

OLA Quarterly



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Reflections from Menucha

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Library Catalogs and Other Discovery Tools

Over the last few years, it has become nearly impossible to read a library journal or attend a library conference without reading or hearing about “next generation catalogs.” Many thoughtful and vocal critics have pointed out that library catalogs are hard to use, do not include information users need, and do not measure up to the non-library sites our users frequent, such as Amazon and Google. Vendors and individual developers alike have responded, developing new systems and new models to help users discover the treasures their libraries contain. Some of this trailblazing work has taken place right here in the Pacific Northwest. In this issue, we feature the work of some modern-day library pioneers who are performing the hard work required to take our retrieval systems in new directions.

The articles in this issue range from the unconventional (or all-encompassing) to the visionary to the specific and concrete. John Replinger offers a plea for more intelligent, flexible catalogs that can adapt to the changing needs of users. Mark Dahl shows us how we can help make this vision a reality by moving to network-level, global systems that benefit from the participation of large numbers of users. Meanwhile, Tom Larsen argues

that local catalogs still play a valuable role in meeting user needs, allowing libraries to present unique materials in creative ways that may not be possible in large-scale, shared systems. Stephanie Michael sums up these varying perspectives in her overview of last fall’s ACRL regional conference, which focused on next-generation catalogs. The next two articles describe a variety of projects intended to enhance access to library materials. Terry Reese discusses the development of LibraryFind™, an open source metasearch tool developed at Oregon State University. Al Cornish tells us about the Orbis Cascade Alliance’s partnership with OCLC to develop WorldCat Navigator, the product that now powers the Summit union catalog.

In order to build user-centered discovery tools, we need to determine what users need and how they interact with our systems. Elizabeth Ramsey reports on her work doing usability testing of keyword searching in the Concordia University catalog, while Wade Guidry describes the changes made to Beachbooks, the Coastal Resource Sharing Network catalog, in response to usability testing. Allison-Bunnell tells us about the Northwest Digital Archives, a specialized retrieval system for archival finding aids, emphasizing

the role of usability testing in its design and development. Archival and other materials from special collections are also the subject of Richard Sapon-White’s article. Noting that many of these materials are not cataloged and therefore not findable using library discovery tools, he suggests some ways to tackle that problem.

Throughout all of these articles, one message comes through loud and clear: our systems must be built around the needs and expectations of our users. Users should not have to do things the library way, using library search syntax and vocabulary. Users expect our systems to be as easy as the non-library systems they use regularly. The goal of user-centeredness, however, can be achieved in many different ways. Each library has unique collections and user needs, and this diversity is reflected in the variety of systems and models described in this issue. The key question is, How do we create and implement systems that best meet the needs of our users? We hope you find both inspiration and food for thought in the pages that follow.

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O L A O

Perspective on Catalogs

by **John Replinger**
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My first experience with an electronic library catalog was a “dumb” terminal at the local library. I searched for the book *The Wizard of Oz*, and while I knew the author’s name and the title, it remained frustratingly elusive in the catalog. With some experimentation, I discovered that my title search failed because I excluded “The” as the first word. And my author search should have been, “Baum, L. Frank” instead of “L. Frank Baum.” At the time, I thought these were truly “dumb” computers with rules that were too stringent; I wondered how many people gave up in sheer frustration for not being able to find what they wanted.

Fortunately, our electronic catalogs have improved considerably since then, yet there is still room for improvement. For the next generation of catalogs, one thing is paramount: they need to be increasingly flexible to meet the changing needs of their communities.

Library catalogs should help patrons become better searchers. They need to predict errors, anticipate the needs of patrons, and offer alternative search strategies that yield additional and higher quality information. One way is to make the search process more interactive. It can be very difficult to articulate a complex question, which is often where librarians trump technology. A reference interview allows for quick feedback to occur between a librarian and patron, as clarifying questions and answers are shared. Catalogs could unobtrusively ask follow-up questions to help clarify the search, such as “did you mean this author or year?” As the search unfolds, any new search algorithm employed should be clearly labeled for patrons to view. In the process, patrons learn what information is useful and how search strategies are “phrased” through their search history.

Another good way for people and computers to learn is through mistakes. Some systems anticipate failed searches through spell check technology. A good example of a failed search is a query that has too many terms and would yield nothing, in which case the Boolean search automatically changes from “AND” to “OR” to broaden the results. While catalogs continue to evolve and failed searches are monitored, the technology should consistently analyze the results to learn about common problems. As data are compiled on recurrently failed searches, patterns emerge, and alternative search strategies could be recommended while the patron types. Some Web browsers, like Firefox 3.0, already use this technology.

As our languages and cultures change over time, it is important to include new words and phrases that our societies commonly use. Social tagging is one way to accommodate these changes in language. Some may cringe at the thought of public-generated metadata in library records, but within the right environment, social tagging can be a powerful resource for the library and an incredible way to include patrons. BiblioCommons (<http://bibliocommons.com>), is a new library-oriented “social discovery system” that allows patrons to tag records with keywords and comment on library materials. Similarly, LibraryThing (<http://www.librarything.com>) encourages users to tag books in their own collections and explore tags utilized by other people to discover new books. The new Orbis Cascade Alliance catalog (<http://summit.worldcat.org>) is another example that takes advantage of social tagging, in addition to allowing patrons to write book reviews.

Reviews by patrons may not seem important at first glance, but including them is an ingenious way to get patrons involved in your library and to gain valuable qualitative feedback about your collections. Since librar-



ies have traditionally relied on usage statistics for collection development, this kind of information from patrons should be coveted. Patrons may see reviews as an invitation, that libraries value their opinions and want their feedback. They may also see reviewing as a way to give back to society, to help others locate quality information. Book reviews will probably be more popular with public libraries whose patrons tend to read for entertainment, rather than academic library patrons that tend to read out of necessity.

Technology should unobtrusively suggest other materials, much like an electronic reader's advisory. It should lead users to other books of interest. The catalog could list a few books from similar subject headings, nearby call numbers, or even commonly checked out library materials. For example, within the catalog record for "Harry Potter and the Goblet of Fire," five specific magic or fantasy titles could be displayed as suggestions, not unlike Amazon.com. Catalogs already do this in a sense with subject headings; they efficiently group hundreds of similar items together. Unfortunately, most users are overwhelmed by lists of subject headings. Casual users only want a few specific titles.

Much like an electronic reader's advisory, patrons need improved current awareness systems to track their favorite authors and genres. It would be wonderful if patrons could login to their library account, identify their favorite authors/book series, and automatically be placed on a notification list when new books are published. This type of service would be another way to encourage patrons to participate in collection development.

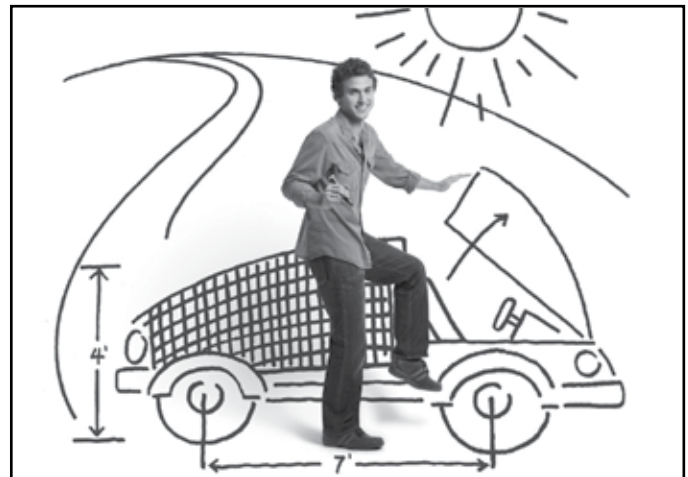
Privacy issues arise as libraries make reader's advisory and reviews available for patron use. In both cases, patrons could leave a trail of personal information about themselves. The New York Times recently ran a story on an upcoming study from the Carnegie Mellon University about people's

attitudes towards privacy (Stone 2008). It suggests that while people cherish the idea of privacy, they often let their guard down and provide information about themselves freely online. Libraries will need to consider what patrons want, in conjunction with privacy concerns, as these new technologies develop.

Libraries will also need to accommodate small mobile technologies, such as cell phones and personal digital assistants (PDAs). According to the 2007 Pew Internet Research Project survey, 62 percent of U.S. residents are a part of a "wireless, mobile population that participates in digital [non-voice data] activities away from home or work" (Horrigan 2008). Some technologies today, such as smart phones, provide full-featured Web browser that are much more interactive than the clunkier cell phone Web browsers. Software applications for these mobile devices are being released at an incredibly fast rate, including WorldCat.org's recently-released WorldCat Mobile application (www.worldcat.org/mobile). Libraries should explore how a catalog interface can be built to make searching faster and easier to use with these on-the-go technologies. We also need to anticipate the type of digital content that



Reviews by patrons may not seem important at first glance, but including them is an ingenious way to get patrons involved in your library and to gain valuable qualitative feedback about your collections.



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people will want with these new devices, such as audio and streamed video.

Within shared consortial catalogs, it is common to run across a list of identical titles with slightly varying editions, media formats, special notes about donors, etc. It can be confusing for patrons to figure out which item they want. Let's simplify the results for our patrons by consolidating local metadata into one general record that can be shared among consortia members, with the option of displaying local metadata at the click of a button.

Then there is the issue of searching for an author. Most catalogs still use the rigid format of last name, first name and middle initial. Catalogers use the strict standards for consistency, but it seems reasonable for a catalog to include the natural language form of an author's name, such as "Joe A. Smith" in addition to "Smith, Joe A." Some catalogs are capable of searching both forms, but this feature is often buried. Why not make this the standard author search, and make the traditional (stricter) author search the advanced option?

Patrons want a convenient one-stop center that allows them to search for a variety of information and to access it quickly either electronically or in print. Traditional catalogs have been wedded to the book, but patrons want to search for everything a library has to offer. One should be able to

search for not only books, but for movies, journal articles, current news, and more through one interface. WorldCat.org for example is able to search for an increasing array of formats such as articles and Internet resources, but has issues with limiting to local collections.

These features are a step in the right direction, yet there is still a long way to go for all catalogs. It is exciting to see many of these issues being addressed in the latest platform releases. By becoming more interactive, catalogs can adapt more fluidly to the changing needs of patrons. Let's meet the patrons where they are (on-the-go), accommodate how they search, utilize the language they commonly use, and provide the formats they need. 🌿

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The Evolution of Library Discovery Systems in the Web Environment

by **Mark Dahl**

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In December 2008, the Orbis Cascade Alliance, a consortium of academic libraries in Oregon and Washington, launched a new union catalog on OCLC's WorldCat.org platform. This change resulted in an updated Web interface, better keyword searching, and faceted results. However, we also lost some features that worked well in our old system. But the larger significance of this change might not be obvious. A shift has taken place, one that moves us into a new paradigm for the systems that support discovery of resources in libraries. The Summit catalog is now part of a great global organism known as WorldCat, and that organism is poised to be more dynamic and more ubiquitous than any of our old local catalogs could have ever been. How did we get here? I will attempt to answer that question through my personal account of library search and discovery as a librarian and technologist since the mid-1990s.

