what-are-mobile-friendly-library.html>) compares the usability and features of vendors' mobile database options; “What Are Mobile Friendly Library Sites Offering? A Survey” (<http://musingsaboutlibrarianship.blogspot.com/2010/04/comparison-of-40-mobile-library-sites.html>) compares the layout, content, and other features of more than forty mobile library websites. If you want to see all the things your library mobile site could do, this is an excellent place to start.

“Return of the Mobile Stylesheet”

www.alistapart.com/articles/return-of-the-mobile-stylesheet

The how, and why, of the code jiu-jitsu you'll need to ensure your mobile stylesheet displays on a wide range of devices.

“How to Build a Mobile Website”

www.smashingmagazine.com/2010/11/03/how-to-build-a-mobile-website

Specific code you'll need to address the limitations (and, in some cases, build on the strengths) of mobile devices using CSS.

“The 5-Minute CSS Mobile Makeover”

<http://perishablepress.com/press/2009/08/02/the-5-minute-css-mobile-makeover>

Gives you a complete stylesheet you can apply right away to make a generic, but highly workable, mobile site. Also explains the reasoning behind the elements of this stylesheet.

“Making Your Blog Friendly to Mobile Devices”

www.librarywebchic.net/stories-tutorials-and-code-demonstrations/making-your-blog-friendly-to-mobile-devices

Another mobile stylesheet you can use, geared toward WordPress sites.

Mobile Technology and Libraries (Tech Set #2)

Jason Griffey. Neal-Schuman, 2010.

Mobile style sheets, library web apps, mobile databases, and more, from a well-known library technology expert.

CSS Compressor & Minifier

www.minifycss.com/css-compressor

Minify your CSS with this free tool.

Firebug/Chrome Developer Tools

Firebug (a plugin for Firefox) and Chrome Developer Tools (built-in: View > Developer > Tools) let you

see the CSS controlling every element of a webpage. Useful for understanding how sites are put together, learning about the effects of different CSS declarations, and isolating problem elements for debugging.

DCPL iPhone App Code

<http://dclibrarylabs.org/archives/476>

The code for the DC Public Library’s iPhone app is available via a Creative Commons BY-NC-SA license, so you’re free to download it and alter it for your non-commercial purposes as long as you release your own products under a compatible license. In other words, you’re already most of the way to having your own library iPhone app. DCPL built it for you.

Notes

1. “About Us,” Get Help Florida, last updated Oct. 13, 2011, www.gethelpflorida.org/aboutus.shtml.
2. “Who We Are,” Get Help Florida, last updated Oct. 13, 2011, www.gethelpflorida.org/aboutus.shtml.
3. Jason Griffey, *Mobile Technology and Libraries (Tech Set #2)* (Neal-Schuman, 2010), 40.