

Library Automation and Digitations Through Open Source Software

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ABSTRACT: Now a day's the concept of library and information have changed and it is a greater challenges, Features and definition of open source software, criteria of selection, best open library software, their advantages and limitations will be described. Open library software is a solution to reducing that cost. Few of them Like D-Space, Digital Library, Greenstone Digital Library, Koha Library Automation, E-Prints, and New Gen lib. , OpenBiblio, Avanti, Php MyLibraryetc., Which are useful for developing automation, digital library and institutional repositories. This paper aims to point out the benefits of the open source software and the signifying end of the proprietary.

Keywords: DSpace, Digital library, E-Prints, Greenstone digital library Open source library management software, GSDL, Koha, New Genlib, open access initiative,

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I. INTRODUCTION

Library automation is the general term for information and communication technologies that are used to replace manual systems in the library. Library automation is started with library automation management software. It should have the few necessary modules to automate the library. Such as administrator, members, acquisition, cataloguing, circulation, serials control.

Now days plenty library automation software are available in the market as well as open sources web based many commercial library software are in use in the different libraries, but open source library management software has generated lot of interest among the library professionals over the past years.

In India there are a number of university and institute libraries, which are in the process of library automation and digitalization. The situation in India regarding Digital library is very peculiar. Generally, the use of information technology (IT) and information and communication technology (ICT) in libraries in India is concentrated in universities, Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), Indian Institute of Science (IISc), ICMR, CSIR, ICAR and their research institutes and some special libraries. Some government agencies, as well as public-sector institutions, are also engaged in library automation and digitization.

II. REVIEW OF LITERATURE

Diane Kresh (2007); A Library in which a significant proportion of the resources are available in machine-readable format (as opposed to print or microform), accessible means of computers. The digital content may be locally held or accessed remotely via computer networks. In libraries the process of digitization began with the catalog, moved to periodical indexes and abstracting services, then to periodicals and large reference works, and finally to book publishing. Some of the largest and most successful digital libraries are Project Gutenberg, and the Internet Archive.

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Laura Alpern, International Labour Office (2001); The objective of this manual is to encourage ILO field offices, labour ministries, trade union federations employers' organizations and other institutions in the field of labour, to develop their libraries into active information services for staff and other users. Libraries in these institutions exist to meet the needs of specialized groups of users, who can generally be defined with some

precision. Each group of users has its own functions and its own information needs. The principal users or ILO field offices include office staff and officials of government departments workers' and employers' organizations, technical project staff as well as the local university and research community. The principal users of a Ministry of Labour information service include specialists in labour legislation, managers of industrial relations services and officials or industrial relations tribunals, social security administrators, managers or employment services and factory inspection units, and so forth. A trade union information service might be directed more towards providing training materials for shop stewards, collective agreements, and safety standards etc. An information service in an employers' organization will also be interested in safety standards but will need as well information about management and production techniques. All labour information services will require some of the same types or information, in particular ILO conventions, recommendations and international, regional and national labour laws and regulations and basic reference texts. But it is the particular functions or the officials within the home organization of the service and within its main user groups which define the information to be collected and the services to be provided. Services result from the processing of information that comes into the library.

III. NOTEWORTHY CONTRIBUTIONS

Stefan Pohl, Filip Radlinski, Thorsten Joachims, (2011), An important goal for digital libraries is to enable researchers to more easily explore related work. While citation data is often used as an indicator of relatedness, in this paper we demonstrate that digital access records (e.g. http-server logs) can be used as indicators as well. In particular, we show that measures based on co-access provide better coverage than co-citation, that they are available much sooner, and that they are more accurate for recent papers. In scientific literature, citation information is a key source of information about relationships between documents. Citations are used to measure impact of documents and journals, to identify related papers via co-citation and bibliographic coupling, and to improve ranking in keyword based search. Unfortunately, there are at least two problems with citation data.

Steve Lawrence C. Lee Giles Kurt Bollacke (2011), The rapid increase in the volume of scientific literature has led to researchers constantly fighting information overload in their pursuit of knowledge. Staying up-to-date with recently published literature and actually finding relevant sources is becoming increasingly difficult, if not impossible. Experience varies widely, but the time when every essential journal was held in all major academic libraries has passed. The Web promises to make more scientific articles more easily available. An increasing number of authors, journals, institutions, and archives make research articles available for almost immediate access.

Swapan Kumar Patra & Prakash Chand (2012); Accordingly, a few major ICT related projects have been initiated; for example, Software Technology Parks in India, Multimedia Super Corridor in Malaysia and Singapore. The study presents a brief overview of research output available in Library and Information Science (LIS) in SAARC and ASEAN regions. Bibliometric methods are used for analysis and evaluation of recorded knowledge and research performance of individuals, institutions, countries, and regions in a given field of research. However, the research outcome of any region is directly related to its demography.

