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E-RESOURCE, DISCOVERY TOOLS AND SERVICES FOR ACADEMIC LIBRARIES

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Abstract

The emergence of the World Wide Web (WWW) and Internet as a new media of information storage and delivery provide an unparalleled media for delivery of information with greater speed and economy. The web technology and Internet has changed the way of information is stored, retrieved and communicated in the libraries. As more libraries move towards providing their services in a digital environment, the improved access to remote library collections is making the use of electronic information resources more realistic and more attractive. Information Technology has become an integral part of all aspects of the library. Well and proper implementation of IT in library results into better resource sharing and more effective services to the users. With the increasing impact of Information Technology it is supposed that library should adopt new technology to provide traditional library services by new ways. The concept of web based library services is emerged and now-a-day's libraries are providing their services out of the four walls of the library building. Library website is one of the most powerful and important tool for providing the various kinds of web-based library services. Most of the academic libraries are subscribing electronic resources to their libraries. subscription of large collection of electronic resources, e-journals, e-books, e-database and other electronic resources which are suitable for teaching and research have created opportunities and well challenges to library and information professionals for managing and discovery of electronic resources. This paper briefly describes concept discovery tools, open source discovery tools, black light, SOPAC, resource discovery, discovery tool evaluation check list, web based library service, online databases search engines, EBSCO discovery services, etc. It is an attempt to touch base with all the areas relating to web discovery tools, web based technical and innovative library and information services in simple language.

Keywords: Digital Library Services, Electronic Reference Services, Web Based Resources, Reference Services

Introduction

With the increasing impact of ICT on the library and with the changing technological environment, libraries are adopting modern techniques to provide fast and better services to its users in more effective way. In order to cope with the changing technological environment libraries are providing web based library services to its users.

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Library webpage is one of the most powerful tools to provide web based library services. These kinds of services fulfill the fourth principle i.e. “Save the time of library staff and library users”. The Due to the tremendous growth and continuous development of technology, the role of library becomes more responsive in making the users techno-savvy. Technological developments have affected not only the formats and sources of the information, but also how and where to provide library services. Libraries and their resources have partially moved to the virtual world of the Internet. As a result, library users can access the resources from outside the physical library. In an effort to reach users accessing the library via their computers, many libraries and library consortia are extending their services to include virtual reference. Technology now allows users to submit their queries to the library at any time from any place in the world. Web Based Services, Digital Library Services, Internet Library Services and Electronic Library Services are terms with similar meanings. As more libraries move towards providing services in a digital environment, the improved access to remote library collections is making the use of electronic information resources more realistic and more attractive. Traditional online services had transformed themselves into internet-based online services using web-based technologies. From traditional online services to today, four generations of information retrieval tools have passed that assist users in searching the World Wide Web. Most of the academic libraries are subscribing electronic resources to their libraries. subscription of large collection of electronic resources, e-journals, e-books, e-database and other electronic resources which are suitable for teaching and research have created opportunities and well challenges to library and information professionals for managing and discovery of electronic resources

The first generation of information retrieval tools was designed for use with bibliographic databases. The first generation provided access to references to the end documents rather than to the documents themselves, and indexing and searching were thus applied to document surrogates, such as titles or abstracts. These tools require considerable human efforts to collect, arrange, code, and annotate the various resources. A primary benefit of the first generation of tools is providing users with easy browsing capabilities.

The second generation of tools attempts to collect and index resources as an automated function. Automatic collection and indexing reduces the amount of human effort. The ability to search through massive amounts of information and locate the desired information for the user is the primary benefit of the second generation of tools. The third generation deals with World Wide Web Meta search engines, such as Harvester and Meta crawler.

The fourth generation involves new ideas such as search agent technology currently being developed to search for information on the web. Web-based search engines are as a

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means of finding relevant pages on the Internet. Different search engines, directory, meta-search engines, gateways, subject portals, electronic journals and on line databases each type could be used in a different way, from simple keyword searching up to peer reviewed web sites.

