



USAGE OF OPEN SOURCE SOFTWARE

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ABSTRACT:

Few years back, no one thought that libraries will have to implement the concept of value added services in its daily routines. Open source is similar to peer review, which is used to strengthen the progress of scholarly communication. This paper presents the idea of open source software and its overall structures combined with the actual project needs, it presents the software tools available in the open source world that truly has the advantage of enhancing the overall test efficiency, saving the cost of human resources and so on.

Keywords:

Library, software, electronic, resources

INTRODUCTION:

Developments in electronic and communication technology have affected every profession in the past decades and libraries are no exception. Internet is the gift of information technology, which has brought a huge data. Computer Networks are simply the media that carries the information. Especially in this article, we will discuss about the importance of using search engine in modern era. There are various search engine and search engine software available in World Wide Web. Libraries of all types are challenged to provide greater information access and improved levels of service, while coping with the pace of technological change and ever increasing budget pressure. Use of software applications in libraries has become essential due to a number of factors. The most visible factors among them are: 1. Growth of electronic resources: Large databases from periodical, magazine and journal publishers became increasingly available in digital format- at first on CD-ROM, later via online services. Library services are transitioning





from local traditional collections to global resources provided on demand via the most advanced networking technologies. Today, library collections are used by people on campus as well as by individuals who are not even located on the library's physical facilities. 2. Anytime Anywhere Access: Access to online digital information from anywhere is the need of the hour. This is forcing a shift in role of library from a repository to a gateway, with users expecting online libraries that can provide round the clock services. 3. Resource sharing: Libraries of all types also need to utilize new application systems to automate resource sharing. Union Catalogues and Inter Library Loan modules are needed to allow cooperating institutions to combine their catalogues and allow patrons of one library to request and borrow from linked institutions. These technologies will foster the growth of library consortia and the extension of offerings beyond the organizational boundaries of individual libraries. The term 'Open Source' refers to software in which the source code is freely available for others to view, amend and adopt. It is created and maintained by a team of developers that crosses institutional and national boundaries. Open source is generally more stable than proprietary software. After all, any programmer can read, distribute and modify source code. The DSpace Digital Library Software offers exciting ways to build and distribute digital document collections. It helps us to publish digital collections on the Internet or on CD-ROM. Within a few minutes time, one can build full text, search indexes and browsing classifiers for any collection of digital documents. Libraries are undergoing many changes due to digital revolution. Libraries have to provide information to user desktops instantly irrespective of place, time and format. The massive development of ICT has changed the role of library and information centers. In this changing world, Librarians and Libraries should have to play a major role in managing these digital resources. Digital libraries do replace the concept of a library as a





repository of knowledge with the notion of it as a provider of information services to users. In this age of exponential growth of information materials in print as well as digital form, both physical and digital libraries are essential and can work in unison, supplementing each other. Developments in electronic and communication technology have affected every profession in the past decades and libraries are no exception. Internet is the gift of information technology, which has brought a huge data. Computer Networks are simply the media that carries the information. Especially in this article, we will discuss about the importance of using search engine in modern era. There are various search engine and search engine software available in World Wide Web. Libraries of all types are challenged to provide greater information access and improved levels of service, while coping with the pace of technological change and ever increasing budget pressure. Use of software applications in libraries has become essential due to a number of factors. The most visible factors among them are: 1. Growth of electronic resources: Large databases from periodical, magazine and journal publishers became increasingly available in digital format- at first on CD-ROM, later via online services. Library services are transitioning from local traditional collections to global resources provided on demand via the most advanced networking technologies. Today, library collections are used by people on campus as well as by individuals who are not even located on the library's physical facilities. 2. Anytime Anywhere Access: Access to online digital information from anywhere is the need of the hour. This is forcing a shift in role of library from a repository to a gateway, with users expecting online libraries that can provide round the clock services. 3. Resource sharing: Libraries of all types also need to utilize new application systems to automate resource sharing. Union Catalogues and Inter Library Loan modules are needed to allow cooperating institutions to combine their catalogues and allow patrons of





one library to request and borrow from linked institutions. These technologies will foster the growth of library consortia and the extension of offerings beyond the organizational boundaries of individual libraries. The term 'Open Source' refers to software in which the source code is freely available for others to view, amend and adopt. It is created and maintained by a team of developers that crosses institutional and national boundaries. Open source is generally more stable than proprietary software. After all, any programmer can read, distribute and modify source code. The DSpace Digital Library Software offers exciting ways to build and distribute digital document collections. It helps us to publish digital collections on the Internet or on CD-ROM. Within a few minutes time, one can build full text, search indexes and browsing classifiers for any collection of digital documents. Libraries are undergoing many changes due to digital revolution. Libraries have to provide information to user desktops instantly irrespective of place, time and format. The massive development of ICT has changed the role of library and information centers. In this changing world, Librarians and Libraries should have to play a major role in managing these digital resources. Digital libraries do replace the concept of a library as a repository of knowledge with the notion of it as a provider of information services to users. In this age of exponential growth of information materials in print as well as digital form, both physical and digital libraries are essential and can work in unison, supplementing each other.

