

Online Law Library Maps*

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Ms. Paulus-Jagrič accessed the Web pages of 190 law libraries to determine which had linked their online library maps to OPAC locations. She summarizes her findings and analyzes the components of the most successful online law library maps.

¶1 I became interested in online maps while working at New York University (NYU) Law School Library, a very challenging space comprised of six levels: a ground floor and two basements below it in Vanderbilt Hall, the original law school building; two levels under Sullivan Street between West Third and West Fourth Streets, connected to Vanderbilt Hall by a spectacular staircase; and a subbasement under the newest law school building, Furman Hall, on the corner of West Third and Sullivan.¹ Given this complex configuration, NYU law librarians spend a considerable amount of their time at the Reference Desk—perhaps as much as 50%—giving directional information. Eventually, in the course of a major library renovation, Associate Director for Research and Online Services Jay Shuman suggested that I find a software package that would enable us to load maps on the library Web page. I selected SmartDraw Professional Plus 6.²

¶2 Early in the process of drawing the maps, I learned from Associate Director for Technology Leslie Rich that Web maps could easily be linked to the location

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** Reference/Educational Services Librarian, New York University Law School Library, New York, New York. I would like to thank the following people who were kind enough to answer my map-related questions: Jeff Allman, Digital Resources Coordinator, Paul L. Boley Law Library, Lewis & Clark Law School; Rick Buckingham, Legal Reference Librarian, Suffolk University Law School; Francis H. Chin, Director of Administrative Computing, Brooklyn Law School; Jeff Coolman, Web/Media Support Specialist, Creighton University School of Law; Michelene Decrow, Administrative Manager/USM-L List Mistress, University of Maine School of Law; Dominick Grillo, Assistant Director for Technology and Collection Services, Hofstra University Law School; Milan Komljenovic, Manager of Information Technology, and Amy Lovell, Manager of Database Systems, Duquesne University Center for Legal Information; Rob Truman, Assistant Director, Electronic Information Services, Boley Law Library, Lewis & Clark Law School; Scott Webel, Web and Administrative Assistant, Tarlton Law Library, University of Texas School of Law; Linda Whisman, Director and Professor of Law, Leigh H. Taylor Law Library, Southwestern Law School. Special thanks to Leslie Rich, Associate Director for Technology, NYU Law Library, for her help, patience, and comments on an early draft, and to Jay Shuman, Associate Director for Research and Online Services, NYU Law Library, for getting me started on this project.

1. For more information on Furman Hall, dedicated on Jan. 22, 2004, see NYU School of Law Dedicates Furman Hall, <http://www.law.nyu.edu/newbuilding> (last visited July 18, 2006).

2. For information on the current version of a business graphics program, see SmartDraw, <http://www.smartdraw.com/exp/ste/home> (last visited July 18, 2006).

fields in Julius, NYU Law Library's online catalog (<http://julius.law.nyu.edu>). When patrons found a record for a useful book, they could click on the name of the room in the location box and a library map would pop up. That struck me as a remarkably useful improvement to our OPAC in this labyrinthine space, where most of the collection is underground, orientation is difficult even for the initiated, and patrons often become frustrated searching for apparently inaccessible materials.

¶3 Some library administrators may feel that their facilities are so new, so clear in layout and organization, so unlike NYU Law Library, that any maps, digital or otherwise, are not worth the time and effort necessary to create and maintain them. The truth, however, is that any library can be confusing, especially for incoming first-year law students coping with the stress of beginning law school. Maps would be worthwhile if they were *only* useful for first-year law student orientation or for assisting library guests. But linked to OPAC locations, their value goes beyond initial orientation, providing assistance to the always-time-conscious law student who needs to retrieve library materials. Maps help to make students independent of reference staff, who are not always available to assist them, at least in this way if not in others.