Tefko Saracevic and Marija Dalbello (2012); In this study, we are trying to examine the complex relations and connections between research and practice in the area of digital libraries solely through records that digital library projects in both research and practice generated on their web sites, and from the literature reporting on digital libraries. In other words, we concentrate solely on visible or, surface, evidence. The strengths and limitations of the method are elaborated in the methodology section and again revisited in conclusions at the end.

We asked the following questions related to numerous activities in digital libraries:

- Does digital library research inform digital library practice? And vice versa?
- To what extents are they connected now, nearly a decade after they began?

Objectives of the Study

- To study the open source library system
- To discuss the usage of KOHA
- To measure the issues and challenges related to it

IV. RESEARCH METHODOLOGY

Research Methodology is a way to systematically solve the research problem, it not only takes the research methods but also consider the logic behind the methods. The study of Research Methodology for developing the project gives us the necessary training in gathering materials and arranging them, participation in the field work when required, and also provides training in techniques for the collection of data appropriate to particular problems.

V. DATA COLLECTION

Primary Data

The primary data will be collected by means of a survey. Questionnaires will be prepared and filled up by the libraries. The questionnaire contains questions which reflect on the type and quality. The response of the libraries is recorded. The filled up information will be analyzed to obtain the required interpretation and the findings.

Secondary Source

In order to have a proper understanding of the libraries services of a dept. study is being done from the various sources such as book and the articles from various researches and newspapers, magazines, internet etc.

RESEARCH SAMPLE

Sampling Plan

For this research various random sampling methods are used because of not possible to study whole universe.

- Sampling Location: Sample location is libraries located.
- Research Instrument: Structure Questionnaire.
- Contact Method: Personal Interview and Mail Method

RESEARCH PLAN

1. I will go through secondary data in which I would like to study Journals, books and various reports related to my title.
2. Primary data will be collected through survey and observations located.
3. Analyses the need of this issue
4. Try to search the solution.
5. I will attend Conferences and discuss my research.
6. I will go through to publish my research in journals for publication.
7. Examine and resolve the related problems.
8. Discuss issues and challenges related to it with suggestions and recommendations.

EXPECTED OUTCOMES OF THE STUDY

The research study will establish the use of KOHA. The digital skill is very essential for the successful application of digital libraries so open source integrated library system will discuss in today environment and measure the issues related to it.

OPEN SOURCE SOFTWARE

The primary difference between the open source software and commercial software is the open source software provides the freedom to modify the software by its user. They have source codes which are available under a license for users to look at and modify freely and permits users study, changes, and improve the software. Open source software (OSS) are based on net, they required good speed internet connection, and good PC

Advantages of OSS

- ❖ The OSS present advanced software development model.
- ❖ OSS presents economical option other than the money-making software
- ❖ Source code of the software is always open and available to the libraries
- ❖ Traditional commercial software will not provide any coding service.
- ❖ Libraries has right to change and modify or develop the software according to their requirement
- ❖ It reduces dependence on vendors.
- ❖ It helps to converting their libraries in to digital form. .
- ❖ Overall, open source is good for everyone.

Limitations with OSS

- ❖ Without the support of the expert you can't any up gradation/change in this software.
- ❖ Commercial Software Company will immediately respond on customer requests for any problem. With OSS, if one doesn't do it himself, he is at the mercy of a disjoint community of developers.
- ❖ The main problems faced in the libraries are related to retraining end-user to get use to new paradigm shift.
- ❖ The library professional and user have faced initial difficulties adopting to open source technology practice due to non availability of proper training.
- ❖ Sometimes library authority does not agree to adopt new technology and therefore it is very difficult to adopt new systems to provide library service to the users.

- ❖ Major problem faced by the library is to shift data from existing software to OSS because library professionals are not well acquainted about software programming or source code.

Selection of Library Management Software

Library management software is not a simple task. The Librarians plan to go with renowned software or online. At the time of selection the Librarian should have must the followings information about the software which might help to select the right software for housekeeping operations as well as information retrieval

Product quality

How it matches the library's requirements

- Features and functions
- Staff training and support service
- Operating system
- Hardware and software requirements
- Functionality
- User Friendly
- Design
- Conforming to standards: MARC, Z39.50, ISO-2709, etc.
- Scalability: Single user-multi use network.
- Can it be used in client server LAN architecture or fully web browsing architecture
- User controlled customization
- Reports that help take decisions
- Security levels

OPEN SOURCE LIBRARY AUTOMATION SOFTWARE

Open source Library Automation Software now available and being used in the libraries. In India also, some libraries are using Open source Library Automation Software. Some of open source are listed:

KOHA

Koha is a promising full featured open source integrated library system (ILS) created in 1999 by Katipo Communications for the Horowhenua Library Trust in New Zealand, and currently being used by thousands of libraries all over the world.