I entered library school in 1996. As the Web emerged, I developed a growing curiosity for it and delved into HTML coding, Web programming, and Web server administration. In those early days, the library community was just digesting the obvious advantages that the Web had over previous technologies like Gopher and Telnet: mouse click hyperlinking and richer graphics. The underlying discovery systems libraries used continued much as they had in the past with prettier Web-based interfaces on top.

By the late 1990s some transformative changes began to take shape in the online library world and on the Web. In the library world, full text databases and services like JSTOR arrived on the scene, putting large amounts of actual content, not just indexing, online. The general online fulltext database became the bread and butter of our online offerings at Central Oregon Community College, which we were positioning to support distance education. On the Web more

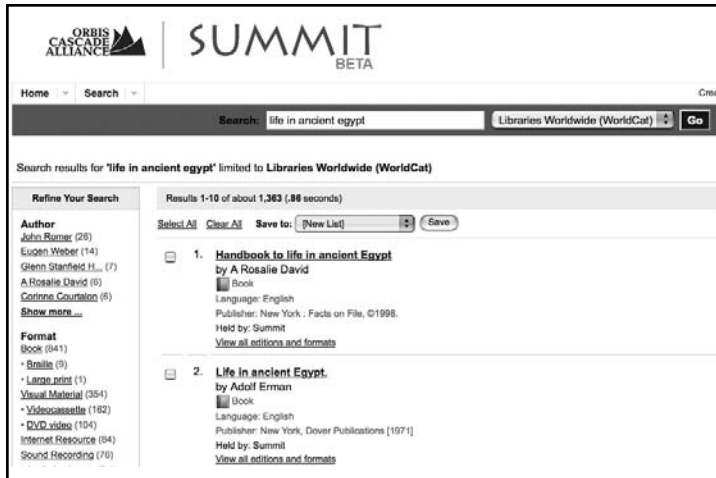
broadly, e-commerce gained ground and people got used to shopping experiences that involved search, discovery, and fulfillment.

In 1998 Google was founded, and by the early 2000s it was the most popular search engine on the Internet. Google's clever PageRank algorithm harnessed the collective intelligence of the Web by using hyperlinks to help determine relevancy. It was a system that benefited enormously from the sheer scale of Google's computing power. More importantly, it got smarter as more people used it. Google proved that a Web scale enterprise could achieve things that small- and medium-sized players could not. In a similar way, dot-com crash survivors like eBay and Amazon established that in certain markets there was only room for a few large players on the Web.

While Google was growing its search business, libraries mostly ignored search and worked on the problem of organizing a growing array of full text resources. Libraries were acquiring access to electronic journals by the bucketful, but it was hard to find out if a given library had access to a particular journal. By 2001, I had moved to Watzek Library at Lewis and Clark College, and one of my first tasks was to develop a way to search our electronic and print journals by title. In response I created a database that mixed together data from our ILS and Serials Solutions and would later support an OpenURL resolver.

In the early to mid-2000s, library catalogs began to adopt more of the trappings of mainstream e-commerce sites by incorporating cover art, external links, and fancier Web design. They remained weak in search functionality. In 2005, major figures in the library technology community like Andrew Pace and Roy Tennant began asking rather loudly why OPAC search left so much to be desired when compared





The new Summit catalog has relevancy ranking based in part on library holdings as well as next generation catalog features like facets.

with commercial Web search (Pace 2005; Tennant 2005).

Projects emerged that attempted to significantly improve search functionality in Web OPACs. They included North Carolina State University Library’s catalog based on the Endeca search engine and Casey Bisson’s WPopac (now Scriblio), an OPAC based on the modular WordPress blogging software.

In the early 2000s libraries also began to break important new ground with digital collections mounted on systems such as ContentDM and DSpace. These were the first Web-based discovery systems managed by libraries that harnessed the Web’s global reach. Library catalogs largely contain references to books held by hundreds of libraries and are typically closed to search engines because of the redundancy of their data. By contrast, digital collections contain unique materials and are generally open to search engines, allowing people anywhere on the globe to find and use their content.

In late 2005 and early 2006 I co-authored a book, *Digital Libraries: Integrating Content and Systems*, with Kyle Banerjee and Mike Spalti. We started work on the book with a loosely-conceived thesis: that integra-

tion of disparate content and systems with Web technologies could create exceptional online services for libraries. We argued that library systems, including discovery systems, would be many dis-integrated units tied together by standards and clever Web programming. Modular digital library tools like OpenURL resolvers, electronic resource management software, and digital asset management software, the trend toward OPACs running atop ILSs, and federated searching systems that relied on new standards like SRU/W (search/retrieve via URL or Web service) all seemed to confirm this thesis.

But as we researched the book in late 2005, it became clear that this model did not explain it all. More and more, users were beginning to encounter library resources on the Web outside the “walled garden” context of library-managed discovery systems. People might discover books on Amazon or articles on Google Scholar and then acquire the content via a library’s physical or virtual gateway. Moreover, Web 2.0 sites like Flickr, del.icio.us and YouTube allowed users to contribute and organize digital assets in a collective fashion. Like Google, these Web 2.0 sites got better as more people used them and aspired to a Web-wide audience.

In April 2006, I heard Lorcan Dempsey of OCLC give a presentation to the Orbis Cascade Alliance Council on “Moving to the Network Level: Libraries, Readers, and Applications.” Dempsey discussed the shift from vertically integrating services within a single institution to “collaboratively sourcing” services in concert with external players. The Alliance’s own union catalog, which aggregates supply and demand for books among 30+ academic libraries, served as a strong example of regional collaboration. Dempsey encouraged the group to broaden its thinking to resource sharing that would involve “multi-level” collaboration between individual libraries, regional



consortia and global players like OCLC, JSTOR, and Google. He challenged the group to think about “painful” activities being done at the local or regional level that could be more effectively done by higher level organizations and systems.

In some respects, the idea of outsourcing library systems to larger-scale players went against my instincts. I’d always enjoyed managing my own servers and writing my own Web applications. There was something inspiring about being able to load Linux on an old PC and run my very own Web presence from that little box humming away in the closet.

Nonetheless, I couldn’t get the “moving to the network level” phrase out of my head. In late 2006 and 2007, I discovered that the idea related to the various Web applications that I began using at work and in my personal life. Gmail revolutionized my productivity at work. I benefited from its great search and organization features, powered by Google’s huge infrastructure far away from my PC. At Watzek Library, we began using Basecamp and Google Docs for project management and collaboration. At a time when I supported a collection of digital images for teaching on MDID digital collections software, I was impressed with how much better Flickr managed digital assets. Meanwhile, buzz around the concept of cloud computing grew, especially with the publication of Nicholas Carr’s *The Big Switch* in early 2008, which explains how computing power in far-away data centers is revolutionizing both personal computing and back-end IT infrastructure.

In 2008, our library began implementing two network level discovery services. In winter 2007/2008, the Alliance struck a deal with OCLC to create a union catalog solution based on the WorldCat.org platform. WorldCat Navigator is a consortial version of WorldCat Local that provides a catalog with the wide scope of WorldCat.org

but with discovery and delivery features tailored to the needs of the Alliance.

Given the growing shift in my thinking, I saw several advantages in the Alliance move to WorldCat. The interface is more modern than the old Summit and offers conventions from the consumer Web such as narrowing searches by facets and creating user accounts for favorites. More compelling, however, is the broader concept of having a catalog that is a part of a larger organic whole. The WorldCat database is a dynamic, ever evolving thing, updated by a global community of catalogers. Unlike our local catalogs, where we download records and they remain mostly unchanged like a card in a card catalog, WorldCat operates like a Web 2.0 site: a community of people can cooperatively add metadata to improve digital objects, albeit in a much more regulated, library-world way. WorldCat’s global, ever changing holdings information allows WorldCat.org to have an unparalleled relevance ranking of books, not unlike Google’s PageRank concept. The WorldCat.org platform also supports user-contributed content like ratings and reviews, a service that will be progressively more useful as more libraries and users come on board.

Moreover, with WorldCat.org, OCLC takes a lesson from Google and Amazon and understands that Web scale matters. In order for library content to be noticed on the Web, it needs to be presented by a global player, not in a diluted fashion from thousands of separately managed library catalogs. Unlike local library catalogs, WorldCat.org provides a place to reference a book that is useful for anyone on the Web and maintains relationships with commercial search vendors so that its records will appear in search engine results. Furthermore, it provides a catalog with common conventions for searching and viewing records not unlike Google providing a certain consistency in its interface across the Web.



As Watzek Library threw its weight behind the Alliance WorldCat project, we got another innovative network-level initiative underway. Our visual resources curator, Margo Ballantyne, and a faculty member in Ceramic Arts saw an opportunity to create an online image collection of contemporary ceramics. The challenge would be collecting the images and metadata from artists dispersed throughout the world. The Digital Services Coordinator, Jeremy McWilliams, and I were avid users of Flickr and knew of its powerful Web-based tools for managing images. With little money behind the project for staff support, we came up with the idea of having artists contribute images and metadata and assign copyright through their own Flickr accounts. We would then assemble the images in a Flickr Group and present them as a coherent digital collection via a Web site driven in part by the Flickr API. We implemented this idea in the spring of 2008, albeit with some technical modifications to our initial vision (McWilliams 2008).

This site, <http://accessceramics.org>, is a live, growing collection of contemporary ceramics images that reside in individual Flickr accounts but are organized together into a digital collection with a defined set of metadata. In contrast to digital collections that are cataloged centrally, our metadata is entered by the contributors. We found some similarities to this model in the digital history projects launched by the Center for History and New Media such as hurricanearchive.org. We also found affirmation in our selection of Flickr when the Library of Congress launched a collection of images in the Flickr Commons in 2008.

These recent experiences have convinced me that a new model for library discovery systems may be emerging, one characterized by global discovery systems like Flickr, WorldCat.org, and new ones yet to surface in both the profit and non-profit sectors.



The challenge of library technology and metadata professionals will move from managing a library's own set of isolated databases to managing their library's imprint on shared global discovery platforms.


These will be systems that benefit from the network effects allowed by Web scale: they will get better as people and organizations use them and contribute to them. The challenge of library technology and metadata professionals will shift from library management of isolated databases to managing their library's imprint on shared global discovery platforms. Libraries will still strive to provide specialized interfaces and metadata for their users, but the work will be done in this new global context.

