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Innovations Affecting Us -- Open Source in the Library: An Alternative to the Commercial ILS?

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period. Furthermore, she said, the EC will experiment with faster and wider access and will support the cost of author payments in their research grants.

At the end of the conference the EC published a rather banal, if balanced, Statement (http://ec.europa.eu/information_society/activities/digital_libraries/doc/scientific_information/communication_en.pdf), which had been prepared earlier. The statement may have been a disappointment to true believers in Open Access, but will have brought some comfort to the publishers. While noting the strategic importance of scientific information and the benefits to science and society of ready access to this information, it also noted that EU-based publishers produce 49% of total global journal output in an industry that employs 36,000 Europeans. Against this background, the EC will take the following actions:

Access to Community funded research

The EC will take measures to promote better access to the publications resulting from the research it funds, which will include a financial contribution towards publishing costs, including open access publishing.

Co-funding of research infrastructures (in particular repositories) and projects

The EC will intensify its activities regarding infrastructures relevant to scientific

information, in particular linking digital repositories at the European level. Funding will be made available to this end for the period 2007-2008.

Input for the future policy debate

To feed the debate and the policy process, the EC will launch a study on the economic aspects of digital preservation, to start in 2007.

Policy co-ordination and policy debate with stakeholders

Further Deliberations and Discussions will be initiated and encouraged, both within the EU structures and with stakeholders.

In its conclusion the EC acknowledges that access to, dissemination of, and preservation of scientific information are major challenges of the digital age. Success in each of these areas is of key importance for European information society and research policies. It also acknowledges that the different stakeholders in these fields have differing views on how to move forward towards improvements for access, dissemination and preservation. All, one has to acknowledge, true.

And Now?

You, dear reader, might think that these are rather pedestrian conclusions, considering the enormous amount of European energy, creativity and brainpower that has been devoted to this subject over the last 12 months. Given that a significant portion of the Brussels conference was devoted to a discussion of business models for the electronic world, you might, perhaps,

also wonder why there was no speaker from another content-based industry — such as music — where the Internet has revolutionized the business model within the space of a few years and from which the scientific information world might have something to learn. When you delve to obtain some new insights that the EC study and conference might have contributed to our understanding of the future of scientific publishing, you may find you delve in vain. Perhaps this does not matter. In a scientific publishing world in which readers increasingly come to journal articles via **Google**, **Google Scholar** and other free search engines, where a steadily growing portion of the journal literature itself is freely available, and where the **Howard Hughes Medical Institute** has signed a deal with **Elsevier** that allows free access to its articles six months after publication, you might think that events outside of Brussels are going to determine the pace of change in scientific publishing, as well as the business models that support it. You might very well think that. I couldn't possibly comment.

Note: The presentations given at the conference "Scientific Publishing in the European Research Area: Access, Dissemination and Preservation in the Digital Age" are available at http://ec.europa.eu/research/science-society/page_en.cfm?id=3460.



Innovations Affecting Us — Open Source in the Library: An Alternative to the Commercial ILS?

by **Kristen DeVoe** (Electronic Resources Librarian, College of Charleston) <devoek@cofc.edu>

Introduction

How much did your library pay for its integrated library system? Chances are that a lot of money was spent on the purchase of an ILS and that a lot is still being spent for ongoing maintenance and adding new features. The development and support of automated software is a half-billion dollar a year industry. But what if your library could run a fully functional ILS *for free*? That is, with no initial payment and no ongoing maintenance fees? This is exactly what some libraries, tired of paying for expensive commercial automation systems or unable to afford one, are doing. Open source integrated library systems have been available for several years, but they are very gradually gaining momentum in the library automation community. This issue's "Innovations Affecting Us" will explore several of the open source integrated library systems that are available.

What is Open Source?

"Open Source" refers to software that is free and makes available the original source code that underlies an application, allowing anyone to study and modify the original application.

Generally with open source a community of interested persons takes responsibility for the creation, continued development, and technical support for an application. Most open source software exists under a standard license agreement, such as the General Public License (GPL), which allows for use, modification, and distribution of open source software for free. Linux, an open source computer operating system, is a premier example of the open source approach to software development.

Open source software has several perceived advantages over commercial software:

1. Open source software can be refined to fit local needs. Because the source code is available, the development of the software is determined by the needs of the user, not a commercial vendor.
2. Open source software is free. Since there is no purchase price or maintenance fee, the only major cost associated with open source applications is local development.
3. Unlike commercial software applications, open source applications do not have any restrictions on use. Users can

modify, use, and distribute the application as they see fit.

While open source applications certainly have some advantage over commercially vended software, there are also potential disadvantages of using open source:

1. Open source applications can have inadequate technical support for users. Many applications lack documentation, have limited documentation, or use documentation geared only towards software developers.
2. There can be unanticipated costs associated with the modification of open source software for local needs. Users may not anticipate extra work that may be necessary with open source software that would not be necessary with commercial software, which may be more complete.
3. Speed and scalability can also be of concern when using open source software. Sometimes the programming languages used for open source applications are not

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very scalable and are slower than other languages used to develop commercial software.

4. Open source software can often seem decentralized in terms of development, with many people working on the software at once but not necessarily together. This approach can slow down progress and troubleshooting.

Available Open Source Integrated Library Systems

Today there are several open source ILS systems available for download and installation. This section is intended to give a brief overview of some open source integrated library systems and provide resources for finding more information on each.

