Michigan Evergreen: Implementing a Shared Open Source Integrated Library System

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Abstract

In 2008, seven Michigan public libraries migrated to Evergreen, an open source integrated library system developed by the George Public Library Service. The Michigan Library Consortium and Grand Rapids Public Library provided the support, training, networking, and system administration for the system. This article examines the reasons for implementing an open source system and the challenges to running and sustaining it.

On August 4, 2008, the Branch District Library (BDL) flipped the switch and became the first public library in Michigan to use Evergreen. Located in rural Branch County and part of the Michigan Evergreen Project (http://mlc.lib.mi.us/wiki/index.php/Michigan_Evergreen), BDL was the first of seven Michigan public libraries to come up on the open source integrated library system (ILS). The others were waiting in the wings and were anxious to see how BDL fared in their first few weeks with Evergreen. Everything went well. No system migration is without its rough spots, and this one was no different. Within a few days, however, the most serious problems were solved. BDL was off and running and never looked back.

Michigan Evergreen is a joint project between the Michigan Library Consortium (MLC – http://www.mlcnet.org) and Grand Rapids Public Library (GRPL-- http://www.grpl.org/). MLC administers the project and performs support and training. GRPL is home to the servers and is responsible for system and network maintenance. As the project took shape and the first migrations began, all the partners were forced to tolerate a lot of ambiguity and to think creatively. Deciding to migrate from one ILS to another is not a decision made lightly. Migrating to an ILS that was developed by a state library agency and largely implemented only in that state requires the library director and staff to take a leap of faith. It was also a risk for MLC and GRPL, a risk that had its seeds in another statewide project, MeLCat, begun several years before.

In 2004, the Library of Michigan had signed a contract with Innovative Interfaces, Inc (III) to provide the hardware and software for a statewide resource sharing system, MeLCat. The Library of Michigan licensed INN-Reach for a central catalog that libraries in Michigan could use to input bibliographic and item records, no matter what ILS the library was using. Library patrons would be able to search the catalog and place requests for anything they found in the catalog, regardless of where it was located. The software routed the request to a library that had the item on the shelf. A load-leveling table insured that libraries were lending as much as they were borrowing.

Shortly after signing the contract with III, the Library of Michigan contracted with MLC for support, training, and implementation. The software license with III allowed 550 libraries to join the system. It was up to MLC and Library of Michigan to create the processes and procedures to implement the new system within those libraries as quickly and efficiently as possible. By early 2005, the system was up and running, and libraries were applying to join MeLCat.

At first, applications trickled in. Within twelve months the pace had picked up, and it was not long before the implementation queue was full for more than a year into the future. MeLCat trainers traveled to libraries all over the state, from the highly-urbanized southeast to the sparsely populated Upper Peninsula. The trainers encountered a great deal of enthusiasm both for the project and for the vast, new access to library collections that it offered library patrons. They encountered frustration when some librarians found that their library automation was no longer adequate and that it was hard for them to come up on MeLCat. Much of the time these were small libraries with small budgets and limited access to technical help. They were looking for help in moving to a new better ILS. Occasionally, we would hear similar pleas from larger libraries that either had not migrated in quite some time or were unhappy with their current ILS vendor.

Because it was in their nature to want to help these libraries, the MeLCat trainers would regularly start conversations with the phrase: "Somebody ought to do something to help out these libraries. They need better systems." That was code for "MLC ought to invest in an ILS that any library in the state can afford and use." As it happens, a few years earlier, the staff at MLC had investigated whether it made sense to do just that. A survey of library directors around the state showed that there was some interest but not enough to move forward, and, therefore, the initiative died. Whenever MLC begins a project, it does so with the requirement that the project must become self-sustaining. MLC is a stand-alone, nonprofit organization without ongoing funding from government appropriations or a larger parent institution. It is successful because it provides services that Michigan libraries need and because the cooperation it facilitates benefits everyone. However, that self-funding rule requires MLC to choose carefully from among the myriad possible projects. The results of a self-conducted survey led MLC to conclude that an ILS was not the right thing at that time. With the change in the environment that MeLCat

brought, it was time to re-examine that decision.