¶4 NYU now has six maps of the full floors on the library's Web site (www.law.nyu.edu/library/map), each linked to other documents and Web sites;³ an eight-page, black-and-white handout of the full-floor maps with added information on laptop printing and the wireless network; and twenty-three Web maps linked to Julius (each of the six floors contains from one to five specific locations). For the Julius maps, we recycled the basic full-floor maps, retained the color of the specific room where the book can be found, and changed the colors of the other locations on that level, if any, to gray.⁴ From students' reactions when we demonstrate the online versions at the Reference Desk or in library training sessions, it is clear that the maps are greatly appreciated.

Integrated Library Systems in Law Schools and Location Linking

¶5 Curious to learn whether law library maps are widely available and whether linking them to OPACs is a common practice, I used the alphabetical list of law

3. Nothing can assuage the pain for a student referred to a microform source, but the maps actually do help. The map to the subbasement under Sullivan Street and the **Media Center** link on the library home page both have links to the Golding Media Center home page, which contains, among other things, the Media Center Guides and the Cabinet Number Floor Plan, also drawn in Smartdraw. The guides tell students which cabinet to go to, and the floor plan shows them where in the room to find it. All the microform records in Julius have the link **Connect to Golding Media Center Location Guides**. Without this information, students had to request help from the reference librarian, if one was on duty.
4. Try this by going to this Julius record for the *New York University Law Review*, <http://julius.law.nyu.edu/search/tNYU+law+review/tnyu+law+review/1%2C1%2C2%2CB/frameset&FF=tnyu+law+review&2%2C%2C2> (last visited July 18, 2006).

schools on the ABA home page to access 190 of the 193 ABA-approved U.S. law school home pages.⁵ I went directly to law library home pages, where most library maps are located. I typically found them in an **About the Library** link, or under **Library Information**, although there were exceptions.

¶6 I identified each automation system by using the lib-web-cats directory on the Library Technology Guides Web site.⁶ Then I searched each OPAC for several items typically held by law libraries, looking for linked location fields.⁷

¶7 As indicated in table 1, the integrated library systems most commonly used in law school libraries are Voyager, Aleph 500, and the SIRSI and Innovative systems, with Innovative's Millennium being the clear leader in the field. Four others⁸ are used by only five libraries, a mere 2.6% of the 190 libraries I examined, and I did not include them in my totals.

¶8 Table 2 indicates the number of law libraries that have maps on their Web site and that directly or indirectly link information, including maps, to OPAC locations.

¶9 This shows that, at the moment,⁹ only libraries using Innovative Interfaces, Inc. (III) systems directly link OPAC locations to library maps. The implication is that the other systems do not offer that option, although all appear to permit (if

Table 1

Library Automation Systems Used in Academic Law Libraries

	Dynix/ Horizon	Endeavor/ Voyager	SIRSI*	ExLibris/ Aleph 500	Innovative**	VTLS/VTLS	GEAC	Prof. Software
No.	2	29	17	16	123	1	1	1
%	1%	15%	9.5%	8.4%	64%	.5%	.5%	.5%

* Sixteen libraries use SIRSI's Unicorn; one library uses SIRSI's DRA.

** Twenty-five libraries use Innovative's Innopac; ninety-eight libraries use Innovative's Millennium.

5. Section of Legal Educ. & Admissions to the Bar, Am. Bar Ass'n, Alphabetical School List, <http://www.abanet.org/legaled/approvedlawschools/alpha.html> (last visited July 18, 2006). I excluded the three Puerto Rican schools, whose Web sites are in Spanish, but did include the Judge Advocate General's School.
6. Marshall Breeding, lib-web-cats: A Directory of Libraries throughout the World, <http://www.library-technology.org/libwebcats> (last visited July 18, 2006). See Marshall Breeding, *Using the lib-web-cats Directory*, INFO. TODAY, Nov. 2002, at 46, available at <http://www.librarytechnology.org/ltg-display-text.pl?RC=10347>.
7. I ran title searches for *American Constitutional Law*, *Harvard Law Review*, and at least one federal source (*Federal Register*, *Code of Federal Regulations*, or *United States Code*); a few author searches; and keyword searches for the words **international**, **foreign**, or **Wests**. I looked at, conservatively, forty to fifty records per library.
8. The less-common integrated library systems in law libraries are Dynix/Horizon, VTLS, GEAC, and Professional Software.
9. Hofstra University's Barbara and Maurice A. Deane Law Library used SIRSI/DRA until the end of 2005, when it migrated to Innovative's Millennium system. It was the only library I found that linked locations directly to library maps in a system other than Innovative.

