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Discovery Services: Single-Search Access to Multiple Resources

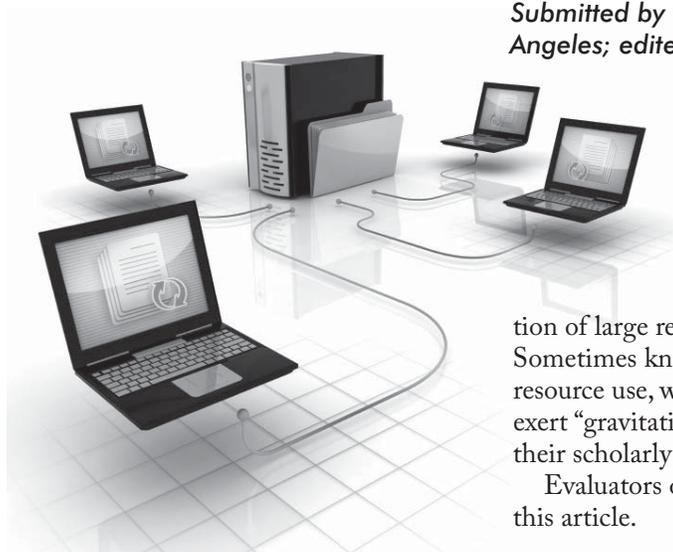
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Technology: Discovery Services: Single-search Access to Multiple Resources

Submitted by Win Shih, USC Libraries, University of Southern California—Los Angeles; edited by Lynne M. Fox, AHIP



Libraries can provide more effective services to their patrons with single-search access to multiple resources via “discovery service” products [1]. These hosted discovery tools offer one-shot searching of library local holdings and diverse electronic content from database producers, and electronic journal and book publishers and providers. Search results are ranked by relevancy and offer navigation of large result sets using sorted groupings that are derived via facet limitation. Sometimes known as next-generation catalogs, these services encourage wider resource use, while recognizing the “long tail effect” [2]. Discovery services can exert “gravitational pull” similar to Google Scholar, empowering users to realize their scholarly goals with a greater variety of resources.

Evaluators of discovery services should focus on the criteria that are detailed in this article.

Content Coverage and Richness of Metadata

Discovery vendors tend not to be content producers; rather, they receive metadata from publishers. Comparing journal titles or databases covered by each discovery product is not sufficient. One must also look into how richly metadata are indexed. Ask vendors:

- What types of metadata are harvested from database vendors and publishers? “Thin” metadata with minimum bibliographic information (title, author, source) are sparse compared to metadata that include full text, abstracts, and subject headings.
- Does metadata encompass subject headings added by indexers? Controlled subject vocabulary offers additional search result precision.
- Are full text, captioning, tables of contents, and abstracts of articles or electronic books indexed and searchable? Can one search within the full text of documents? The more granular the indexing is, the richer the discovery experience will be.

Content Enhancement

As vendors integrate metadata from publishers, records representing the same or related work can be enhanced. Two types of records may be generated during the “de-duplication” process:

- Super Record: For an identical entity, metadata from multiple sources might represent different degrees of comprehensiveness. By merging various versions of metadata for the same entity, a consolidated or “super” record offers the most comprehensive information. A journal article super record, for instance, may contain subject terms and images from PsycINFO, PubMed, and Sociological Abstracts.
- Composite Record: Metadata records representing different editions or formats of the same work can be grouped and merged into one single entry. For example, a compos-

Discovery Services [4]

- EBSCO Discovery Service: www.ebscohost.com/discovery/
- Ex Libris Primo Central: www.exlibrisgroup.com/category/PrimoCentral/
- Encore Synergy (Innovative Interfaces): www.encoreforlibraries.com/products#es/
- Summon (Serials Solutions): www.serialssolutions.com/summon/
- WorldCat Local (OCLC): www.oclc.org/worldcatlocal/
- Blacklight (University of Virginia): www.projectblacklight.org
- VuFind (Villanova University): www.vufind.org

ite record of Beethoven’s Sixth Symphony lists all items related to this work, including music and video recordings by different performers, music scores, and books. Such manifestations of Functional Requirements for Bibliographic Records (FRBR) can significantly simplify and streamline user discovery processes.

