

Eight Things you should Know about Open Source Integrated Library Systems.

Vimal Kumar V.¹ and Thomas Abraham²

¹ *Asst. Librarian*
Asian School of Business
Technopark, Trivandrum-695581
Vimal0212@gmail.com

² *Open Knowledge Society*
thomuhs@gmail.com

Abstract: Open source library management systems are free alternative to costly commercial library systems. It helps to automate library functions and give a tremendous savings on library automation expenses. User's participation in all stages of software project ensures the development of the features that the library really wants. Lack of awareness and knowledge in open source technology among library professionals restrict wide adoption of open source library management system. This article gives an insight into the use and maintenance of open source library management systems.

Key words: open source, library management system, library automation

Introduction

Open source is becoming a trend setter in libraries. Lots of open source softwares are available for various automation purposes in libraries. Open source digital library and institutional repository softwares are very popular among librarians. But such softwares are mainly used to preserve and disseminate scholarly literature and other digital content. Digital libraries and institutional repositories have relevance only in big library systems. Circulation, cataloging, acquisition and serial control are common basic functions in all types of libraries. Automation of basic house keeping operations is the first priority of most of the libraries. Open source ILS (Integrated Library Systems) help to make automation of basic library functions affordable.

Library professionals like to see open source ILS through different perspectives. Some people are attracted to open source ILS due to its philosophy. Another segment is tech savvy librarians who try open source ILS because of openness in source code and support towards open standards. Small and medium size libraries feel automation of house keeping operations as a financial burden due to the high price of proprietary Library Management Systems. Libraries in developing countries show interest in open source ILS because of its economic feasibility; i.e. free availability. Open source library management systems give effective way to automate their library operations without much financial

investment. Principles and practices of open source software are very similar to the principles and practices of modern librarianship. Both value free and equal access to data, information and knowledge. Both strive to promote human understanding and to make our lives better. Both make effort to improve society as a whole [1].

What is open source ILS?

An integrated library system, or ILS, is an enterprise resource planning system for a library. An ILS is designed to coordinate and automate such library functions as the online catalog, the circulation system, and the acquisitions system [2]. An ILS improves the efficiency of house keeping operations. Use of ILS requires only the one time entry of the data (bibliographic and user) and the same can be made use for all other purposes. Proprietary ILS is costly and protected by copyright and has strict restrictions on use and distribution. Open source ILS is a free alternative to proprietary integrated library management system. Libraries can obtain open source software freely and can use for the automation purposes. Open source software's are available with source code and if necessary libraries can make changes in software. There are no differences between features and functions of commercial and open source ILS. The fundamental difference is visible in the development process and distribution. Group of people or institutions contribute resources (time, money and skill) into the development of

open source library management system for their library automation. Open licenses are adopted for the free distribution of software. Most of the open source ILS projects are licensed under GNU (General Public License). Koha, Evergreen, PMB, Newgenlib, and OpenBiblio are the popular open source integrated library systems.

Who is doing it?

Open source softwares are developed for the goodness of the community and ownership rest with public. Openness and cooperation in all stages of software development expands opportunity for collaborative work. So professionals and users attracted to open source software projects and make use their spare time for creative contribution.

In the case of popular open source ILS, most of them were initially developed for individual library purposes. Later stages, they moved to open source platform and released software in public domain. Koha ILS was developed in 2001 for Harovenua Library Trust and released under open source license in 2003. Koha gained rapid attention among library professionals and software developers because of its open source nature. Now Koha development activities are coordinated by Liblime, a software company providing open source software services in United States. NewGenLib is another mature open source ILS developed in India released in public domain in 2008. Kesavan Institute of Information and Knowledge Management and Verus Solutions Pvt. Ltd. started NewGenLib as proprietary initiative and they gained substantial user base. They adopted General Public License, popular free software license with the hope of getting more customers and to ensure community participation in development.

In certain instances, a group of libraries with similar functional requirements developed ILS for their consortium operations. Evergreen library management system originated for the use of PINE (Public Information Network for Electronic Services) consortium of 257 libraries in Georgia State, United States. Member libraries in consortium can pool their resources including technology, money and human resource for the development and maintenance of their own ILS without buying commercial ILS. In such cases they can also save a significant amount of money for library automation.

How does it work?

Development and maintenance of open source software project is the responsibility of public, especially the concerned user group. Always software projects in public domain start as a solo initiative. OpenBiblio developed by Frédéric Descamps for the automation of a school library where his wife worked [3]. Later more people joined with the OpenBiblio project and contributed to the development process.

