

Web Scale Discovery tools for Academic Libraries

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Abstract:

Ever expanding set of Web and ICT services has changed the way of learning and communication and research. Discovery system is a platform to facilitate Single Search box to search all resources the Library and it provides result based on relevance. Academic libraries are transforming from federated search technologies to Web Scale Discovery system. The WebScale Discovery services increase the value of the library by providing high research productivity with a single search box. This paper highlights the Web Scale Discovery and the importance of the discovery tools and services for academic libraries.

Keywords: Web Scale Discovery, Library Networking, Information Retrieval

Introduction

Due to advances in Information and Communication Technologies the concept of libraries as a physical place has been changing to virtual places, libraries providing information wherever the user resides whether in physical place or virtual place in a hybrid library environment. It is important to understand user information seeking behaviours, but knowledge of user searching patterns in online catalogues is incomplete and contradictory. Library and Information Centres are playing a vital role in providing the information required by the user for their research and development works. The main task is disseminating information from the library collection as well as from the electronic resources. Web scale discovery system is an innovative tool for search library collections.

Academic Libraries are working with Web Scale Discovery system vendors on a hybrid approach that incorporates search assistance and recommended elements with web scale

aggregation and blended result displays. Usually library websites provide link to Online Public Access Catalogue (OPAC) and list of E- Resource Databases where user have to choice either form OPAC or E Resources, these tool facilitates access to efficient searchfor required information. Web Scale services are capable in quick search and search across a local & remote access and provide relevance results to users with ranking. Advanced ICT infrastructure and Web Scale Discovery enablesacademic libraries to reach a broad community of user, at the same time librarians have to focus on meeting the specific need of a single user.

We are familiar with how the World Wide Web has changed the way of learning, communication & research. Web Scale Discovery system is a solution to access relevant information, many service providers occur in recent, they have aggregated the supply of all resources ononline search servicesover the Internet. Today web scale discovery tools developed by OCLC, Ebsco, Ex Libris etc., and Web Scale services build a network of participants to share their diverse and individual needs.

Web Scale systems is a hosted search and discovery systems that feature blended displays of heterogeneous information resources, facet limit mechanisms and integration with local content management systems. Web Scale Discovery services are getting wide acceptance from library community, it is evident from the fact that many libraries are replacing Federated search to web scale discovery.

Discovery system is a platform where it facilitates Single Search Box to search all resources of a library collectionand provides relevance result. Web Scale Discovery services are set of integrated technologies with the potential to transform the nature of library systems. Web Scale Discovery tools are offered as cloud computing model and have the capacity to easily connect vast information repository.

Web Scale Discovery: Overview

Web Scale Discovery Service enables to search queries from a variety of sources from single search box user able to search based on index of metadata, electronic resource, catalogue and institutional repositories.

Athena Hoepfner defined the Web Scale Discovery as a “preharvested central index coupled with a richly featured discovery layer providing a single search across a library’s local, open access and subscription collections”.

In simple terms Web Scale Discovery services are integrated web based services with major potential to transform the nature of library system. It provides a platform for library users to search and access from all the library resources to get relevance based results. Web scale includes the technologies which facilitates to harvest, index, ranking, search and retrieve the content with user interface platform features. This aims to provide a user friendly environment to users.

Content: Web Scale Discovery system contain variety of content like Integrated Library Records, E Resources, Digital Collections, Institutional Repository and Other contents. Also it can include contents from indexing and abstracting databases and the contents from open access repositories.

Technology: Web Scale Discovery systems contains integrated set of technologies and tools to harvest, store, search and retrieve the content to user queries through a unified web interface.

Web Scale Discovery services increase the value of the library by delivering unique research productivity with a single search box. This service helps libraries to improve services with more discoverable and unique ways for users to search and communicate with librarians.

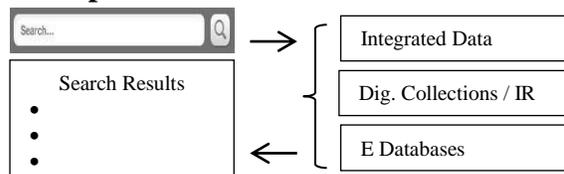
Web Scale Discovery helps to increase research experience without bias increase the role of library in research and meets user's needs. Contents can be search at the same time, which provides extremely fast search response with the highest degree of relevance based result.

Key concepts of Web Scale Discovery

Some of the key concepts of Web Scale Discovery are given below.

- Unified platform to search all the resources.
- Pre harvested index of metadata.
- Single results list for all library collections.
- Relevancy in result based on ranking.
- Featured user interface.
- Faceted navigation
- Single point of entry to search library resources.
- Web interface.
- Targets the universe of objective vetted library content.
- Simple keyword search box.
- Harvesting of any given resource.
- Provision to remotely access.
- Local special collections digital and print.
- Social media features.

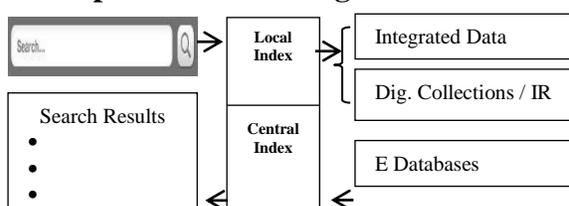
Example of Federated Search:



Real time query and response

Figure1: Federated Search Model

Example of Search using Web Scale Discovery



Pre-built harvest an Indexing

Figure 2: Web Scale Discovery Search Model

Examples of Web Scale Discovery:

The four major vendors are OCLC, EBSCO, ProQuest, and Ex Libris. Ideally all possible online content providers are indexed, as well as the library's local holdings.

