From Online Catalogs to Library Portals: Empowering Users

From Online Catalogs to Library Portals: Empowering Users

Zahiruddin Khurshid
Senior Manager, Cataloging Operations Department
&
Acting Senior Manager, Systems Department
King Fahd University of Petroleum & Minerals Library
Dhahran, Saudi Arabia, 31261
khurshid@kfupm.edu.sa

AND

Syed Sajjad Ahmed
Senior Cataloger, Cataloging Operations Department
King Fahd University of Petroleum & Minerals Library
Dhahran, Saudi Arabia, 31261
sjahmed@kfupm.edu.sa

From Online Catalogs to Library Portals: Empowering Users

Abstract

Purpose--The paper aims to highlight both major and minor features of the library portal, which empower users to get access to a wide variety of e-resources with a single sign-on.

Design/methodology/approach—The study is mainly based on review of the literature. It briefly discusses the transition from the library OPAC to the library portal.

Findings—A library portal is an extension of the Web OPAC. It continues to improve with the new features and capabilities, some of which may go beyond the library portal.

Originality/value—Library portals are changing too rapidly and the information would be out of date within few months. So the currency of information is the value of this paper.

Keywords: Library portals, Online catalogs, Web OPAC, User empowerment

Paper type: General review

From Online Catalogs to Library Portals: Empowering Users

Introduction

Since the advent of online catalogs, catalog use studies have been conducted regularly to ascertain among others, two major things: first, the user attitudes toward the catalog, and second, additional features desired by the users. The most cited among these studies is the Council on Library Resources (CLR) study of 1982 (Matthews, Lawrence, and Ferguson, 1983) in which 31 US libraries participated. The user responses to this survey and subsequent use studies helped both librarians and system designers in the development of the next generations of online catalogs.

The development of the Web OPAC as the fourth generation catalog in the mid 1990s empowered the users with the ability to search a library catalog remotely through an easy-to-use interface. Later, an extension of this facility provided powerful searching of web resources together with the searching of local catalogs, online journals, and locally digitized resources with a single sign-on. Users can also initiate a reference question through electronic reference services ('ask a librarian") and submit an interlibrary loan (ILL) request with the same log-in. By 2001, the concept of the online catalog had changed completely as Web OPACs were transformed into library portals. That is why Carden (2004) considers a library portal as an extension of the Web OPAC. The development of library portals does not stop here as they continue to improve with the new features and capabilities, some of which may go beyond the library portal. Jackson (2005) envisions portals to evolve into something very different, and to him the concept

of a portal will become a footnote in the evolution of providing access to quality information resources.

The paper aims to present the user empowerment features of library portals designed to take user access to varied resources to a new level. Although a number of papers have been published on library portals during the last six to seven years, what makes this paper different from the previous works is that it lists both major and minor features of library portals based on their most current design. It is appropriate to mention here that library portals are changing too rapidly and the information would be out of date within few months. So, the currency of information is an important factor in this work.

Literature Review

A search of both LISA and Google retrieved more than twenty articles discussing the definition and the changing concepts of the library portal and the history of transition from the library OPAC to the library portal. Boss (2006) provides the simple definition of a portal as "a single user interface for access to a wide variety of electronic resources both within and outside the library". Zhou (2003) traces the history of web portals, which originated in the business sector in the early 1990s. On the other hand, Savarese (2006) describes the various stages of development from the card catalog to the library portal and how the mission of the library and the purpose of the catalog changed along with it. Morgan (2000) edited a special issue of *Information Technology and Libraries* on the "user-customizable library portals" with a focus on MyLibrary@NCState as one of the pioneering portals first conceived in January 1998. Cox (2003) lists three core functions

of the portal: (1) browsable (by subject) and searchable database of available resources, (2) cross-searching of multiple resources, regardless of search protocol and the format of the metadata with de-duplication and sorting of results, saved searches, and simplification of authentication, and (3) use of OpenURL to carry the user through from hits in bibliographic databases to the full text or document delivery options. Thomas (2000) stresses that instead of striving for comprehensiveness, the goal of the catalog as portal must be to increase the ability of a community of users to meet their information needs by doing as much "one-stop shopping" as possible. McKeen and Parent (2000) claim that catalog users of the new millennium wish "to have [in the catalog record] a convenience of finding not only reference to an item or article but almost instant access to the item itself". Ramsden (2003) provides a good review of several of the known products. Cox and Yeats (2003) review library portal solutions provided by library management system suppliers. Reviews of individual products, such as MetaLib, from Ex Libris by Sadeh and Walker (2003) and Millennium Access Plus (MAP) from Innovative Interfaces Inc. by Myhill (2005) are also published. Jackson (2002) discusses the features of a "dream portal" and Carden (2004) clarifies the distinction between library portals and enterprise portals, and presents a case for librarians to participate in and provide leadership to enterprise portal projects.

