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SPECIAL ANNIVERSARY EDITION: PART TWO

THE DAISY STANDARD:
MAINSTREAMING
ACCESSIBILITY

LINKING TO LIBRARY
RECORDS WITH OPENURL
AND OPENBOOK

IN SEARCH OF BEST
PRACTICES FOR
PRESENTATION OF
E-JOURNALS

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FUTURE OF VIDEO
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STREAMLINING BOOK
METADATA WORKFLOW

JOHN MIEDEMA

LINKING TO LIBRARY RECORDS

with OpenURL using the OpenBook WordPress Plug-in



Many people are interested in providing book cover images and bibliographic data on their webpages. Librarians and book bloggers use this data to enhance their book reviews and discussions. A number of book widgets and application programming interfaces (APIs) exist for obtaining this data from commercial book sources. OpenBook is a software module that provides a simple method of obtaining rich book data from Open Library, an open source project of the non-profit Internet Archive.

OPENBOOK IS A PHP PLUG-IN for WordPress, an open source web content management platform popular among librarians and book bloggers. WordPress users do not need any programming knowledge to use the plug-in. Once OpenBook is installed, the user simply inserts a “shortcode” with an ISBN or other book identifier into a webpage. The plug-in detects the shortcode and replaces it with a book cover image, title, author, and publisher obtained from Open Library using their API. The book data is formatted in HTML and displayed on the web page.

The first version of OpenBook was developed to meet the immediate needs of its developer and other web users who write about books and wished to display bibliographic data. The plug-in was received enthusiastically and has been downloaded an average of twenty times per week for two years, ranking it in the top quarter of WordPress plug-ins. OpenBook has had several enhancements, but there has been one recurring request from librarians who use WordPress for their library websites: the ability to link back to their library catalogs. One common use case is that of a librarian who maintains a blog to highlight collection items. In this case, the librarian would like to link the highlighted item back to its record in her particular library catalog so the patron can view the item’s availability and check out the item.

As a result of these requests, one of the enhancements to the first version of OpenBook was the addition of a “Find in a Library” link to book records in OCLC’s WorldCat. This enhancement provides an indirect link to library records. A second major version of OpenBook has been developed that provides a direct link to a specific library’s records using OpenURL technology. This article provides a first look at how OpenURL is implemented in OpenBook.

OpenURL and COinS

OpenURL was originally introduced by Herbert van de Sompel and Patrick Hochstenbach as a way to provide links from citations to a library’s licensed electronic journal articles. It has since been generalized for other applications and published as the standard, ANSI/NISO Z39.88, *The OpenURL Framework for Context-Sensitive Services*. Implementing the OpenURL standard requires three things: a ContextObject with metadata, an OpenURL link, and an OpenURL resolver.

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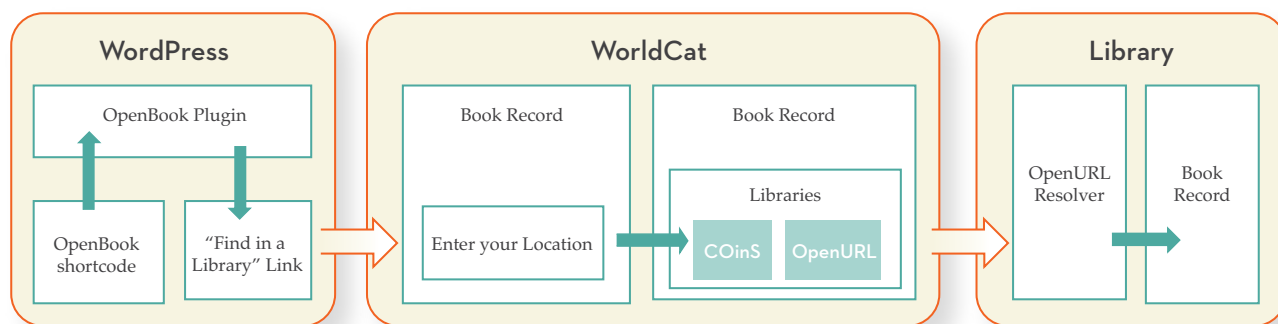


