Discovery and Delivery: Making it Work for Users

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User expectations for complete and immediate discovery and delivery of information have been set by their experiences in the Web 2.0 world. Libraries must respond to the needs of those users whose needs can easily be meet with Google-like discovery tools as well as those who require deeper access to our resources. What has happened to bring us to this time in the evolution of library collections and services? What characterizes user expectations and how are we fulfilling them today? What can we do to prepare for the future? Are we prepared for what is to come?

INTRODUCTION

User expectations for complete and immediate discovery and delivery of information have been set by their experiences in the Web 2.0 world. Libraries must respond to the needs of those users whose needs can easily be meet with Google-like discovery tools as well as those who require deeper access to our resources. I would first like to talk about what characterizes user expectations today—specifically, exceptional service, convenient tools and user recommendations and feedback. One of my favorite examples of the kind of exceptional service that users have become accustomed to comes from Jenny Levine's blog, The Shifted Librarian.

> So I ordered it from Amazon and waited for it to arrive. And waited. And waited. And waited. After a couple of weeks, I decided to contact Amazon about it, so I started digging through the 'where's my stuff' screens to find a phone number to call. Eventually, I got to a screen that had a button on the right-hand side that said "telephone help" or something like that. I clicked on that button and a small window popped up. It asked for my phone number and for when I wanted them to call me. I gave them my number and chose the 'right now' option. Sure enough, my phone immediately started ringing! I was put into their automated voice tree and was able to get to a human being to resolve the problem. It's just the kind of thing I'd love to see from a library, both on its own web site and embedded in others' sites (local government pages, school pages, etc.).[1]

The second example is a personal one involving my hunt for slippers for my husband last Christmas. I had his shoe size but did not know how to relate that to the options available as small, medium, or large. So I clicked on "live help," had an e-mail exchange with someone at the company, and finished my transaction very quickly.

Our users have also become very accustomed to convenient tools. Joan Lippincott has written about the disconnects that millennial students have with today's library. They depend on Google or other search engines for discovery of information resources rather than consulting

library Web pages, catalogs, and databases. These students often find library-sponsored resources difficult to figure out on their own, they are seldom interested in formal instruction in information literacy, and they prefer to use the simplistic but responsive Google.[2]

There are many, many examples of convenient tools available to students on their favorite websites. One example in the book world is from the publisher, HarperCollins, who includes an author tracker feature for forthcoming books by your favorite author. You can even add a widget for a particular book that keeps track of the time until the book is in stores. With this widget you can see how many days until the author's next book will be available.[3]

Users also expect to have access to value-added content on websites that range from Amazon to epinions.com. In addition, they expect to be able to add their own recommendations and feedback on virtually every interaction they have on the Internet. A good example is Amazon's "Search Inside the Book" feature, which includes details such as the front and back cover, an excerpt, and the table of contents, as well as a section called "customers who viewed this book also viewed," followed by a listing of books of possible interest.

So let me close this introduction with another personal example. Some of you know that when I am not doing library stuff, I am a very serious golfer. I recently was on a golf course here in Arizona and saw this very cute head cover of a cactus (head covers look like stuffed animals that protect the heads of your golf clubs). So, of course, I thought, I have to have one of those. One logical approach was to think about what stores on the Internet might have such a head cover, most likely a place like Golf Galaxy or Golfsmith. So I searched for those stores on the Internet; one of them had nine screens of head cover options, but no cactus head cover. So my next thought was Amazon; they sell everything, right? A search for cactus head cover on the Amazon site found twenty-four pages with 5,130 results. Finally I realized I could add a key word and so twenty minutes later I had located and purchased my head cover. This process was similar to finding something on a library website. But, that is not what I did. Instead, I behaved like most of our users and put the words "cactus head cover" into Google. On the first page, the first four entries that resulted from my search led me quickly to a place where I could purchase the head cover. The elapsed time was two minutes.

