

Exploring Open Source Integrated Library Systems (ILS)

Assignment 2 Emerging Technologies Paper

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History

Libraries perform a variety of functions (acquisitions, cataloging, circulation, serials, inter library loans, online public access catalog (OPAC), and statistics and reporting) in their role of organizing materials and making them accessible to users. Before 1960, these functions were performed largely separately from the others and without the aid of computer automation. From the 1960s through the 1990s, technological advances like the invention of MARC formatting and the creation of OCLC (The Ohio College Library Center later renamed the Online Computer Library Center) allowed libraries to automate and condense many library functions (Boden, 1993; Lee, 1989). These advances eventually led to the creation of integrated library systems, or ILS. Since the 1990s, ILS have become the standard for libraries to handle their multiple information needs.

ILS software falls generally into two categories: proprietary and open source software (OSS). There are also products on the market that are a hybrid of traditional and open source (Hadro, 2009). A company developing proprietary ILS software keeps the source code secret, and considers code secrecy a key to the company's economic advantage. One widely used traditionally-developed ILS is ExLibris' Voyager, developed in 1995. On the other hand, OSS ILS source code is publicly available for anyone to examine, critique, and modify. Interested individuals or companies, and often subscribers to the software, share responsibility for the creation, support/maintenance, and development of the program and its functionality (Breeding, 2004). Two OSS ILS that have become widely respected and adopted are Koha and Evergreen. Koha was originally launched in 1999 by New Zealand's Horowhenua Library Trust and Katipo Communications, and Evergreen was created by the Georgia Public Library Service (GPLS) in 2006 (Breeding, 2016).

Importance for Libraries

An ILS (integrated library system), also known as an LMS (library management system) helps with resource planning for libraries. Most ILS have separate modules united by a unified interface. Typical modules found in ILS include: acquisitions, circulation, cataloging, serials and online public access catalog (OPAC) (Ojedokun, Olla, & Adigun, 2016). There are a variety of ILS to choose from, both proprietary and OSS, tailored for different types of libraries and materials. Proprietary ILS were the standard in the 1990s and 2000s. However, in the past 10-15 years, OSS ILS have matured and now have features that equal or surpass their traditional ILS counterparts.

ILS have a finite life cycle. This means that periodically, libraries find themselves shopping around for a new ILS or adjusting to recent migration. Table 1 presents data from Marshall Breeding's librarytechnology.org website (2016), showing the number of libraries using a

sampling of proprietary and/or OSS ILS and how many libraries have migrated away from those programs.

ILS P=proprietary O=OSS (Original date launched)	# of libraries/facilities using software	# of libraries/facilities migrating away from software	% of libraries/facilities migrating away from software
Voyager P (1995)	942	447	32%
Aleph 500 P (1980 launched as Aleph 100)	1603	261	14%
Alma P (2012)	1078	1	0%
Evergreen O (2004)	835	175	17%
Koha O (1999)	1062	26	2%
Horizon P (1991 launched under the name Marquis)	2239	1413	39%
Dynix P (1983)	11	2596	99.5%
Symphony P (2007)	12258	979	7%

Table 1: Number of facilities using Voyager, Evergreen, and Koha ILS and amount of facilities migrating away from those systems in 2015.

While this table only shows some of the options for ILS, one can see that away from older, or legacy, ILS. Some of these libraries are staying with proprietary ILS but others are making the switch to OSS ILS. Enis (2016) reports that 11% of institutions are currently using an OSS ILS and of the 80% of institutions that are using proprietary ILS, a quarter of them are considering switching to OSS ILS. The appeal of switching to an OSS ILS seems to be gaining traction in the information science community.

How OSS ILS could improve library services

The development of ILS dramatically changed how library services were performed and delivered. Streamlined workflows and improved sharing of data and information between modules are features that we almost take for granted today. But librarians and users continue to demand innovation and more powerful features from their ILS, most notably in the OPAC modules. This demand for enhanced features has spurred the development of what many call the “next generation catalog.” Breeding (2007) describes 10 visions for the next generation catalog: a single point search entry (discovery interface), state of the art web interface, enriched content, faceted navigation, simple keyword search box, relevancy rankings, did you mean...? prompting, recommendations for related materials, opportunity for user contribution, and RSS feeds.

Both proprietary and OSS ILS developers are working to address these next generation catalog desires of users and staff but OSS ILS may be able to be more responsive to those needs, more quickly. Yang and Hoffman (2010) favored OSS ILS when they compared the attributes of Voyager Evergreen and Koha and examined how well each system addressed next generation catalog requirements.

	Voyager	Evergreen	Koha
Single point entry	Not truly federated	Not truly federated	Not truly federated
State of the art web interface	Customizable	Customizable	Customizable
Enriched content	Somewhat	Somewhat	Yes
Faceted navigation	Filters but no navigation	Appeared to have but didn't	Yes
Simple Keyword	Yes	Lacked some Boolean functionality	Lacked some Boolean functionality
Relevancy rankings	Yes but no popularity ranking or user tags	Yes but no popularity ranking or user tags	Yes but no popularity ranking or user tags
Did you mean...prompting	No	Spellcheck and term prompter	Spellcheck but autocorrects in a strange way
Recommendations for related materials	No	No	No
User contribution	No	No	Ratings, reviews, and tagging
RSS feeds	No	No	Yes

Table 2: Comparison of next generation catalog features across Voyager, Evergreen, and Koha.