Figure 1: OpenBook Implementation of OpenURL via WorldCat

ContextObjects in Spans (COinS) is a standard for embedding bibliographic metadata in a hidden HTML span element. One significant development for OpenBook was the addition of COinS support. While COinS can refer to any information resource, the focus of OpenBook was the book format, and its COinS were created to reflect that resource type. A COinS element is created for each book or other item and can then be detected and used by other applications. OpenBook already had access to a rich supply of data from Open Library, so adding COinS was a small matter of formatting it according to the latest standard.

The original motive for adding COinS to OpenBook was to enable integration with Zotero, an open source Firefox extension that stores bibliographic data in a user's citation database. Zotero users who visit OpenBook pages now find an icon of a book or folder in the Firefox address bar. When the user clicks on the icon, a title appears for each instance of OpenBook, and the users can select which citations to save to their databases.

Implementing COinS took OpenBook one step forward in linking to library records. It also required an OpenURL, a Uniform Resource Locator (URL) that contains both the metadata found in COinS and a pointer to an OpenURL resolver at a library's website. The OpenURL is typically found as a hypertext link on a webpage. Upon clicking the

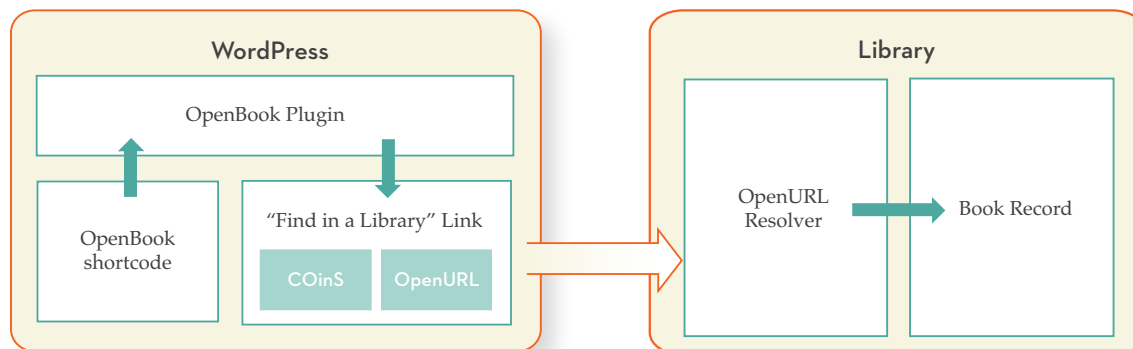
link, a user is transferred to the library's resolver page where the resolver has parsed the metadata and listed links to matching library resources. The listed contents depend on the library; for books the resolver page typically provides information about the requested item's availability and physical location. In this way, the OpenURL standard can be used to fulfill the librarian's request for linking OpenBook to a particular library's book records.

OpenBook Version 1: Linking to Library Records via WorldCat

OCLC has implemented the OpenURL standard in WorldCat, a union catalog of the collections of member libraries. WorldCat provides a standard URL structure to provide links to records in its database. In a first effort to link to library records, OpenBook was enhanced with a "Find in a Library" link to the WorldCat. The implementation is depicted in Figure 1.

When an OpenBook user inserted a shortcode with an ISBN in WordPress, the plug-in replaced it with the usual book data and then inserted an additional "Find in a Library" link to the WorldCat. When a visitor clicked the link, he or she would be transferred to the WorldCat site. To get to specific library records, the visitor would be required to enter a regional locator such as a zip or postal code. WorldCat

Figure 2: OpenBook's Direct Implementation of OpenURL



then lists a number of libraries that are considered close to the locator. Each library has an OpenURL with COinS for the book, and a pointer to the library's OpenURL resolver. By clicking on one of these OpenURLs, the visitor can then view the selected library's book record.