Table 2

Maps on Academic Law Library Web Sites

ILS	Maps on law library or OPAC home page	Maps linked directly to OPAC locations	Indirect links to maps	Direct links to other information*
III/ Millennium	57	11	5	21
	13	1	2	4
III/Innopac				
Endeavor/ Voyager	20	0	2	1
SIRSI/ Unicorn	9	0	1	3
SIRSI/ DRA	1	0	0	0
ExLibris/ Aleph500	13	0	6	12
Total	113	12	16	41

* Such as staff contact information or a textual location guide.

not to encourage) linking to other information and indirectly maps.¹⁰ Still, only twelve of the seventy Innovative law libraries that already have maps on their Web sites actually link them to location fields. Possibly the fifty-eight Innovative law libraries that do not might do so if they knew how easy it is.

¶10 In III's Millennium, one begins by accessing Web Options, a page with a long list of selections. The option "LOC" is part of the Web OPAC and does not have to be purchased separately. For every location that should link to something, the URL is simply typed in. At NYU, we want the locations to point to the maps, so the maps' URLs are inserted in a box opposite each location's abbreviation.¹¹ Updating our twenty-three Julius maps as collections are relocated or spaces reconfigured is easily done in SmartDraw. Then one clicks "Publish to the Web" in SmartDraw's file drop-down menu and chooses whether to "Publish To SmartDrawNet," "View My Drawings on SmartDrawNet,"¹² or "Export to HTML

10. In my survey, a link to "other information" occurred when, for example, in ExLibris/Aleph libraries, the information "I's" in location fields were linked to library hours or staff contact information; if that information ultimately connected to the law library home page and then to maps, it was an "indirect link."

11. The only problem was that we wanted the maps to open in separate windows, so that a patron's original Julius search would remain intact. Innovative support provided the answer to this question. For example, if we want the Lasdon Room map to open in a separate window, we would type "http://www.law.nyu.edu/library/map/julius/lasdon.htm onClick="window.open('http://www.law.nyu.edu/library/map/julius/lasdon.htm'); return false" in the Web Options file.

12. SmartDrawNet is "your own personal web space for sharing your drawings with friends, colleagues, and clients. It is included at no additional charge when you purchase a copy of SmartDraw." SmartDraw, How to Draw Floor Plans, <http://www.smartdraw.com/tutorials/floorplans/tutorial13.htm> (last visited Aug. 4, 2006).

Files.” We select the last option, import the files into MS FrontPage, our Web publishing tool, and upload them to the Web.¹³

¶11 I wrote the other three companies requesting information about linking locations in their systems. A sales support manager at Ex Libris told me that its Aleph 500 system does not link locations “automatically,” which I understood to mean that there is no built-into-the-system way to do so.¹⁴ She explained that some Ex Libris customers link locations on their own and suggested that I contact them, but none of the librarians I wrote at Ex Libris/Aleph 500 libraries responded to my questions.

¶12 I failed to get any information from Endeavor about its Voyager system, or from any libraries that use it. SIRSI did not respond either, and it was of more interest to me. At the time of my survey, SIRSI’s DRA was the only system other than III that appeared to support linking maps to location fields, although only one of the two SIRSI/DRA libraries, Hofstra University School of Law’s Deane Law Library, did so.¹⁵ However, Dominick Grillo, who created Hofstra’s maps, found no built-in way to link them to the OPAC and invented his own technique.¹⁶

¶13 Explaining how he implemented the linking process in SIRSI, Mr. Grillo wrote:

In HoldingsItemFormat.html you want to insert the line:

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<!--DRA_INCLUDE file="mapchoice.html"-->. We placed the line near the location field, so the info would show up as a link underneath the location text. “Mapchoice.html” (or pick your own name) is the file that determines which map is shown. . . . The logic is based on location code. It looks first for location code. If a location code matches, then it either shows a specific map (for example we have a code just for reserve items, and they are all in one place, so only one map is needed), or it drills down farther. “020101” is the location code for our general law classifieds, and since those are all over, I then look at the call number. Based on the call number, a map image is chosen. The line after the call number or location code check gets placed where the DRA_INCLUDE line from above was in the original OPAC display. In short, a lot of nested IF<>THEN<>ELSEs. Once you figure out how, it’s not too hard to implement.17
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This information may be conceptually useful not only to other SIRSI libraries, but also to any non-Innovative library that decides to link its maps to OPAC locations.¹⁸

13. SmartDraw exports two files, a jpg and an html, for each drawing. Both files are then imported into FrontPage for uploading to the Web site.
14. E-mail from Kathryn Heavey, Sales Support Manager, Ex Libris, Inc., to the author (Oct. 3, 2005) (on file with author).
15. Hofstra now uses Innovative. *See supra* note 9.
16. E-mail from Dominick Grillo, Assistant Director for Technology and Collection Services, Deane Law Library, Hofstra University Law School, to the author (Dec. 5, 2005) (on file with author).
17. E-mail from Dominick Grillo, Assistant Director for Technology and Collection Services, Deane Law Library, Hofstra University Law School, to the author (Dec. 12, 2005) (on file with author).
18. As of July 2006, Hofstra’s excellent maps have not yet been linked to the new catalog. E-mail from Dominick Grillo, Assistant Director for Technology and Collection Services, Deane Law Library, Hofstra University Law School (July 28, 2006) (on file with author).

¶14 As a result of this research, I must conclude that, of the integrated systems most commonly used in law libraries, Innovative is the only one to incorporate linking information to location fields with the rest of its processes. Although it may not be impossible to do in other systems, it appears to require a high degree of ingenuity.

¶15 The inevitable question is, if so few libraries currently provide OPAC location links to maps, and only one of the four integrated library systems makes it easy to do, why should other libraries even consider doing it? After all, most libraries have enough to do just in maintaining the services, online and otherwise, that they already provide. The answer is that this particular service helps to decrease patron frustration associated with using books and other physical materials. Students are happiest when their materials are just a click or two away. Familiar with the convenience and speed of online resources, they often appear to resent referrals to physical resources; their problems begin just with finding them in the first place. This reluctance often operates to students' detriment because comprehensive, in-depth research frequently should include sources that are only available in hard copy; without them, research may be incomplete or even inaccurate.¹⁹ By improving the process whereby students gain familiarity with a library's physical structure and physical resources, librarians increase patron satisfaction and demonstrate in a tangible way that they have their users' best interests at heart.

What Makes a Good Map?

¶16 To begin with a very basic point, a good map should never be visually distracting. Flash and animation are techniques that should be used with great discretion, and not only because they can dramatically slow down some computers. Too much activity, too many colors, and too much interactivity detract from a map's primary mission, which is to direct a user, who often is confused already, to a specific location. Rather than show examples of maps that I feel make this mistake, I will offer a positive example of a library that uses sophisticated technology in a restrained way while offering high-quality, in-depth information to users.

¶17 Be sure to use Internet Explorer when you access the maps at the Creighton University School of Law Web site (<http://culaw2.creighton.edu>). Mouse over

19. Students who are dedicated to online research and who are utterly indifferent to anything but electronic resources will still benefit from online maps. They will certainly need to know where the computer lab is or where in the library they can log onto the wireless network, and online maps, whether or not linked to the OPAC, are the most convenient way for them to get such information. However, I am not alone in believing that physical resources retain their importance. See Michelle M. Wu, *Why Print and Electronic Resources Are Essential to the Academic Law Library*, 97 LAW LIBR. J. 233, 235, 2005 LAW LIBR. J. 14, ¶ 6 (footnote omitted) ("Despite tremendous strides in electronic publishing and in digitization technologies, the majority of the world's published materials remain in physical (print or microform) formats only.").