If a library develops a special vocabulary for a subset of its collection, it will add the terms to a global database so that this vocabulary, however esoteric, can have a broader benefit. With our likely move to WorldCat Local here at Watzek, I'll encourage our cataloger to start adding genre headings for videos on WorldCat instead of doing the work in our local system. Rather than sweating out upgrades to library-managed OPAC software, we will enjoy WorldCat Local's "software as a service" model that assures it is being constantly improved and upgraded, just like Gmail. When we feel the need to customize, we'll use APIs to create interfaces tailored to our user communities. We'll also take the opportunity to mash up data from multiple sources on the network. For example, Watzek recently created a proof of concept mashup with the



WorldCat API and the Google Book Search API that creates a Google Books search with library holdings in the result set. This platform shift should benefit smaller libraries like Watzek, who will now have access to a search and discovery infrastructure that is as good as that used by the big players. Hopefully, these shared platforms will spark new innovations in collections and services by both small and large libraries.

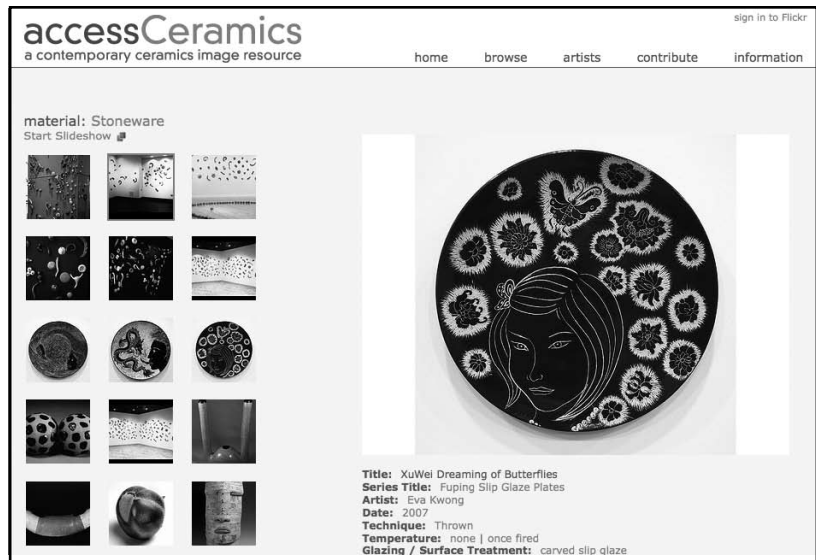
The movement towards network-level discovery systems for libraries is emerging in an uneven manner typical of new technologies. I welcome the complexity, chaos, and change. As has been the case in the recent past, much of our job will be managing change for our user communities, both technically and via communication with our constituents. These network level systems should make it easier to do basic research and access common material. User expectations for more specialized materials and services should increase. Whereas we have historically concentrated most of our energy on commonly published material in familiar forms, in this global discovery environment we may find ourselves working at the extremes. We will be curating physically and digitally what we have that is unique and of interest globally, as well as assisting with new forms of intellectual output that don't neatly fit the book or periodical categories.

Wherever we end up, it should be a good ride. 

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The Library Catalog as Experimental Sandbox

by **Tom Larsen**

*Database Management
and Catalog Librarian,
Portland State University Library*



A number of such “next generation” catalogs are being developed, all of which show great promise, and none of which is entirely without flaws.

For centuries libraries have made use of catalogs in one form or another as a register of the bibliographic entities found in a particular library (New World Encyclopedia contributors 2008). The modern online public access catalog (OPAC) has expanded this concept somewhat to include not only items owned by the library, but also items freely available via the Internet that have been deemed by library staff to be of value to their patrons. The modern OPAC also improves on previous catalogs with enhanced search capabilities and by being accessible from any computer with an Internet connection.

The recent advent of concepts such as “Web 2.0” and “Library 2.0,” though still nebulous, illustrates that users no longer think of the library as their only, or even their primary, source of information. As pointed out by Coyle (2007a), “The question today is not how do we get users into the library, but how can we take the library to the users. The answer will necessarily involve a transformation of the library catalog.” Users rarely begin information searches in the library catalog, tending more often to start searching the Web using a popular search engine such as Google. The question becomes not one of what resources can be found in the library but rather one of what resources are available anywhere and how can one obtain them (Coyle 2007b). Consequently methods are being developed to pass Internet searches on to a library catalog when appropriate. At the same time, new services are being developed in library catalogs to send a user’s search beyond the local catalog into the catalogs of other libraries, into electronic databases, into digital repositories, or even into the Web. In addition, services are being developed that allow users to provide value-added content in the form of tags, reviews, etc., thus making the catalog more interactive.

A number of these “next generation” catalogs are being developed, all of which show great promise, and none of which is entirely without flaws. An interesting family of new catalog interfaces comes from OCLC and is based on the WorldCat union catalog. OCLC’s WorldCat database contains over 125 million bibliographic records with the holdings of over 10,000 libraries around the world. OCLC has developed three new interfaces to this database.

WorldCat.org provides an interface that displays search results in such a way that it guides users to the nearest library that holds the item in question, then to progressively more distant libraries, thus allowing the user to find the quickest way of obtaining the item from a library. Furthermore, certain Web services (e.g., Google Books) allow the user to pass their Web search on to WorldCat.org to find a copy of the item at a nearby library.

WorldCat Local has the added feature of local branding. The holdings of the local library are displayed first, followed by the holdings of other libraries in the local library’s consortium, followed by other WorldCat libraries. For many purposes, WorldCat Local can serve as the primary interface to the local library’s collections (as opposed to the local library’s own Web OPAC) with the added feature that the holdings of other libraries are also displayed. This feature is useful if the local copy is unavailable or does not exist.

WorldCat Navigator is being developed for Summit, the union catalog of the Orbis Cascade Alliance. It is similar to WorldCat Local except that it is branded for Summit and displays the holdings of Alliance libraries first followed by the holdings of other WorldCat libraries. WorldCat Navigator also allows patrons to borrow items directly from other libraries in the consortium.



None of these new interfaces is without problems. For example, the bibliographic records that display in WorldCat interfaces are based on the OCLC master record, so any notes (as well as other fields) that may appear, in a library's local records will not appear or be searchable, in the WorldCat displays. This is particularly troublesome for libraries with extensive special collections, since these fields are often crucial for identifying unique copies of rare materials (Allison-Bunnell et al. 2008). Furthermore, any authority work done in the local catalog is potentially lost in WorldCat unless OCLC has also done that authority work on their master record. There are many records in WorldCat for which such authority work is sorely lacking. OCLC is aware of these problems, however, and hopefully they will find solutions to them.

The highly networked nature of information resources, and the decreased need for users to be within close proximity to resources, have led some to wonder why libraries even need their own bibliographic database and user interface (Coyle 2007b). Certainly it seems redundant for a library's holdings to be represented in WorldCat and the local database, which sometimes entails duplicated effort. While future improvements in WorldCat may make it possible for libraries to abandon their local catalogs and rely solely on a union catalog, this does not appear to be totally feasible at the present time. In addition to problems with records, many libraries use their local catalogs to inventory items such as study room keys, laptops, their dark archives, and other items that are not appropriate for a world-wide union catalog. In some cases items (e.g., those in dark archives) should not even be visible to anyone other than library staff.

Another reason why some libraries might want to maintain a local catalog is to have an experimental sandbox. At Portland State

University, we have a history of experimenting with our catalog to develop new services for our patrons. One of our more successful experiments involved exploiting the capabilities of the Electronic Resources Management module from Innovative Interfaces to integrate one of our digital archival collections into our database, and then to allow our patrons to navigate through the various hierarchical levels of the collection (Brenner et al. 2006). This system mimics some of the hierarchical characteristics of a finding aid, yet it consists of sets of linked MARC records which can be searched by author, title, subject, etc., with the other bibliographic records in our catalog. These records also contain links to the digital objects themselves. This system has greatly improved access to this collection. The important point here, however, is that this experiment would have been impossible without a local catalog.


Another experiment we performed in our local catalog involved the inclusion of non-Roman scripts (Chinese, Japanese, Korean, Arabic, and Hebrew) in authority records. We discovered this had certain beneficial consequences for searching in our catalog. When the vernacular script form of a name was entered into a 4XX or 5XX field in the appropriate authority record, a search using the vernacular script, retrieved records with the vernacular form of the name, and through the cross references provided access to records that contained the name in Romanized form.

This functionality would benefit our patrons, but this project was not carried through to completion because the Library of Congress began including vernacular scripts in their authority records, which then appeared in the OCLC authority file. Currently, it does not appear to be possible in WorldCat to retrieve Roman-script-only records when searching using the vernacular script. Consequently, this type of search still



... we would have never been able to explore the possibilities if we did not have a local catalog in which to explore them.

works best in our local catalog. Again, we would have never been able to even explore the possibilities if we did not have a local catalog in which to explore them.

These are exciting times, and it will be interesting to see what developments will happen in the world of library catalogs and other information discovery systems. Nevertheless, we are not quite ready to abandon our local catalog and throw the proverbial baby out with the proverbial bath water. On the other hand, though, as the baby grows up, it would do well to be flexible. 

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Reflections from Menucha

*by Stephanie Michel
Reference/Instruction Librarian,
University of Portland
(and Past President
of ACRL-Oregon)*

Librarians from across Oregon and Washington gathered on October 23 and 24, 2008, in the beautiful autumn sunshine at the Menucha Retreat and Conference Center for the ACRL Oregon/Washington fall conference. The theme, “The Once and Future Catalog,” offered insight into exciting possibilities for next-generation library catalogs, as well as discussion of issues to consider and obstacles to overcome. Speakers from around the Northwest and across the country discussed their experiences with cutting-edge library catalogs, including:

- Kristin Antelman, Associate Director for the Digital Library at North Carolina State University (NCSU) Libraries, presented the NCSU Endeca-based library catalog and the Triangle Research Libraries Network (TRLN) consortial catalog.
- Tim Daniels, formerly the PINES Program Manager with the Georgia Public Library Service (GPLS), discussed the Evergreen-based PINES system.
- Terry Reese, Digital Production Unit Head at Oregon State University, addressed regional opportunities for next-generation library catalogs.
- Steve Shadle, Serials Access Librarian; Anne-Marie Davis, Reference Librarian/Collection Development Coordinator; and Kathleen Collins, Reference and Instruction Librarian from the University of Washington (UW) Libraries discussed implementation and public services issues with WorldCat Local.

Several themes emerged from the conference session and invigorating discussions.

It’s all about the user.

A fundamental concern for user needs and preferences was a common thread. The WorldCat Local panel stated at the beginning of their presentation that ultimately, it’s all about the user; later they discussed their adoption of the Google mantra, “trust the user.” Terry Reese focused on the need for one interface per user, meaning that each user could customize the catalog interface to his/her own preferences. He also energized the audience by suggesting that the OPAC should be the least used interface, questioning why users should need to leave their own familiar online environments and come to our system to find information. Kristin Antelman’s and Tim Daniels’ presentations also addressed seeking user input and gaining user buy-in during the planning process for their new systems. From these presentations, it became clear that user needs should be central to the planning process for next-generation library catalogs.

Considering all the options.

