

Can this economy support library changes to an open source software system?

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During this time of global and national recession and generally poor economy, libraries must be extra careful with how they budget their money. As of last year the American Library Association reports branch closings and budget cuts all across the country. ("Branch closings and," 2008) A possible solution to library budgets woes is open source software. In addition to open source software having many characteristics that would fit in well with library philosophies, open source software are usually free to download and install. However, just because the source code is free does not mean that there are not other costs that may be involved with installing and supporting open source software. There are a lot of questions about whether it is really financially sound for libraries to switch from their propriety software over to open source versions.

There is a lot of reasons for why libraries should want to use open source software. Open source software (OSS) is different from commercial software in that the source code is free to use, modify, and redistribute. Just as how libraries have a philosophy of providing information for free to be used in whatever ways people would like, open source software allows this continued cycle of using, modifying, tweaking, and passing on of knowledge in software format. A lot of library software is propriety software as seen from the 40,000 propriety integrated library systems bought between 2004 and 2007. (Breeding, 2007) This may be due to the poor visibility of OSS at the time and an slow initial acceptance to OSS. In the same article Breeding mentions that "many librarians are discouraged with the commercial ILS vendors" and that there are "complaints about the low level of innovation and the high cost of automation software". (Breeding, 2007) Because of the nature of open source, libraries should be able to more easily customize their software to better match the particular needs of their patrons. The customer will no longer be limited to whatever the vendor provides, savvy librarians and technical staff will be able to fulfill the innovation needs themselves.

Since it's initially free, libraries can try out an OSS and see if it works with their system without any sort of commitment. With propriety software, libraries usually don't get to see the final product in action until after they've established a contract and had it installed. So OSS is nice in that libraries can see what they are getting themselves into before paying licensing and installation fees to vendors. Licensed software can be a hassle in a lot of other ways, since it requires keeping track of the different license code for each software. The technician needs to know which software is available for which computer. Some licensed software requires the use of a dongle, which takes up a USB slot, otherwise the licensed software won't work. If something goes wrong, there are all these questions about whether the license allows the software to be transferred to a new computer or other limitations. While it's understandable that the license is just there to protect the software owner's rights and it's a sort of contract, it just adds a lot of complexity to the system. A medium to large size library can have anywhere from 20-60 computers available to the public, so making sure each box has the right software and right license for it can be a headache for whoever is in charge of the technical parts of the library. On the other hand, this complexity is why libraries usually pay a vendor to come in and handle software installations and issues. As long as the vendor's company is still running, a library should be able to expect technical support from them, that's what they pay for. In a rare case, like the one for Alameda Free Library, sometimes a library may deal with a bad vendor that does things like mishandle the software licensing, selling the licenses to other people or providing poor technical support.

Despite all the hype over OSS, there are those who feel that the benefits are not immediate or obvious enough to warrant the switchover from established propriety software.

Clifford Lynch makes this comment about integrated library systems: "there is a mature, competitive market in such systems, and I question whether the choice to invest in developing an open source ILS makes sense given very constrained resources." (2009) Lynch's statement echoes a popular idiom that goes along the line of not changing something if there are no major flaws with it. Libraries may not be in love with their current software, but at the very least they can say that they are familiar with it and know how to use it. Recently, there was a 1,779 survey in which people were asked about their satisfaction with their software and interest in OSS. "A large number of responders indicated that their libraries might have some interest in open source but that they lacked the technical staff they felt they needed to adopt this approach." (Breeding, 2008) So besides financial hurdles, there are also technical and training issues that need to be overcome. It seems that education and training classes would be the best way to get past these barriers to OSS, but with libraries already cutting most non-essential programs, it seems unlikely that libraries will spend the money to put into classes such as this.

It seems like the main focus of OSS for libraries at the moment are for integrated library systems and online catalog software replacements. For integrated library systems that are OSS are Koha, Evergreen, Emilda, OpenBiblio, and phpMyLibrary. For online catalogs there are Blacklight, Helios, SolrMarc, and VuFind. ("Oss directory,") Looks like libraries have quite a few choices for potential OSS for their libraries, showing that there is an interest among the community for working on and servicing library OSS. Unfortunately, it appears as if some of them are updated more frequently than others. Whether its a propriety software or OSS, a company that goes out of business and ceases working on a project can happen to any company at any time. The difference with open source is that some other party may pick up the project and continue it. That's not quite so easy with closed source software.