The first step, in early-2006, was to talk to a few ILS vendors about their systems and our environment. Instead of finding both a fit for libraries' needs and a way to move forward, MLC ran into obstacles. Partly it was a function of price. MLC was looking for a solution that would appeal to libraries paying less than $5,000 for a system and far less than that for annual maintenance fees. This required a solution that was different from those offered by the regional shared ILS installations in the state. While Michigan had no statewide ILS for libraries to join, several regional groups offer systems to libraries in their regions. These systems include shared Sirsi/Dynix Unicorn, Sirsi/Dynix Horizon, and III Millennium systems. The solution had to be different enough to be compelling. MLC was not interested in playing a "Me, too" game, but instead wanted a system that would benefit from MLC's unique position as a statewide, multi-type consortium whose value increased because of MLC's involvement.

Once MLC had a look at the commercially available vendors and their systems, it was clear that none of them really met our needs. Price, functionality, and existing business models threatened to stop the project and did not meet the goals of affordability and low overhead on the technical side combined with excellent functionality. MLC found that excellent functionality often was too expensive, while affordability did not always provide the needed functionality.

The game changed in late 2006 with the announcement that the PINES (http://www.georgialibraries.org/public/pines.php) consortium in Georgia had migrated from Sirsi to a new system called Evergreen. Evergreen had been developed by the Georgia Public Library Service (GPLS -- http://www.georgialibraries.org/) and was in use by more than 250 public libraries in PINES.

GPLS decided to release Evergreen as open source software, freely licensed under the GNU General Public License. In essence, it is free for anyone to use, modify, and share. With a history and inclination to support open source software, MLC had the opportunity with Evergreen to provide a service that no one else in Michigan was offering. It seemed to solve the two main problems that MLC had identified earlier: affordability for libraries of all sizes and types and a robust platform that would move libraries toward full-featured systems. In addition, it looked like a service to which MLC could add substantial value. Evergreen is not a commercially-available product that other consortia in the state use. It does not fit into the vendor/customer model that librarians know. MLC has often been the place for Michigan librarians to learn about and try new services. While many librarians use open source software for a wide variety of applications, many expressed reluctance about trusting their most visible and mission-critical application to open source software. Even with the upheaval in the marketplace over the last few years, most librarians remain very comfortable with the traditional vendor model and gain a great of deal of security from having a vendor to call. While MLC is not a vendor, MLC might be able to play the role of trusted partner, the place to call when issues arise or there are problems with the software. It would be a new, ambitious role but one that MLC is well-suited to assume.

With that thought process and internal conversations continuing, a small task force scheduled a trip to Georgia in June 2007. They spent a day with staff from GPLS learning about their development experience and getting an overview of the system's functionality. The following day they were off to visit Athens-Clarke County Public Library, about 60 miles east of Atlanta. Perhaps not surprisingly, they met with staff who were enthusiastic about Evergreen. Over and over again, the staff said how much they enjoyed working with the system and what an improvement it was over the system that they had used before. Not that

Evergreen was perfect. They did let the task force know that they had found the reports module hard to use and quite mysterious. But overall, everyone, from catalogers to circulation staff to reference librarians was effusive in their praise of the system and the folks at GPLS who developed it.

Armed with that knowledge, MLC plunged ahead through the summer and fall of 2007. Through email surveys, telephone calls, and in-person conversations, ten libraries said that they might be interested in joining a pilot project built around Evergreen. The vision was a shared system, with one database, accessible by any library in the group, but also configurable so that any participant could opt in or out of sharing with others in the group. Although Evergreen was built for the PINES consortium, the programmers built in enormous flexibility. If they so chose, libraries in a group could opt for common loan periods, the same fines schedule, and other joint policies. Conversely, they could each set their own policies and act completely independent of each other. Because the Michigan Evergreen consortium is strictly voluntary and the libraries joining it were unlikely to have a history of working together on other projects, it was expected that each participant would want to keep its own rules and operating conditions. MLC was not interested in brokering a common set of rules. As it turned out, this flexibility attracted enough interest for the project to proceed.

By the time of the Michigan Library Association annual conference in November, we thought we had six likely participants in the pilot project. MLC held an information meeting at the conference and received verbal confirmation from seven libraries. In one case, four libraries shared one system leaving four systems to migrate: one that uses Millennium, one that usesTLC, one that uses Dynix Classic, and one that uses a regionally-based system from NuGen Systems Inc.