The main advantage of the WorldCat solution was ease of implementation. It is easy to construct a WorldCat link when provided with an ISBN (or ISSN or OCLC number). There are also several drawbacks to this solution. Rather than accessing a library directly, OpenBook visitors have to go through the additional steps of navigating to the WorldCat catalog and locating a library. A more significant problem is that WorldCat only lists holdings for member libraries who have purchased an OCLC FirstSearch package. This limitation excludes many local libraries. It is not unusual to perform a WorldCat search only to find that the recommended library is hundreds of miles away. These shortcomings render the WorldCat solution untenable for many librarians who want to link users directly to their library catalogs.

OpenURL via a Browser Plug-in

Another approach to accessing library records directly from the web is the implementation of OpenURLs in a browser plug-in. OCLC provides the OpenURL Referrer, a simple browser plug-in that can be configured with the OpenURL resolver for a library of the user's choice. The resolver address can often be found in WorldCat's registry of libraries. When the user navigates the web, the plug-in detects instances of COinS, then assembles and displays an OpenURL for the configured library. LibX is an open source product with more advanced functions integrated into the browser, such as library searching and off-campus proxy support. When COinS was added to OpenBook it became suited to the use of these browser plug-ins.

The browser plug-in approach offers a way to link directly to library resources without navigating to an intermediary site like WorldCat. Even so, it is not an ideal solution for librarians seeking to link back to their library catalogs. The browser

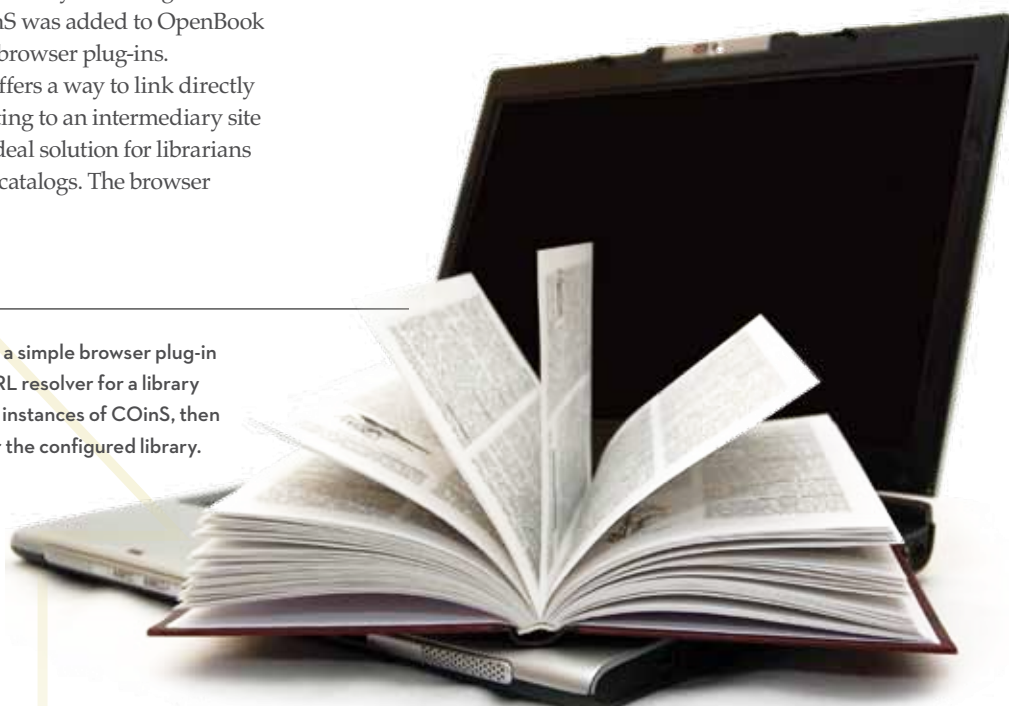
The first version of OpenBook was developed to meet the immediate needs of its developer and other web users who write about books and wished to display bibliographic data.

