# Why WorldCat Local?

"Web Scale" Discovery and Delivery of Library Resources

efore WorldCat Local, OCLC had built two platforms that addressed the "Web scale" discovery and delivery of library resources: Open WorldCat and WorldCat.org. Open WorldCat integrates WorldCat content into popular search engines (Google, Yahoo! Search, etc.) and bookseller sites. Once integrated, WorldCat records appear in results along with other Web resources, providing information that was previously hidden in library catalogs. WorldCat.org is a destination Web site for access to library collections and services. It searches the entire WorldCat database, provides links to services and resources that are geographically close to the user, and has a search box that is freely available to add to other Web sites. WorldCat Local builds on improvements to WorldCat.org, leveraging traffic from Open WorldCat, WorldCat.org, and partner sites.

Successful Web services leverage two-way networks. Google matches advertisers with searchers. eBay has a history of feedback from millions of buyers and sellers. Amazon.com brings even more things together, with thousands of stores and millions of products served up in one Internet storefront. In each of these cases, every new user or transaction adds value for all users and to the platform as a whole. Each system—as well as the user experience—is more robust and efficient through shared resources (improvements, feedback, data). Thus far, individual libraries have generally not been able to participate at the "Web scale."

Partnering with OCLC made sense because OCLC is in a position to work with large commercial entities like Google and Microsoft and expose our data in ways that individual libraries are unable to.

# What Is WorldCat Local?

WorldCat Local is most easily thought of as a localized version of WorldCat.org. It is branded and configured to reflect a library's look and feel and the services the library provides, all at a unique URL. Both versions of WorldCat include all 100 million+ records in OCLC WorldCat, as well as over 50 million article citations from five databases (Article First, British Library Serials, ERIC, GPO, and PubMed), integrating traditional catalog records with article citations. What makes WorldCat Local special is the way in which records are displayed and the integration of local delivery options. In addition, WorldCat Local inherits enhancements and services that are built for the WorldCat.org platform.

# **How Does It Work?**

At a very high level, all searching in WorldCat Local is done against records in the WorldCat database. At minimum, a library implementing WorldCat Local must have its OCLC holdings symbol attached to records in WorldCat (or use other services, such as a link resolver or OCLC eSerials Holdings). So as part of the implementation, some libraries might need to have a data cleanup, or reclamation, project to ensure that all records are marked appropriately.

This basic holdings information is used to present a "Held by:" statement in the brief results list. When a user selects a specific item to view, the system queries a local or consortial catalog to ascertain current circulation and status information. Depending on how an individual library has defined its work flows, users are presented with different options for obtaining the item. Any local



Search results with harvested image thumbnails.

records (e.g., on order or in process) or local edits not present in WorldCat are not currently seen by users in WorldCat Local. Implications and issues surrounding this topic are covered later in this work.

Realizing that libraries have vast amounts of digital content in repositories other than their catalog, OCLC can harvest records from OAI repositories, crosswalk them to MARC format, and load them directly into WorldCat, where they become part of a user's search and discovery experience. This is how OCLC handles CONTENTdm and other digital collections. In addition to providing information about the individual items, WorldCat Local also displays harvested thumbnail images in the brief results list (see figure 1).

Over 50 million article citations from providers such as GPO, Medline, ArticleFirst, ERIC, and the British Library Inside articles service are also discoverable through the WorldCat Local interface, meaning users can finally get article and book content in the same system. These article citations cover a wide range of content. WorldCat Local uses a library's OpenURL resolver to connect users directly to the actual content, and it can also hook into the interlibrary loan system to provide a more seamless delivery environment.

# **WorldCat Local Features**

Searching with WorldCat Local is easy and very Googlelike with a simple free-text search box. There is also an advanced search option that allows for more precise searching and limiting. The initial browse display is ordered by a ranking algorithm that preferences local records. In our case, UW holdings are preferenced over those of our consortial partner libraries (the 35 Summit libraries in the Orbis Cascade Alliance) and over those of other WorldCat libraries (see figure 2).

Each record includes icons that give users a visual clue as to the materials' format. Facets along the left side of the screen allow users to refine their search by author, format, year, content, audience level, language, and topic. WorldCat Local also supports multilingual interfaces as well as display of non-Roman scripts.

Individual records have three distinct blocks; bibliographic, availability, and tabs (see figure 3).