MATERIAL AND METHOD:

Open Source Software (OSS) Open source refers to both the concept and practice of making program source code openly available. Users and developers have access to the core designing functionalities that enable them to modify or add features to the source code and redistribute it.





Extensive collaboration and circulation are central to the open source movement. Many features distinguish open source software from closed or proprietary software. The open source initiative (OSI) has set a standard, the “open source definition”, by which software qualifies for an open source license. The software must meet the following criteria: 1. Unrestricted Redistribution The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale. 2. Source Code The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a preprocessor or translator are not allowed. 3. Modifications The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software. 4. Author's Source Code Integrity The license may restrict source-code from being distributed in modified form only if the license allows the distribution of

RESULT AND DISCUSSION:

General Purpose Open Source Software Following are some of the most widely used general purpose open source software: 1. –Open Office— Open office is a full fledge office suite from OpenOffice.org. It includes full featured word processing, spreadsheet and presentation applications that can do the same thing that its Microsoft counterparts can. It also





has support for other file types, which means it works seamlessly with Word, Excel and others. It also works on all major platforms including Windows, Mac OSX, and Linux. There are no licensing fees nor support fees. 2. Linux—Linux is a very powerful operating system. Linux's functionality, adaptability and robustness has made it the main alternative for proprietary operating systems, especially where budget are a main concern. Red Hat Linux is the most popular distribution of Linux in the United States. Linux distribution comes in many flavors like Red Hat, Ubuntu, Debian PCQ etc. Latest versions of Linux come with very good and powerful user friendly interface for the individual who wants to wean himself from proprietary systems. Adopting GNU/ Linux and Open Office has following

advantage:It is freely shareable, no need to spend thousands or rupees now and in future on purchasing MS Windows or MS Office. –It is virus proof and hence anti-virus software is not required to be purchased. Along with GNU/Linux (such as Ubuntu GNU/Linux) additional very useful software applications for image editing, pdf editing and creating etc can be freely installed. • Gimp—It is an image manipulation tool. It is an Open source counterpart to Adobe Photoshop. This popular tool has been rapidly gaining features and support in the last year. • Apache—It is most widely known as an http server, which takes care of hosting web sites. It has created by a few hobbyists who were not happy with the closed-source solutions available. • Mozilla Firefox—this browser probably doesn't need an INTRODUCTION: or an argument as the success story for this category. But, to be fair, it should be mentioned that all products offered through the Mozilla Firefox Web site are available free of charge for windows, Mac, and Linux computers in more than 35 languages. This compatibility and availability meets all the





standards suggested by the Open source Ware Consortium and its major supporter, the William and Flora Hewlett Foundation.

Software Tools For Automation :

- Integrated solutions
- Databases
- Cataloguing/ MARC Tools
- Barcode Makers THE SCOUT PORTAL TOOLKIT

Description: The Scout Portal Toolkit (SPT) allows groups or organizations that have a collection of knowledge or resources they want to share via the world Wide Web to put that collection online making a big investment in technical resources or expertise.

Special Features: The portal interface has a number of useful features including o Cross Field Searching o Resource Annotations by users o Intelligent User Agents o Resource Quality Ratings by Users o Suggested resource referrals (Recommender system) RESEARCH GUIDE

Description: Research Guide is a web based management subject guides for academic libraries.

Special Features: Some of the features are: o Support for creating specialist pages with contact information and other background information on subject specialists in the library. o Web based interface for creating and editing guides and specialist pages o Database back end POSTKUNE CONTENT MANAGEMENT SYSTEM.

Description: Post Nuke is the most powerful and popular open source content management system on the Internet. It is easy to install, easy to understand/use, and easy to administer. **Special Features:** It is full of features including: o Complete web based administration o Support for additional modules with Post Nuke API o Strong community support CASCADE Description: Cascade is a Perl driven, web based content management system. It's based on a community model of managing of a large directory resource. Cascade allows one to easily maintain a web





based Yahoo like directory of resources using web based forms. Special Features: Some of the features are: o Supports related categories and virtual subcategories (what you see in yahoo directory with an @ next to them) o Designed to integrate with static content on your website o Supports basic ratings of content USER SERVICES The user services like reference, circulation and document delivery are really crucial since it is the face of the library. Automating these functions not only helps reducing the burden on the librarians but also improves the image of the library among the users.

