

Case Study: Armenian Evergreen ILS pilot

Project overview

The eIFL-FOSS ILS project provides an opportunity for evaluation of and possible migration to a free and open source software (FOSS) integrated library system (ILS). It promotes direct engagement with the FOSS communities of a chosen ILS. And it lays the groundwork for a mutual support network across eIFL.net for further libraries investigating migration to a FOSS ILS. The project focused on evaluating two FOSS ILSs with robust and open development and support communities: Koha (<http://www.koha.org/>) and Evergreen (<http://www.open-ils.org/>). Following a general call for participation in early 2008, libraries from 12 countries representing 11 language groups submitted applications to become pilot sites. From these, 7 sites were selected that represented a wide range of libraries and regions. All applicants joined an email discussion list in order to follow the progress of the pilot sites. The 7 pilot sites are: Fundamental Scientific Library of the National Academy of Sciences, **Armenia**; National Scientific Library, **Georgia**; Mzuzu University, **Malawi**; Library of the Faculty of Medicine Pharmacy and Dentistry, University of Bamako, **Mali**; Madan Puraskar Pustakalaya, **Nepal**; Midlands State University Library, **Zimbabwe**; and An-Najah National University Library, **Palestine** (West Bank). Each pilot library participating in the project was invited to participate in an intensive technical training workshop in Yerevan, Armenia, in June 2008. Case studies of each pilot draw out learning points for other libraries seeking to move to a FOSS ILS.

Pilot library

The **Fundamental Scientific Library of the National Academy of Sciences** (FLIB <http://www.flib.sci.am/>) has been a dynamic space of creativity, a source of knowledge and a place for learning and research welcoming researchers, students, and academicians from different subject areas since 1935. The library has more than 3 million physical documents in various media in all fields of science. This includes numerous collections in Armenian, Russian and a variety of European and Eastern languages. It holds a unique collection of Armenian rare books dating back to the 16th century as well as a collection of Armenian periodicals dating back to the 19th century. The library boasts a team digital content consultants and subject librarians specialized in their disciplines. It provides a modern and sophisticated web portal providing access to its various digital resources both on the Internet and via more than 40 computers available for library visitors of which it receives more than 16,000 user visits per year.

Dr. Tigran Zargaryan leads the team at the Fundamental Scientific Library. His work is supported by the Electronic Library Consortium of Armenia (ELCA <http://www.elca.am/>). Moreover the Fundamental Scientific Library helps to coordinate the 29-plus libraries of the National Academy of Sciences (NAS).

Motivation for exploring a FOSS ILS

With more than 3 million volumes, the Fundamental Scientific Library of the National Academy of Sciences has understandably employed an integrated library system for some time. Its principal library system since 2001 has been the proprietary ALEPH system from ExLibris. This is an enterprise level system that requires substantial technical knowledge to administer. And it has significant costs involved in licensing fees and maintenance and support contracts. No migration to a FOSS ILS could take place within the Fundamental Scientific Library unless the new system were to provide at least an equivalent technical solution. Of course the possibility of reducing the cost of the ILS through the use of FOSS is also a primary motivator. A further factor is the role of

leadership across the institutional libraries within Armenia and becoming a centre of excellence. In order to lead regional libraries in this direction, the Fundamental Scientific Library felt it would need to undertake such a migration itself to test the waters. In addition to the legacy ALEPH ILS, the library also employs a WinISIS database with which they have a long history of participation as well as a more limited-use IRBIS database.

Learning point: Leadership often demands that one library undergo the pain of piloting a new solution before confidently recommending it to others.

Learning point: FOSS solutions need to be at least as technically proficient as any proprietary system they are destined to replace.