	Search for items: guns germs and steel	Advanced Search
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2004 (3) 2003 (4) 2001 (2) 2000 (5) 1998 (5)	<ol> <li>Jared Diamond Language: English Type:</li></ol>	

WorldCat Local browse display showing ranked holdings (UW first, then Summit, then WorldCat), Icons for material type, and facets. Accessed May 2008.

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# Figure 3

WorldCat Local individual record. Accessed May 2008.

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by Adam Greenfield		
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105 of 107 people found the following review he ★★★★☆ good but not gospel, (2000-02-10		
by Anthony Boyd		
	sent his ideas as Rules You Must Follow, rather lata to back up his assertion, and on a couple thi typos in this book,	

User-contributed and Amazon.com reviews for *Designing Web Usability* on the UC Davis Libraries' implementation of WorldCat Local. Accessed May 2008.

The upper block displays basic bibliographic data: author, title, publisher, standard numbers, and so forth. Records include hot links for authors and subject headings. Detailed records in WorldCat Local can display book jackets and include reviews. Users can obtain citation formatting and export records to EndNote or RefWorks. There are also many ways for users to create links to records in social networking tools such as MySpace and del.icio.us.

In the detailed record, the availability block (in the section headed "Get this item") displays the appropriate fulfillment options as defined by the library in its WorldCat Local configuration questionnaire. Links to Google Books will appear automatically, as they are built in to the service, but other options may include appropriate request services and links to full text or to the link resolver. Holdings and availability information is pulled into the display in real time from a local catalog. In our case, UW Libraries holdings are expanded to include library location, call number, and circulation status. Holdings for consortial libraries are collapsed, but can be expanded. The number of available copies are indicated for both local and consortial holdings.

Below the holdings and availability blocks are five tabs:

- **Libraries** displays libraries with holdings in WorldCat. The display is based on distance from the zip code of the user. This is the default tab in the WorldCat.org platform.
- **Details** provides additional bibliographic information about the item, such as pagination. The tab includes links to WorldCat Identities, allowing users to explore more about the author. In response to user feedback, the Details tab is the default tab in WorldCat Local.
- **Subjects** includes all subject headings assigned to the work.
- Editions includes links to all editions regardless of year and format. As discussed in a later section, WorldCat Local uses FRBR to collocate related works.
- **Reviews** includes user-contributed reviews. Users can create a WorldCat Local account and add reviews. If

a library chooses to include Buy It links (currently from Amazon.com or Baker & Taylor), reviews from Amazon.com will also appear here. Figure 4 shows an example from the implementation of WorldCat Local at the University of California-Davis, complete with reviews from WorldCat users and Amazon.com.

# Web 2.0 Features

One of the challenges facing libraries is how to build online systems and services that meet users' expectations. Given the popularity of social networking sites such as Facebook and MySpace and with the tight integration of social networking features in many online sites and services, users have come to expect this functionality wherever they go. Unfortunately for many libraries, including these features in our discovery tools is often expensivewhether the money is spent purchasing solutions from integrated library system vendors or in using local IT staff to write and integrate the services. With WorldCat Local, a library is able to leverage the resources of OCLC by having OCLC create these social services and integrate them into the WorldCat Local interface. For those libraries whose IT department is small or focused on production services, it's one way to get the features without investing additional resources in local development.

Since going live in April 2007, many user-centered features have been added to the WorldCat Local interface. As of June 2008, users are now able to perform the following tasks:

- · Assign a star rating to items at the detailed record level.
- After creating a WorldCat.org account, manage lists of resources for later retrieval. These lists can be
  - shared publicly to other WorldCat.org users
  - exported into a variety of formats (e.g., HTML, RTF, RIS, EndNote, or RefWorks)
  - easily shared to various social networking sites or have RSS feeds created from them
  - exported to a CSV file for further manipulation
- Easily view different citation styles for individual items.
- Export bibliographic data to citation management tools such as EndNote or RefWorks.
- Write a review of an item and read others' reviews. As noted above, these may include reviews from Amazon.com.
- Using the AddThis button that appears on every item record in the "Share It" section, easily e-mail a link, bookmark it in the user's local browser window, or share with others on a multitude of social networking sites.

Libraries can also choose whether they wish to display links that allow the user to buy the item from either Amazon.com or Baker & Taylor.