Library portals

Portals were first introduced in the business sector in the early 1990s. Due to the enormous growth of web documents, locating relevant web files by conventional means was quite difficult. To solve this problem, search engines were created. But, they too

were found to be not that efficient in retrieving the desired documents from the huge amount of web resources. This led to the introduction of a new technology known as web portal for channeling or categorization of web documents into preconfigured groups. The Web portal, considered as an earlier stage of a portal, was first adopted by libraries in 1998 when MyLibrary portal was introduced at the North Carolina State University Libraries (Morgan and Reade, 2000). Since then the library portal has continued to evolve as what Jackson (2002) calls it the "dream portal", a super discovery tool that specializes in high-quality content. It is fast and powerful, searches across formats and resources and returns results that are deduped and relevancy ranked, delivers full text or information objects whenever available, integrates appropriate applications, and supports authentication and permits customization and personalization, e.g. alerts, saved hits or searches, and custom views of resources.

Deltor et al (2003) find variations in the literature on the agreement over what constitutes a library portal but, the author has tried to list below all those features which are almost common across all known portal products.

1. Federated search

A federated search facility of the portal allows users to do cross-searching of up to several thousand e-databases regardless of their search standards and protocols (Z39.50 and http) or format of the metadata (MARC, Dublin Core, EAD, and XML). The search results are then displayed in one result set eliminating duplicates, providing users with a convenient choice of resources. Searches are often slow, but will improve with the developments in technology. The federated search, also known as consolidated search, is

based on a server product called MuseGlobal or WebFeat as its major competitor. ExLibris has developed its own product called MetaLib. Figure 1 is the consolidated search screen of the Horizon Information Portal (HIP) at the King Fahd University of Petroleum & Minerals (KFUPM) Library.
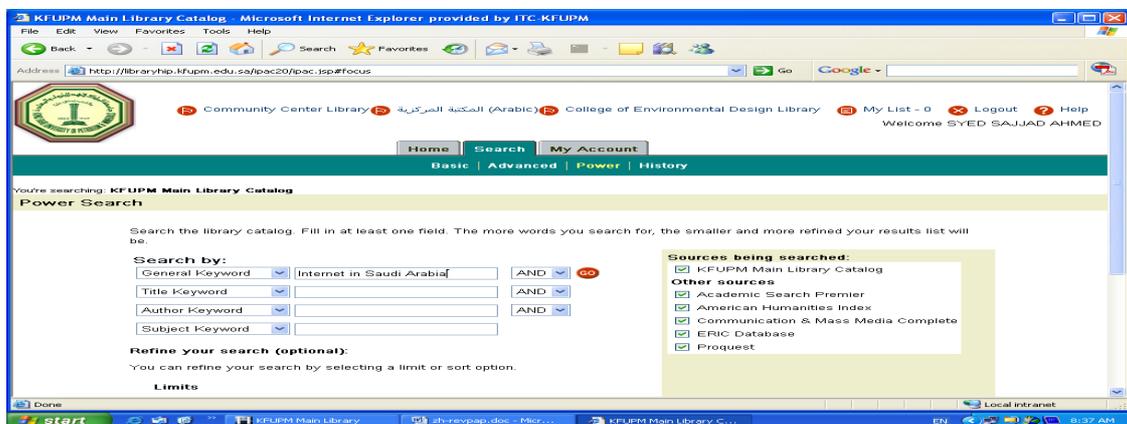
"Take in Figure 1

Figure 1. Consolidated Search Screen From HIP

(**http://libraryhip.kfupm.edu.sa/ipac20/ipac.jsp#focus**)

There are compelling advantages to federated searching for both users and library staff. It saves time for searching multiple databases one-at-a-time. Also, users do not need to master multiple user interfaces, as is required when searching each database separately. In fact, users can enjoy a simple interface that is custom configured according to library specifications.