Essentially, I agree with Mike Eisenberg who said, "The simple but powerful 'Google search box' is a model for what we need in libraries— beyond federated search, this means one-step immediate access to the full text of library resources. We can claim success when people use the library search as readily, easily, and often as they do Google."[4]

DISCOVERY—WHERE WE HAVE BEEN

So with those kinds of expectations before us, let's talk about discovery, starting with where we have been. This area is characterized by various layers of discovery, silos by format, a focus on tangible or purchased resources, chaos in keeping track and distinguishing what we own, and forcing users to come to us. The first layer of discovery is local including the library's online catalog, your listing of electronic resources (databases and journals), and usually a separate database for digital content created by the library. Most library websites have individual silos by format or type of content. It is not uncommon for a user to search in one of our silos using key-words. But when their keyword fails to match anything, they get a small message that says "no matching records." No other self-respecting website would give them anything less than a "did you mean" option or at least a listing of where their keyword would have fallen in an alphabetical list of resources.

For most of us at this stage, the second layer of discovery is a statewide, consortial, or regional layer of discovery. Some systems like OhioLINK have a relatively simple single keystroke to transfer a search from the local catalog to the statewide catalog, but most users have to have a fair level of sophistication to understand and use this next layer of discovery. For most of us, OCLC's WorldCat serves as the national and international layer of discovery. Our most sophisticated users understand this layer and may use it as a starting point for their search, working their way down to the local level. Many faculty have come to understand that they could search WorldCat first and find a larger universe of materials and then request materials not owned by their library via interlibrary loan. Most of our focus with these layers of discovery has been on tangible or purchased resources and with making users come to the library to get what they need.

DISCOVERY—WHERE WE ARE NOW

So, where are we now with discovery? Many libraries have begun to improve discovery in our legacy systems and explore new options. North Carolina State University Libraries (NCSU) was one of the first to unveil a new approach to searching in their existing library catalog using Endeca software. Launched in January 2006, NCSU used an existing software product that had never been applied to the rich data in existing catalog records. This implementation began to look much more like popular websites rather than existing online catalog interfaces. For the first time, users could capitalize on embedded options in the record to refine their search by categories such as location, genre, format, language, material type, publication date, and popularity. Results could be sorted by publication date, relevance, call number, and title. The individual components of subject headings were available to narrow your results. For example, for a title with the Library of Congress Subject Heading: Political corruption–United States–History–20th century, the user could narrow search results by each of the elements. Features such as "did you mean?" when a potential typographical error was detected were available. The user could also easily see options such as "More titles like this" or "More by this author" with all of these features capitalizing on the existing descriptive cataloging information.

Then our integrated library systems vendors began to release new interfaces for their own systems but were also marketed as available for addition to a competitor's online catalog. In his blog, *Library Technology Guides*, Marshall Breeding unveiled the new Primo interface from Ex Libris, the first time that Primo had been made available to the general public.[5] Ex Libris has also incorporated Google's Book Search API so that it brings content back into the catalog from the "About the Book" pages in Google's Book Search.

The University of Kentucky (UK) Libraries contracted with Innovative Interfaces as a development partner for their Encore product. Encore too is designed to be independent of the underlying integrated library system and UK's implementation places Encore as a discovery layer for its Voyager system. Encore includes faceted searching using the richness of the cataloging records and also adds graphic features such as book jacket displays for recently added materials. Encore uses tag clouds to provide the user with familiar options for enhanced subject access. Tag clouds are a great way to get the work of catalogers and technical services staff into the hands of users without having to teach them the nuances of the formal subject headings. All of these features and displays are dynamic, corresponding to the current search results. As those results change, so do these features. One of the most appealing features of this interface is that the user is never faced with a dead end search. The Encore interface can be customized and branded so that the user is aware that the interface is provided by the University of Kentucky Libraries and it also

incorporates familiar tools such as "did you mean." When location or availability information is needed, the user is quickly linked to the exact search screen for his title in the Voyager system.[6]

There is at least one open source option in the area as well, VuFind, developed by Villanova University, described as follows:

> VuFind is a library resource portal designed and developed for libraries by libraries. The goal of VuFind is to enable your users to search and browse through all of your library's resources by replacing the traditional OPAC to include:
>
> • Catalog Records
> • Locally Cached Journals
> • Digital Library Items
> • Institutional Repository
> • Institutional Bibliography
> • Other Library Collections and Resources
>
> VuFind is completely modular so you can implement just the basic system, or all of the components. And since it's open source, you can modify the modules to best fit your need or you can add new modules to extend your resource offerings.[7]

Of course, VuFind has many of the same features available in commercial systems including faceted browsing, live record status and location, ability to customize and brand, and suggestions for similar resources. It also has the advantages and disadvantages of open source—no ongoing support fees but a commitment to some level of programming and development.

