

WILS Tech Note: OpenURL

Many of us are aware of OpenURLs. When we use a product like SFX, OpenURLs somehow take us magically from a citation to a list of databases or other sources for the cited information. For example, after typing some information into UW-Madison's Find It (an SFX-based service) about an article I'm in which I'm interested I get back a link to it in a full-text database for which the university has a license:

The screenshot shows the 'Find It' interface for the University of Wisconsin-Madison Libraries. The header includes the university logo and the text 'University of Wisconsin-Madison Libraries' and 'Find It'. Below the header, the following information is displayed:

- Title:** Telecommuting's past and future: a literature review and research agenda
- Source:** Business process management journal [1463-7154] Siha yr:2006 vol:12 iss:4 pg:455-82

There are several sections with links and input fields:

- Full Text** (Section header)
- Online** (Section header)
- Emerald** (Link)
- Year: Volume: Issue: Start Page:
- Find in a library** (Section header)
- Check for this item in our [MadCat library catalog](#)
- More Options** (Section header)
- Journal Information** (Section header)
- See table of contents and more in [Ulrich's Periodical Directory](#)
- Citation Management** (Section header)
- To import this record into EndNote or [Bibliographic Database Managers](#) ProCite, see
- To import this record into RefWorks, [Moving Citations into RefWorks](#) see
- Assistance** (Section header)
- Send [questions, problems, or comments](#)
- Need help? [Ask a librarian by phone, email, or in person](#)

At the bottom, there are links for [FAQ / Help](#) and [E-Journal List](#). The footer text reads: 'A service of University of Wisconsin-Madison Libraries © 2005 SFX version 3 by Ex Libris Inc.'

Even better, Find It links are often embedded in abstracting and indexing databases, and then the article may be a single click away.

How does the magic work? It requires the work of some software to determine which database sources may have the item (the *link resolver*), more software to send an OpenURL query, and a server or set of servers to return holdings information or a direct link to abstracts or full-text. What ties all of this together is the OpenURL itself.

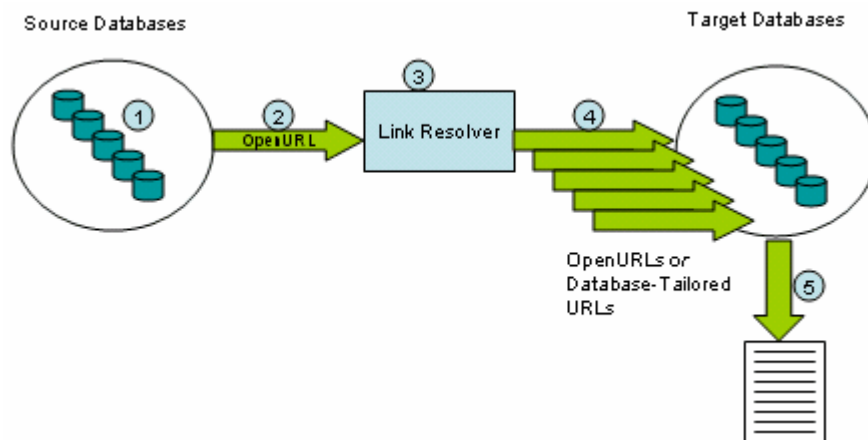
The OpenURL concept is important because it decouples metadata about an item from hard links to retrieve item. Unfortunately, links (URLs) to items go stale or change over time, whereas metadata remains stable. Therefore, it is desirable to identify an item through a URL that carries a description of the item rather than an idiosyncratic link to that item. Thus, the OpenURL.

An example of an OpenURL is:

```
http://resolver.someplace.edu/cgi?rft_val_fmt = info:ofi/fmt:kev:mtx:journal
& rft.atitle = Isolation of a common receptor for coxsackie B
& rft.jtitle = Science
& rft.aulast = Bergelson
& rft.auinit = J
& rft.date = 1997
& rft.volume = 275
& rft.spage = 1320
```

(from page 43 of the ANSI standard [see below]; as in the standards document, this has been formatted for readability).

In order for products like SFX to work, sources of citations need to be set up so that OpenURL links are inserted in search results. The link resolver must “know” the possible targets (full-text and other databases) that are available to users. This is done through a setup process. The link resolver, given this context of available results, generates either a new URL based on its built-in knowledge about the structure of the target databases, or in some cases passes on the OpenURL essentially unmodified to those targets which have their own link resolver logic. In some cases, where the URL scheme of a target is unfathomable and it does not handle OpenURLs, when the user clicks the link she is directed to a search screen on the target database rather than directly to the cited publication. These cases become rarer as database vendors bring their interfaces into conformity with the OpenURL standard.



How OpenURLs work:

1. User identifies a book or article of interest in a source (usually abstracting or indexing) database.
 2. Clicking on link sends OpenURL to Link Resolver.
 3. Link resolver determines where book or article is available, and offers choices to user. (In case of a book or other tangible media, the search ends with a pointer to the physical object. The pointer will usually be in the form of a catalog record.)
 4. For articles, links to the target databases containing the article are generated.
 5. User clicks on a link and obtains the item.
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As those who have done it can attest, setting up a link resolver can be hard work. Information must be provided as to what electronic databases are available, and what years of coverage are available. For a small library this may not be particularly daunting, but for larger libraries with many subscriptions the task can become monumental. This information is vital to accurate and complete retrieval of electronic articles.

The use of OpenURL will only grow as libraries' subscriptions to databases multiply the options for access to articles. At some point it will simply become impossible to manually track which serials are contained in which database, much less make the patron do so.

Next Time: COinS, a means of embedding bibliographic metadata in HTML

For further reading:

Why OpenURL? is a great introductory article providing more details on the history, motivation, and future of OpenURLs. It also has pointers to much additional information.

(<http://www.dlib.org/dlib/may06/apps/05apps.html>)

ANSI/NISO Z39.88 -2004: The OpenURL Framework for Context-Sensitive Services. This is the definitive authority, but it's hard going. Better than a sleeping pill for those restless nights.

(http://www.niso.org/standards/standard_detail.cfm?std_id=783)

Tech Notes are short articles discussing library-related technology.

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