2. Patron authentication with single sign-on

"Having to remember multiple passwords is a common complaint cited as a reason for not using library approved resources, as opposed to simple Google searches" (Cox and Yeates, 2003). Ramsden (2003) acknowledges the same problem by saying that "users can be overwhelmed by the number of resources and the problem of multiple log-ins and search interfaces in an online library environment". One of the major features of portal technology is the single sign-on facility, which eliminates the inconvenience of re-authentication. With this facility "patrons login on the first server visited—either the library or another campus entity—and enjoy access to all the offerings of their portal." (WebPAC Pro, 2005). This type of basic authorization may also be based on the institution's LDAP (Lightweight Directory Access Protocol) software in which each user is authorized based on the correct user ID and password pair. "Compared to domain name authorization, IP range authorization, and client digital signature authorization, basic authorization is what the name suggests. However, basic authorization remains one of the most secured methods to preventing unauthorized access" (Zhou, 2003). SirsiDynix offers an add on product called Remote Patron Authentication (RPA) with Horizon to provide secure authentication and gives users seamless access to restricted resources. Delaware State University uses RPA to provide remote access to electronic databases to its users (figure 2) for which they must have valid DSU barcode IDs.
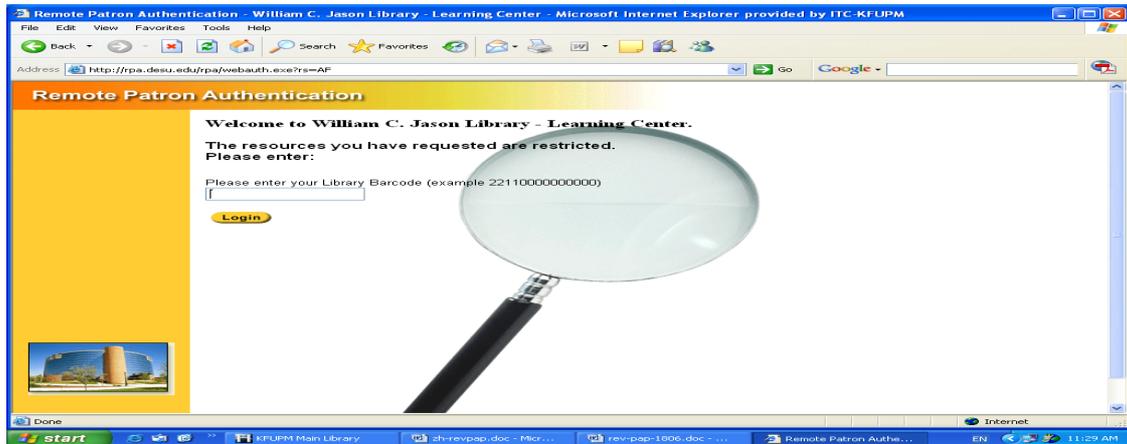
"Take in Figure 2"

Figure 2. RPA Screen from Delaware State University

(**http://rpa.desu.edu/rpa/webauth.exe?rs=AGRIS**)

WAM (Web Access Management) is another authentication software provided as part of the MAP portal by Innovative Interfaces.

3. OpenURL

Library portals support the OpenURL framework, a standardized format that provides extended service-links from a record in an abstracting and indexing (A&I) database to the full-text described by the record; from a record describing a book in a library catalog to a description of the same book in an Internet bookshop; or from a reference in a journal article to a record matching that reference in an A&I database (Van de Sompel, Beit-Arie, O. 2001). A large number of databases are now OpenURL compliant and provide links from bibliographic citations to authorized full-text sources. But, there are still many databases lacking compliance of Z39.50 and OpenURL and therefore, cannot be accessed through links from the citations.

WebBridge is the name given by Innovative Interfaces to its OpenURL-based contextual linking component of the MAP portal. It offers a smart linking capability, which seamlessly enables libraries to link together information resources when appropriate. This can include content enrichment such as book-jacket images and book reviews, but can also include linking to the most appropriate copy of full-text journal articles or e-books. Each resource is offered only if specific criteria are met based on elements from the record of the user's search. These related resources can be categorized under library-defined services such as book reviews, similar titles, holdings at nearby libraries, full-text availability, and book-jacket images. WebBridge (2006) can create these lists of related resources from any electronic resource in the library's collection that can send a WebBridge link to the resolution server. Figure 3 is a sample of WebBridge search screen from the Tempe Public Library.
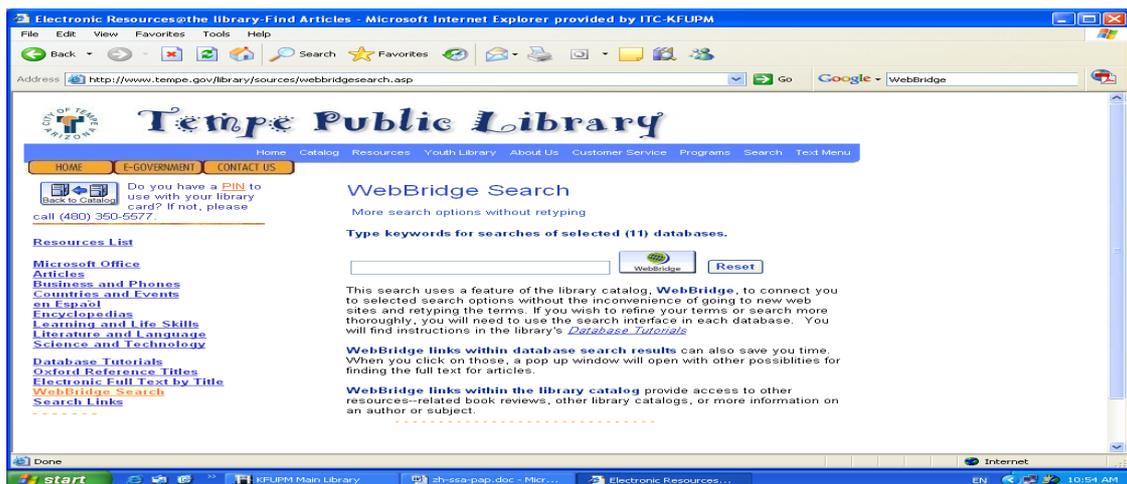
"Take in Figure 3"