The following months were busy with drafting contracts, developing policies, buying hardware, and readying the systems for mi-

gration. MLC and the participating libraries worked on a tight deadline in order to get the first system up before the end of summer, 2008. All the participants signed contracts in the spring, and by May the sequence was set for migration. Branch District Library would be first, Traverse Area District Library (TADL) second, Niles District Library third, and Grand Rapids Public Library fourth. In the end, GRPL was second, and Niles was a week later. TADL came up in early November.

At the same time MLC was creating policies, processes, and procedures for working with the participating libraries, it was negotiating with Equinox Software Inc (http://esilibrary.com/esi/) for consulting and support to help migrate from current systems to Evergreen. MLC did not wish to write the loader programs necessary to convert data in the existing systems to a form that Evergreen could accept. Instead MLC contracted with Equinox.

Equinox was born when the principal software developers from GPLS formed their own company to support and develop Evergreen. Early on it was evident that they were all programmers and technical geeks, and MLC had to make some adjustments in its plans to accommodate the fact that they were just forming and moving into full production. That said, they have been a joy to work with. Their dedication to the project and to solving problems for the participating libraries has been incredible. MLC could not be happier with this working relationship. Without their support, MLC would not have been able to get as far as it did in the first year.

Now that the basic system is up and running at all four libraries, MLC is ready to turn its attention to other urgent questions. Still to be answered are questions about governance of the system, clearly-defined rules about requests for software development and enhancements, and MLC's ultimate role.

These issues illustrate the strengths and weaknesses of open source software. Some have questioned whether there is a business model for open source software that makes sense. In an October post in his blog, "The Pervasive Datacenter," Gordon Haff says: "Pure-play open source as a standalone business has largely proven to be marginal. There are *many* successful companies that leverage open source in various ways. But it's the cross-selling of other things--systems, proprietary software, and services, in the case of system vendors, or advertising, in the case of Google--that brings in most of the revenue."[1] None of this should be taken as an admission that open source software is irrelevant or lacking. Haff says later in the same post: "Yet for all those points that are either in the debit column or that some would place there, it's hard for me to see how open source could be considered as anything other than a great success. As a model for how software is developed and how people collaborate, open source has utterly transformed IT."[2] For MLC, that is the crux of the issue and the key difference that Evergreen brings to the table.

As a software package, there is little to differentiate Evergreen from other ILS software. Any ILS from a reputable vendor does a fine job with circulation and cataloging. There are minor differences in these modules among vendors but they all work more or less in a similar fashion. OPACs are somewhat different. No one seems to have devised the perfect user interface and neither has Evergreen. Evergreen has some nifty features, such as book bags and an outstanding advanced search function that is not available in other products, but by and large Evergreen's face to the world and to the librarians who use the system is not much different from what others have to offer.

Evergreen shines behind the scenes and in the potential for new business models. The systems administrators and programmers at GRPL, MLC, and some of the other participating libraries are impressed at the ease with which they can implement the system and make changes. The ability to customize

each installation has been extremely popular with the libraries that have adopted the system. Very early in the project, the developers at Equinox said that they had built Evergreen so that it would be easy to "bolt on" additional modules as they were needed. That seems to be true. And because it is open source software, Michigan Evergreen has the ability to change the source code to suit changing needs. The Michigan Evergreen participants are no longer at the mercy of a vendor's development cycle or their decisions about where enhancement requests are in their development queue. That is one of the biggest selling features of Evergreen and open source software in general.

It is also one of the challenges: how to allow the development and enhancements to the system that any one of the participating libraries wants while protecting the viability and smooth functioning of the entire shared system? Our shared system is very much like an ecosystem. Decisions made by one participant can affect every other participant. At this point in its very young history, Michigan Evergreen has an informal process for adding new development. It works because of the small number of participants, all of whom are dedicated to making the project a success. As it grows, Michigan Evergreen will inevitably attract interest from some librarians who are less interested in the open source philosophy and simply want to know the rules. By then, a well-written and clear development process that spells out how the members contract for developments and how those developments get done must be in place.