The speakers stated that they investigated various products before determining which option would best meet their needs. Each institution’s choice reflected their main priority for system functionality: discovery (search interface) or fulfillment (delivery system). NCSU and GPLS prioritized discovery, choosing Endeca and Evergreen for their user-friendly interfaces. UW considered Endeca and Encore, which offer better discovery, but ultimately selected WorldCat Local for its fulfillment system.

Terry Reese made an interesting observation that “search is easy; discovery is hard.” If you give a user a search box, they will find something. But will they find the best or the most relevant search results? The chal-



lence of next-generation library catalog systems is to optimize discovery, to have a robust system on the back end that can connect users to the information they need while offering an intuitive interface that any user can easily navigate.

Streamlined decision-making.

Kristin Antelman, Tim Daniels, and the UW panel discussed the importance of a streamlined and efficient implementation team in order to complete the project quickly. Kristin Antelman commented that if they had involved all potential stakeholders, they would still be talking about the project years later, rather than having accomplished it. In addition, the project needs sufficient support resources, including staff and funding. Another key element in the success of the NCSU and PINES catalogs was the use of project managers who oversaw and directed the implementation process. A small, well-organized and adequately-supported implementation team helped these projects to achieve their goals quickly.

Communication is key.

Speakers acknowledged that communication, both during and after a project's implementation, is crucial to its success. Library staff and patrons need to be kept up to date about implementation timelines and ongoing improvements to the system. Additionally, all users should have the opportunity to provide feedback or to report problems with the system. Tim Daniels discussed GPLS' outreach to member libraries, which resulted in a collective sense of ownership and pride in their library catalog. UW librarians learned from their experience that communication is vital to positive staff perception of the project. Lack of communication can leave staff feeling like their input is not valued and might cause negative perceptions of the system that linger after the implementation.

Collaboration.

Now more than ever, collaboration within our own libraries and among regional partners is vital to success, not only of library catalogs but of many library services. The GPLS system provided a model of collaboration; their 275 member libraries participate in the system at no cost to the member libraries. Their catalog is centrally administered, and a statewide library card allows users to check out and request materials from any member library across the state. NCSU also lauded their TRLN consortial catalog, which allows users to receive items from participating libraries within one day of the request. The geographic proximity of their libraries makes this arrangement more feasible.

UW noted user demand for materials from other libraries increased dramatically after they adopted WorldCat Local. Summit borrowing increased 59 percent, and interlibrary loan borrowing increased 101 percent. As patrons use more materials owned by other libraries, the need for each individual library to own every book is reduced, opening the door to cooperative collection development. Building collections cooperatively with regional partners will allow libraries to reduce duplication in their collections and free their limited resources to purchase unique materials that benefit the entire consortium.

Collaboration needs to happen to a much greater degree, according to Terry Reese. He predicted the end of the local integrated library system (ILS), and suggested that the ILS will move to the network level. A network-level ILS would be centrally administered, either by a consortium or a vendor. Participating libraries could utilize the full functionality of the ILS without the responsibility for maintaining the system, thereby reducing costs and duplication in staff time and expertise among libraries. For users, a move to the network level



would provide a consistent catalog interface across multiple libraries and might lead to a statewide library card program similar to the Georgia Public Library Service.

Persistence.

Persistence was a key factor in the success of all the projects. Terry Reese stated it best by asserting, “We succeed by committing to a solution and making it work.” The speakers noted that their projects were accomplished through hard work and dedication on the part of their project teams, who overcame the obstacles, implemented the system, and persisted after the implementation to troubleshoot issues and make the system a success.

Usability (or, it really is all about the users).

Usability, for patrons and for library staff, was a theme throughout the conference. Once libraries have implemented the new system, how do they determine if it meets their goals? Can users efficiently use the system to locate and borrow materials? GPLS created a new position focused on usability; this person will be responsible for conducting usability tests with staff and patrons at member libraries. NCSU conducted focus groups which shaped the development of the TRLN system; Kristin Antelman noted, “too often, our opinions are arbitrary and driven by the people involved.” Usability

tests gather feedback from our core users to ensure that our decisions meet their needs and expectations.

UW implemented WorldCat Local with the idea that if it didn’t work for their users, they would turn it off, despite the significant investment of time and resources. Another WorldCat Local library did exactly that. The Peninsula Library system in California was another early WorldCat Local adopter; however they turned off WorldCat Local almost immediately due to user complaints about their inability to limit a search to a specific branch library. Although UW’s WorldCat Local has this same limitation, they have overcome this issue by maintaining two separate library catalogs: the former Innovative Interfaces library catalog, which offers more advanced search functionality, as well as WorldCat Local.

User feedback about UW’s WorldCat Local catalog was primarily positive; negative feedback usually focused on specific problems rather than broader complaints. UW also made an interesting distinction between the types of negative complaints that they received: they classified the issues as transitional (a result of users’ learning curve with the new system), or functional (actual problems with the system). Not all complaints indicate that something is wrong with the system; instead some offer a teachable moment in which users can be taught how to efficiently utilize the new system.

After the implementation, and ideally on an ongoing basis, libraries need to ask their users if the system is working for them and how it can be improved. Users, expectations, and research methods change; the library catalog (or any other system) needs to be responsive to this changing environment and continue to adapt to users’ shifting needs and preferences.

Throughout the conference, speakers energized and engaged the audience by encouraging us to think imaginatively




“...too often, our opinions are arbitrary and driven by the people involved.”

—Kristin Antelman,
Keynote speaker,
ACRL Menucha 2008



about what the library catalog could be. How can we jazz up the catalog interface and offer features that our users expect and utilize in other online applications? How can the back end of the system offer better functionality for fulfillment and delivery of materials? How can we incorporate the lessons learned from conference speakers. These lessons are:

- investigate all of our options
- identify our project goals
- appoint streamlined implementation teams
- seek input and gain buy-in from our users
- establish clear communication methods for reporting successes as well as problems
- collaborate with regional libraries
- be persistent on our path to success
- remember, throughout the process, to keep our focus on the user.

This conference provided a great start to the conversation on how our individual libraries and our regional consortium can shape the future of library catalogs. 

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LibraryFind™:

The Development of a Shared Library Platform at Oregon State University Libraries

by **Terry Reese**
Gray Family Chair
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Librarians need to look beyond a system's surface improvements to evaluate the system's ability to cross boundaries and provide opportunities for interoperability.

The digitization of academic resources has been a boon for library patrons, providing library users with access to resources not available in earlier years. However, the advent of Internet discovery tools like Google and Yahoo have led users to expect simple yet richly interactive systems that transparently facilitate access to information. And it has been the library community's challenge to develop systems and strategies for meeting changing user needs. This has meant a closer look at our own culture and a need to rebuild ourselves as more nimble organizations with the ability to quickly shift directions and develop more transitive services. While many libraries continue to talk about the need to become more like Web 2.0 organizations, few have actually started to move in that direction.

However, before moving forward, we should really step back and define some of the vocabulary that will frame the conversation—specifically how Web 2.0 and metasearch are being defined. Many of the discussions around Web 2.0 center around technology and functionality, which are an outward manifestation of the Web 2.0 philosophy. The focus on this aspect often leads to confusion as dialogue about Web 2.0 bogs down in debating feature sets rather than the guiding principles of the Web 2.0 movement. Like many communities, libraries have become enamored with much of the functionality that has come out of the Web 2.0 movement (tagging, faceting), but have failed to fully understand the movement's foundational principles. As Tim O'Reilly writes in his article, "What is Web 2.0," the driving force behind the Web 2.0 concept is one of no boundaries. When the Web is envisioned as the development platform, traditional rules and boundaries simply no longer apply. Out of that vision comes new rules and philosophies related to

how software and services should be developed. For example, O'Reilly argues for the idea of "perpetual beta," treating users as co-developers in the development process. If O'Reilly is right, and Web 2.0 philosophically represents this world where boundaries do not exist, then for librarians the hallmark of a Web 2.0 system cannot simply be a user interface improvement. Rather, librarians need to look beyond a system's surface improvements to evaluate the system's ability to cross boundaries and provide opportunities for interoperability.

Web 2.0 systems create new access points to encourage users to exploit and create tools from available data. The Web 2.0 philosophy of data interoperability reflects one of the library community's traditional core values. When the Oregon State University (OSU) Libraries first started developing the LibraryFind™ application, developers focused on how the application would encourage and promote greater interoperability with the Libraries' information resources. While LibraryFind's™ user interface (UI) reflects many of the technologies associated with Web 2.0 the aim of the LibraryFind™ was to embrace the Web 2.0 philosophical mantra and build a tool that could function as a component of a larger unified library platform.

In addition to Web 2.0, the concept of metasearch is a term that is often misunderstood or used interchangeably with federated search. For the purpose of this dialogue, federated search will be used to describe a search done over many different resources, where the query runs on numerous remote servers before results are aggregated and returned to the initiator of the search. Metasearch, on the other hand, will be defined as a search that is able to query and aggregate content from local and remote indexes. Metasearch's abil-





O'Reilly argues for the idea of "perpetual beta," treating users as co-developers in the development process.

ity to aggregate content comes much closer to the classic Web search engine model, where a single index is utilized to query a large cache of information. While federated search tools have no such central index and must rely solely on their ability to retrieve data from a wide variety of sources, metasearch utilizes an approach that combines both harvested and remote collections together. The distinction is an important one due to the inherent limitations present in federated searching. Since federated search queries multiple remote servers, a certain amount of built-in latency will always be present as the search tool communicates with its various remote servers. Metasearch applications, however, attempt to strike a balance between locally harvesting and indexing content (when possible), while still providing support for federated searching of resources that do not support local harvesting and indexing. Within the library community, the most notable resources that do not support local harvesting and indexing, are electronic journals and abstracts.

In 2006, the OSU Libraries decided to take a more active role in the development of its information infrastructure. Unsatisfied with the current crop of "next generation" systems available to the library community, the OSU Libraries opted to re-think what it meant to develop library services as part of a single unified library platform, and set out to develop that vision. This move certainly was not without risk, as the OSU Libraries moved away from a vendor-supported model to one in which the Libraries would be primarily responsible for both ongoing support and development of their retrieval platform.

The first of the components to be developed as part of this initiative was LibraryFind™. LibraryFind™ is an open source metasearch application that was developed to be used as the primary access point for aggregating the library's fragmented in-

formation landscape. This enabled OSU Libraries to, for the first time, offer a single set of Application Programming Interfaces (API) to departments and patrons looking to develop connections to library resources. Also, LibraryFind™ provides the Libraries' developers with a unified API for building other patron services. This development has allowed the OSU Libraries to take a more active role in defining and developing our own search infrastructure, as well as develop a product that could potentially benefit the greater library community as a whole. While a discussion of LibraryFind's™ current functionality or roadmap for development is out of scope for this particular article, information about the application can be found at the LibraryFind™ project Web page: www.libraryfind.org. The remainder of this piece will take a closer look at why OSU Libraries developed LibraryFind™ and its positive outcomes.