Figure 3. WebBridge Search Screen from the Tempe Public Library

(http://www.tempe.gov/library/sources/webbridgesearch.asp)

Article Linker is another OpenURL link resolver from Serials Solutions.

4. User personalization

Library portals empower users to customize search results and display them in any order they desire. They can also personalize the portal by highlighting items belonging to a specified location whenever they search. Default notification type and pickup locations can be determined for request placement. Profiling of users enables users to save searches, rerun searches, and register to be alerted of new table of contents (TOC). These alerts can be emailed to users on weekly, bi-weekly, or monthly basis. In addition, users can maintain a list of items checked-out. HIP users are able to track items and requests and to place holds and renew items by using the "My List", "My Account", and "MyLibrary" functionality. The MyLibrary (2006) interface is a user-centered, customizable interface to Library collections of information resources. The interface allows the user to see a customized view of resources from where ever they log in. Some of the services provided include remote authentication, access to circulation information services, document delivery, subject specific groupings of content and updates and much more (figure 4). Libraries can also display a list of new titles along with a list of highly circulated titles categorized by library defined headings.
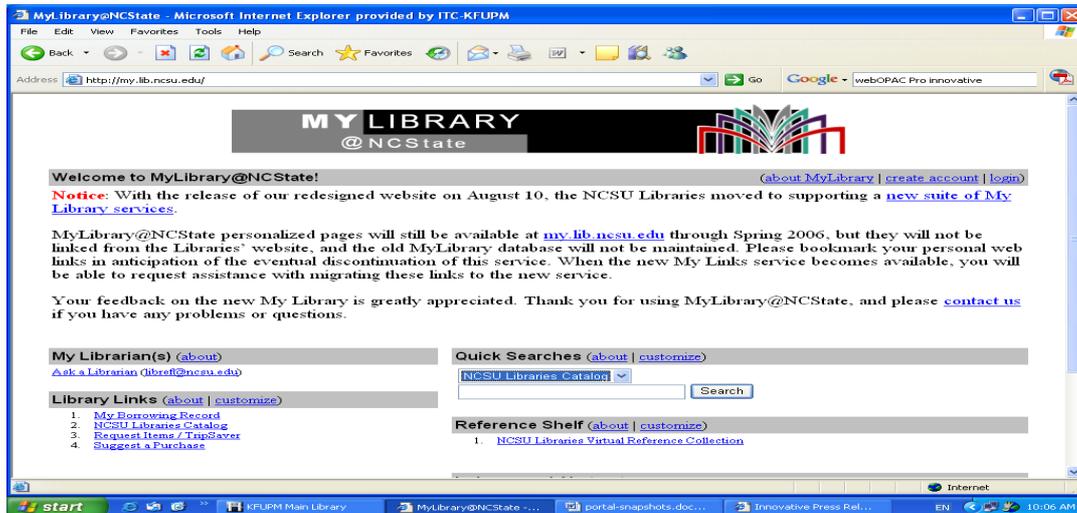
"Take in Figure 4"

Figure 4. MyLibrary Screen

(**http://my.lib.ncsu.edu/**)

5. Multiple channels

A single portal screen has multiple channels for search and display. For example, it can display the search result of the library catalog in one channel and show library fines in another. Similarly, library hours, library events, and new arrivals can be displayed in separate channels.