When evaluating these products, it may be helpful to consider the following:

- Is the product actively being developed?
- What modules are available? Cataloging, circulation, OPAC, acquisitions, serials, etc?
- Is MARC supported?
- Is the source code and documentation available for download?
- Are any libraries currently using the system?

Avanti MicroLCS (<http://www.avantibrarysystems.com/>) began in 1998 and is the project of a sole developer, **Peter Schlumpf**. **Avanti** is designed for small libraries and will run on any operating system. **Avanti MicroLCS** version 1.2 is now being developed, and will include basic circulation capabilities. The release of version 1.2 is expected in April of this year. The product Website does not indicate that any library is using **Avanti**, which is currently in version 1.0.2. Version 1.0.2 includes the capability of importing and exporting the title database via delimited text files. A demo of the system's search function is available online at <http://www.avantibrarysystems.com/demo/>.

Emilda (<http://www.emilda.org/>) is a system being developed by a Finish Software Company, **Realnode Ltd.** **Emilda** is based on Extensible Markup Language (XML) and is compatible with any operating system. The system includes an OPAC, circulation and administration functions, Z39.50 capabilities and 100% MARC compatibility. Currently, **Emilda** is used at 14 schools in Espoo, Finland. The source code and documentation are available at the **Emilda** Website and a demo is available online at <http://demo.emilda.org/>.

Evergreen (<http://www.open-ils.org/>) was developed by the **Georgia Public Library Service** and the **Georgia Library Public Information Network for Electronic Services (PINES)**. **PINES** is a consortium of 265 public libraries in Georgia, all of which have migrated to the open source **Evergreen ILS**.

Evergreen, licensed under the **GPL**, cur-

rently has modules for circulation, cataloging, Web catalog, and statistical reporting and it also supports the SIP2 protocol for self-check and Internet/computer access control. Acquisitions and Serials modules are currently under joint development with the **University of Windsor** and are expected to be available in early to mid 2008. There is an **Evergreen** wiki with installation instructions, demos, PowerPoint presentations, and documentations at <http://open-ils.org/dokuwiki/doku.php?id.>

Koha (<http://www.koha.org/>) is a system that was originally developed in New Zealand by **Katipo Communications**. Today **Koha** is maintained by volunteers in Canada, France, New Zealand, the United States, and Great Britain. A self-named "full feature ILS" **Koha** includes modules for circulation, cataloging, acquisitions, serials, reserves, patron management, and branch relationships. According to their Website, the **Koha ILS** is currently used in over 50 libraries worldwide and is usable by libraries of all sizes. For example, the **Nelsonville Public Library** in Ohio uses **Koha** for its eight branches and collection of 250,000 items. A demo is available online at <http://www.koha.org/showcase/>.

Learning Access ILS (<http://www.learningaccess.org/>) is developed by the **Learning Access Institute** in Seattle. The goal of the **Learning Access ILS** is to offer smaller, underrepresented libraries access to a library automation system. Currently, about 15 libraries are taking advantage of this opportunity. This system includes modules for circulation, a Web OPAC, cataloging, interlibrary loan, and serials cataloging. In terms of scalability, The **Learning Access ILS** can be used by libraries with a few hundred catalog records to libraries with over a million records. An online demo is available at <http://ils-lopez.learningaccess.org/>.

Additional open source integrated library systems include **OpenBiblio** (<http://obiblio.sourceforge.net/>), **phpMyLibrary** (<http://sourceforge.net/projects/phpmylibrary/>), **PYTHEAS** (<http://web2.uwindsor.ca/library/leddy/people/art/pytheas/index.html>), and **WEBLIS** (<http://www.icie.com.pl/WEBLIS.htm>). Information on each of these can be found on the application's Website.

The End of the Commercial ILS?

Does the evidently increasing popularity of open source integrated library systems mean the end of the commercial ILS? Although many librarians are discouraged with commercial vendors, the proprietary ILS still has a stronghold in library automation. Libraries using open source systems represent a very small percentage of the library community. However with the recent success of the **Georgia PINES** open source ILS, **Evergreen**, open source systems may be on their way to gaining popularity.

Of course there are some difficulties that many libraries would have to overcome in order to effectively implement an open source ILS. One of the benefits of a commercial system is the technical support. This is a service that the library pays for, but if there is not a knowledgeable systems department at the

library, technical support from commercial vendors can be well worth the cost. Implementation of an open source ILS is an endeavor that can require a certain level of expertise in automation systems. Some systems such as **Koha** and **Evergreen** can be installed and supported by companies like **LibLime** (<http://liblime.com/>), which takes the technical burden off of the library itself but comes at a price.

In the end, librarians might have to take a wait and see approach to tell if the open source ILS will become a viable alternative to commercial library systems. In the meantime it is quite interesting to watch the growth and development of the open source ILS.

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Resources

Avanti microLCS <http://www.avantibrarysystems.com/>

Emilda <http://www.emilda.org/>

Evergreen <http://www.open-ils.org/>

GNUTeca <http://www.gnuteca.org.br/> (site in Portuguese)

Koha <http://www.koha.org/>

Learning Access ILS <http://www.learningaccess.org/>

OpenBiblio <http://obiblio.sourceforge.net/>
phpMyLibrary <http://sourceforge.net/projects/phpmylibrary>

PYTHEAS <http://web2.uwindsor.ca/library/leddy/people/art/pytheas/index.html>

WEBLIS <http://www.icie.com.pl/WEBLIS.htm>

LibLime <http://liblime.com>