FOSS ILS choice

The Fundamental Scientific Library opted to migrate to Evergreen (<http://www.open-ils.org/>). In turn more than 29 constituent libraries of the National Academy of Sciences have followed the Fundamental Scientific Library's lead in establishing a union catalogue using Evergreen. The choice of Evergreen was not immediate. It came after an initial process of piloting both Koha and Evergreen. Obviously it requires a substantial commitment of staff time in order to canvas multiple possible solutions. For complex library situations, however, the most plausible solution will not always be immediately obvious. Trial installations of both Koha and Evergreen were made and participation with both FOSS development and support communities was initiated. This provided a wealth of 'hands-on' learning for staff with regard to the technical installation, maintenance and support of the software but also, importantly, direct engagement with these FOSS communities. Numerous staff members have had the opportunity to ask questions on either the Koha or Evergreen lists. In addition, the Fundamental Scientific Library also kept a watching brief on NewGenLib, a formerly proprietary java-based ILS that was re-released under a FOSS licence during the course of this pilot. And of course the development of ABCD, the FOSS successor to the ISIS software suite is also under scrutiny. Such a wide portfolio of development investigations will not be viable for all libraries, but where staff size and motivation permits there is no doubt that this creates a highly experienced and well-rounded library technical team.

Learning point: A wide portfolio of watching briefs on possible future systems can provide needed continuing professional development for library staff.

For some time both Koha and Evergreen seemed like viable options for the Fundamental Scientific Library. They have comparable technical lineage and if all things had been equal it might have come down to which FOSS development and support community was most welcoming and helpful in deciding which system to pursue. In fact that was not the case. Both communities provided positive experiences. The key differentiator in the end was technical. But this technical difference was not something that could have been predicted prior to substantial testing with viable datasets from the library. And in the end it resulted in the decision to move forward solely with Evergreen.

Learning point: Technical differences, where they exist, between comparable FOSS systems can be decisive, but discovering these may require considerable investment of time and effort.

This learning point is worth reiterating. There is simply no substitute for the practical experience gained by testing a system against real-world conditions, i.e. your own data. Very often libraries will make their decision to opt for one solution over another much earlier in the process. As a result they can be left with a situation where substantive workarounds and/or further core software development may be required to resolve a late-emerging technical problem. Since we are dealing

with software for which the source code is available, it is always at least possible that a technical solution can be created and implemented. But not every library, not even a large team of technical librarians such as can be found at the Fundamental Scientific Library in Armenia, will have sufficient programming skills to arrive at such a solution. In this case, by running parallel pilots the library was able to postpone its final decision until a clear technical differentiator between the competing solutions emerged.

Initial Installation

The data in the legacy ALEPH system is in MARC21 format. This has been a great advantage for this pilot. Whereas other pilots have had to struggle with getting their existing data into a library standard format, the Fundamental Scientific Library has been able to focus its attention instead on testing how the systems it is considering handle its data. Many records in the dataset are in Armenian and others are in Russian along with a few other languages. Would either Evergreen or Koha have difficulty handling Armenian records?

At this point one of the advantages of working closely with the FOSS development communities for these systems became clear. Tigran's team was able to produce a set of Armenian records, approximately 10,000 records, and pass these to key developers of Evergreen and of Koha for testing purposes. The results were surprising. Neither system handled the records perfectly on the first trial run. In the case of Evergreen that was revealed to be a bug in the software which was immediately addressed. For Koha the testing was less conclusive. No obvious software bug emerged and yet there remained an issue. This ultimately became the technical decider pushing the Fundamental Scientific Library to focus solely on Evergreen. Two points emerge. Without a large body of already standardized records, there would have been no way to pressure test the competing systems. And without close ties to the FOSS development and support communities testing of such a record set locally may not have been able to reveal a clearly identifiable bug in the software – a bug which could straightforwardly be fixed.

Learning point: It is impossible to anticipate precisely how a close association with a FOSS development community will benefit your use of that software, but almost invariably it ends up making a difference and in some cases a dramatic difference.

It cannot be underestimated just how advantageous it was for the Fundamental Scientific Library in Yerevan to host the initial training workshop for the eIFL-FOSS ILS pilot. During those few days when experts from the Evergreen and Koha development communities were on hand, Tigran's team was able to gain significant hands on experience. Whereas each of the other pilot sites were only able to have one person attend the workshop, nearly the entire technical team from the Fundamental Scientific Library participated dividing their time between the Koha and Evergreen training.