Andrew Pace, one of the librarians responsible for the implementation of Endeca at NCSU, documents that he first began talking about these interfaces as nothing more than "lipstick on a pig" in 2002.[8] Roy Tennant elaborates on this in a blog post titled "Lipstick on a Pig 2.0":

> In the past I've quoted my esteemed colleague at the North Carolina State University Library, Andrew Pace, calling minor library catalog improvements "lipstick on a pig." Sure, the pig may look a little bit better, but it's still a pig. The point of this is not to merely insult library catalogs, but to identify that in focusing on gloss instead of substance is to miss the real point. Our systems are more broken than that.[9]

I prefer to think of these interfaces as transitional. While we move ahead with development for better systems, the use of an improved discovery layer is useful to our users and better than the status quo. In essence, old challenges linger, but discovery has improved.

The marketplace also now includes new options for improving discovery for users. OCLC has placed WorldCat on the open Web at WorldCat.org and made it freely available to the public. The website is devoted to searching WorldCat libraries and includes the entire WorldCat database. It is a permanent destination much like Amazon or eBay. OCLC also introduced a new search box that can be added to your library website or your Facebook account or blog.[10] The WorldCat.org website is clearly labeled—Find items in libraries near you. Once a user locates a title of interest in WorldCat.org and clicks on that title, they are presented with a variety of options for accessing that book including purchase through Amazon. More importantly, the system assesses their location and presents local library options. For example, when I search a title, the system interprets my information as the University of Kentucky without my having to do anything and presents me with options for getting the book itself at UK or the next closest libraries that own it. The system also links seamlessly to the user-initiated ILL system to allow me to place my own request for the item. The individual item page also gives the user a clear sense of the range of things he or she can do such as:

- Get it (search my library, purchase from Amazon)
- Save it (add the page to my favorites or a list)
- Add to it (review the item or add to its public notes)
- Share it (add links in popular tagging tools such as Digg, MySpace, Facebook, and Del.icio.us)

On October 9, 2005, WorldCat.org debuted new options for users to contribute content to records. These social and personalization tools allow a user to:

- Build their own personalized lists of books, videos, and other library-owned items; lists can be public or private, and public lists can be searched and shared with friends
- Add their own ratings and reviews of an item, and contribute to collaboratively edited contextual notes
- Add library materials to their social bookmarks at sites such as Digg, Del.icio.us, and Facebook with the Add This widget available on item record pages[11]

In addition, OCLC has entered the marketplace with another new option called WorldCat Local,[12] which debuted at the University of Washington in May 2007. WorldCat Local presents the entire WorldCat database to the user in lieu of the library's local catalog but presents results in order of the most accessible to the user. The first items displayed are available locally, followed by those shared consortially and then open access and other global collections. As a result, for the user it is much like searching Amazon but with a focus on materials that can be made available by the local library first. OCLC has also loaded article level information into WorldCat so that the user no longer must search in individual silos for articles, books, or digital items. In the Ohio State University implementation of WorldCat Local, it is easy to find archival finding aids with links to full-text digital items as well. When the user reaches the stage of accessing a particular item, the features from WorldCat.org mentioned previously are available. When searching the University of Washington catalog, the interface knew that I was not eligible to borrow materials directly from the catalog and seamlessly forwarded my query to the UK interlibrary lending page for user initiated ILL requests.

Susan Marcin and Peter Morris discussed the differences between the Encore discovery tool and WorldCat Local in a recent article:

> However, at the heart of it, these [Encore and WorldCat Local] appear to be two vastly different products with different goals in mind. A library might not even need a native ILS interface if it used WorldCat Local. The WorldCat Local interface is fully developed—a library could abandon the ILS and rely on a basic (perhaps open source) inventory control system for circulation and acquisitions. Encore is not designed with this goal in mind. It is not meant to replace the native ILS but intended to enhance it.[13]

You can read more about these various systems in the July/August 2007 issue of *Library Technology Reports*.[14]