Relevance

Librarians should investigate how relevancy scores are calculated and how weights are assigned to different fields in order to understand how results are ordered. Pay attention to:

- How does the library’s local collection fare in relevancy ranking? Local materials are represented by MARC records, which can include less comprehensive information than the metadata of full-text articles. Will library collections be “drowned” or “buried” on page ten of result lists?
- Do discovery services offer the flexibility to boost or bias the result ranking of a specific group of records based on local need?

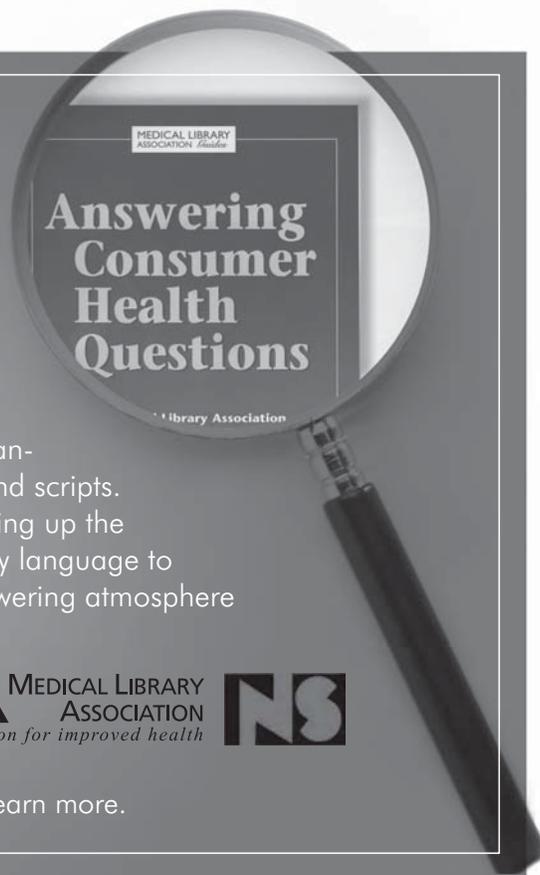
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Traversing Data in Library Systems

The discovery service must interoperate seamlessly with other systems and services. It not only has to interface with preferred authentication methods, such as lightweight directory access protocol (LDAP) or Shibboleth, but also must permit communication flow across systems in real time. Consider:

- **Local Holdings Information:** Depending on the library's integrated library system, up to six fields (library branch information, collection type, call number, item description, loan type, and status) are required to fully represent the availability of a library item. However, most discovery service vendors currently accommodate only three fields. The capability of the discovery tool to query and reflect the availability status of the library's local collection in real time is critical.
- **Uploading Library Catalog Records:** Because libraries add, modify, and withdraw records constantly, synchronization with the discovery service should be transacted as frequently as possible and, preferably, in an automated way.
- **Fulfillment Services:** "Discovery" is only the starting point in the chain of the discovery-to-delivery process. Once items are discovered, success of user capability in locating and accessing materials hinges on how seamlessly the discovery tool interacts with fulfillment services, including the link resolver, interlibrary loan services, bibliographic management tools, widgets, really simple syndication (RSS) feeds, web services, and the library catalog system.

The Open Source Alternative

There are open source alternatives [3] to the commercial product solutions for discovery services. VuFind from Villanova University and Blacklight from the University of Virginia are two promising contenders. However, "open source" does not mean "free." On the contrary, open source alternatives require in-house installation and expertise to sustain their operation. Additionally, it can be quite expensive and legally complicated to acquire and incorporate commercial content from publishers and vendors into an open source discovery service.

Discovery services offer tremendous potential for dynamic, user-sensitive delivery of relevant information. Finding the service that best matches a library's unique needs can be a challenge, and the strengths and weaknesses of the services need to be considered.

References

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4. Wikipedia. Next-generation catalogs [Internet]. [cited 20 Aug 2010]. <http://en.wikipedia.org/wiki/List_of_next-generation_catalogs>.