Programmers, users and funding agencies jointly take part in the various activities for the software development. Online communication tools like wiki, online discussion forums, and blogs are used for the interaction between members in software community. Users and developers interact through discussion forums to report errors, giving suggestions and to clear doubts regarding the operation of software. Open source ILS projects ensure the users participation in the preparation of technical documentation, language translation and user manuals. Day by day request for new features are received from libraries and they are trying to incorporate into these existing software with the help of community members. Active open source projects usually have regularly updated web pages and busy development email lists. They usually encourage the participation of those who use the software in its further development. If everything is quiet on the development front, it might be that work has been suspended or even stopped [4].

Why is it significant?

Main attraction of open source ILS is that it charges no license fee. Investing in a proprietary library ILS is a never ending process. In addition to huge initial investment, libraries are compelled to shell out money to retain the ILS service. Purchase of a proprietary ILS does not mean that library have full control over the software. Ownership of the software will rest with the company and libraries should be continuing as mere users. If libraries dare to stop the service of commercial ILS, they will face the severe consequences including loss of control over bibliographic data. In such cases companies may charge a good amount to give bibliographic records back to libraries.

Local technical support can be sought for the installation and maintenance of open source software in libraries. Technical specifications and other details are available for public and it help to deploy open source ILS with the help of technical service providers either from library or locally available. It ensures access of technical help for the trouble shooting of ILS without any delay. Most of the open source ILS projects make use open standards and tools for software development. MySQL, Perl, PHP, Zebra and Apache are the favorite tool kit for the development of popular open source ILS. Z39.50, SRU/W, OpenNCIP, OpenSearch, and XML are the examples of open standards utilized by open source ILS projects for data exchange and retrieval. "We needed the freedom to change things, to change the code if necessary, because the types of things we want to do are not going to appear in commercial library software for years"[5].

Where is it going?

We can observe that popular open source ILS projects started with minimum functional features. Consecutively more features are added to existing software receiving the contributions from developer and user community. For example, MARC support, z39.50 server and NCIP modules in Koha were developed initially for Nelsonville Public Library, US. Later these modules were made available with the main software release. The Crawford County Libraries in Pennsylvania chose to support the integration of the Zebra XML storage and retrieval environment into Koha. The Westchester Academic Libraries Director Organization (WALDO) contracted to introduce many features into Koha required for academic libraries. Contributions from many libraries to the software development have led to the expansion of Koha from a very simple ILS to one with a competitive set of features suitable for many small and medium-sized libraries [6].

Open source ILS projects are expanding its features list receiving the advantages of innovative technology and growing number of users. Each successive version of open source ILS tries to manifest user requirements based on suggestions. Koha and PMB adopted web 2.0 technology to enhance the user experience. Latest version of Koha has provisions for RSS, federated searching, tagging and reviews by users. It also adopted zebra plug-in for efficient text indexing and retrieval from large bibliographic record collection. Open source ILS have to achieve the capability to handle digital content in near future. They initially developed were to handle the automation purpose of libraries with small collection. Now they are in progress on the way to take place in the list of enterprise class library automation systems.

What are the selection criteria?

Selection and evaluation of open source software is different from proprietary programs. A key difference for evaluation is that the information available for open source programs are usually different than for proprietary programs; source code, analysis by others of the program design, discussion between users and developers on how well it is working, and so on [7]. Open source ILS is free and libraries can try full version of the software. It is possible to install and test more than one open source ILS to find the suitability against the library requirements. All types of technical information related with open source ILS is available for free access. Technical documentation, bugs information, users queries in discussion forums are open for public and it provides valuable information for ILS selection and maintenance. Certain features or functional modules essential for day to day work may not be available with the initial development stages of open source ILS. In such cases, libraries have to purchase additional modules from open source service providers or making use the in-house expertise to build the required features. It is essential to read release notes of latest version and software road map to know which features are already available and are expected in future. Ensure the availability

of standards (e.g. MARC, Z39.50, NCIP etc) which are essential for data exchange.

What are the downsides?

Even though open source ILS are available free, it is not ready to use. Many features in ILS are generalist and must be either customized before use or adjusted with existing features. Open source ILS available with standardized features majority of libraries required.

If technical expertise for installation and maintenance are available in the library itself, open source ILS is free from initial investment and other ongoing expenses. Other wise, library has to hire technical support of software service provider for services such as installation, data migration and maintenance. Initial investment on open source ILS is probably less than the annual maintenance of commercial ILS. Many libraries simply do not have the in-house expertise to support open source software development, and also don't have the ability to train staff on the use of the new technologies [8]. Libraries should make a good home work before the adoption of open source library management system.