So why create LibraryFind™ in the first place? When I get asked this question, I'm often surprised to find that many people assume that the primary motivation for creating LibraryFind™ was money. I can understand this line of thinking. On average, a federated search solution to meet the needs of OSU Libraries would run approximately \$20,000 to \$40,000+ depending on the vendor and functionality purchased. While LibraryFind™ has reduced our total cost of ownership for a metasearch application, the actual costs or potential cost savings played a very small role in the decision to develop the LibraryFind™ application.

In 2005, the OSU Libraries were using a vendor-supported federated search tool. Yet as the Libraries became more interested in developing custom services for our varied audiences, it became clear that this federated search solution simply did not meet the current or future needs of the organization. While the Libraries could have looked




for a new vendor solution, Administration saw an opportunity to reinvent the library, adopting a much more fluid environment that would encourage the rapid development of new and improved library services. LibraryFind™ served as the test-bed for this model of service development. The responsibility for creating the application was shared between Emerging Technology and Library Services, Reference Services (who oversaw and provided formal usability testing) and Digital Access Services (formally known as Technical Services).

So how has the development of LibraryFind™ changed the OSU Libraries? There have been two fundamental changes that have grown out this experience. First and foremost has been the creation of a library-wide platform. For the first time, the Libraries have a discovery platform to use as a building block for other library services. In the two years since LibraryFind™ has gone live, the Libraries have been able to utilize LibraryFind™ to expose the Libraries' resources through other projects, like Oregon Explorer (www.oregonexplorer.info), a state-wide natural resources portal and Library à la Carte (alacarte.library.oregonstate.edu), a tool designed to enable rapid development of course and subject guide pages. As a platform component, LibraryFind™ acts as a conduit for information, bridging the gap that had existed between externally developed applications and their users. Additionally, the application itself has been well-received and continues to be well-utilized by the OSU user community.

In addition to LibraryFind™, the process used to develop the application has changed the way that the OSU Libraries view the creation of user services. Like many organizations, the OSU Libraries suffered from a paralysis of perfection, an idea that services needed to be perfect before they could be presented to the user. The Library-

Find™ application was the first to utilize a “perpetual beta” model. New features would be continuously released and evaluated. Services that found an audience were developed further and retained; those that did not were removed from the application. For the Libraries, this represented a big change from past projects which generally included a work plan with a definable ending point. LibraryFind™ on the other hand, continues to advance as the LibraryFind™ team assesses how user needs evolve.

Another change emerged in how the Libraries evaluate the success and failure of new projects. As tenured faculty, our success for promotion and tenure is tied to project success. However, the Libraries have had to recognize that there is value in creating projects that never succeed because they provide valuable feedback for the next attempt.

LibraryFind™ is an ongoing research experiment at the OSU Libraries. The program and its development continues to allow the Libraries to test concepts, push boundaries, and share library data with the campus and its extended user community. What's more, the application has served to further the research mission of the Libraries by significantly contributing to the metasearch community and providing a valuable resource for other libraries interested in developing their own search infrastructure. Finally, LibraryFind™ has fostered an environment where librarians are more comfortable with research and development and are actively identifying applications which further the Libraries mission to provide users with the tools they need for teaching and research endeavors. 

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... the process used to develop the application has changed the way that the OSU Libraries view the creation of user services.



The New Summit:

Building the Foundation for Enhanced User Services

by **Alan Cornish**
*Head, Library Systems,
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On December 1, 2008, the Orbis Cascade Alliance unveiled a new Summit search system (Orbis Cascade Alliance 2008). The creation of this new, much more robust, Summit catalog was motivated by several factors. Most importantly, the Alliance Council, in a 2006 strategic planning effort, identified next-generation discovery systems as a priority initiative for the Alliance (Orbis Cascade Alliance 2009). The most pressing need identified by the Council was to improve the patron interface to meet the expectations of our current users, whose expectations are shaped by services such as Amazon, Facebook, and Flickr.

In March 2008, the Alliance Council met and decided to commit to a product still in development, OCLC's WorldCat Navigator. The WorldCat Navigator solution consists of three components: a customized view of WorldCat.org, which supports discovery; the Navigator Request Engine (NRE) software, which is an extension of OCLC's VDX interlibrary loan software, to support returnable borrowing; and the Circulation Gateway program, which enables standardized communication between NRE and library circulation systems (OCLC, 2009). In the envisioned development partnership, OCLC and the Alliance would work together to create an integrated search/request/delivery solution based upon these software tools.

The essential features of a next-generation discovery system are embodied in the new Summit catalog (summit.worldcat.org) and are:

- Retrieval of article records from Summit; indexes include ArticleFirst, British Library Serials, PubMed/MEDLINE, and ERIC.

- Display of post-search filters, or facets, on results screens; these facets include: author, format, publication date, language, and topic.
- Improved relevancy ranking of search results.
- Book jackets displayed in many records.
- Support for user-created lists, tags, and book reviews.
- Ability to customize and extend the catalog through a published Application Programming Interface (API), which provides the information that developers need to customize results and record displays.

One additional element was needed, however, to make this migration a successful one: maintaining the requesting and borrowing capabilities to which Summit users were accustomed. These capabilities include the ability for users to search and seamlessly request items from Summit institutions; to review the status of requests; and to renew and cancel requests. The previous Summit catalog and borrowing system relied upon the Innovative Interfaces (III) INNReach consortial borrowing software and the III Millennium software, which is used by each Alliance library as its local catalog. Because of the tight integration that III achieved with Millennium and INNReach and the high requesting volume of the existing Summit service, the challenge proved to be formidable.

When the Council approved the change to WorldCat Navigator, it also created an implementation team to spearhead



the migration. The Implementation Team managed the WorldCat Navigator implementation; which included supporting the shutdown of the III INNReach system; coordinating software development tasks performed within the Alliance; and supporting communication with and training for Alliance members (Orbis Cascade Alliance 2009). To a great degree, the Implementation Team's work, and the migration as a whole, has been transparent. A search of the term "summit migration" in Google will retrieve detailed information about the migration from the Alliance's Web site, including information on the Implementation Team's work (Orbis Cascade Alliance 2008). In short, the Alliance and its members are taking a leadership role among consortia in the development partnership with OCLC and in the implementation of WorldCat Navigator. Making information on the migration public, when possible, will enable other consortia and institutions to benefit from this work.

It was clear from the start that the migration would be challenging. The deadline required that the migration to Navigator would have to be accomplished in a very tight timeframe and would require an "all hands on deck"



Making information on the migration public, when possible, will enable other consortia and institutions to benefit from this work.

approach by the Implementation Team, by staff at the Alliance and at member institutions, and by OCLC staff who were assigned to the implementation. Also, the tight timeline meant that the INNReach shutdown process would have to begin in early November, only seven months after the Council's decision to commit to the WorldCat Navigator migration.

Beyond the timeline issue, there were technological ones. During the fall 2007 Northwest Innovative Users Group meeting, Kyle Banerjee presented at a plenary session on next-generation discovery systems (Banerjee 2007). One of the points that Kyle emphasized was the lack of maturity of the then-available discovery solutions, with all of them employing techniques such as screen scraping, use of JavaScript code hacks, and the use of software packages designed for other purposes (such as content management systems). As a result, in order to deploy a much more robust discovery system that would better meet the needs of Summit users, the Alliance and its members had to embrace some relatively immature technologies. Much of the early work for OCLC and staff members working throughout the Alliance went to ensuring the best possible request experience and service for users, given the technical challenges of this migration.

Additionally, it was clear at the March Council meeting that the Alliance would be assuming some local software development responsibilities as a development partner with OCLC. This was quite a change from the previous software support model with III's INNReach, for which the




vendor performed essentially all development work, and improvements in the software were requested and implemented through a lengthy enhancement process. For example, programming had to be performed to support pass-through searching from Millennium systems throughout the Alliance to the new Summit catalog. The programmers went beyond replicating the Millennium-INNReach functionality and implemented pass-through searching that retains advanced search limits, such as date ranges and media types, when passing a search from a Millennium catalog to the new Summit catalog. Developing the OpenURL resolver was particularly critical, because it enables the system to process requests for articles. The resolver is configured so that institutions can set up one or more entries as needed in order to support multiple fulfillment options, e.g., for each campus of a single Alliance institution. These local development efforts are being supported by an Alliance technology group; the programmers responsible for coding specific applications for the new Summit are listed on the technology group's Web page (Orbis Cascade Alliance 2009).

Because the new summit runs on the WorldCat.org platform, only OCLC records are searchable. Therefore the Alliance and OCLC launched an immediate initiative to update the accuracy and completeness of member library holdings in WorldCat. OCLC supported the updating of holdings through reclamation and batch updating projects, which enabled records to be added in WorldCat for holdings not previously represented in the system. Because of the rapid implementation timeline, OCLC worked with the Alliance and member libraries to perform these updates as a high priority (Orbis Cascade Alliance 2009), with coordination provided by the Alliance.



... the Alliance has implemented a software solution that has the potential for truly integrating the discovery and delivery processes.

While the migration work is still in progress as of this writing, January 2009, a number of important milestones have been achieved. The core functions of discovery and returnable requesting and borrowing are in place. All of the discovery features listed at the beginning of the article are now available to Summit users, including the ability to extend the discovery system using a published API (OCLC 2009). Most importantly, by employing WorldCat Navigator, the Alliance has built a foundation that will support the ongoing improvement of user services. The Navigator Request Engine software can support the delivery of articles as well as returnables (books, etc.). The NRE can also support requests for materials held by libraries outside the Alliance, either through WorldCat Resource Sharing, or by transferring request information from NRE to ILLiad, another OCLC resource sharing product.

While OCLC is still developing support for article requesting in NRE, the Alliance has implemented a software solution that has the potential for truly integrating the discovery and delivery processes. Summit users will have the ability to search a growing and diverse set of collections as a single unified collection, and to obtain materials through a unified request system. It's a challenging and ambitious goal, but with the implementation of the new Summit system, the Alliance and its member institutions have taken a big step toward meeting it. 



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Building Catalogs in the Sand

by **Wade Guidry**
Systems Manager,
Coastal Resource
Sharing Network (CRSN)

For the past four years, the Coastal Resource Sharing Network (CRSN) has had an evolving public interface for their Beachbooks library catalog in pursuit of a better search experience for patrons. CRSN, serving a population of 70,000 in Tillamook and Lincoln counties, includes six member library systems, two community colleges, 13 library buildings, and one bookmobile. CRSN's current annual circulation stands at 850,000, with a collection size of 400,000 items. This article shares some of the ideas behind their evolving catalog design.

Finding the catalog

Users can find a library catalog one of two ways: by doing a Web search, or by entering the catalog's address in their browsers. Prior to 2005, the CRSN catalog address, www.crsn.lib.or.us, was difficult to market and hard to remember. So, during an ILS migration in early 2005, CRSN switched to the much friendlier www.beachbooks.org. Such addresses double as great search terms to help patrons find the catalog online. For example, a Google search for "beachbooks" puts the CRSN catalog at the top of the resulting hit list.