As was mentioned above, users usually start their research on other sites, such as Google or Wikipedia, as these resources provide context to help frame a research question or background information on a topic. In early 2008, Google announced its Google Books API, a systematic way to query whether content is available from its Google Book Search project and to embed that content into a site. For items available in Google Books Search, buttons labeled "Preview Item (Google Books)" or "View Item Online (Google Books)" are now presented with other fulfillment options. Surfacing Google Books information enables users to make a more informed decision about whether an item is worth investing the time to request or retrieve.

In addition to social features within the WorldCat Local interface, a Google gadget and a Facebook widget are available for users to embed in and search WorldCat Local from those interfaces. Each provides a simple search box for each library's implementation. These tools are available as part of the WorldCat Local activation process.

A recent enhancement to WorldCat Local is the availability of WorldCat Identities, a summary page for every name in WorldCat. An Identity page can be accessed from the About the Author link on the Details tab. On a WorldCat Identities page, the user sees an overview of the person's publications; the publication timeline; cover art for selected works; a list of most widely held works by and about the person profiled, all languages of publication, audience level, and related identities; and a tag cloud of associated subjects. This page provides the user a wealth of additional context about the person, information that was simply not available at the local-system level.

# Discovery Before and After WorldCat Local

Library users at the University of Washington are fortunate to have access to a vast and rich array of information resources. At the same time, this richness can create a complex and daunting landscape for users. The UW Libraries encompass collections of over seven million physical items. These items are shelved in libraries across three campuses and 15 branches. The UW Libraries also provide access to hundreds of databases and full-text electronic journals and book packages, each with its own distinctive interface and services. While a federated search service might have addressed the need to search multiple interfaces for some of our user population, we opted not to deploy such a service. We didn't have the staff to sup-

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Show more Year 2004 (5) 2003 (4) 2001 (2) 2000 (5) 1938 (5)	Language: English Type: (1) Sound Recording : Non-music : History : (2) Compact disc Publisher: St. Paul, Minn. : HighBridge Co., [2001], (2) 1997. Held by: Summit Libraries 4. Jared Diamond Language: English Type: (2) Visual Material : Videorecording : (1) VHS tape Publisher: [Madison, W1 : University of WisconsinMadison, 2004] Held by: WorldCat Libraries	

WorldCat Local display showing search results organized by "Held by" information: first University of Washington, then Summit, and then WorldCat libraries. Accessed May 2008.

port it, and many federated search systems are fraught with performance issues and thus provide a less-than-ideal user experience.

Prior to WorldCat Local, there were multiple discovery silos for UW users:

- University of Washington online catalog: listing of materials held by UW Libraries, except the UW Law Library
- Summit: Orbis Cascade Alliance union catalog of 35 academic libraries in Washington and Oregon with more than 29 million items
- · FirstSearch WorldCat: listing of the rest of the world
- hundreds of article databases

There was no clear path for users in moving from one system to another. Users had to know that if they didn't find something in the local UW online catalog, they should click on the Search Summit button. We estimated that 50% of users never clicked through from our local catalog to Summit. If users found nothing in Summit, there was no easy way to get them to the next step—WorldCat or interlibrary loan. We believed we lost 90% of users getting from Summit to WorldCat or interlibrary loan.

Because (in theory) the UW Libraries holdings are a subset of the Summit database, and Summit libraries' holdings are a subset of WorldCat, the user could identify resources available in any of these silos by searching only WorldCat, although that system lacks hooks into current circulation/status data. WorldCat Local displays those materials with appropriate holdings statements and in an order that makes it clear which items are held locally, which are held by consortial partners, and which are held by other WorldCat libraries. As mentioned above, users see holdings in the following order (see figure 5):

- held by UW libraries
- · held by Summit libraries
- · held by WorldCat libraries

Users don't have to know how to get from one silo to the next, as WorldCat Local contains the content from all three.

The screen shots in figures 6 and 7 show how confusing it was for users to move from one catalog to another in the pre-WorldCat Local environment. In these examples, the user is trying to find something by Stanley Mofjeld. Searching for the author "mofjeld" in the University of Washington's local catalog results in a set of records for Harold Mofjeld; no Stanley Mofjeld is found (figure 6). To continue, the user would have to know to click on the Search Summit button to repeat the search in Summit.