At the time of their study, Koha, an OSS ILS, was able to fulfill more next generation requirements than the others. And since this article is 6 years old, many of the desired functions have been added in Koha updates (Koha..., 2016). OSS ILS have shown their commitment to continuing innovation in development by seeking out partnerships with companies like EBSCO who agreed to integrate EBSCO Discovery Service (EDS) with Koha and Evergreen (Open Source..., 2015).

Another valuable opportunity inherent in OSS ILS is the ability of libraries/facilities using OSS ILS to cooperatively contract a development house (e.g. Bywater Solutions) to develop a feature which is then shared by the entire OSS community. This kind of fluid consortium helps diffuse costs of development that in the past, might have fallen solely on one institution's shoulders and only shared if the company decided to offer the update to other subscribers (Open Source..., 2015).

Tangible/Intangible benefits of OSS for users and/or larger organization

Besides shared costs and increased speed of development, Ojedokun, Olla, and Adigun (2016) list the following as possible reasons for libraries to choose OSS over proprietary ILS: discounted cost, freedom from vendor restrictions, ability to customize and be flexible about modules and services, improved support services, and inclusion of user-generated metadata.

As mentioned in a previous section, ILS have a limited life cycle. Most libraries have to migrate to a new ILS multiple times. Every time a switch to a new ILS is made, evaluations need to be made about the current needs of the library staff/users and the quality of the ILS available to choose from. Each evaluation and subsequent ILS migration incurs extra cost and disruption to work flow/services for the library/staff/users. Perhaps one benefit to using OSS ILS will be that libraries will be able to stick with one ILS for longer; adapting their current ILS to their changing needs instead of having to migrate to a totally different product.

Finally, there is an ideological appeal to adopting OSS ILS for many information professionals. The American Library Association first code of ethics states that “we provide the highest level of service to all library users through appropriate and usefully organized resources.” The second part of the code states “that we uphold the principles of intellectual freedom and resist all efforts to censor library resources.” One might argue that proprietary source code is a form of censored material that impedes our goals of providing the highest level of service to our patrons. The ability to manipulate a transparent source code in order to organize a library’s resources in the most useful way speaks directly to these fundamental codes of our profession (American Library Association, 2008).

Possible drawbacks to using OSS

While there are many motivations for a library to choose OSS ILS, there are possible drawbacks to consider before. In order to maintain/develop an OSS ILS, a library would need IT staff familiar with ILS functions, possessing the skills to tweak code to give the library the features it wants. Most OSS communities expect the subscribers to “contribute” to the development of the product. If a library’s staff lacks the ability to contribute to software development and the library is not committed to hiring extra staff who can, OSS ILS is probably not its best choice (Open Source..., 2015).

Second, some people wrongly assume that since the OSS ILS software is “open” then migrating to the OSS ILS will be free. While there is some savings associated with ILS, the cost of installing, training, migrating to, hosting, and troubleshooting/developing the software is still significant.

Finally, because OSS ILS is open, the potential exists for a company to develop a piece of open software along a different path, eventually creating products and/or software add-ons that are different enough to make them incompatible with the original program. This has happened with the LibLime version of Koha (Hadro, 2009). While LibLime claims that its Koha source code is still open, LibLime is developing other programs, like Koha Express, that are proprietary; thus blurring the lines between OSS and proprietary and confusing consumers about which version of software they are really signing up for.

Conclusion

A well-chosen ILS can make your institution more effective and more efficient; better aligning library service with user needs. Recently, both proprietary and OSS ILS have incorporated “next generation” features into their software, making either one a potential choice for libraries looking to migrate to a new system. Factors that may impact a library’s decision to move to a particular ILS may include: cost, staff ability, need for flexibility and speedy customization, and ideological preferences towards traditional or OSS software. One factor that should not affect a library’s decision is the mistaken belief that OSS ILS are somehow less reliable or have inferior functionality to proprietary ILS. Whether your institution ultimately decides to use a proprietary ILS or an OSS ILS, the selection should be carefully considered with the intent of matching institution, staff, and user needs.

References

- American Library Association. (2008). *Code of Ethics of the American Library Association*. Retrieved October 22, 2016, from <http://www.ala.org/advocacy/proethics/codeofethics/codeethics>
- Boden, D. R. (1993). A History of the Utilization of Technology in Academic Libraries.
- Breeding, M. (2004). Open Source and the ILS. *Library Technology Reports*, 40(1), 84-85.
- Breeding, M. (2007). Introduction. *Library Technology Reports*, 43(4), 5.
- Breeding, M. (2016). Library Technology Guides: Documents, Databases, News and Commentary. Retrieved October 16, 2016 from <http://librarytechnology.org>
- Enis, M. (2016). Open invitation. *Library Journal*, 141(6), 38-41.
Compares Bywater, Equinox, and LibLime installations and products
- Hadro, J. (2009). LibLime's Enterprise Koha sets off debate. *Library Journal*, 134(17), 16.
- Koha Library Software. (2016). Official Website of Koha Library Software. Retrieved October 16, 2016 from <https://koha-community.org>
- Lee, H. (1989). Trends in Automation in American Academic Libraries: Ohio University's Experience.
- Ojedokun, A. A., Olla, G. O., & Adigun, S. A. (2016). Integrated Library System Implementation: The Bowen University Library Experience with Koha Software. *African Journal Of Library, Archives & Information Science*, 26(1), 31-42.
- Open Source Picks Up the Pace. (2015). *Library Journal*, 140(6), 35-37.
Talks about future development goals for Koha and Evergreen
- Yang, S. Q., & Hofmann, M. A. (2010). The Next Generation Library Catalog: A Comparative Study of the OPACs of Koha, Evergreen, and Voyager. *Information Technology & Libraries*, 29(3), 141-150.