Klutznick Law Library and click **Interactive Library Map**. With your cursor in the dark blue area you will see four tabs at the top of the page: **Library Info**, **Find Books** (by type of material, e.g., ALR, Periodicals, or Federal Statutes; subject; or stack number), **Find Place** (by room number on either floor or by the room's name on the upper or lower level), and **Find Staff** (by name, position, or room number). The library has two levels and as you search, the map automatically flips to the level you need and flashes the room or stack where you need to go. For example, when looking for staff information, no matter how you search you will be given a staff member's name, position, office number, photo, and phone and e-mail contact information, while the person's office location flashes on the map. Mousing over rooms in the light blue area gives the rooms' names and numbers in a pop-up; mousing over stacks gives their contents by name or their call number ranges. Jeff Coolman, the library's Web/media support specialist, developed the map using Javascript. He optimized images to ensure that the map would load quickly; it is interfaced with a database²⁰ so stacks and labels can be easily updated.²¹

¶18 A good map should be clear and give patrons enough information to enable them to find what they need. How clear it should be is a difficult question, but an important one for libraries debating whether to link maps to their OPAC location fields. Libraries must consider both the degree of specificity they can afford, in terms of both the cost of any necessary software and the time needed to train staff to use it and make all the inevitable updates, and the degree of specificity actually necessary to improve patrons' library experience. It may be technically feasible to direct a patron to a specific shelf, but it may also require a full-time staff person to keep that map accurate, as an obsolete map can produce as much (or more) patron frustration as no map at all, and be considerably more expensive. At NYU Law Library, we feel that it is sufficient to send students to the correct room.

¶19 Suffolk University Law School's Moakley Law Library offers very precise maps²² on its Web site (www.law.suffolk.edu/library); select **About the Library**, then **Maps**. The Map Index page has links to individual maps of the fifth through seventh floors. Click on a floor link and select an item from one of the very detailed drop-down menus on the left side of the page (e.g., Massachusetts materials on the fifth floor, specific titles on the sixth floor, title ranges of periodicals on the seventh floor); the item's location will appear in bright red on the black and

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20. Coolman says he uses MySQL databases to drive the Web site at Creighton and to support the map. "The database simply acts as a content management system for the application as any server-side scripting would support a dynamically-driven website. Sections of Javascript and HTML code are produced on the fly built around the content from the database." E-mail from Jeff Coolman, Web/Media Support Specialist, Creighton University School of Law, to the author (July 27, 2006) (on file with author).
 21. E-mail from Jeff Coolman, Web/Media Support Specialist, Creighton University School of Law, to the author (Mar. 31, 2005) (on file with author).
 22. The maps also are award winners, having received the 2003 Law Library Publications Award, Nonprint Division, from the American Association of Law Libraries.

white map, and its stack number will appear in a box on the left above the drop-down menus. When you click on the printer-friendly map button, the printed map also shows the highlighted location and the item's stack number. The same maps are linked to OPAC locations and perform the same functions. A patron merely notes a book's call number from the OPAC record, clicks the link in the location field, selects the correct range from the drop-down menu on the map, and the shelf appears in red. Rick Buckingham created Suffolk's maps using Macromedia Fireworks, ColdFusion, and JavaScript. He writes:

For each floor, I scanned a copy of a printed map and used Fireworks to clean up the image and divide the map into sections. So, for example, the map of the 6th floor comprises 5 images: topall.gif, upleft.gif, right.gif, midleft.gif, and bottom.gif. For each highlighted location on the map, I created a separate GIF image with a unique name. For example, the image that shows the location of American Law Reports is alr.gif. I use JavaScript to swap the images and give the stack information when an item is chosen from the menu. So when American Law Reports is selected, the JavaScript code causes the image right.gif to be replaced by alr.gif. It also writes the location, 6-25A TO 6-27A, in the box after "Stack(s)." The page itself is written in ColdFusion and draws data for the maps—image names, stack location, image location—from a table on the server.²³

¶20 As updating is easily accomplished using ColdFusion, a very high level of specificity can be offered to patrons without staff members incurring a time-consuming maintenance obligation.

