
AN OVERVIEW OF FUTURE ROLE OF CATALOG IN ACADEMIC LIBRARIES

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Abstract

Catalog used to be a one point resource locator in Library in earlier days. Library professionals and users are happy with that practice in the print only era. Due to emergence of Electronic Resources, the role of catalog is also changing. Electronic resources have become reality along with print resources. Accessing electronic resources shows that librarians and users are facing a complex set of challenges. While a number of products have evolved for each aspect of the problem, the question is, how can they all be designed and implemented in such a way that they all work together, providing a clear and seamless interface for library users and avoiding redundant work for library staff? To date, no single product exists that provides comprehensive management of electronic resources. Will portals or federated search solutions be the answer to managing and providing access to resources available from academic libraries as well as other content needed by the academic community? With many, disparate electronic information sources available today, users are challenged with identifying and locating resources that match their needs. This paper explores some of the issues related to future of the catalog.

Keywords: Integrated Catalog, Portals, Federated Search

1. Introduction

Libraries of all sizes and types are embracing digital collections, although most libraries will continue to offer both print and digital collections for many years to come. New purchases and subscriptions to journals, magazines, and abstracting and indexing services are heavily weighted toward digital, while e-books are beginning to become a presence in library collections. Libraries prefer digital collections for many reasons, including, but not limited to, the following: digital journals can be linked from and to indexing and abstracting databases; access can be from the user's home, office, or dormitory whether or not the physical library is open; the library can get usage statistics that are not available for print collections; and digital collections save space and are relatively easy to maintain.

The recent proliferation of metadata standards is part of the information explosion that has occurred in the past couple of years. The appearance of the Internet and the World Wide Web, the rapid pace at which scholarship and research can now take place due to technology and the rise in the number and complexity of formats in which information can be contained and stored, have meant that users are challenged to find ways to effectively send, store, preserve, exchange, and migrate information in the electronic environment. While libraries have usually led the way regarding presentation and storage of information with regard to the print environment, their place in this new electronic age has yet to be determined and measured. In this new environment of CDs, DVDs, aggregator databases, full-text, data sets, PDFs, jpegs and streaming media, and with scholarly and commercial entities constructing their own information/metadata standards to deal with the challenges and problems of electronic interchange and storage in libraries is a major concern.

2. Print and Electronic Resources

The shift from print to electronic publication of scholarly journals and other resources is growing in a geometrical progress. Researchers, teachers, students, and other readers demand electronic formats because it provides so many advantages over print, especially for search and retrieval. Recognizing the greater capability of the digital medium, editors are treating the electronic versions of journals as the definitive versions of record. Scholarly publishers are shifting their business models accordingly and pricing print and electronic formats separately so that they can survive as electronic subscriptions replace print. And research and academic libraries are increasingly canceling print subscriptions in favour of electronic licenses both to satisfy user demands and to avoid the substantial costs associated with ordering, receiving, cataloging, binding, storing, and circulating paper volumes.

Universities, colleges, and their libraries have recently been working together to help scholars manage their copyrights and to craft alternatives to high-priced forms of scholarly publishing. It is now equally, and perhaps even more important, that research and academic libraries work with scholars and their publishers to sustain future research and teaching by establishing trusted archives of scholarly literature. So, in future libraries are bound to provide access to this scholarly literature of open access archives.

3. User Needs

The internet, digital electronic resources, and database technology have transformed the way people search for information. Today many people rely on keyword searches in single-step search engines—e.g., Google or AltaVista—that retrieve information from unspecified slices of the web. This is eroding the use of traditional library reference and information services and could ultimately result in a set of services and resources that are less authoritative but more convenient.

Users frequently cite with ease and convenience as the main reasons they prefer commercial search engines over gaining access to electronic sources through a library's web site. Sources such as online journals, online public domain materials, or locally developed databases are often passed by because of these convenient options. Libraries must gear up to provide a competing level of convenience while retaining the authority and quality of information delivery for which they have been traditionally known.

For a host of queries, of course, the Google or AltaVista search may be all a user needs. Librarians must reconcile themselves to this fact and refocus the mission of library information services and resources to the deeper, more complex information needs of users engaged in searches that require higher levels of authority and more comprehensive scope.

The scholarly information arena offers researchers an ever-increasing array of resources. Researchers are likely to find material relevant to their subject in a variety of Web-based resources: their own library's catalogue; catalogues outside their own library, such as a national or union catalogue or a catalogue of another institution that specializes in similar subjects; reference databases, such as an abstracting and indexing database or citation database; full-text resources; digital repositories; and Web pages. The current process of accessing several resources for the sake of seeking information is cumbersome and requires some knowledge of the various resources, their access mechanisms, the query interface they provide, and the type of results they return. It also requires a manual comparison between the results returned from several resources and does not enable the user to move from one resource to another for further discovery and navigation.

Significant efforts are under way to address these issues, not just for scholarly information but also for all Web-accessible data. Of particular interest are the integrated systems, portals, semantic Web developments. Although, these new tools show some promise, but depending heavily on the adoption of emerging standards. Independent intelligent tools are required for integrated access across heterogeneous resources. Librarians must reconcile themselves to this fact and refocus the mission of library information services and resources to the deeper, more complex information needs of users engaged in searches that require higher levels of authority and more comprehensive scope.