Media coverage

In 2008, patrons of the Beachbooks catalog used the search term DVD more than any other and three times as often as the next most commonly used term. CRSN patrons also searched for VHS often enough to put it in the top 20 search terms used. Clearly, Beachbooks patrons want to use the catalog to find media. Following the lead of other Oregon libraries like Deschutes Public Library, CRSN has tried to incorporate media-friendly features in the Beachbooks catalog, including:

- The ability to browse specific item types (DVD, music CD, audiobook CD)
- The ability to browse movies and TV shows by genre and show title

One popular new feature has been the addition of a "Movies and TV" page that allows patrons to browse movies by genre (adventure, Disney, historical, etc.), and to browse TV shows by title. While CRSN did not add this feature until June 2008, some of its associated searches still reached the top 50 most popular searches for the entire year.

Providing relevant labeling for media searching is another good idea CRSN is pursuing. Librarians know that when searching music, an "author" search equates to a search for a composer or performer, or that "publisher" equals a music label, like Blue Note. The average user does not necessarily think that way. Labeling media searches with relevant terms like "director/performer," "composer/artist" and "title/track" is a simple way to improve media discoverability.

Cover to cover

CRSN began providing cover art and reviews on Beachbooks in late 2004. Like many libraries, CRSN purchases enriched content through its ILS vendor, with the content originating from Syndetic Solutions, now part of Bowker Publishing. While CRSN cannot measure its impact, they do quickly hear from patrons if the content goes offline or loads slowly. The downside to this enriched content has been its cost and the lack of content for media like movies and music. However, some lower-cost alternatives for enriched content are starting to appear. Baker & Taylor now offers an enriched content solution called "Content Café," which includes content for music and movies in addition to books. Another vendor, Book-

- The ability to search within broad A/V groups (movies, music, audiobooks)



Letters, offers dynamic book-related content for newsletters and Web pages that can be leveraged for in-catalog delivery.

CRSN has also experimented with using their content stream in creative ways. For example, one of the CRSN catalogers suggested last year that they try to mimic the display of featured books on the Barnes & Noble Web site. Based on that suggestion, CRSN leveraged its subscription to Syndetic Solutions content to create a dynamically-updated display of recently added titles that appears on the Beachbooks front page. Using the same technique, Newport Public Library, one of the CRSN member libraries, displays recent staff picks from the Beachbooks catalog on their Web site.

Database integration

For some patron needs, subscription databases are the perfect tool. In relation to the catalog, though, where do they go and what are they called? For EBSCOHost, the predominant CRSN database, CRSN has sidestepped those issues by implementing a search box that allows patrons to search EBSCOHost directly from the front page of the catalog. Patrons simply enter their search query and click “Search.” Libraries subscribing to EBSCOHost can easily create such a search box using the new Search Box Builder tool provided by EbscoHOST.

CRSN also integrates its database list directly into the catalog. Embedding the database page directly in the catalog has the disadvantage of relying on the dynamic, session-oriented nature of catalog URLs. To counteract this, CRSN offers direct navigation to the database page via the URL <http://www.beachbooks.org/databases>, which can be bookmarked and linked.

Undergoing analysis

Usage statistics can help guide catalog design. For the Beachbooks catalog, CRSN uses two freely available tools for analyzing



For some patron needs, subscription databases provide the perfect tool. In relation to the catalog, though, where do they go and what are they called?

Web traffic, Google Analytics and AW-STATS. Google Analytics is by far the easier tool to implement and within the capabilities of casual techies.

Google Analytics provides interesting and useful information about catalog traffic, browser screen resolutions, and connection speed. It also provides usage data such as most common entry points, number of visits and unique visitors, average session length, and most visited pages

This data helps CRSN decide which screen resolutions to test most thoroughly with the catalog. For example, 4 years ago 800 x 600 was still a common screen resolution, but today only 10 percent of Beachbooks users use a screen resolution of 800 x 600 or lower. Google Analytics also shows that despite growing sales of Apple computers, over 91 percent of Beachbooks users still run Windows, and the use of Linux among patrons remains below one percent. Although still a very small subset of total use, mobile devices are also starting to make an appearance in the list of OSes—a trend worth watching.

To use Google Analytics, libraries can set up an account at www.google.com/analytics, and follow the instructions for adding a simple HTML snippet to the footer of the catalog. After a few days, data is available on the Google Analytics dashboard.

Miscellany

Between major revisions, CRSN continues to add smaller features to our catalog as





new needs and opportunities arise.

Recommend it!—The “Recommend It!” feature allows patrons to e-mail a link to a single item in the catalog to a friend. A minor success, patrons use this feature about 20 times per month.

Comments Submission—CRSN tries to make it easy for patrons to contact member libraries directly through the catalog by including links to comment forms within the catalog. Patrons use this feature regularly, with several new messages arriving each day. Most of the comments involve specific account questions (“What’s my PIN?” or “How to I renew?”), but patrons also make purchase recommendations and the occasional design suggestion.

Direct navigation—Amazon and other commercial sites have successfully taught users about direct site navigation with URLs such as amazon.com/movies and amazon.com/music. CRSN offers similar URLs for some pages within the catalog to help with navigation, as well as with bookmarking and direct linking. Such URLs include beachbooks.org/databases, beachbooks.org/movies, and beachbooks.org/library2go.

No results found—Rather than simply display a “no results found” message in

response to an unsuccessful search, our catalog now provides a number of search tips and links to similar searches.

Constant testing

To keep the catalog moving forward, CRSN likes to test it regularly. Gordon and West (2008) listed three use cases they apply as a quick litmus test of the usability of any catalog they encounter. To paraphrase their tests:

- Can a patron easily find a title such as “She’s not there” that includes Boolean terms?
- Can a patron easily list all DVDs in the catalog?
- Can a patron easily find titles from the New York Times bestseller lists that the library owns?

To those tests, CRSN would add some others:


- Can a patron quickly find the catalog via search engines like Google?
- Can a patron quickly limit a search to fiction or nonfiction?



- Can a patron easily search by media type?

CRSN also looks to other catalogs for new ideas. CRSN visits other SirsiDynix catalogs to find out what other libraries are accomplishing on the platform. For broader inspiration and trend watching, CRSN looks to catalogs of prominent Northwest libraries, especially those active in catalog development. Those include Seattle Public Library, Multnomah County Library, Deschutes Public Library, and Corvallis-Benton County Public Library. Looking even more broadly, WorldCat and OCLC FictionFinder incorporate new and interesting catalog features on a regular basis.

Conclusion

Looking back over the last four years, the Beachbooks catalog has benefited greatly from the input of staff and patrons, as well as the anonymous contributions made by those whose work they have copied. Looking forward, the Beachbooks catalog continues to evolve. This coming year, CRSN will likely implement saved reading lists for patrons, with help from new ILS features. CRSN might also need to adapt the catalog for use on increasingly prevalent mobile devices like smart phones and incorporate new media types, as they did recently with downloadable content and Netlibrary E-books. Whatever happens, one thing is sure: the Beachbooks catalog will continue to evolve. 

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Legacy Metadata and the New Catalog

by **Richard Sapon-White**
*Head of Cataloging,
Oregon State University*

The nature and purpose of library catalogs are rapidly changing. The future catalog will enhance users' searching capabilities with relevance ranking and provide access to book reviews and user comments. Searching the catalog may be integrated with searching citation indexes and Internet databases. A whole world of new possibilities for the future of the catalog is just around the corner.

At the same time, the contents of the new catalog are also changing. Last year, the Library of Congress released a report calling on libraries and archives to reveal more of their hidden collections—archival and special collections of unique and rare materials as well as other resources not represented by bibliographic records in online catalogs and databases (Library of Congress Working Group on the Future of Bibliographic Control 2008). Meeting this challenge requires an understanding of the scope of the problem and strategic planning to solve it. This article explores the nature of these hidden materials, how libraries can bring them to light, and what resources will be needed to add this content to the new catalog. Oregon State University's efforts to meet this challenge will be highlighted.

Special collections and archives contain rare and unique library materials in many formats, including print books and serials, manuscripts, photographs, locally produced audio and video recordings, and realia. Many of these items remain hidden from scholars and researchers because the metadata describing them may be difficult to locate, incomplete, or non-existent. The challenge for these repositories is twofold: create metadata so that scholars can search for these materials online, and digitize the resources so that scholars can examine them from their desktops. Digitization enables discovery of the resources as well as preservation of the originals.

The metadata for these materials may currently exist in paper shelflists and catalogs awaiting retrospective conversion. At Oregon State University (OSU), some of our rare books are likely only described in the special collections card catalog, although there are plans to convert these to MARC records in the near future. The History of Atomic Energy Collection demonstrates a slightly different situation. A catalog of the collection was published in print (Laudamus 1990), but in order to locate and use the collection, a researcher must first discover the printed catalog. In WorldCat, only eleven libraries hold a copy of this title. To resolve this problem and make the collection more visible, we have begun cataloging books in this collection, ensuring that the individual titles are accessible via WorldCat.

Special collections and archives also may have backlogs of uncataloged acquisitions. The Northwest Digital Archives project has opened many Pacific Northwest resources to the world at large. Doing their part for the project, OSU archivists have created digital finding aids to many of their collections. Some of these finding aids are for recently accessioned collections, but many are for materials that have been stored in our archives for many years. The finding aids, created in Encoded Archival Description (EAD) format, are converted to MARC records using MARCEdit and then added to WorldCat and our local catalog (and therefore also to Summit, the union catalog of the Orbis Cascade Alliance). By making these records widely available, we provide multiple avenues for researchers to discover the finding aids.

Although the projects mentioned above are moving OSU forward in making our holdings more widely known, we have a long road ahead to achieve our goal of providing



metadata for all of our titles. Many other materials owned by OSU must wait their turn for metadata creation. These include a small backlog of gift monographs (approximately a thousand titles, many of them requiring original cataloging), about a hundred monographs in Farsi, and thousands of serial titles awaiting retrospective conversion. Serials in the Linus Pauling Collection and the OSU Integrated Plant Protection Center Library also await cataloging.

The situation at other libraries is likely no different from OSU. Titles in backlogs are often similar and include various types of gray literature, such as theses and dissertations, foreign publications, and government documents. These materials often require complex and/or original cataloging. With the many demands placed on the limited number of catalogers today, these backlogs tend to be fairly static.

The scope of the problem of materials awaiting retrospective conversion is the subject of two recent studies of the *National Union Catalog, Pre-1956 Imprints* (popularly called *Mansell*). These studies have revealed that 25 to 28 percent of *Mansell* entries have yet to be represented in WorldCat and the approximately 13 million entries in *Mansell*, these studies indicate that as many as 3.6 million titles await retrospective conversion (Beall 2005; DeZelar-Tiedman 2008). Although this cataloging labor is presumably distributed among many libraries, the studies highlight the degree to which many titles are well-hidden from most researchers in today's online environment.