¶21 A library should be able to use its maps in a variety of contexts. An example of some very specific maps that function beautifully as a virtual tour is found on the Web site of the Duquesne University School of Law (www.lawlib.duq.edu). The maps are found under **DCLI -General Information** on the left side; click **Virtual Tour**. The maps have numbers in blue circles that correspond to a key that gives the name of the area or room. When you click a number, either on the map or on the key, several changing color pictures and a text description of the area appear at the right side of the page.

¶22 The majority of Duquesne's OPAC locations are not linked to maps, but journal records have a field titled **Online version: FIND IN THE STACKS**, in addition to a location field.²⁴ Clicking on the link retrieves a map of the ground floor, where journals are located, which is similar to the map in the Virtual Tour. A superimposed circular enlargement shows the exact shelf location of the journal in hard copy, with its shelf number.²⁵

23. E-mail from Rick Buckingham, Legal Reference Librarian, Suffolk University Law School, to the author (Dec. 1, 2005) (on file with author).

24. According to Amy Lovell, the decision was made to use the maps for items that do not have call numbers, and so far only the journal collection has been completed. E-mail from Amy Lovell, Manager of Database Systems, Duquesne Univ. School of Law Library, to the author (Dec. 9, 2005) (on file with author).

25. See, e.g., Center for Legal Information Ground Floor Map, Shelf No. G75, <http://www.lawlib.duq.edu/maps/G75-16.gif> (last visited July 19, 2006).

¶23 Both sets of Duquesne's maps and the Virtual Tour were created by Manager of Information Technology Milan Komljenovic using MS Visio.²⁶ He created several templates which he used to produce maps for each collection, saved the templates as GIF files, and exported 50kb files for Web publishing into Macromedia Fireworks. For the virtual tour, he used Fireworks again to produce the images, add text, and compress the files; he created the final product in Dreamweaver. He hopes eventually to create maps for classified material as well as for collections without call numbers.²⁷

¶24 An important factor to consider in creating a map is its accessibility to a wide range of patrons, including the handicapped. One library I had planned to discuss had a very impressive virtual tour combined with floor plans. However, when I requested more information, I learned that they were planning to replace the tour with HTML maps. The virtual tour had been created outside the library with Shockwave software; the frequent and inevitable revisions to it also had to be outsourced, which was burdensome and doubtless costly. The library also learned that the Flash tour did not meet "W3C quality assurance standards," whereas the HTML maps, which could be maintained in-house, would comply.

¶25 This was the first I had heard about W3C, the World Wide Web Consortium.²⁸ Although I was reluctant to admit ignorance and incorrectly assumed that I would find a quick answer on the Internet, I eventually had to consult an expert. According to Francis Chin at Brooklyn Law School, the W3C's Quality Assurance Standards are a meta-standard, a kind of style guide like the *Bluebook*, although perhaps not as compulsory. Chin says that what is really at issue are the 1998 amendments to section 508 of the Rehabilitation Act of 1973,²⁹ Web accessibility standards that "require web sites hosted by Federal agencies to be handicapped accessible; other sites are not required to follow the standards, but are encouraged to do so."³⁰ The point of the standards is to ensure that handicapped people can access Web sites, and also to allow Web sites to be accessible and searchable using devices other than a standard Web browser, such as a cell phone, a PDA, a computer text reader, or a search engine like Google.³¹

26. According to the vendor, it is possible to insert a CAD file and manipulate it in Visio. It is then possible to resize it, change the scale, or move it. Microsoft Office Online, Create a Floor Plan, <http://office.microsoft.com/en-us/assistance/HP842500031033.aspx> (last visited July 19, 2006).

27. E-mail from Milan Komljenovic, Manager of Information Technology, Duquesne Univ. School of Law Library, to the author (Dec. 14, 2005) (on file with author).

28. The World Wide Web Consortium "was created to lead the Web to its full potential by developing common protocols that promote its evolution and ensure its interoperability." Press Release, World Wide Web Consortium, World Wide Web Consortium Marks Completion of Quality Assurance Working Group with New Recommendation (Aug. 17, 2005), available at <http://www.w3.org/2005/08/qa-pressrelease.html.en>.