plug-in is a client-side solution, meaning that the burden of the work falls to the user. The OpenURL is only available to web users who are aware of the plug-in, and have taken the time to install and configure it. This approach is fine for more advanced users who prefer to control their information experience, but is less suited to others. OpenBook, by contrast, is a server-side solution, with the programming handled by OpenBook on a web server. It is meant to be a simple solution requiring little effort on the part of the librarian or the library patron.

It is recognized that a directly configured OpenURL may provide less information to a visitor of a particular library's website than the WorldCat solution, which lists the availability of an item in a number of libraries. If the item is unavailable in the specifically configured library's collection, a non-member of the library has few options. However, a member of the library may be able to request an interlibrary loan, perhaps using the RACER link provided on many OpenURL resolver pages to electronically request interlibrary loans. This latter use case is the one envisioned by most librarians interested in using OpenBook.

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RELEVANT LINKS



COinS

ocoin.info

CUFTS

cufts2.lib.sfu.ca

LibX

www.libx.org

OpenBook

[wordpress.org/extend/plugins/
openbook-book-data](http://wordpress.org/extend/plugins/openbook-book-data)

OpenLibrary

openlibrary.org

OpenURL Referrer

nj.oclc.org/openurlref

OpenURL standard (Z39.88)

www.niso.org/standards/z39-88-2004/

WordPress for Libraries Wiki

wp4lib.bluwiki.com

WorldCat

www.worldcat.org

WorldCat Registry

www.worldcat.org/registry/Institutions

Zotero

www.zotero.org

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OpenBook Version 2.0: Direct OpenURLs

The swell of interest in OpenBook and thoughtful feedback from users has inspired a line-by-line rewrite of OpenBook. This second version of OpenBook includes many new features, most significantly the much requested feature by librarians to link from instances of OpenBook back to their particular library's records. This implementation of OpenURL is depicted in Figure 2.

The WordPress platform provides a mechanism for adding administrative panels so that plug-in users can configure options. OpenBook Version 2.0 adds an administrative panel where a user can configure a library's OpenURL resolver. As before, when an OpenBook user inserts a shortcode with an ISBN in WordPress, the plug-in replaces it with book data from Open Library, then inserts a "Find in a Library" link. If an OpenURL resolver has been configured, OpenBook will create a link with COinS bibliographic metadata and point to the resolver. Users will also be able to modify the link text to their liking, e.g., "Find in the University of Western Ontario Library." When a visitor clicks the link, he or she is transferred directly to the library's resolver page and can view the library's book record. If the user does not configure an OpenURL Resolver, the previous WorldCat link will still be available.

Tests of the new solution showed that some OpenURL resolver links in WorldCat's registry are stale. It appears that these are typically the result of library managed resolvers that haven't updated invalid links. While it takes time and the cooperation of a library's technical staff to implement a local OpenURL resolver, any library can in principle implement a resolver at any time without incurring membership fees such as those required for using WorldCat. (CUFTS is one open source solution for implementing OpenURL in libraries.) Also, while many academic libraries have an OpenURL resolver, many public libraries do not.

With the OpenBooks direct linking solution, no advanced technical knowledge is required by the librarian to implement it. He or she simply configures the OpenURL resolver once, and OpenBook does the rest of the work.

Other enhancements in version 2 increase the usefulness of OpenBook to librarians and book bloggers. There is full user control over the content and styling of the OpenBook data elements. Users will be able to use shortcodes in WordPress widgets. An indicator will let users know if a book is available to be read online at Open Library. For technically advanced users, OpenBook has been rewritten for re-use of code modules in other contexts. These and many other features will be available when version two of OpenBook is released in the fall of 2009. | FE |

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