What will it take to reveal these hidden materials in the catalog of the future? Our libraries will need the human resources to create metadata and the equipment to provide quality scanned images. As with any project, funding will be needed to hire and train personnel to create and maintain the



What will it take to reveal
these hidden materials in the
catalog of the future?

metadata. We will need library staff who are skilled and can apply their attention to detail, knowledge of cataloging rules, and experience with different metadata schemas to these valuable resources. Since these materials tend to be rare and unique, the trained individuals should have facility with languages as well as knowledge of rare book cataloging and multiple metadata schemas. The manual records of the past, when they do exist, will also need to be upgraded to current standards. Adequate staffing to handle this additional work will likely be a challenge for many libraries given the current economic situation.


In addition to creating or converting metadata, the ability to crosswalk metadata from one schema to another will also be critical. Redundant metadata allows for multiple avenues of discovery. For example, a metadata record in an institutional repository using Dublin Core metadata could be converted to MARC for inclusion in a WorldCat record. Such work requires metadata specialists with the skills necessary to create and adapt macros for metadata conversion.

There are several obstacles to fulfilling these goals. Fundraising is needed for personnel and equipment. Finding skilled catalogers has not been easy in recent years. The supply of new metadata specialists coming from library schools is limited while the number of catalogers currently employed is dwindling. Training paraprofessionals is a possible solution, although training takes time and close supervision.



Subject librarians will need to set priorities to allocate financial and human resources to those materials with the greatest significance to users.

Despite these obstacles, OSU has forged ahead on making our hidden resources more visible. As material budgets and new serial subscriptions dwindle, staff have time to devote to special projects. With training and guidance, they can tackle some of the cataloging backlogs and work on our retrospective conversion project for serials. Special collections staff occasionally requests MARC cataloging of specific titles of importance. Library school interns have helped with some cataloging projects in the past and could be helpful in the future. Digitization projects could include funding for metadata creation; such metadata could then be converted to MARC for inclusion in our catalog and WorldCat. We will continue to seek new and creative ways to stretch our resources and serve our users.

There are many rare and unique resources that are difficult for researchers to locate or use in all of our collections. The objective of including all of them in the catalog of the future will require thoughtful planning, fundraising and execution. The effort we make will enable our libraries to share the breadth and depth of our collections with the wider world. 

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Northwest Digital Archives:

Evolving Access to Archives and Special Collections in the Northwest

by **Jodi Allison-Bunnell**
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As library catalogs that offer general access to a wide range of materials continue to evolve, so do specialized tools that offer more detailed access to particular types of materials. Few areas have seen as much activity and as many changes over the last ten or fifteen years as archives and special collections. The Northwest Digital Archives (NWDA) program at the Orbis Cascade Alliance is in its seventh year of building effective access to archives and special collections materials in the Northwest. The program has evolved over time to meet the changing needs of its member institutions and their researchers and will continue to evolve to expose these often-hidden unique collections.

NWDA offers enhanced access to archives and special collections materials in Idaho, Montana, Oregon, Alaska and Washington through a union database of finding aids, or descriptions of those materials by collection. Finding aids provide varying levels of detail on collections beyond the MARC record. The ability to

search across them provides researchers with a level of access to information about collections that is not available through any other source.

Excellent search engine exposure also enhances access. Each collection in NWDA also has a MARC record in WorldCat and a local catalog, and most of those records link to the finding aid in NWDA through the 856 field. Members who have digitized materials from collections can link to those images from item-level or folder-level descriptions in the finding aid in the NWDA database.

The finding aids are encoded in an XML document type definition (DTD) called Encoded Archival Description (EAD). In the past, finding aids for archival collections were most commonly created as typescript or word processing documents. Some descriptive standards existed, but local practices prevailed. Unlike library cataloging, with its natural incentive to save costs by sharing and distributing copy cataloging, archives and special collections items are unique, and nearly all cataloging is entirely original. Descriptive practices have historically been shaped by the nature of each collection, with strong arguments made for particularized rather than standardized practices. With the development of new library catalogs, EAD, the World Wide Web, and a general mandate

The screenshot shows the NWDA website interface. At the top, there is a navigation bar with tabs for 'home', 'search', 'about', 'contact us', and 'member tools'. Below this is the title 'Guide to the Ruth and Latrobe Carroll Papers 1932-1980'. A search bar is located on the left side. The main content area is titled 'Overview of the Collection' and includes the following information:

- Creator:** Carroll, Ruth, 1899-Carroll, Latrobe
- Title:** Ruth and Latrobe Carroll Papers
- Dates:** 1932-1980 (inclusive)
- Quantity:** 7.25 linear feet (14 containers)
- Collection Number:** AX 710
- Summary:** Latrobe Carroll (1894-1996) and Ruth Carroll (1899-1999) were American authors of children's literature. The collection includes manuscripts, illustrations and correspondence that reflect the work of Ruth and Latrobe Carroll.
- Repository:** University of Oregon Libraries
Special Collections & University Archives
1299 University of Oregon
Eugene, OR 97403-1299 USA
URL: <http://libweb.uoregon.edu/speccoll/index.html>
- Languages:** Collection materials are in English.
- Sponsor:** Funding for encoding this finding aid was provided through a grant awarded by the National Endowment for the Humanities.

Below the overview, there is a section for 'Biographical Note' which includes the following text:

(Archer) Latrobe Carroll (January 5, 1894-November 30, 1996) was born in Washington D.C and passed away in Stamford, Connecticut. He received his education from Harvard University.

Carroll was a member of the Authors League of America, Friends of the Library (Asheville); second vice president 1960-

Example of a finding aid in the Northwest Digital Archives.

Unlike library cataloging, with its natural incentive to save costs by sharing and distributing copy cataloging, archives and special collections items are unique, and nearly all cataloging is entirely original.



Current members of the Northwest Digital Archives program:

- Alaska State Library
- Central Oregon Community College
- Central Washington University
- Eastern Washington State Historical Society/Northwest Museum of Arts & Culture
- Eastern Washington University
- Gonzaga University
- Idaho State Historical Society
- Lane Community College
- Lewis & Clark College
- Montana Historical Society
- Oregon Health & Science University
- Oregon Historical Society
- Oregon Institute of Technology

to improve collection access to expanding audiences, archivists have developed and begun to adhere to more standardized methods for describing groups of archival and special collections materials. In 2004, the Society of American Archivists released *Describing Archives: A Content Standard* (DACS), which for the first time prescribes minimal and optimal elements that should be present in any description of items from or groupings of archival materials (Society of American Archivists 2004).

NWDA began in 2002 with funding from the National Endowment for the Humanities (NEH) and National Historical Publications and Records Commission (NHPRC). The project grew with additional funding from those same agencies in 2005 and became a program of the Orbis Cascade Alliance in 2007.

The Alliance’s administrative and fiscal home is the University of Oregon, and the NWDA Program Manager is an Alliance employee. NWDA’s technical infrastructure is hosted by Washington State University, with Head of Systems Al Cornish serving as Database Administrator. A half-time student programmer helps him with system maintenance and development. Member fees support this staff, software, hardware, and costs associated with telephone and in-person meetings. NWDA gained new members from the Alliance and began as a program with thirty-one members in July 2007.

NWDA uses both Google metrics and internal reports to track usage. Members can access basic usage reports, which show how many of their finding aids are retrieved each month, on the member Web site (Northwest Digital Archives <http://nwda-db.wsulibs.wsu.edu/reports/document.pl>). These reports show a consistent upward trend in use. In January 2006, only 24 finding aids were retrieved from the database, but by January 2008 use had

climbed to over 15,000 retrievals a month. Since mid-2008, database use has been consistent with 20,000 to 22,000 finding aids retrieved each month. Over the same three-year period, the pathway that users of the NWDA site use to get to the finding aids has changed considerably. While researchers first came in primarily through the NWDA search and retrieval site, that quickly changed once the finding aids were exposed to search engines through Google sitemaps in mid-2006. The proportion of entry from search engines and referring sites quickly increased to around 50 percent and since October 2007 has stayed around 90 percent. Of that 90 percent, about two-thirds are from search engines and one-third from referring sites, which include library catalogs, Wikipedia, and sites that focus on specific subjects.

Google metrics give much more detail on these visitors and how they behave on the site. The most commonly retrieved finding aids are for the Montana State Prison Records at the Montana Historical Society, the Montana Ku Klux Klan Records and the Expo ‘74 World’s Fair Records at the Eastern Washington State Historical Society, and the Bill Bowerman Papers at the University of Oregon. Most visitors are from the United States, but there is also significant use from Canada, the United Kingdom, Germany, and Australia. Within the United States, most visitors come from within the Northwest (primarily Seattle, Portland, Missoula, Spokane, and Eugene), but visitors from New York appear in the top 20. Visitors view an average of two pages on each visit, and stay on each page for just under two and a half minutes. Most keyword searches were on personal names, followed closely by organization names (Google Metrics run on nwda-db.wsulibs.wsu.edu for March 1, 2008–January 15, 2009).



Improved discovery on the Web also leads to increased collection use. NWDA members report increases in collection use since they became consortium members. In a spring 2008 survey of the membership, 50 percent of members strongly agreed that participation in NWDA has increased the use of their collections, with an additional 31 percent somewhat agreeing with that statement. Nearly half the members estimated increases in use at 1 percent to 10 percent, with another one-third estimating increases in use at 11 percent to 20 percent (NWDA Program Assessment 2007). Anecdotally, many members report that researchers increasingly appear in their reading rooms with finding aids printed out from NWDA and knowing exactly what they would like to see.

The design and functionality of the first NWDA search interface, made available in summer 2004, were based largely on the needs and preferences of the archivists working on the NWDA project. Decisions about the site's functionality, appearance, and other factors were often difficult to make, as they were based on opinions about the needs of researchers rather than direct or documentable information. The original Web site was intended to serve both NWDA project members and their researchers, and the navigation and terminology reflected this dual audience. In 2005, with discussions of general usability more visible within the library and archives profession and with a need for a more rational basis on which to shape the site, NWDA formed a usability testing working group (UTWG) to guide the consortium's work. NWDA's commitment to usability principles and testing has involved new skills and significant time commitments from participating members on behalf of the consortium, and it has resulted in significant changes to and important improvements in the site's ability to effectively serve researchers.



NWDA's commitment to usability principles and testing ... has resulted in significant changes to and important improvements in the site's ability to effectively serve researchers.

The UTWG formulated usability principles in January 2006 based on Jakob Nielsen's work and on Web site accessibility needs for users with disabilities (Orbis Cascade Alliance 2006). The group followed with its first round of usability testing at the annual meeting of Northwest Archivists in Butte, Montana, in May 2006. The test subjects were other archivists not associated with NWDA. One UTWG member interviewed subjects and one took notes. Test subjects were allowed to explore the site with little imposed structure. The results of this test showed that NWDA needed to focus on keyword rather than browse searching and revealed some key navigation issues that had not previously been noticed. Resulting changes included a keyword search box on the home page and greater consistency in navigation on the site (Orbis Cascade Alliance 2006).