29. Pub. L. No. 105-220, 112 Stat. 1092, 1203 (1998) (codified at 29 U.S.C. § 794d (2000)). A non-obligatory version of section 508 is the World Wide Web Consortium's Web Content Accessibility Guidelines 2.0 (Apr. 27, 2006), available at <http://www.w3.org/TR/WCAG20>.

30. E-mail from Francis H. Chin, Director of Administrative Computing, Brooklyn Law School, to the author (Mar. 13, 2006) (on file with author).

31. *Id.*

¶26 According to Chin,

The problem . . . is that . . . Macromedia Flash . . . is not handicapped accessible. Sight-impaired users use a special program that reads the contents of the website for them, and it doesn't work on sites using Flash. They actually don't need to get rid of the Flash version; Guideline 4.2 says "Ensure that user interfaces are accessible or provide an accessible alternative(s)." They just need to provide an alternate non-Flash website that provides the same information.³²

This information should be of interest to potential library map or tour designers, as it may influence their choice of software.

¶27 A good map is always helpful to patrons, even in a library with a simple architectural layout like the Lewis & Clark Law School's newly renovated Paul L. Boley Law Library. Its map can be found, in Flash, non-Flash, and printable versions, under **Library Info** on the library home page (<http://lawlib.lclark.edu>). By having several versions, Boley Law Library is in compliance with the W3C standards. When first accessed, the map cycles once through its range of colors, quickly identifying its different areas, and finally settles with the words **Library Map Guide** underneath the map itself, which has brightly outlined rectangles floating over the black-and-white stacks. Mousing over the **Library Map Guide** reveals a list of material types; mousing over the items in the list highlights their location on the map in color. Mousing over the map itself identifies individual areas by the materials they contain. This is a tasteful and elegant use of technology, and I appreciate that the Flash version does not blink at trauma-inducing speed, but rather at a relaxed, even dignified pace. Although not detailed, I am certain this map is a useful directional device that is much appreciated by the library's patrons.

¶28 The map was developed in-house by Jeff Allman in Flash MX; he used a static GIF for non-Flash users. He plans to expand the Flash map to other areas of the library and to link it to other resources on the library Web site. He also plans to integrate the map with the OPAC location fields, which as we have seen should not be difficult with an Innovative system. Regarding technology, Allman writes insightfully:

My philosophy is to keep multimedia use to a minimum and use it only when the technology is useful for disseminating information. Before coming to the law library, I used to be an animation and multimedia director, so my approach to Flash technology is the opposite of what it used to be.³³

32. *Id.* Chin notes that Adobe acquired Macromedia at the end of 2005, and although it has added accessibility features to Flash, "the tools are limited. . . . [However,] Adobe is much more active with accessibility issues than Macromedia was, so it remains to be seen if they can make additional improvements." E-mail from Francis H. Chin, Director of Administrative Computing, Brooklyn Law School, to the author (Aug. 3, 2006) (on file with author). For the full text of the most current version of the standards, see Web Content Accessibility Guidelines 2.0 (W3C Working Draft, Apr. 27, 2006), <http://www.w3.org/TR/WCAG20>.

33. E-mail from Jeff Allman, Digital Resources Coordinator, Boley Law Library, Lewis & Clark Law School, to the author (Mar. 8, 2006) (on file with author).

¶29 Good maps do not have to be expensive. Many law libraries have tight budgets and may feel that, however desirable, producing maps would be too expensive in terms of software costs and staff time. But look at the Leigh H. Taylor Law Library at Southwestern Law School. Although it has no maps on its home page, it is an Innovative library and does link maps to its OPAC (<http://library.swlaw.edu>). If one runs a title search for the *Federal Register* and selects that title from the resulting list, the resulting four records can be found in three locations: Federal, Microfiche, and Reference. Clicking on the links brings up very clear HTML maps that highlight in red the specific group of shelves the patron will need to visit. The library's sixteen maps are divided into four files that are conveniently bookmarked to take users to the map they need.³⁴ The Southwestern maps were created about ten years ago by an architectural firm in conjunction with a renovation project, according to Linda Whisman, the library's director.³⁵ The library was given copies and has used them in a variety of ways ever since, including linking them to the OPAC. Network Services Administrator Mario Brooks is responsible for the coloring and linking. This was probably a comparatively inexpensive solution as well as a successful one that appears not to have required very complex software or extremely sophisticated computer skills; also, the maps, while referring to discrete areas, are general enough not to need constant revision.