6. Statistics and management information

Statistical data on database usage, such as who has used which databases, number of search requests, search types, number of hits, number of full-text requests, usage time, etc. are very critical for management purposes. Each database publisher may have different format of recording these data, which may cause problems for libraries in measuring the relative performance and value of service. Library portals integrate management information and present them in a single format to be used effectively for management purposes.

Conclusion:

The limitation of online catalogs and the ease in searching of web resources have forced users to go "first to Google and other search services rather than to library catalogs" (Marcum, 2006). This situation is a matter of serious concern for libraries and they must act quickly to bring their users back to the library for all their information needs. The introduction of library portals with all the features listed above is imperative for libraries to remain relevant in a Googlized world. Although libraries have started implementing portal products during the last five to six years, the focus should be more on enhancing them with features of user empowerment so that they can perform searching of a variety of resources and carry out personalized transactions through a single interface.

References

Boss, R. W. (2006), "Library portals", available at: http://www.ala.org/ala/pla/plapubs/technotes/librarywebportals.htm (accessed May 5, 2007)

Carden, M. (2004), "Library information within the enterprise portal", available at: http://www.elag2004.no/papers/Carden.pdf (accessed May 5, 2007)

Carden, M. (2004), "Library portals and enterprise portals: why libraries need to be at the centre of enterprise portal projects", *Information Services & Use* Vol. 24 No. 4: 171-177.

Cox, A. (2003), "Choosing a library portal system", *Vine* Vol. 33 No.1: 37-41.

Cox, A. and Yeates, R. (2003), "Library portal solutions", *Aslib Proceedings* Vol. 55 No. 3: 155-165

Deltor, B…et al. (2003), "Fostering robust library portals: an assessment of the McMaster University library gateway", available at: http://www.business.mcmaster.ca/msis/profs/detlorb/Working_Paper_4.pdf (accessed May 5, 2007)

Jackson, M. E. (2002), "The advent of portals", *Library Journal*, Vol. 127 No. 15: 36-39.

Jackson, M. E. (2005), "Looking ahead: the future of portals", *Journal of Library Administration* Vol. 43 No. 1/2: 205-220

Marcum, D. B. (2006), The future of cataloging. *Library Resources & Technical Services* Vol. 50 No. 1: 7

Matthews, J. R., Lawrence, G. S. and Ferguson, D. K. (eds), (1983), *Using Online Catalogs: a Nationwide Survey.* New York: Neal-Schuman.

Mckeen, L., Parent, I. (2000), 'The National Library of Canada: organizing information for the new millennium., *Cataloging & Classification Quarterly* Vol 30 No. 1: 33

Morgan, E. L., ed. (2000), "User-customizable library portals", *Information Technology and Libraries* Vol. 19 No. 4: 165-205.

Morgan, K. and Reade, T. (2000), "Pioneering portals: MyLibrary@NCState". *Information Technology and Libraries* Vol. 19 No. 4: 191-198.

Myhill, M. (2005), "A MAP for the library portal: through the library labyrinth of online information sources", *Online Information Review* Vol. 29 No. 1: 5-17.

MyLibrary Interface. (2006), available at:
http://www.le.ac.uk/li/distance/eliteproject/elib/mylibrary.html (accessed May 5, 2007)

Ramsden, A. (2003), 'The library portal marketplace", *Vine* Vol. 33 No. 1: 17-24.

Sadeh, T. and Walker, J. (2003), "Library portals: toward the semantic web", *New Library World* Vol. 104 No. 1184/1185: 11-19.

Savarese, J. (2005), "Library portals and what's next *Campus Technology",* available at:
http://www.campus-technology.com/article.asp?id=11087 (accessed May 5, 2007).

Thomas, S. E. (2000), "The catalog as portal to the Internet", available at:
http://www.loc.gov/catdir/bibcontrol/thomas_paper.html (accessed May 5, 2007).

Van de Sompel, H. Beit-Arie, O. (2001), "Open linking in the scholarly information environment using the OpenURL framework", *D-Lib Magazine* Vol. 7 No.3, available at
 http://www.dlib.org/dlib/march01/vandesompel/03vandesompel.html (accessed May 5, 2007).

"WebBridge: resource linking," (2006), available at:
 http://www.iii.com/mill/digital.shtml (accessed May 5, 2007).

"WebPAC Pro marks new stage in online public access", (2005) *INN-Touch* Vol. 19 No. 3: 1-2

Zhou, J. (2003), "A history of Web portals and their development in libraries. *Information Technology and Libraries* Vol. 22 No. 3: 119-128.