Discovery Tools

Discovery tools, allow the user, through a single search box, to search a base index of metadata as well as many of the library's digital resources such as proprietary databases, the catalogue, and institutional repositories. A notable advantage of discovery tools is that they can provide access not only to proprietary electronic content but to local collections as well. A discovery tool is often referred to as a stand-alone OPAC, a discovery layer, a discovery layer interface, an OPAC replacement, or the next generation catalog (NGC). Unlike the front end of an integrated library system or ILS OPAC, a discovery tool is defined as a third party component whose purpose is to "provide search and discovery functionality and may include features such as relevance ranking, spell checking, tagging, enhanced content, search facets. The discovery tools promise to provide a single interface to multiple resources based on using a centralized consolidated index to provide faster and better search results. Libraries may adopt a "Web OPAC wrapper" solution to embed their existing OPAC within another user interface layer. Today Libraries are discussing beyond new generation catalogues and exploring discovery tools, both open source and proprietary web scale discovery tools developed by OCLC, Serials Solutions, Ebsco, and Ex Libris , Encore and Aqua browser etc. Libraries are beginning to adopt new discovery tools to effectively and efficiently streamline the search process in the hopes of facilitating better search results. Web discovery services are a tool with major potential to transform the nature of library systems. These services are capable of searching quickly and seamlessly across a vast range of local and remote content and providing relevancy-ranked results in the type of intuitive interface that today's information seekers expect. New discovery tools to provide a single interface to multiple resources based on using a centralized consolidated index to provide faster and better search results. There are commercial and open source tools which are being used by libraries. The continuing proliferation of formats, tools, services, and technologies has upended how we arrange, retrieve, and present our holdings. Our users expect simplicity and immediate reward and Amazon, Google, and iTunes are the standards against which we are judged. It is our responsibility to assist our users in finding what they need from different locations. Web scale discovery can secure library's role as the primary place for research and help users in finding relevant information. It provides a complete family of e-discovery tools that can help libraries to provide a comprehensive approach to accessing library collection.

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Open Source Discovery Tools

Several open source discovery tools are being used by libraries. Some of the important open source discovery tools are:

Black light

It is a discovery interface, next-generation catalog especially optimized for heterogeneous collections. Library catalog can be used as a front end for a digital repository, or as a single-search interface to aggregate digital content. The University of Virginia, Stanford University, Johns Hopkins University, and WGBH are the principal contributors to the code base and use it heavily at their institutions. There are dozens of sites worldwide that use Blackligh .

Fac-Back-OPAC (Kochief)

Fac-Back-OPAC is a faceted back- up OPAC. This advanced catalogue offers features that compare favorably with the traditional catalogues for today's library systems. Fac-Back-OPAC represents the convergence of two prominent trends in library tools: the decoupling of discovery tools from the traditional integrated library system and the use of readily available open source components to rapidly produce leading-edge technology for meeting patron and library needs.

Library Find

Oregon State University (OSU) Libraries has designed and deployed Library Find, a meta search system. It has important features like; Built-in Open URL resolver, ability to search locally index collections, web-based administration and customizable user interface.

Rapi

An open-source project of the WING group in the School of Computing, National University of Singapore licensed under the MIT license. Rapi provides an OPAC package that allows you to build a Lucene index from your MARC files. The user interface supports a variety of features including tabs, an overview, details view and a suggestion bar etc.

Scriblio

Scriblio formerly known as WPopac is an award winning, free, open source CMS and OPAC with faceted searching and browsing features based on Word Press. Scriblio is a project of Plymouth State University, supported in part by the Andrew W. Mellon Foundation.

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SOPAC

Social Online Public Access Catalog is a module for the Drupal CMS that provides true integration of library catalog system with the power of the Drupal content management system. It has features of **tag, rate, and review** of the library holdings.

VuFind

It is an open source library search engine that allows users to search and browse beyond the resources of a traditional OPAC. VuFind operates with a simple, Google-like interface and offers flexible keyword searching. While most commonly used for searching catalog records.