DISCOVERY—WHERE WE ARE GOING

So, where are we going? The Association of College & Research Libraries Environmental Scan 2007[15] refers to an article by Karen Markey that "asserts that OPACs lost the battle for user attention to Web search engines. While some authors discuss how [the] OPAC may be brought back, other authors doubt that it will make a comeback. Some of them claim that librarians have waited too long to respond to search engines."[16] Karen Schneider notes that "improving the catalog as a finding aid does not necessarily improve its ability to be a destination."[17] In short, we are moving toward services that bypass the library website by taking content to the user and seamlessly fulfilling their requests. Some of the services mentioned earlier are early examples of where we will likely be in the future. In a March 2006 presentation at the University of Michigan Mass Digitization Conference, Daniel Greenstein reported observing students at the University of California, San Diego with two browsers open—one to Amazon using its "Search Inside the Book" feature to find what they wanted and then the library catalog to locate the call number.[18] One question we need to ask ourselves is how might this change once more full text is freely available on the Web?

Open WorldCat, OCLC's project to expose library content and integrate it with Web search engines and bibliographic and bookselling sites, stated the following benefit to libraries:

> The result: OCLC member libraries are more visible on the Web, and their catalogs are more accessible from the sites where many people start their search for information. . . . "Opening" WorldCat records to the Web helps libraries and other institutions provide a fast, convenient service to current and potential users through familiar Web channels. Open WorldCat points more people—even those who do not typically visit libraries—to library collections as a first source of information. It promotes the value of libraries on a scale greater than any library or group could achieve alone.[19]

When Open WorldCat first debuted in early 2006, the people accessing WorldCat via the open Web quickly eclipsed user traffic through any other means.

Google Scholar is another example of the integration of library information in tools on the open Web. With a particular focus on books and journal articles of interest to scholars, users no longer need to navigate the various databases we provide for them but rather search across the content in Google Scholar. When a user searches in Google Scholar and finds something of interest, one of the options available to them is Library Search. From that option the user quickly moves into the systems described earlier, which provide local library access to and information about the content. At the University of Kentucky we have enabled our SFX link resolver so that users in Google Scholar can find content that has been licensed by us for their use. Google Scholar eliminates the need for a user to understand the distinctions between databases. For example, in 2006, JSTOR announced that it had "entered into an arrangement enabling Google Scholar to index the archive. . . . Since 2001, while the overall number of Articles Viewed has increased more than sevenfold, links into JSTOR have increased by 32 times. [There was] a spike in the early part of this year, bringing in around 4 million links in only two months—apparently the result of Google's recently completed index of JSTOR."[20] As more publishers enable access to their content through Google Scholar, users will find what they need there and be able to quickly transition to the full text content.

In another example, Microsoft "evangelist," Jon Udell, developed his Library Lookup Project, which created a bookmarklet that can let the user know if their local library owns the book

or not using a second browser. In further refinements, the library can install a script in their local catalog that will automatically insert a link in Amazon below the title of the book that will indicate the status of the book in your library catalog. Clicking on the link will bring you to the library record for that book. Even if the book is checked out, the status in Amazon will read "due back at the [blank] Library on [due date]."[21]

The Google Library Project or Google Book Search aims to digitize the library collections of its twenty plus partners and make that full text available. Google makes its goals for this project clear:

> The Library Project's aim is simple: make it easier for people to find relevant books—specifically, books they wouldn't find any other way such as those that are out of print—while carefully respecting authors' and publishers' copyrights. Our ultimate goal is to work with publishers and libraries to create a comprehensive, searchable, virtual card catalog of all books in all languages that helps users discover new books and publishers discover new readers.[22]

On their "About Google Book Search" page, Google makes it very easy and clear to the user what they can do once they find a book. Options range from buying the book, to searching to learn more about the book, to finding related information, to borrowing it from a library.[23] This page alone is an excellent example of how much better our competitors are doing than we are to be useful to their users. The reference pages for each book are also very rich with content.