An example of OSS that libraries can use is Koha, which is a library and automation software. It was designed by programmers and librarians who wanted to "improve access to materials" (Fredericks, 2009) This is appealing for libraries because they can change the software to make it fit with their system better without having to pay for a vendor to come out and change it for them. Another appeal of open source software is that it's "freely provided" thus "the licensing and maintenance fees... in commercial products aren't an issue". (Fredericks, 2009) On the surface, this seems like it would make OSS the ideal solution for libraries that are hurting from this economy. Another benefit from OSS is that there tends to be a community of "techies" who are behind the software and some companies that specialize in supporting OSS products if there's no "in-house expertise". (Fredericks, 2009) With propriety software, libraries would need to contact a vendor who would then contact a programmer to make changes or support to their software, which can be costly in time or money. That's because propriety software is closed and thus libraries don't have direct access to the source code to make modifications by themselves. With OSS, libraries can contract a company to modify their code. However, if the company goes out of business or the contract expires, the "user still have the software code available... unlike propriety commercial product, users retain the software" (Fredericks, 2009). So even if all work stops being done on the software, the library can chOSSe to modify it in-house using their own staff or a hired technicians since they possess the original code.

Despite all the appeals of OSS, there are some definite disadvantages to consider. In this economy, even a small blemish may be the fatal flaw that takes OSS off the table of consideration. Even though OSS is free to install and try, "some open source products, unlike Firefox, are challenging to install". (Schneider, 2008) Considering libraries have databases

and other things that need configuring, someone on staff would need the technical knowhow to install and configure OSS. Either that or the library would need to hire a technician or contract to a company that works with OSS, which suddenly makes it a lot less free. Fredericks continues in her article to say "free software is certainly appealing, but if the program is more difficult to install and manage, 'free' loses its luster. (2009) It would require that the tech staff be well-informed as they "continue to support ongoing programs" and even if the software is free "funds are still needed for network, hardware, and support services." (Fredericks, 2009) As seen, there are costs associated with OSS that exist even if there are no licensing or maintenance fees. Libraries are highly dependent on their online catalogs, Internet access, and databases for their material and patrons. Switching systems would require being down while the new system is installed, installing and configuring programs for each of the computers, training staff to use the new software, and dealing with whatever issues appear when the new system is being used. Changing software just because it might potentially be cheaper or more flexible is no light decision.

Right now, libraries are especially feeling the brunt of the weakened economy. Since most public libraries are dependent on what's budgeted to their system from their city or county affiliate. An example of this is the Oskaloosa Public Library which suffered from the Iowa state legislature cutting \$60 million from local governments. As a result "the city budget line item for library materials was slashed from \$47,000 to \$1000" (Holland, 2009) The direct consequence of this is the board voting to cease the RFID tagging program; creating a new philosophy "if the library's operating budget cannot support the fixed operating costs of a project, it's risky to commit the library to it" (Holland, 2009) This conservative new attitude makes it seem unlikely that this library will make the switch over to open source software. Unless open source software can prove that its installation and continued operating cost will be less than the previous system, it'll be a hard sell for this library system. However, despite the grim outlook of this position, the Oskaloosa system will probably next "move from SirsiDynix to a less expensive integrated library system." (Holland, 2009) If open source software can prove to be cheaper, then perhaps it will be in the consideration for the change after all.

Sometimes libraries have no choice but to turn to open source software for their needs, because they cannot afford the expensive commercial versions of software. An example of this is libraries in developing worlds. Because of "bad economic conditions" like the ones in India, many of them opt to use CDS/ISIS or WINISIS non-profit products from UNESCO. (Kushwah, 2009) However, due to the limitations of those programs, a lot of them are switching to KOHA, an open source integrated library system licensed under GNU. (Kushwah, 2009) While both are free, the UNESCO developed program is closed and thus limited by whatever changes are made by the UNESCO developers. KOHA works with automated systems and is compatible with MARC 21. "This has given an option for the libraries to use ILLS like KOHA instead of storage and retrieval systems like CDS/ISIS without spending huge money." (Kushwah, 2009) If it works for a place like India, libraries in the US should be able to find the resources to use an open source software like KOHA.