World Cat Local-OCLC

OCLC released the initial version of World Cat Local in November 2007, following an earlier development period with trials dating to spring 2007. World Cat Local provides access to more than 740 million items, including articles from partners such as EBSCO, Elsevier, Gale, H.W. Wilson, and LexisNexis; the digital collections of groups like collective resources of libraries worldwide.

Summon (Serial Solutions)

Serials Solution began dedicated development of its Web scale discovery solution, Summon, in 2008, building the product from scratch as a new platform. Summon works with library's link resolver to broker access to full-text content owned or licensed by the library, and works with the library's proxy server or alternate authentication method to enable access to licensed content by offsite users.

EBSCO Discovery Service (EDS)

EBSCO Discovery Service (EDS), launched in early 2010, provides web-scale discovery by creating a unified, customized index of information resources available in an institution that is made searchable through a single search box using a powerful search engine. EBSCO Discovery Service (EDS) creates a unified, customized index of an institution's information resources, and an easy, yet powerful means of accessing all of that content from a single search box.

ExLibris Primo Central

Ex Libris began development of its next-generation discovery layer, Primo, in 2005, with official public release occurring in 2007; Primo version 3 was released in spring 2010. Primo Central, Ex Libris's Web discovery component, was officially released in mid-2010.

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Resource Discovery

The first place for all Library users to locate their material (all books, periodicals and electronic resources) is the OPAC. The system we have operated for the last 5 years is Libsys. Within that period, the look and feel of the traditional library catalogue has been challenged by the growing familiarity with and attraction to more of a "Google style" approach, among both students and researchers alike. As librarians, of course, we appreciate the finer points of cataloguing and classification, and their usefulness for resource discovery, skills which are now perhaps becoming lost on the current generation of users. As a direct result of user feedback asking for a "cleaner, more user-friendly interface" the Library has introduced the Beta Catalogue, which will run alongside the Voyager OPAC for an unspecified period. Using VuFind open source software from Villanova University, the Beta Catalogue offers a new approach to searching. Starting with a general keyword, a search can then be narrowed using the groupings on the right hand side of the results screen. Fuzzy searching shows alternative spellings, offers suggestions for related items and identifies variant editions. One can read reviews from Amazon, and use the quick links to get more information from Amazon, Google Books, and World Cat. The Beta Catalogue is still a work in progress; it does not as yet have the full functionality of the OPAC to permit class mark searching, renewals, reservations, or user account information. Since it was implemented towards the end of last year the response of users has been overwhelmingly favorable. It is not intended at this stage to replace the Voyager OPAC interface.

DISCOVERY TOOL EVALUATION CHECK-LIST

The web discovery tools are new and under development. While there is not yet much user data, encouraging information has been learned about the capabilities and limitations of these tools. Vendors keep on announcing about the new features of their tools, highlighting expanded content agreements, interface improvements, and important new customers. Proper evaluations of these tools are yet to be done. Following points can be considered for evaluation of discovery tools.

Single point of entry for all library information: The library catalogue should be a single search or federated search for all library materials, including pointers to the articles in electronic databases as well as records of books and digital collections.

State-of-the-art web interface: Library catalogue should have a modern design similar to commercial, e-business sites.

Enriched content: Library catalogue should include book cover images, user driven input such as comments, descriptions, ratings, and tag clouds.

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Faceted navigation: Library catalogues should be able to display the search results as sets of categories based on some criterion such as dates, languages, availability, formats, locations, etc.

Simple keyword search box on every page: The next generation catalogue starts with a simple keyword search box that looks like that of Google or Amazon. A link to advanced search should be provided.

Relevancy. Librarians complain that OPAC relevancy results are problematic or that they do not understand how relevance is determined. The next-generation catalogue does better in relevancy ranking with increased precision.

Did you mean . . .? A spell-checking mechanism should be present in a next generation catalogue.