Another example of exposing content is the work done by the University of Washington and others to incorporate their content in Wikipedia. If you do a search in Wikipedia for Klondike Gold Rush and scroll down to the external links, you will find an entry labeled University of Washington Libraries Exhibit.[24] Clicking this link takes you to photographs related to the Klondike Gold Rush which are available from the University of Washington Libraries. In addition, on this same page you will find a link to the Wikimedia Commons. Following this link takes you to a group of photos, most of which are in the public domain and posted by others. One of those was posted by the Library and Archives of Canada, an additional example of what libraries and archives are doing to take their content to where users are already searching for information. If you wonder about the value of adding content to Wikipedia, consider this fact, "Wikipedia . . . is now the seventeenth-most-popular site on the Internet, generating more traffic daily than MSNBC.com and the online versions of the *New York Times* and the *Wall Street Journal* combined."[25] In a 2007 study by the Pew Internet & American Life Project, "more than a third of American adult internet users (36%) consult the citizen-generated online encyclopedia Wikipedia. . . . And on a typical day in the winter of 2007, 8% of online Americans consulted Wikipedia. . . . Wikipedia is far more popular among the well-educated than it is among those with lower levels of education."[26]

In a related example, The Library of Congress (LC) is attempting to engage users with its content by posting images from its collections in Flickr.[27] This project began with three thousand of LC's most popular photos being posted in January 2008. During the first week, there were more than 650,000 views of the images with comments posted on more than 400 individual photos and 1,200 photos were marked by people as favorites.[28]

While reviewing these images in preparation for this presentation, I found an entry where the Flickr user has added a comment correcting information about the entry citing an authoritative article in the *New York Times* digital archive. LC then responds "Thanks for your information about the date. We'll add the information to the source data and reload the description."[29] Not only has the Library of Congress connected with its users in their environment, it has been able to add valuable context and detail to the metadata about these images.

LibraryThing is yet another example of new sites available to Internet users who love

books. LibraryThing defines itself as "a site for book lovers. LibraryThing helps you create a library-quality catalog of your books. You can do all of them or just what you're reading now. And because everyone catalogs online, they also catalog together. LibraryThing connects people based on the books they share."[30] Many of the vital statistics about LibraryThing are available in its Zeitgeist Overview. As of July 16, 2008, more than 29 million books (3.46 million unique titles) had been cataloged on the site by more than 450,000 users. More than 450,000 reviews had been added.[31] In essence, the site has formed a community around the love of books; it is not just about cataloging your collection. I have a LibraryThing account for one primary purpose. Rather than cataloging the books I own, I enter what I have been reading in order to provide a feed to my blog, which I use to provide a weekly update to my library staff about what is going on in the UK Libraries.

LibraryThing also has a section for libraries. For a moderate cost, you can export your library's list of books to LibraryThing. Then with a few lines of HTML, your catalog can be enhanced in three ways:

- Book recommendations. High-quality "recommended" or "similar" books, like reader's advisory that points to books available in your library.
- Tag-based discovery. LibraryThing for Libraries provides tag clouds for books, and tab-based search and discovery, drawing on the over 31 million tags added by LibraryThing members.
- Other editions and translations. Links to other editions and translations of a work. (This works much like the FRBR model.)[32]

On these same FAQ sections of LibraryThing, you can take a tour and follow links to libraries who have actually implemented this product.[33]

One good example is the Deschutes Public Library in central Oregon.[34] Not only has this library pulled in content from LibraryThing, they have also implemented the piece of software (API) that lets their catalog link easily to content in Google Book Search. When a user searches the library catalog at the Deschutes Public Library and encounters a book with a match in Google Book Search, the screen displays a link labeled "preview this book at Google." As commented on the Google Blog, "This enables Deschutes readers to preview a book immediately via Google Book Search so that they can then make a better decision about whether they'd like to buy the book, borrow it from a library or whether this book wasn't really the book they were looking for."[35] And lest we think this is just a feature for public libraries, the preview feature has been implemented by the University of Texas Libraries as part of their partnership with Google to digitize their collection. When you click on a link in the catalog for a book under copyright, you are taken to a limited preview for the title with options such as contents, popular passages, subjects, and so on. This feature has also been added to Ex Libris' Primo interface.

One final example is Open Library whose goal is to have one Web page for every book ever published. Open Library is a project of the Internet Archive and is partly funded by a grant from the California State Library. Everything about the project is open—open software, open data, open documentation, and a freely available website. The project is growing, as stated on its website, "To date, we have gathered about 30 million records (13.4 million are available through the site now), and more are on the way. We have built the database infrastructure and the wiki interface, and you can search millions of book records, narrow results by facet, and search across the full text of 230,000 scanned books."[36] Will this compete with WorldCat?