It includes modules for circulation, cataloging, acquisitions, serials, reserves, patron management, branch relationships, and more.

Koha has web-based Interfaces software and built standards, it has no vendor lock, the technical support can be taken from any party who is familiar technically. It is available as free open source for general public license (GPL). It supports MARC 21 and UNIMARC support, Z39.50. It also has a provision for online reservations and renewals,

New Gen lib

New Gen Lib, an integrated Library Management Software are open source under the most widely used free software license, GNU General Public License (GPL).

The software was developed over a four-year joint effort between a professional charitable trust, Kesavan Institute of Information and Knowledge Management (KIIKM) and a fledgling software development company.

Php My Library

PhpMyLibrary is a PHP/MySQL web-based library automation software that has the facilities of cataloging, circulation, and OPAC module. The software also has an import export feature. It strictly follows the USMARC standard for adding materials. This software is compatible with the content management system and have as facility of Online reservation system for library and also supports import from ISIS database with an ISIS2MARC program.

Open Biblio

This software has facilities of OPAC, circulation, cataloging, and other administrative work. OpenBiblio is well documented, easy to install with minimal expertise and designed with common library feature.

Avanti

Avanti MicroLCS Software is developed by Avanti Library Systems in Java language. This is a small, simple, and easy to install and use open source software. it is a platform independent, and can run on any system that supports a Java runtime environment. This software is useful for small libraries, This software incorporate standards such as MARC and Z39.50 as modules and interfaces.

Greenstone Digital Library

The Greenstone digital library software is an open source system for the construction and presentation of information collections. Greenstone is a suite of software for building digital library collections. It is not a digital library but a tool for building digital libraries. It provides a new way of organising information and publishing it on the internet in the form of a fully-searchable, metadata-driven digital library. It has been developed and distributed in cooperation with UNESCO and the Human Info NGO in Belgium. It is multilingual software, issued under the terms of the GNU GPL Greenstone runs on all versions of Windows, and Unix/Linux, and Mac OS-X and is very easy to install. It has two separate interactive interfaces, the Reader interface and the Librarian interface. End users access the digital library through the Reader interface, which operates within a web browser. The reader's interface is available in the following languages: Arabic, Armenian, Bengali, Catalan, Croatian, Czech, Chinese (both simplified and traditional), Dutch, English, Farsi, Finnish, French, Galician, Georgian, German, Greek, Hebrew, Hindi, Indonesian, Italian, Japanese, Kannada, Kazakh, Kyrgyz, Latvian, Maori, Mongolian, Portuguese (BR and PT versions), Russian, Serbian, Spanish, Thai, Turkish, Ukrainian, and Vietnamese.

D-Space

DSpace was developed by Massachusetts Institute of Technology (MIT) libraries and Hewlett-Packard (HP), as an open source application that institutions and organisations could run with relatively few resources. It is to support the long-term preservation of the digital material stored in the repository. DSpace accepts all manner of digital formats, such as articles, preprints, working papers, technical reports, conference papers, books, theses, data sets, computer programs, visualisations, simulations, and other models, multimedia publications, administrative records, published books, journals, bibliographic datasets, images, audio files, video files, reformatted digital library collections, learning objects, web pages, etc.

E-Prints

E-Prints has been developed at the University of Southampton School of Electronics and Computer Science in 2000 and released under a GPL license for building open access repositories that are compliant with the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH). It shares many of the features commonly seen in document management systems, but is primarily used for institutional repositories and scientific journals.

Fedora

Fedora software gives organisations a flexible serviceoriented architecture for managing and delivering their digital content. Digital objects exist within a repository architecture that supports a variety of management functions. All functions of Fedora, both at the object and repository level, are exposed as web services. These functions can be protected with fine-grained access control policies. This unique combination of features makes Fedora an attractive solution in a variety of domains. Some examples of applications that are built upon Fedora include library collections management, multimedia authoring systems, archival repositories, institutional repositories, and digital libraries for education.

VI. CONCLUSIONS

Library Automation and Digitization required lot of money to create and its maintenance. The Open source software is a solution to reduce the cost. OPEN Source software provides free source code, simple customization, and growing user community. This also includes the successful implementation Of open source solutions to the parent library. In India automation and networking of library are still in their formative stages. Recently, ICAR and its institutes/ SAUs taken a decision to implement Koha open source software initially in 12 Libraries from National Agricultural Research System (NARS)8 . Librarians and programmers may worked together to implement open source integrated library systems and at the same time, library professional are required to acquire new skills for developing and managing the digital library by using open source LMS. For taking benefit from OSS additional technology, education, and training are essentially required.

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