Perhaps it was this early emersion that contributed to Armenia making the biggest individual contributions to both Koha and Evergreen during the course of the pilots. For example, Tigran committed early on to providing the Armenian translation for the Evergreen and Koha user interfaces. At the time the decision to opt for Evergreen had not been made. So Tigran's contribution to Koha remains a positive enticement for other libraries in Armenia to consider Koha as their next ILS even though his library has decided on a different path. Not all Armenian libraries have their records in Armenian (at least one university uses English for its catalogue records), and therefore they will be able to take advantage of the option of an Armenian user interface in Koha even prior to any technical resolution of the Armenian script issue. Meanwhile Tigran's contribution of the Armenian translation for Evergreen continues to benefit his own library's use of that software. And finally, the contribution of a testing set of Armenian records has now become a standard testing tool for new versions of Evergreen helping to establish its credential as a viable ILS

for countries outside North America. This is both a remarkable example of engagement with FOSS communities for an eIFL.net library, but at the same time merely typical of the generosity and helpfulness of FOSS development and support communities.

Learning point: Once you begin making practical contributions to a FOSS community your contribution continues to benefit both you and others indefinitely.

It definitely helped that Tigran's team had sufficient Linux expertise to handle the installation of Koha and Evergreen without significant difficulty. And any difficulties that did arise were quickly resolved through the email discussion lists of those two projects. That left more time to concentrate on the records themselves and the issues they revealed.

Building a network of local and regional support

The Fundamental Scientific Library committed itself to a leadership role across the libraries in the National Academy of Sciences through participation in this project. As can be seen above, that participation was never selfish – contributions were being made to the FOSS communities throughout. Another great example of that community spirit occurred in April 2009 when staff at the Fundamental Scientific Library in Armenia hosted a 2-day workshop for staff at the Ilia Chavchavadze State University library in neighbouring Georgia. This was an opportunity to share experiences since this Georgian library had already begun testing Evergreen. It was also an opportunity to build a regional network of Evergreen users.

Today the use of Evergreen has spread across the 29-plus libraries of the National Academy of Sciences in Armenia. Together they are building a union catalogue in one Evergreen instance. And collectively, led by the Fundamental Scientific Library, they are becoming regional leaders in the use of Evergreen.

Learning point: Banding together with other local or regional users of your preferred FOSS ILS is a great way to increase the support resiliency of the FOSS community.

Next steps

There is no doubt that current world financial difficulties are impacting eIFL.net libraries. In Armenia, a recent restructuring of financial allocations to libraries means that the licensing and annual maintenance fee for the legacy ALEPH system is under pressure. Now, more than ever, a viable FOSS alternative is necessary for the Fundamental Scientific Library of Armenia. The investment of time and energy exploring multiple FOSS options, testing Armenian datasets, and engaging directly with FOSS development and support communities is sure to reap significant benefits. And those benefits are beginning to become more real.

It is worth noting as well that the success of the Fundamental Scientific Library of Armenia is not seen in the FOSS community as merely an Armenian success story. It is seen as a success for the Evergreen community worldwide, as evidenced by Tigran's presentation and participation in the first international Evergreen conference held in Athens, Georgia (USA) in May 2009. This close engagement with the Evergreen community looks set to continue as Tigran will be participating in the Evergreen documentation working group which arose as a result of discussion at the conference.

Learning point: Early investigation of FOSS alternatives may appear prescient when financial challenges make legacy proprietary solutions increasingly untenable.

Learning Points from the pilot

There have been numerous learning points from this pilot. A few may be unique to the Fundamental Scientific Library of the National Academy of Sciences or to ELCA, but most have wider application. They will inform our future efforts in promoting FOSS in libraries.

- Leadership often demands that one library undergo the pain of piloting a new solution before confidently recommending it to others.
- FOSS solutions need to be at least as technically proficient as any proprietary system they are destined to replace.
- A wide portfolio of watching briefs on possible future systems can provide needed continuing professional development for library staff.
- Technical differences, where they exist, between comparable FOSS systems can be decisive, but discovering these may require considerable investment of time and effort.
- It is impossible to anticipate precisely how a close association with a FOSS development community will benefit your use of that software, but almost invariably it ends up making a difference and in some cases a dramatic difference.
- Once you begin making practical contributions to a FOSS community your contribution continue to benefit both you and others indefinitely.
- Banding together with other local or regional users of your preferred FOSS ILS is a great way to increase the support resiliency of the FOSS community.
- Early investigation of FOSS alternatives may appear prescient when financial challenges make legacy proprietary solutions increasingly untenable.

For further information on the Fundamental Scientific Library of the National Academy of Sciences's Evergreen activities, please contact Dr. Tigran Zargaryan tigran@flib.sci.am.

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