Another popular OSS that libraries are adopting is Evergreen. Recently, four county library systems in South Carolina adopted Evergreen to join a resource sharing network. Apparently this is financially prudent because "Evergreen also allows the consortium to enjoy immense cost-cutting benefits by sharing a single system" (Equinox Software, 2009) With the budget for materials being slashed, interlibrary loan is a good solution for providing materials that a library cannot buy presently. While it's possible to have an interlibrary service

without sharing the same system, it is a lot less efficient. If a bunch of different library systems use a bunch of different propriety software they may not be compatible with each other. They'd have to search the individual libraries' OPACs to see if they have the item requested, then use some out of system method for keeping track of the material. If they're all on the same system, like with Evergreen, they can probably access each other's OPACs. Plus they can use a computer to keep track of the material because the record is available in the same system.

OSS provide more than just library related software, there are many OSS versions of popular propriety software that libraries can use instead. "Using the Linux or OpenBSD operating system can reduce the need to license Windows operating system when purchasing or upgrading computers." (Houser, 2009) Operating systems can be one of the most expensive pieces of software to purchase for a machine and modern libraries like the one where the author works can have nearly 100 computers. One major drawback would be that these third party software brands may not be as compatible as a popular operating system like Windows. Libraries would need to decide if this is a major issue (some libraries limit the patrons access to a set amount of software anyway) and if their staff or technical department is comfortable with working with a non-Windows operating system. Houser also suggests replacing Microsoft Office with the OSS OpenOffice.org. (2009) For a small business, Microsoft lists its price at \$449.95 so finding an alternative that is functionally identical, free, and easy to install like OpenOffice can be a real budget saver. House claims that the savings from licensing by itself can save "hundreds, thousands, or tens of thousands of dollars, depending on the size of the library." (2009) If the software is seemingly functional identical and free, there seems to be little case against arguing going for the OSS version. Many people use the Firefox Internet Browser program over the propriety program Internet Explorer from Microsoft for instance. Not all OSS are as well-known or popular as Firefox, but it is an example of how successful an OSS can be.

Even in this tight economy, there are still libraries receiving grants which can be used to pursue OSS. On October 15, "LYRASIS has been awarded a grant of \$192,000 by the Andrew W. Mellon Foundation to plan a support service for assisting libraries with the adoption and use of open source software and systems." (Lyrasis, 2009) Even if the software package is free, OSS still takes resources like time and money to set up. Having a nonprofit like LYRASIS specialize in providing this service to libraries is a great first step for overcoming the initial barriers to OSS installation. While this may not be enough money to cover cost of continued maintenance, "the grant will provide LYRASIS with consulting expertise and dedicated staff resources over a six-month period to assess library needs in depth..." (Lyrasis, 2009) Six months may not seem like much, but it seems like the major inhibition for using OSS is the initial fears and actual conversion from a proprietary system to an OSS system. If a library system can get setup with some OSS, as long as the software is adequately working, it doesn't seem likely that the maintenance costs will be as high as hiring a vendor for proprietary software and paying for those licensing fees.

Community is an important factor in OSS and finding software with a good community behind it can be a cost saving measure. If the free support is good, libraries won't have to pay for a specialized technician to make changes for their software. VuFind is a good example of an OSS online catalog that has community support. If one goes to there webpage at <http://vufind.org/> one can click on the documentation to read instructions for installing the software. Clicking on the Support link brings up mailing lists where people can gather and talk about issues. On the right there's a link to an Issue Tracker where issues are reported. If

someone has an issue with the software, they can go to that link and see if it's known or even resolved already. The project summary says that 40 percent of the issues are still open while 57 percent are resolved or closed. ("Vufind issue management,") So while the problem solving is still ongoing, at least there are signs that the issues that people bring up are being addressed. There is even a wish list link for people to request new features for the program. So while OSS may not have a contract that one can point at to demand individual service from a vendor, there are still people out there on the Internet who can provide varying degrees of information and technical support for free. At any rate, if there is a strong technical community backing the open source software, even non-technical staff should be able to follow the instructions or ask for help to fix problems with the software.

While it will vary depending on the software type and factors like cost and community support, financially libraries should be able to switch from their propriety software brands to OSS versions. There are options like grants and working through the software using online help for technical guidance. Plus with more libraries switching to OSS, it would not be hard to simply request the source code from a library system that has had previous success with their open source software. Inheriting whatever useful modifications the previous library system had made to their OSS is one of the advantages to the software code being open. In some cases, OSS may be a way of cutting costs by dropping the licensing and vendor fees that are associated with propriety software. There are also OSS that can play a functionally identical role as expensive propriety software like Microsoft Office, Windows, and Internet Explorer. Using the OSS versions of these software can relieve the library of the licensing fees associated with keeping them and upgrading them. OSS just gives libraries more software options, many of which are cost-saving advantages in this economy.

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