UW online catalog showing holdings for Harold Mofjeld and Search Summit button. Accessed May 2008.

If the user clicked on the Search Summit button, the results would show records for Harold and Norman Mofjeld, but still no Stanley Mofjeld (figure 7). At this point, the user has hit a dead end. To continue from here, the user would have to know to try searching some version of WorldCat (or possibly another database licensed by the UW Libraries), then return to the UW Libraries home page with a citation to get to the interlibrary loan form in order to place an interlibrary loan request for the item.

Using WorldCat Local, the user can search for Mofjeld and find records for Harold, Norman, and Stanley (figure 8). In addition, the inclusion of article citations in WorldCat Local allows the user to find articles as well as traditional catalog materials.

# Delivery Before and After WorldCat Local

Prior to WorldCat Local, UW also had three separate delivery silos:

- For UW materials: Many UW materials (books, media, scores, etc) could be requested by UW patrons through the local catalog. Holds could be placed on items that were checked out.
- For Summit materials: Patrons could request materials held at UW and other Summit libraries through Summit. If an item requested by a UW user was held by University of Washington and was available, the system placed a hold, also called a same-site request, on the UW copy. If not, it placed a hold on a copy at

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### Figure 7

Summit catalog showing search results for the author "mofjeld." Accessed May 2008.



Summit catalog showing search results for the author "mofjeld." Accessed May 2008.

another site, and the item would be delivered to the University of Washington.

 For materials not held by University of Washington or Summit libraries: These materials had to be requested through interlibrary loan. Some integration existed between our OpenURL resolver and interlibrary loan, although most users learned that the easiest entry was through the link on our home page.

Again, there was no clear path for requesting materials. While UW materials could be requested through the local catalog, this path wasn't always the most desirable. For example, if a UW item was checked out and requested through the local catalog, it was recalled from the current user. If that same request had been made through Summit, the requestor would get an available copy from another library. There was no path from either the local UW catalog or Summit to interlibrary loan.

WorldCat Local requests are routed to the most appropriate delivery option as defined by our work flows. Requests for materials held at University of Washington or Summit libraries are routed through Summit. This takes advantage of the system being able to select an available copy and maximize use of materials. Requests for materials held by WorldCat libraries are routed through interlibrary loan (ILLiad). Users don't have to stop and think about the most appropriate way to request materials. They don't have to ask themselves: Is it owned by the University of Washington? Is it checked out? Is it available through Summit? How do I get to interlibrary loan? The most appropriate option is consistently and prominently presented to the user.

Figures 9 and 10 illustrate the differences between requesting materials with and without WorldCat Local. For example, suppose a user searched for *Guns, Germs and Steel* in the UW online catalog and found all four copies checked out (figure 9). Clicking on the Request/ Place Hold button would result in one of the copies being recalled from a current user.

In WorldCat Local, the same search would show that the UW copies were checked out (figure 10). However, clicking on the Request Item button would result in a hold being placed on one of the 20 copies available at other Summit libraries.

When a user searches for materials that are not owned by the University of Washington or by another Summit library, the user is presented with the option of requesting materials through interlibrary loan (figure 11). The request would be opened in the user's ILL (ILLiad) account, and OpenURL would fill in the citation information.



Results of a search in the University of Washington local catalog. All copies of *Guns, Germs and Steel* are checked out. Accessed May 2008.

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### Figure 10

WorldCat Local showing that all University of Washington copies *Guns, Germs, and Steel* are checked out, but 20 of 35 copies are available at Summit libraries. Accessed May 2008.

not yet rated)	
Туре:	🗞 Book; English
Publisher:	[Alaska?] : The Service, [197-?]
OCLC:	33370963
Related Subjects:	Roads – Alaska – Chugach National Forest – Design and construction.   Roads – Location – Alaska – Chugach National Forest.   Highway planning – Alaska – Chugach National Forest.
Citations:	Cite this Item   Export to EndNote   Export to RefWorks
Get this Item	1
This item is not	owned by University of Washington Libraries or Summit Libraries, but you may still borrow it from a library outside of Summit Libraries
using interlibran	

Figure 11 WorldCat Local displays Request item through Interlibrary Loan button when the item searched for is not owned by University of Washington or another Summit library. Accessed May 2008.