Let me close this section with a quote and admonition from Lorcan Dempsey: "Discovery happens everywhere and discovery without fulfillment disappoints."[37] In essence, we must help users discover information wherever they are but discovery is not enough, it must be converted to fulfillment for the user.

WHAT REMAINS TO BE DONE? ARE WE PREPARED?

So, why should all of this matter to us? We must begin to work differently than in the past. Technical services and collection librarians have a rich set of skills to contribute in today's libraries but those skills must evolve to include new approaches to enriching the content and experiences of our users. In December 2007, OCLC announced that it was conducting a pilot project to capture metadata from publishers and vendors further upstream in the publishing process. This pilot flows out of the recent Library of Congress Report on the Future of Bibliographic Control,[38] which recommended that the library community make use of bibliographic information earlier in the supply chain.[39] This is where we are headed—less focus on touching every record and more focus on enrichment. Roy Tennant says it well, "this means forgetting about 'control' and getting good about 'enrichment.'"[40]

We must also experiment and use new tools. For example, instead of building a Web page, the Cataloging Department at the University of Georgia used a Del.icio.us account to create a page of resources for library employees. This was a much simpler approach to bookmarking a set of heavily used sites rather than the complexity of designing a Web page.[41]

How might we use the skills of cataloging to bring disparate special collections together? Increasingly we will need to bring cataloging and metadata skills to bear on unique special collections including building context around collections. At the University of Kentucky Libraries, we have a wonderful oral history of Happy Chandler who was the Governor of Kentucky (available in the Kentuckiana Digital Library, http://kdl.kyvl.org/). Happy Chandler also served as commissioner of baseball. How do we bring together this oral history with his biography on the National Baseball Hall of Fame site (http://web.baseballhalloffame.org/index.jsp)?

At the Orange County Public Library in Orlando, Florida, the online catalog and MARC records have been used in a variety of unconventional ways. A MARC record was created for the catalog to promote a fundraising event featuring author Carl Hiassen. The record listed all of his titles in the 505 field and also contained a link that led to a Web page to purchase tickets for the event. The library also created MARC records in Spanish and English for their Live Homework Help site. The record had many subject headings with school subjects such as math with an 856 link to the homework help database. Other examples include enhanced records for language learning tools and career books. During the years that Oprah Winfrey was selecting books for her book club, public libraries had difficulty coping with the demand for the titles because they had little advance notice of the title to be selected. Orange County found an innovative way to deal with the problem by simply adding a record to their catalog that was titled "Oprah's New Pick." Library users could then place a hold request for the book long before the actual title was known. The library could assess the expected demand and order accordingly once the title was known. Orange County employs librarians who are known as Digital Access Architects who work full time to deliver customer service through the use of technology.[42]

What would happen if the library worked like NetFlix? "NetFlix is easy, personal, fast, and convenient. It assists users in finding titles they will not only enjoy but titles that they are probably

very excited to find because they are surprised that they could be found or they've never heard of them before. Their choices are not limited to the blockbusters of the day. NetFlix makes it very easy for customers to borrow and return titles. NetFlix is to movies as libraries should be to books."[43] Unfortunately, libraries have not become more like NetFlix but a book version of NetFlix, BookSwim, has entered the marketplace. "BookSwim is the first online book rental library club lending you paperbacks and hardcovers netflix-style directly to your house without the need to purchase! Whether it's New Releases, Bestsellers, or Classics, we've got over 200,000 titles to choose from, with free shipping both ways! Read your books as long as you want—no late fees! Even choose to purchase and keep the titles you love!"[44] And our users now have options that mean they may not need a library unless we learn to more effectively market and sell our services to users and provide them with the options they expect.

CONCLUSION

In conclusion, I have one piece of parting advice which I must credit to our OCLC colleague, Andrew Pace:

> Outside my window is one of the large ponds that dot the OCLC campus in Dublin. Slightly frozen, I saw several members of Dublin's rather robust goose population crossing the thin ice covering the pond. Mind you, it wasn't quite comical—it was actually done with as much grace as a goose can muster in such an exercise. . . . It dawned on me that these geese were not afraid because if the ice breaks, they can swim; and if the water is too cold, they can fly. Well, the metaphor for librarianship is almost too easy here. I would argue that sometimes fear of the cold water makes people forget they can fly.[45]

So take some chances, I know you can swim and I think we can fly.