Ebsco Discovery Service: Ebsco Discovery Service (EDS) began development in the year 2008 Ebsco and later officially launched in the year 2010.

Primo Central Ex Libris: Ex Libris began development its discovery layer Primo in the year 2005, Primo Central Ex Libris Web scale discovery service was officially released in the year 2010.

WorldCatLocal:WorldCat Local is a Web Scale Discovery service by OCLC. WorldCat released the initial version in the year 2007 and in the year 2009 OCLC brought discovery platform with the collaboration of more content providers.

Summon Web scale Discovery:Summon Web Scale Discovery is released in the year 2009. Summon is developed by Serials Solutions a division of Proquest, this is one of the early entrants in to the library Web scale Discovery environment.

Features of Web Scale Discovery

Index of Content: Web scale consist of largest unified index which helps to include more content of e resources.

Customization: Provision for search is provided with highly customizable features to Navigation, user accounts, chat services, modifies text and customized search facility.

Faceted Navigation: This allows users to explore a collection by applying multiple filters.

Search Assistance: Provision for proper search techniques to get fast search response with reliability.

Relevant Results: It gives relevance result from the collection, provide provision for easy navigation and narrowed filtering and sorting.

Research Assistant: Search guidance, live reference help, suggestions can be given librarians to improve overall experience at the time of search through web scale discovery.

Saving and Exporting Results:Web Scale environment supports for email, print, export citations, bibliographic management using reference manager.

Usage Statistics: Using administrative tools it provide usage reports on most search queries, successful full text downloads, number of searches etc.

Community & Support: Provision to customer support to optimize discovery experiences to share ideas and feedback for librarians.

Web Scale Discovery & Library Services

The impact of internet have changed the way of searching information on the web and the user expect alltheir required information make available in a single set of results across from all the resources in a library. Academic libraries need to review the existing services and expand the services to meet the information needs of students. Competing with other institutions libraries have to give attention on information retrieval services to attract students.

Libraries are purchasing lot of e-resources like e-journals, e-books, and other e-databases. At the same time libraries should facilitate environment to search all the resources of a library collection. The Web Scale Discovery provides environment to search within a single search box, this increase accessibility of E-resources and allows users to retrieve all the relevant information from variety of sources form the library collection.

Web Scale Discovery system increases usage of libraries vast information repository, provides easiest way for user to discover library collection and connects users with librarians. Also it improves the positive impression of users towards library. It can include content such as physical holdings, electronic databases, institutional repositories and digital collections. Web Scale Discovery also accesses to a remotely hosted content, publisher and aggregator content for thousands of full text journals, abstracting and indexing resources and open access repositories.

Here users are in a very advantageous position regarding the access of resources but often they have confusion from where to start and which resource to be covered? Web Scale Discovery is a solution to eliminate this confusion and provide search environment to users to retrieve all the relevant information from multiple sources.

Libraries have to work together to operate at Web Scale environment, they can use cloud to share data and infrastructure to reduce cost on IT infrastructure. Operating at Web Scale libraries can increase their value by network, shared resources and broad collaboration among participating libraries. A major challenge is evaluate the library services, it is difficult to measure how important a piece of information to particular individual or organization.

Benefits for Libraries

- Provide best opportunity to search across your collection.
- Enables library staff to focus on serving users with the IT application by innovating at the local level.
- Provides greater ability to utilize analytic tools.
- Include more Comprehensive collection coverage with various types of content and publishers.
- Researcher can get relevance results without bias with highly relevant results that researcher want.
- Researcher can develop and increase information literacy skills.
- Helps to increase the usage of vast collection library resources.

Conclusion

Web Scale Discovery removed many barriers that previously limited access to information. Libraries can provide better delivery of information and relevance in search results. There are various Discovery Services are available and vary in its offerings. Library professionals should carefully evaluate factors like price, content, staff and technology while selecting Web Scale Discovery systems to meet their goal. Libraries also make sure that proficiency of vendor support and necessary training sessions for effective implementation of Web Scale Discovery service.

Reference:

1. Deodato, J. (2015). Evaluating Web-Scale Discovery Services: A Step-by-Step Guide. *Information Technology and Libraries*, 34(2). doi:10.6017/ital.v34i2.5745
2. OCLC, (2011). Libraries at Web Scale: A discussion document. Retrieved from: <http://www.oclc.org/reports/webscale.en.html>
3. Prem Chand,(2012). Web Scale Discovery Tools. INFLIBNET 8th Convention Planner - 2012 Held at Sikkim University (Ahmedabad), 01-03.
4. Sujatha, H. R., & Reddy, M. B. (2014). Web Scale Discovery Services/Tools: Transforming Access to Library Resources. *Library Herald*, 52(2), 99. doi:10.5958/0976-2469.2014.00500.4
5. Vaughan, J.(2011). Web Scale Discovery Services. *Library Technology Reports*, 47(1), pp. 05-11.
6. Way, Doug, (2010). The Impact of Web Scale Discovery on the use of library collection. Retrieved from: http://scholarworks.gvsu.edu/library_sp/9.