Prospero Description: An open resource internet document delivery (IDD) system. Special Features: Prospero can be easily integrated with and ILL implementation package. ASK A LIBRARIAN (ASKAL) Description: Ask a librarian (ASKAL) is a self managing email based reference service write for libraries. Special Features: Includes an administrative interface. REFERENCE **Desk Manager (Rdm)**

Description:The reference desk manager is a PHP based web application, specifically designed to meet the needs of reference services in libraries. Special Features: Current RDM features are: o Email weblog—with search feature o Electronic card file—with search feature o Common Links area o Web –based Administration MORRIS MESSENGER Description: Morris Messenger is a web-based messenger system which can be used as an effective reference tool by the libraries. Special Features: Unknown SUBJECT GATEWAYS Subject gateways as the name suggests typically focus on a particular subject area. These are online services and sites that provide that catalogues the Internet based resources available in a specific field of study. The libraries have an important role in the building of subject gateway in the area it specializes. Building such kind of services demanded high level of technical adeptness in the past. But with availability of good quality public domain OSS tools has removed that fear. Most of these tools





comply with well accepted metadata standards like Dublin Core, MARC etc.

ROADS Description: ROADS (Resource Organization And discovery in Subject based Services) Special Features: ROADS is a software tool kit allowing gateway managers to pick and choose what parts of the software they require whilst allowing the integration of other software according to requirement. ROADS include advanced features for linking distributed cooperative databases together using the IETF's WHOIS++ search and retrieval protocol, and their Common Indexing Protocol (CIP).
IVIA Description: IVIA is an open source Internet subject portal or virtual library system. As a hybrid expert and machine built collection creation and management system, it supports a primary, expert created, first tier collection that is augmented by a large, second tier collection of significant Internet resources that are automatically gathered and described. Special Features: Some of the major features of the IVIA system include:
o A core system that is fast, robust, reliable and scalable to millions of records and users.
o An array of web crawlers capable of fully to semi automating the identification of significant internet resources.
o Classifiers that enable semi automated metadata content creation providing expert/machine interaction throughout the record building process.
o Search/browse interface options that provide users with great flexibility in finding resources and which support all levels of user search skills.
IMESH TOOLKIT Description: The IMESH toolkit is a coherent set of tools and standards being developed for use by subject gateway software developers and technically savvy subject gateway implementers. These tools and standards will make use of established open protocols and interfaces wherever possible to insure interoperability. The toolkit will include reference implementations for all standards. Special Features: The has many components such as metadata exchange tools, RDF query tools, OAI normalization tools,





Reading Lists etc. INTER LIBRARY LOAN Inter Library Loan (ILL) is the most visible form of resource sharing among libraries. The ILL protocol (ISO10160:1997) developed by the National Library of Canada has sought to automate this process. It has become an ISO standard in 1997. Wide implementation of this protocol would reduce the gestation period in the delivery of ILL request considerably. ILL Wizard Description: ILL Wizard is ISO compliant. ILL web form handles ILL request. It can run from a desktop or from the library's web site server directory. Special Features: Non programmer technical librarians should be able to configure and mount this java web form without help from computer experts.

Osi Certified Licenses:The Open source Initiative (OSI) certifies open source licenses on the basis of ten criteria and till now 45 OSI certified licenses have been declared. Some of those are:

- Academic free license:
<http://www.opensource.org/licenses/academic.php>
- Apache software License:
<http://www.opensource.org/licenses/apachepl.php>
- Apple Public source License:
<http://www.opensource.org/licenses/aspl.php>
- Artistic license: <http://www.opensource.org/licenses/atistic-license.php>
- Attribution Assurance Licenses:
<http://www.opensource.org/licenses/attribution.php>
- BSD license: <http://www.opensource.org/licenses/bsd-license.php>
- Common Public License:
<http://www.opensource.org/licenses/attribution.php>
- Eiffel forum License:
<http://www.opensource.org/licenses/eiffel.php>





CONCLUSION:

Modern computer technologies including Digital libraries have changed the activities and the services of the libraries. Various open source software and technologies are available for the development of digital libraries. A majority of search organizations and universities are rationing several types of literature which are not published in any kind of media. Therefore, the library professionals should utilize the facility of open source software for development of digital libraries in order to provide access for their institutional literature/ document in attractive form. Open source software have helped numerous Libraries and Institutions realize and fulfill their dreams of giving maximum services in lieu of spending minimum resources in situation of depleting economical resources. Value added services are extension of basic services been given by the charitable institutions and through open source software given herein this paper, libraries can get new lease of life much needed for their existence.

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