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## Open URL

By **Richard W. Boss**

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Almost all public libraries subscribe to one or more citation databases either directly with EBSCOhost, InfoTrac, OCLC, or another aggregator or as part of a statewide program sponsored by a consortium or state library agency. While some citation databases include the full text of articles, many do not. Even those that include full-text do not do so for all citations. As a result, libraries must meet the need of their patrons by creating and maintaining linkages from the citations to their own holdings and to external full-text databases. As doing so almost always requires linking to multiple sources, it is important that the linkages be "open," rather than proprietary. That means that a citation from a journal database can be formatted in a standard way that can be processed by the local library system to identify local holdings or by a link server (also known as a link resolver) that will send it to a full-text database for retrieval of the appropriate full text.

The standard for open linking that has emerged is OpenURL. While OpenURL became a de facto standard in 2000, the formal standard was not completed by Committee AX of the National Information Standards Organization (NISO) until early 2004. It had not yet been published by NISO as of August 2004, but was expected to appear much as the committee approved it because the committee's membership includes representatives from EBSCOhost, Endeavor Information Systems, ExLibris, OCLC, Openly Informatics, ProQuest, Sirsi Corporation, Wiley & Sons, and a number of libraries. Among the companies that tested the draft standard on their link servers were Endeavor Information Systems, ExLibris, Fretwell-Downing, MuseGlobal, and Openly Informatics.

Under the standard, a citation database that is OpenURL-compliant prepares a structured and formatted OpenURL string that includes the internet address of the link server at the library's site or at a service bureau. The string also includes data elements that allow the link server to identify the source of the original publication. The standard provides for the inclusion of the journal title, ISSN, volume, issue, date, start page, article title, and author. The more complete the data in the OpenURL string, the greater the likelihood of successful link resolution.

The OpenURL is needed because links that do not conform to OpenURL do not take into account the identity of the user; they take users to a target full-text database regardless of whether the user is in a library that has a subscription for that title in that specific full-text database. Even if a library has a subscription to that specific full-text database, it may not be able to provide access to all categories of users. For example, some licenses restrict use to resident borrowers, with guest borrowers denied access.

This context sensitive aspect of OpenURL requires that a library include complete and accurate information about its patrons, its holdings (including call numbers or shelving locations), its full-text database subscriptions, and access restrictions in the link server's knowledge base.

The inclusion of complete holdings information is particularly important because missing holdings information may result in a patrons being directed to more expensive and time consuming resources such as interlibrary loan or document delivery...

Once the OpenURL string has been parsed, the link server seeks to match information in the OpenURL string to the titles about which it knows. Each vendor that maintains a link server has its own matching algorithm, but all look first to match on the ISSN. For that reason, it is important to include the ISSN in the database for all locally held titles and titles available through full-text databases.

The link server should offer information delivery choices to the user. The choices may not be limited to local holdings and titles available through full-text databases. Many libraries include options for interlibrary loan and document delivery.

While it is possible for a library to design and operate its own link server, almost all libraries subscribe to the

link server offered by the vendor of an automated library system or a major aggregator. It is not necessary that the link server come from the same vendor as the library uses for its automated library system. For example, scores of libraries have purchased ExLibris' SFX link server and are using with other vendors' automated library systems. The link servers of aggregators may be used to access full-text descriptions in other aggregators' databases.

The link server may be housed on site or at a service bureau. While the capital cost of the former is greater, the ongoing cost may be less. However, there is more to the ongoing cost of a link server than the maintenance of hardware and software. There usually is a subscription that keeps the URLs up to date.

While a library may be reluctant to spend thousands, or even tens-of-thousands of dollars, a year on linking products and services, it should evaluate the cost in light of the total investment it has made in its serials collection and the full-text database services to which it subscribes. In most cases, the investment is justified.

In addition to comparing costs among options, a library should look carefully at the features of each option, including the degree to which customization is possible, especially customization of screens. The best way to do this is to compile a list of features by looking at several products, marking the features that are desired by the library, and then comparing each of several products against the list of desired features.

While a great deal of information about OpenURL is available on the Web, much of it is highly technical or outdated. For a current and clear overview with graphics, consult <http://www.serialssolutions.com/alourl01.asp>.

The best source for technical information about OpenURL is NISO Committee AX's web site at <http://library.caltech.edu/openurl>. The site has links to sites on the web that show various OpenURL servers in action. The bibliography that is included on the site is also useful.

A free PDF of the standard is available for downloading at the NISO's web site at [www.niso.org](http://www.niso.org). The site is also the place to check for official publication standard.

For detailed information about available Open URL products, the best sources are the web sites of automated library system vendors and aggregators such as EbscoHost and OCLC.

*Prepared by Richard W. Boss, August 24, 2004*