4. Federated Search

Federated searching is a process that allows users to search across a number of information resources simultaneously. It is sometimes referred to as multi-searching, meta searching, broadcast searching, integrated searching, portal searching, consolidated searching, distributed searching or cross-database searching. The advantage of this sort of searching is that it removes some of the complexity of searching different databases with different interfaces and search commands. With a well-configured federated search tool, users would not need to know which database to select. They would simply choose a discipline area and enter their search terms. They would then be presented with integrated results from a range of databases, catalogues, websites, etc.

4.1 What is the catalog?

Catalog is the appropriate place to execute a federated search? While it is certainly technologically possible to, start a broad information search while looking for a book or DVD. The answer is found in a view of the catalog. If the catalog is the primary source of information, then it's logical to access federated search through the catalog.

However, the universe of available content is no longer limited to that stored within the library walls. Moreover, the type of content required by users is often not cataloged by most libraries. As such, viewing the catalog as the library's primary source of information does not reflect the 21st-century library. Today's libraries are much more than book depositories; they are vast information centers, offering access to, and navigation of, terabytes of articles, technical papers, photographs, and more. Providing books and other cataloged material is only one aspect of the modern library's charter.

4.2 Going with Google

Given the proven success of Google, when we opt for a federated search engine, it makes sense to embrace this model. Which would we use as a one-stop shop for information, Google or Amazon? Most noninformation professionals would find the question silly. If users want to find a book, they go to Amazon. If they need information, they go to Google. We shouldn't force users to predetermine the information source as a precondition to asking their question.

Google has taught us, quite powerfully, that the user just wants a search box. Arguments as to whether or not this is "best" for the user are moot it doesn't matter if it's best if nobody uses it. Moreover, as both Google and Amazon have demonstrated, users have a amusing way of determining for themselves what is best for them.

4.3 Keeping Central

Knowledge is power. This is true not only for the library user but for the library as well. The more that, libraries enable and fully engage their information, the more central they become in the lives of their population. To many laymen, the information locked within library walls is an extraordinarily well-kept secret. The problem is that our information depositories have been made too secure, with hidden information navigation tools unwittingly insulating users from their vast intellectual currency. The paradox demonstrated so elegantly by Google is that the most powerful information access approach also happens to be the simplest and easiest. The most complex and least intuitive interfaces wind up securing information, not facilitating information access.

5. Cross-Database Searching

Integrated searching is a key feature of a portal. It distinguishes it from a web site. Many library web sites provide access to the online catalog, licensed resources, web sites, and links to one or more commercial

search engines. However, access to these disparate resources is most frequently accomplished by searching one source at a time. Library web sites usually do not permit users to conduct a single search of multiple resources, nor do web sites deliver integrated results. Users usually have to integrate the results from their separate searches as another step.

Both the multiplicity of standards and the lack of standards are challenges in developing integrated, cross-database searching. Many online catalogs can be accessed by the international standard for search and retrieval, Z39.50, but additional search techniques are required for such resources as XML datasets or web resources using different metadata schemes such as MARC, Dublin Core, Computer Interchange of Museum Information (CIMI), and Encoded Archival Description (EAD).

Keyword searching is common for web sites. Licensed resources may have proprietary search strategies. As a result, portals must support various search standards and protocols (Z39.50 and http), and they must integrate the results. Portals also must support a variety of controlled vocabulary or thesauri. Library users accustomed to searching Medline, for example, will expect comparable results if they search Medline through a portal interface.

6. Integrated Catalog

Integrated Catalog provide an seamless links to electronic resources, cataloging to the table of contents level, one-stop shopping, enriched subject headings, metadata fields. The provision of electronic access to information is a priority in the academic library sector, and the advantages of information delivery over the network to desktops throughout the campus and beyond are clear. Increasingly, users are demanding a shift from conventional means of library provision to the “virtual library” which never closes. Twenty-four-hour access to information resources, in combination with the development of self-services, is one way to achieve this ideal. Information Services at present era of libraries has embarked on a number of projects to meet the increasing demands of the users for better access. This is consistent with one of the fundamental strategic aims of Information Services to provide access rather than holdings.

7. The Semantic Web

To a user, the Web is an exciting place: a set of interconnected resources and links. The user is typically able to grasp the meaning of a document and determine its relevance by viewing that document. A machine, however, cannot readily interpret this information; yet machine-driven or automated processes are required to facilitate access to the plethora of information on the Web. The semantic Web is now emerging to address precisely this issue and offers a vision for the future in which the explicit meanings given to information make the processing and integration of Web-based information easier for machines to carry out automatically.

8. Conclusion

Academic and research libraries spend lot of money on acquiring electronic resources and to create their own digital resources and it is vital for libraries to provide useful access to these materials. The traditional method of providing access to print resources is the online catalog. The purpose of the catalog was once to provide bibliographic control for a host of resources physically owned by an individual library. Libraries do not own and house many of the electronic resources for which they provide access. However, the catalog should take on a new purpose: to provide systematic access to information in whatever form it takes, not just to inventory a particular library’s print resources. There is a need to rationalise the amount of searches the user must perform to provide information, and a simple search of the library catalogue to look at different sources. The academic library user demands a variety of information, but moving between the online catalogue and other databases can be difficult, confusing and cumbersome. Indeed, the ability to access information directly from the library OPAC, without the need to repeat the search on the Web or an alternative database, would provide a useful advantage. The lack of interoperability

is one of the significant problems facing digital libraries. One major objective of digital library interoperability is to provide a unified search interface. Whether and how to include electronic resources such as web sites, aggregator databases, electronic journals, and digital materials in the catalog is perhaps the key issue in the future of cataloging.

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