All of that points to the need for a governance structure for the Michigan Evergreen Consortium. This is not unique to a group formed around an open source software system. Every shared system has the same challenge: how to equitably manage and lead a group of libraries that may, from time to time, have diverging interests in how the system works. Many groups function on the basis of size and proportional representation. Large libraries have a greater voice and greater leverage when it comes

to decision-making. Participants may elect a board with some permanent and some rotating seats. They form committees around specific functions such as cataloging, resource sharing, and user interface. MLC has yet to move down that path but it is clearly one of the next decisions.

Both the greatest challenge and the greatest potential lie in the very nature of MLC's involvement with this project. From the beginning, MLC has sought to facilitate a project that would not have happened if it had not taken the lead and has struggled against the perception that it is the "Evergreen vendor" for Michigan libraries. It is not. Yet MLC has not been able to articulate its role. MLC offers training sessions and support for librarians in participating libraries when they have questions. MLC develops user guides and documentation. These are all things that commercial vendors do. When MLC staff talk to librarians who are interested in moving to Evergreen, they ask all the questions they would pose to a commercial vendor. MLC has no desire to become vendor-like in the same way that other companies sell their proprietary ILS. It means that MLC must develop a compelling vision of a new model for ILS development, management, and operation.

Related to this issue is the question of sustainability. In order for the project to succeed long-term, the participating libraries must pay a share of the project's cost. With no payment for software licenses, the major costs are support and training, hardware, and telecommunications. Michigan Evergreen's financial model seeks to distribute the costs equitably among all the participating libraries. Every participant is asked to pay a flat annual fee that is the same regardless of library size. That recognizes some fixed costs that everyone takes advantage of no matter how big or small. A variable component also recognizes that size does matter and that larger libraries with higher circulation and larger collections use system resources more heavily. Based on its history with other projects, MLC anticipates tweak-

ing the financial model as it gains more experience with the group of libraries.

MLC's history is one of pilot projects and experimentation. MLC often launches projects when participants are willing to collaborate in refining and developing the necessary processes. It is very much the "Ready, Fire, Aim" management model. That does not mean that all the pieces are in place yet. In looking for models on which to base the organization of Michigan Evergreen, MLC is intrigued by the way some cooperatives work. A storefront food cooperative, for example, is member-owned and often staffed by members-owners. They may also have on their staff paid employees who make daily operational decisions, troubleshoot when problems arise, and generally keep the place running smoothly. In the library world, OCLC might serve as a parallel model. In its early days, OCLC was a cooperative effort built by contributions from member/owners. They had paid staff, but they worked at the direction of the member/owners. Later, OCLC assumed more and more of the trappings of a for-profit venture and lately has become nearly indistinguishable. Another Ohio example that may have lessons for Michigan Evergreen is OhioLINK. Formed by academic libraries in the late 1980s, it has remained true to its cooperative roots for twenty years and has created tremendous value for all its members. Neither of these organizations are built around open source software, but both have lessons and cautions to consider as MLC moves forward with its reinvention of how libraries implement an ILS.

Overall, MLC is pleased with the progress to date. Seven Michigan libraries are now up and running on Evergreen. Two more are slated to be up next spring, and several others have expressed strong interest. That puts Michigan Evergreen on the road to sustainability. As important as that is, ultimately MLC measures its progress against its reasons for launching Michigan Evergreen: facilitating migration to a feature-rich, high-end automation system for libraries that have been unable to do so on their own.

Small libraries are now in the pipeline that would not have a system with Evergreen's rich functionality without Michigan Evergreen, and one current participant was unable to migrate from a legacy system because of a lack of on-site technical staff. Michigan Evergreen was the vehicle to solve that problem.

MLC's mission is to facilitate collaboration among Michigan libraries, to create a rising tide that will lift all boats. Michigan Evergreen fits that mission and promises to have enormous value for every participant.

References

[1] Haff, Gordon. "Has Open Source Won – Or Has It Lost?" The Pervasive Datacenter, October 7, 2008, http://news.cnet.com/8301-13556_3-10059688-61.html?tag=newsFeaturedBlogArea.0, accessed November 15, 2008.

[2] Haff, 2008.