Tony Kurtz at Western Washington University and Donna McCrea at the University of Montana performed the second round of usability testing in late 2006 and early 2007 with undergraduates at their institutions. This testing was more formal, with scripts and Institutional Review Board approval. Kurtz and McCrea recorded and fully transcribed the interviews. The resulting report made a number of crucial recommendations that included eliminating or moving much of the information on the NWDA page that was intended for member institutions; clarifying search options; providing more context



Current members of the Northwest Digital Archives program:

- Oregon State University
- Pacific Lutheran University
- Seattle Municipal Archives
- Museum of History & Industry
- University of Alaska Fairbanks
- University of Idaho
- University of Montana
- University of Oregon
- University of Washington
- Washington State University
- Western Oregon University
- Western Washington University
- Whitman College
- Whitworth University
- Willamette University



to help users understand what finding aids are; clarifying search results; providing a search within the finding aid; and making the printing option clearer. NWDA implemented these recommendations that same year (Orbis Cascade Alliance 2006).

Tiah Edmunson-Morton of Oregon State University performed the third round of usability testing in early 2007, focusing on finding aid presentation rather than searching. Like round two, these tests were scripted and transcribed. Her tests showed that subjects scrolled rather than read lengthy finding aids; wanted better options to search and navigate within finding aids; were confused by lingering archival jargon; and had varying opinions on whether the site satisfied their needs for detail. Specific recommendations included modifications to the navigation sidebar, addition of an expand-collapse function, changes in sequencing and fonts, clearer divisions between sections, and direct links to repository homepages (Orbis Cascade Alliance 2006). NWDA implemented all of these recommendations by summer 2007 as part of a larger site redesign that incorporated new graphics and a cleaner interface. That same summer, the Usability Testing Working Group was renamed the Usability Design Working Group (UDWG) with a broader charge to shape the development of the NWDA site.

In 2008, the UDWG did two additional rounds of usability testing. Round four, again performed by Edmunson-Morton, was a follow-up to round three and tested the subjects' reactions to changes made to the site. Their responses to some elements were positive, including repository links and the search within a finding aid function. Other responses indicated that some changes, including some aspects of the search within the finding aid and the expand-contract function, need additional refinements or are not working as expected. Both users and working group members had recom-

mendations for additional changes based on their results (Orbis Cascade Alliance 2008). Round five of testing, performed by Megan Friedel of the Oregon Historical Society, tested the search experience on the site, including the basic and advanced searches, searching within a finding aid, and entry from referring sites like library catalogs and search engines. She found that a number of small and larger revisions are needed to make the site easier to use (Orbis Cascade Alliance 2008). NWDA is currently reviewing these results and considering what changes to make to the site next.

Usability testing data has provided the group with a better-supported framework on which to base changes to the site: real users have told NWDA what does and doesn't meet their needs and showed us what they most want from the site. Naturally, member institutions and working group members also have the ability to shape improvements and changes to the site, but the focus on users has helped NWDA get away from "designing for ourselves." Usability testing has also changed to reflect changes in use: while it was essential early in the program to test primarily the NWDA site and search functions, the fact that 90 percent of users now come in through referring sites means that it is now much more important to optimize that experience.


This stance is also shaping NWDA's future program. Since 2004, NWDA has wanted to move beyond metadata to offer considerable access to digitized archival content, but the planning and needs assessment for such a project was beyond the project's capacity. The Alliance merger provided the impetus and opportunity for that planning. Since 2007, NWDA has been studying existing digital programs within NWDA and the Alliance, establishing priority researcher audiences across institutions, and asking NWDA and Alliance members about their needs and desires for programs, best prac-





...the focus on users has helped NWDA get away from “designing for ourselves.”

tices, training, and services. In conjunction with Elizabeth Yakel of the University of Michigan’s School of Information, NWDA has conducted interviews with researchers from priority audiences to assess their needs and desires for selection and presentation of digitized archival content. The results, currently being compiled, will shape the direction of a future program that will integrate content hosting, reformatting services, meta-search, and digital preservation. NWDA has received a Collaborative Planning Grant from the Institute for Museum and Library Services to propel the program toward reality.

With its commitment to usability testing, skills developed within the group, and looking forward to expanded digital services in the future, NWDA will continue to build an effective program to enhance access to those unique collections that, in a world where published materials are increasingly universally accessible, are the lifeblood and definition of the institutions that hold them. 

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Usability Survey of Keyword Searching

by **Elizabeth Ramsey**
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This usability survey was originally developed during a practicum at a small liberal arts university in Northeast Portland, Concordia University (CU), as part of my graduate studies at Emporia University. It was originally suggested as a project by my practicum supervisor and head of CU reference, Judy Anderson, as the first step toward creating an online tutorial on keyword searching aimed primarily at distance students. The goals of this project were to give me practical experience with the usability concepts I had been studying as well as giving CU librarians new insights into the needs of their users.

The first task was to identify what we hoped to learn about CU library users and their methods of finding resources. Judy Anderson and CU reference librarian Krista Reichard helped develop seven initial questions we wanted answered through the survey. These initial questions then guided the development of the survey's interview questions and tasks. We also looked at other library tutorials in use by libraries in the Orbis Cascade Alliance, and usability surveys conducted at other libraries. Resources that proved especially useful are listed in the references.

Additional support for this project was provided by Donna Bachard, Concordia University Research Committee Representative, who helped refine the Human Subjects Research Investigation Application and ensure confidentiality procedures. Molly Lee, an intranet communication manager for Daimler who is experienced in usability studies, also provided initial guidance in the possible processes and procedures for usability surveys.

Method

The survey was conducted from November 11 to 18, 2008, on the Concordia University campus and in the homes of subjects. The eight participants in the survey were selected

at random from CU library users who were present at those times I needed to complete the task. Although not a scientific sampling, those surveyed represented a broad range of CU library users, from a freshman completing his first semester in college to an English language learner with conditional admission to CU to a middle-aged student returning to complete her graduate studies after being out of school for over twenty years. After listening to a scripted introduction, each subject completed an informed consent form, answered preliminary questions, then attempted to complete eight tasks related to keyword searches using the Concordia University library catalog. Observations were recorded on a checklist with a number assigned to each subject to help ensure confidentiality. Each survey was completed in less than twenty minutes.

Initial Questions and Concomitant Survey Questions/Tasks

1. **Do students understand when to use a keyword search?**

Interview Question: When do you think you should use a keyword search?

Task: Perform a keyword search in the Concordia University library catalog for "adult education."

2. **Do students know how to modify their search?** (any field ... Boolean terms ...)

Task: Modify your search. Look for: "adult education" AND "literacy" print resources available in English at Concordia. How many results did you get?

3. **Do students know what information they need to find an item on the shelf?**



Interview Question: How would you find the text “Print literacy development” in the Concordia library?

4. **Do student know electronic books are available in the catalog, and how to access them?**

Interview Question: How would you access the resource “Review of adult learning and literacy?”

5. **Do students know where to find the contents of a book?**

Task: Find the contents of the book “Print literacy development: uniting cognitive and social practice theories”

6. **Do students know how to find similar items?**

Task: Find similar items on the topic Adult Education.

7. **Do students understand how to mark and save items?**

Task: Go back to your original search results. Mark and save: “Adult learning method: a guide for effective instructions.”

Task: Send the item you saved in a brief display format to the following e-mail address.

Discussion

During the preliminary interview all subjects reported that they had conducted keyword searches of some kind. However, only two subjects had done so using the CU library catalog (<http://catalog.cu-portland.edu/search-S2>). All had conducted keyword searches using Google, and said Google was the main place they conducted information

searches of any kind. Half of the subjects did not know when to use keyword searches in a library catalog, so an explanation of when to use this type of search would be an important introduction to a tutorial.

In the task requiring subjects to modify their searches, only one-quarter of the subjects used the “modify search” button at the top of the search results page. Most subjects knew to add terms to their original search to narrow their results and understood the Boolean method of adding AND between their terms. However, because subjects did not generally know how to get to the advanced search page through the “modify search” button, they missed the opportunity to narrow their searches in additional ways, such as by location, language, type of resource and year. Several comments were made that the type in the “modify search” button was so small as to be unnoticeable. The survey results and comments point to the importance of drawing attention to the “modify search” and other buttons at the top of the page in a tutorial.

Many of the participants were not entirely sure how to locate resources, whether they were traditional books or e-books. Because less than half of the subjects connected the call number with the location of an item on the shelves, this topic is also an important component in a tutorial. Only one participant had experience with Netlibrary and Ebrary, so resources should also include pointers to tutorials for these products.

Most subjects were able to eventually complete the tasks that required them to click on the item title and use the tabs marked “More Details”, “Find Similar Items” and “Full Records” (see Fig. 1). However, several expressed surprise at the information they could access there, so the uses of the tabs should also be clearly explained in a tutorial.



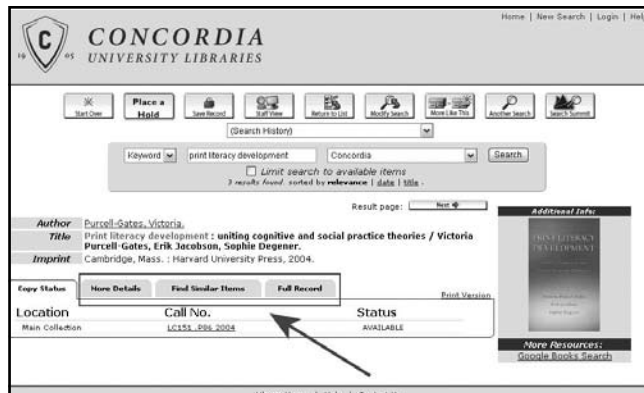


Fig. 1: Single item display in Concordia University catalog

The tasks which gave the subjects the most trouble were those connected with the use of the “Book Bag” button. Only one student understood that clicking on this button was the first step in being able to save and export an item from their initial search results, and this student had attended an informational lecture presented by a CU librarian. Only one student clicked on the item they wanted, then used the “Save Record” button at the top of the screen. When these two subjects did manage to save their records and view them, they complained that there was no clearly identified link to e-mailing their saved item, only the “View and Export” button. Another commented that when she accesses articles from databases there is always a clear method of saving and exporting items. Half of the subjects also asked how such a task could be useful in their future searches. These results indicate that users need clear instructions for saving and exporting items, and the “Book Bag” label does not adequately represent this feature.

The results of this usability survey appear to answer in the negative all the questions initially posed. Thus, all aspects of a keyword search present in the survey tasks should be addressed to some degree in a tutorial: when to initiate a keyword search,

how to modify search results, how to find an item on the CU shelves, how to use e-books, how to find the contents of a book, how to find similar items, and why and how to save and export items. While some subjects were able to find work-arounds which took them outside the library catalog, they will be able to perform much quicker, more accurate searches once they have a better understanding of all of the facets of the CU library catalog interface. A clear and detailed tutorial that includes comprehension checks such as a brief quiz may help them achieve that understanding. 🌸

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