NOTES
1. Jenny Levine, "Call Me." *The Shifted Librarian*. July 10, 2005. http://www.theshiftedlibrarian. com/archives/2005/07/10/call_me.html (accessed July 18, 2008).
2. Joan K. Lippincott, "Net Generation Students and Libraries," *EDUCAUSE Review* 40 (March/April 2005): 57, http://net.educause.edu/ir/library/pdf/ERM0523.pdf.
3. HarperCollins. 2008. http://www.harpercollins.com/ (accessed July 18, 2008).
4. Mike Eisenberg, "The Parallel Information Universe," *Library Journal* 133 (May 1, 2008): 25, http://www.libraryjournal.com/article/CA6551184.html.
5. Marshall Breeding, "Primo now public at Vanderbilt University," *Library Technologies Guide*. 20 August 2007. http://www.librarytechnology.org/blog.pl?ThreadID=15 (accessed July 18, 2008).
6. Innovative Interfaces Inc., "Encore." *Innovative Interfaces*. 2008. http://www.iii.com/products/encore.shtml (accessed July 18, 2008).
7. Falvey Memorial Library, Villanova University. *VuFind*. http://vufind.org/ (accessed July 18, 2008).

8. Andrew Pace, Comment on "Looking Back, Looking Forward." *Hectic Pace*. December 12, 2007. http://blogs.ala.org/pace.php?title=looking_back_looking_forward&more=1&c=1&tb=1&pb=1 (accessed July 18, 2008).

9. Roy Tennant, "Lipstick on a Pig 2.0." *Tennant: Digital Libraries*. May 4, 2007. http://www. libraryjournal.com/blog/1090000309/post/220009022.html (accessed July 18, 2008).

10. CLC, "WorldCat.org interface features." *Oclc.org*. 2008. http://www.oclc.org/worldcatorg/ features/default.htm (accessed July 18, 2008).

11. OCLC, "WorldCat.org: Overview." *Oclc.org*. 2008. http://www.oclc.org/worldcatorg/overview/default.htm (accessed July 18, 2008).

12. OCLC, "WorldCat Local." *Oclc.org*. 2008. http://www.oclc.org/worldcatlocal/ (accessed July 18, 2008).

13. Susan Marcin and Peter Morris, "OPAC: Placing an Encore Front End onto a SirsiDynix ILS," *Computers in Libraries* 28 (May 2008): 9, http://www.iii.com/news/reprints/EncoreWithSirsiDynix.pdf.

14. Marshall Breeding, "Next-Generation Library Catalogs," *Library Technology Reports* 43 (July/August 2007): 1–44.

15. Association of College & Research Libraries, "ACRL Environmental Scan 2007," *Acrl.org*. January 2008. http://www.acrl.org/ala/acrl/acrlpubs/whitepapers/Environmental_Scan_2.pdf (accessed July 18, 2008).

16. Karen Markey, "The Online Library Catalog: Paradise Lost and Paradise Regained?" *D-Lib Magazine* 13 (January/February 2007). www.dlib.org/dlib/january07/markey/01markey.html (accessed July 18, 2008).

17. Karen Schneider, "Toward the Next Gen Catalog," *ALA Techsource*. October 13, 2006. http://www.alatechsource.org/blog/2006/10/toward-the-next-gen-catalog.html (accessed July 18, 2008).

18. Daniel Greenstein, "Webcast: Panel Session—Publishing," Scholarship and Libraries in Transition: A Dialogue about the Impacts of Mass Digitization Projects. The University of Michigan. March 10, 2006. http://www.lib.umich.edu/mdp/symposium/publishing.html (accessed July 18, 2008).

19. OCLC, "Open WorldCat Program," *OCLC.org*. http://chnm.gmu.edu/digitalhistory/links/cached/preserving/8_18a_worldcat.htm (accessed July 18, 2008).

20. Michael P. Spinella, "JSTOR: Past, Present, and Future," *Journal of Library Administration* 46 (July 2007): 55–78.

21. "The LibraryLookup Project," *Infoworld.com*. http://weblog.infoworld.com/udell/stories/2002/12/11/librarylookup.html (accessed July 18, 2008).

22. Google, "Google Books Library Project—An Enhanced Card Catalog of the World's Books." *Google Book Search*. http://books.google.com/googlebooks/library.html (accessed July 18, 2008).