Lack of awareness and knowledge in open source technology and software among library professionals restrict widely adoption of open source ILS in libraries. Marshal Breeding says "support is a significant impediment to the implementation of open source software. The software license fees represent only one component of the overall costs that a library bears in its automation effort. The personnel required for the initial implementation and system administration is a major consideration"[9]. Knowledge in Linux administration is essential for effective deployment of open source ILS in production library environment. In the Indian context majority of library professionals lack the facility for training in Linux operating system and related application softwares. In such cases, commercial open source service providers can help libraries to host ILS and provide continuous support. In India, very few companies provide commercial support for open source solutions in libraries.

What is your commitment?

Open source software is highly depended on users for its development and maintenance. In a typical open source project, community members have varying levels of participation, ranging from passive users to core developers. Library professionals and software developers are involved in the open source ILS projects. High involvement of library professionals is necessary to fulfill the functional requirements of an ideal ILS. So effort and expenses of open source ILS is equally distributed among user community. Open source software projects expect user participation in [10]:

1. To find bugs,
2. To find usability problems,

3. To suggest new features,
4. To review and inspect source code
5. To submit source code,
6. To offer project administration assistance, and
7. for documentation.

Direct investment of money for the development of entire software packages is not necessary in the context of open source software project. Libraries can pay money to develop additional features required by the library and missing in current software release. Next release onwards, newly developed features will be available with main software distribution. With commercial software a big portion of the license fee goes to research and development over which the library has no control, while with open source that same money can be funded for the development of the software modules that the library really wants [11]. Open source software projects opened up wide range of options for user contributions and participation in software development process.

Conclusion

Impact of open source movement made positive effects in libraries. Library professionals are recognizing the impact of open source softwares and began to adapt in library automation purposes. Open source culture empowers libraries to try innovative technologies in their working environment. In addition, libraries have started to develop their own tools such as meta search and social functionality tools to integrate with open source ILS. This practice helps them to develop solutions to solve their technology related problem within the walls of libraries.

In a certain extent, open source library management system help to solve common problems faced by libraries such as fewer budgets for proprietary ILS, management of increasing number of records, large number of members, and lack of powerful administration over all modules in library. Open source library management systems provide access to library-owned data and provide much more flexibility for your library than commercial ILS [12]. It is necessary to make awareness among library professionals about the advantages of open source softwares. Then only libraries can attain tremendous savings on library automation and to achieve increase in performance at the same time.

References

- [1]. Morgan, Eric Lease. "Open source software in libraries". <http://infomotions.com/musings/biblioacid/>
- [2]. "Integrated library system." Wikipedia. 28 October 2009. Wikipedia. 13 Jul 2006
http://en.wikipedia.org/wiki/Integrated_library_system
- [3]. Frédéric Descamps, OpenBiblio
<http://openbiblio.sourceforge.net/indexeng.html>
- [4]. "Top tips for selecting open source software". OSS Watch, www.osswatch.ac.uk/resources/tips.xml
- [5]. "Questions and answers about Koha", Athens County Public Libraries http://www.athenscounty.lib.oh.us/koha_questions.html
- [6]. Breeding, Marshall "The Viability of Open Source ILS", ASIS&T Bulletin, December 2008/January 2009.
http://www.asis.org/Bulletin/Dec-08/DecJan09_Breeding.html
- [7]. Wheeler, David A. "How to evaluate open source software/free software (OSS/FS) programs", www.dwheeler.com
- [8]. Ferraro, Joshua. "Why your library needs open source"
<http://liblime.com/welcome.html>
- [9]. Breeding, Marshall. "An update on open source ILS: Marshall Breeding reviews three open source projects. Information Today, Vol-19, Issue-9, October 2002.
<http://www.infotoday.com/IT/oct02/breeding.htm>
- [10]. Zhao, Luyin, and Fadi P. Deek. 2004. User collaboration in open source software development. Electronic Markets 14 (2): p.p.89-103.
- [11]. Questions and answers about Koha, www.myacpl.org/about/koha/qa, January 30, 2009.
- [12]. Ayre, Lori Bowen, "Open source ILS Add-ons", Infopeople Webinar, 12pm-1pm PDT, Thursday, October 22, 2009.
http://infopeople.org/training/webcasts/webcast_data/354/index.html