Recommendations/related materials: Commonplace in e-commerce sites, the customer is shown additional items with a suggestion like "Customers who bought this item also bought . . . " Likewise, a next-generation catalogue should recommend books for readers on transaction logs.

User contribution: The next-generation catalo allows users to add data to records. The user input includes descriptions, summaries, reviews, criticism, comments, rating and ranking, and tagging or folksonomies.

RSS feeds: Really Simple Syndication allows users to connect themselves to content that is often updated. Next-generation interfaces include RSS feeds so that users can have new book lists, top-circulating book lists, canned searches, and "watch this topic" connections to the catalogue on their own blog or feed reader page.

Integration with social network sites: When a library's catalogue is integrated with social network sites, patrons can share links to library items with their friends on social networks like Twitter, Face book and Delicious.

Persistent links: Next-generation catalogue records contain a stable URL capable of being copied and pasted and serving as a permanent link to that record.

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E- Resource Discovery:

According to Eddie clarke "We use the term Resource Discovery to mean the process of identifying and accessing information relevant to learning, though identification (discovery) and access are best considered as separate processes. It is a basic requirement in all tiers of education, whether or not it involves electronic means (using computers, and more particularly the internet), though that is our focus. Students doing project work, teachers preparing lesson plans and technologists advising academic staff all depend on the existing knowledge base in developing their learning and teaching. We would contend that this is true even where teaching and learning is tightly associated with a particular (already well resourced) curriculum or is more vocational in nature. There is no single resource or source of information which would meet the diverse educational needs of all learners, and one best develops an understanding of any particular subject when it is considered from different viewpoints.

FEATURES OF DISCOVERY SERVICES:

- It provides resource discovery tools which includes different types of resources published by different publishers, venders etc.
- It provides end users search interface for the all the content subscribed by libraries.
- It facilitates easy integration facilities to the library collection, OPAC with wide range of digital resources which offers comprehensive collection coverage for your library users.
- Discovery services offer links facility to the full text articles.
- It offers basic and advance search facility for the library users. In the advance search, the users can use Boolean operators for fields search.
- Users can customize user interface to feel its own website.
- Offers easy integration which provides seamless and comprehensive resource discovery.
- Support to consortium for providing single search interface and management of resources.
- It allows searching rich metadata and provides full text documents from various sources.
- Information literacy skills of the users will enhance automatically when they use electronic resources for their study and research.
- Provides easiest searching facilities for your library collection which enhance usage of library resources and numbers of users.
- Capitalizing on the richness of library resources and encouraging their use.
- Offers built-in support for consortia resources.

LIST OF RESOURCE DISCOVERY TOOLS:

- Google Scholar,
- GetRef,
- ZETOC
- WorldCat- Discovery Service from OCLC
- WebBridge LR

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- Primo and Primo Central from Ex Libris Group
- EBSCO Discovery Service from EBSCO Information Services
- Summon -from Pro Quest
- Pro Quest- Aqua Browser
- Black light, developed by the University of Virginia
- Vu Find, originally developed by Villanova University
- Franklin developed by the University of Pennsylvania Libraries

CONCLUSION

The standards for organizing web-based resources are still in the early stages of development, and librarians are forced to utilize standards for print resources that were not designed for electronic resources. Additionally web-based information resources are volatile in the sense that may be moved from one site to another or may be removed altogether from web. Web-based library services will become more widespread and sophisticated as the web becomes common place throughout the world, and to be successful players in the E-world. Libraries must continue to address the web design and implementation issues. As we actively transfer library services, our central purpose remain the same, to serve and teach users to find, evaluate, and use information effectively. The librarians should be expert to hold the hands of the users who are moving towards new communication paradigm a shift from face to face human contact to human machine interaction, from paper to electronic delivery, from text centered mode to multimedia and from physical presence to virtual presence. Despite these changes in communication technology, the reference interview will remain at the heart of the reference transaction. To meet these challenges the librarians may play a leadership role in providing better Web Based library Services facilities to their current techno savvy users.

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