23. Google, "About Google Book Search." *Google Book Search*. http://books.google.com/intl/en/googlebooks/about.html (accessed July 18, 2008).

24. Wikipedia, "Klondike Gold Rush." *Wikipedia*. http://en.wikipedia.org/wiki/Klondike_gold_rush (accessed July 18, 2008).
25. Stacy Schiff, "Know It all: Can Wikipedia Conquer Expertise?" *New Yorker* 82 (July 31, 2006), http://www.newyorker.com/archive/2006/07/31/060731fa_fact (accessed July 18, 2008).
26. Lee Rainie and Bill Tancer, "Data Memo," *Pew Internet & American Life Project*. April 2007. http://www.pewinternet.org/pdfs/PIP_Wikipedia07.pdf (accessed July 18, 2008).
27. "The Library of Congress' photostream." *Flickr*. http://flickr.com/photos/library_of_congress/ (accessed July 18, 2008).
28. Matt Raymond, "Flickr Followup," *Library of Congress Blog*. January 18, 2008, http://www. loc.gov/blog/?p=237 (accessed July 18, 2008).
29. The Library of Congress. Comment. *Flickr*. http://flickr.com/photos/library_of_congress/2515743501/#DiscussPhoto (accessed July 18, 2008).
30. "What is LibraryThing?" *LibraryThing*. http://www.librarything.com/tour/ (accessedJuly 18, 2008).
31. "Zeitgeist Overview," *LibraryThing*. http://www.librarything.com/zeitgeist (accessed July 18, 2008).
32. "What is LibraryThing for Libraries?" *LibraryThing*. http://www.librarything.com/forlibraries/ (accessed July 18, 2008).
33. "LibraryThing for Libraries, FAQS: General." *LibraryThing*. http://www.librarything.com/ forlibraries/about (accessed July 18, 2008).
34. *Deschutes Public Library*. http://www.dpls.lib.or.us/ (accessed July 18, 2008).
35. Frances Haugen and Matthew Gray, "Book Info Where You Need it, When You Need it," The Google Blog. March 13, 2008. http://googleblog.blogspot.com/2008/03/book-info-where-you-need-it-when-you.html (accessed July 18, 2008).
36. "About Us," *The Open Library*. http://openlibrary.org/about (accessed July 18, 2008).
37. Lorcan Dempsey, "Discover, Locate, … Vertical and Horizontal Integration," *Lorcan Dempsey's Weblog on Libraries, Services and Networks*. November 20, 2005. http://orweblog.oclc.org/archives/000865.html (accessed July 18, 2008).
38. Library of Congress Working Group on the Future of Bibliographic Control, "On the Record: Report of The Library of Congress Working Group on the Future of Bibliographic Control," *Loc.gov*. January 9, 2008. http://www.loc.gov/bibliographic-future/news/lcwg-ontherecord-jan08-final.pdf (accessed July 18, 2008).
39. OCLC, "OCLC to Conduct New Cataloging and Metadata Project," *Oclc.org*. December 13, 2007. http://www.oclc.org/news/releases/200688.htm (accessed July 18, 2008).
40. Roy Tennant, "The Future of Descriptive Enrichment," *Tennant: Digital Libraries*. December 10, 2007. http://www.libraryjournal.com/blog/1090000309/post/1920018592.html (accessed July 18, 2008).
41. "Cataloging Resources's Bookmarks," Delicious.com. http://del.icio.us/catresources (accessed July 18, 2008).

42. Wendi Bost and Jamie Conklin, "Creating a One-Stop Shop: Using the Catalog to Market Collections and Services," *Florida Libraries* 49 (Fall 2006): 5–7.
43. Lori Bowen Ayre, "What if the Library Worked Like Netflix?" *Mentat*. November 30, 2006. http://www.galecia.com/weblog/mt/archives/2006_11.php (accessed July 18, 2008).
44. Bookswim, Inc., *Bookswim.com*. 2007–2008. http://www.bookswim.com/ (accessed July 16, 2008).
45. Andrew Pace, "Cold Goose." *Hectic Pace*. April 7, 2008. http://community.oclc.org/hecticpace/archive/2008/04/cold-goose.html (accessed July 16, 2008).

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