¶30 To summarize, good maps are not visually distracting; they are as clear and specific as they reasonably can be; they can double as a virtual tour or library overview; they are accessible to the handicapped; they are useful for any size library; and they do not have to be expensive.

Conclusion

¶31 Maps should be easy to find on a library's home page, and they should be linked directly to OPAC locations. That is the least frustrating and most efficient way for patrons to find the physical home of the materials they need. In a perfect universe, maps would highlight not only the general area a patron needs to go to, but also exactly which shelf holds the material in question. But however desirable, it also can be a labor-intensive and time-consuming task to keep maps of this level of specificity up-to-date, given the frequency with which collections are shifted in most libraries.

34. This system, with the maps collected in one or more files and bookmarked, is also used by Willamette University College of Law Library. The University of California, Berkeley, School of Law Library has five maps linked to the location **STACKS** in one file, but the file is unfortunately not bookmarked. Yale Law School Library has its linked maps in two files but all the maps appear on the Library Floor Plan page (www.law.yale.edu/library/about/map_upper.html); they are not bookmarked either.

35. E-mail from Linda Whisman, Professor of Law and Director, Leigh H. Taylor Law Library, Southwestern Law School, to the author (Mar. 7, 2006) (on file with author).

¶32 Map designers should remember that a clear and simple solution is vastly preferable to a dizzying flash site or an animation that leaves patrons more confused than they were without it, as well as frustrated by a potentially dramatic loss of computer speed. It is certainly possible to use sophisticated techniques in a restrained way, but it takes effort. Remembering that handicapped patrons and students also use maps will inform map designers' choice of software and possibly reduce their use of Flash technology. The choice of browser-neutral colors will ensure that users will see what you intend them to see.

¶33 Incorporating library maps with a virtual tour can have implications for student and possibly faculty recruitment, and might provide an additional justification for any related costs. However, the costs of producing maps and tours can be minimal. Our software choice, SmartDraw, only cost about \$250.

¶34 About 30% of the maps on law library home pages were in PDF. Several of these were difficult to use, as they need to be rotated, resized, or both to be readable. This is a potential annoyance for patrons (it annoys me). There is no technical reason that pdf maps cannot be linked to OPAC locations, but it would be prudent for libraries that are considering doing so with their existing maps to resolve the orientation or sizing problems first.

¶35 A few libraries that link OPAC locations directly to library maps have links that are invisible unless a patron happens to mouse over them. Without a visual clue in the OPAC record (such as underlining or blue text, both frequently used for other links in OPAC records), users will only discover by accident that the location names are clickable links to maps. Certainly an obvious link would be easier to see and probably more frequently used.

¶36 Lastly, if in doubt whether to expend the effort, staff time, and expense to produce maps and link them, librarians should consider that this endeavor falls neatly within several of AALL's Competencies of Law Librarianship.³⁶ Considered in this light, creating online library maps is not merely an option, but a professional obligation.

36. Am. Ass'n of Law Libraries, *Competencies of Law Librarianship* (2001), *reprinted in* AM. ASS'N OF LAW LIBRARIES, *AALL DIRECTORY AND HANDBOOK 2005–2006*, at 417 (45th ed. 2005), *available at* <http://www.aallnet.org/prodev/competencies.asp>. Relevant competencies include 1.1 (“Demonstrates a strong commitment to excellent client service”); 4.7 (“Develops, creates, and maintains the library Web site”); 5.5 (“Ensures the optimal arrangement of and access to the library’s traditional and electronic resources”); 6.8 (“Promotes the effective use of new technologies for the retrieval of information”); 6.9 (“Prepares and packages materials such as bibliographies, pathfinders, training scripts and handouts, utilizing a variety of formats”).