

A Virtual Exhibition of Open Source Software for Libraries

Josep Manel Rodríguez Gairin* , Patricia Russo Gallo** and Andreu Sulé Duesa***

**sule@ub.edu, **rodriguez.gairin@ub.edu*
School of Library and Information Science, University of Barcelona,
<http://www.ub.edu/biblio>

****prusso@uoc.edu*

Open Source Software for Information Professionals Working Group, Official College of Librarians and Information Professionals of Catalonia, <http://www.soft-libre.net>

Abstract

Frequently the choice of a library management program is conditioned by social, economic and/or political factors that result in the selection of a system that is not altogether suitable for the library's needs, characteristics and functions. Open source software is quickly becoming a preferred solution, owing to the freedom to copy, modify and distribute it and the freedom from contracts, as well as for greater opportunities for interoperability with other applications. These new trends regarding open source software in libraries are also reflected in LIS studies, as evidenced by the different courses addressing automated programs, repository management, including the Linux/GNU operating system, among others.

The combination of the needs of the centres and the new trends for open source software is the focus of a virtual laboratory for the use of open source software for library applications. It was the result of a project, whose aim was to make a useful contribution to the library community, that was carried out by a group of professors of the School of Library and Information Science of the University of Barcelona, together with a group of students, members of a Working Group on Open Source Software for Information Professionals, of the Professional Library Association of Catalonia.

Introduction

The process of selecting a library management program is affected by a series of social, economic and political factors which mean that the final choice may not be the best suited to a particular library's needs, features, and functions.

Open source software is currently one of the options preferred by libraries, because of the facilities it offers for copying, modification and distribution, the absence of licence restrictions and the possibility of interoperation with other applications.

This new trend towards the use of open source software in libraries is also reflected in library and information science degree courses, which include analyses of programs of automation, repository management, the Linux/GNU operating system, and so on.

In view of this growing use of open source software in libraries, and aware of the needs of education centres, a group of lecturers and students at the School of Library and Information Science at the University of Barcelona and members of the Open Source Software for

Information Professionals Working Group decided to create a virtual laboratory for the use of open source software for application in libraries, aimed at the professional community.



Figure 1: Programs presented

The laboratory allows visitors to test different types of open source software in these areas:

- Automation (PMB, Openbiblio),
- Management of electronic resources (Potnia),
- Management of electronic documents (Alfresco),
- Management of repositories (Dspace, E-prints),
- Management of thesauri (Tematres),
- Management of bibliographies (Rebase).

The programs included have all been tested on the courses at the UB's School of Library and Information Science. For each program, we provide access to the complete installation, a brief description of the main characteristics, the official website address, and manuals for installation and use. We have also prepared a series of presentations in which teachers and professionals shared their experiences using some of the programs.

Most of these programs have the same technical requirements for installation, using a LAMP system (Linux, Apache, MySQL and PHP). To grant the same level of freedom, the laboratory has been constructed with the content management system Drupal.

Here we outline the main characteristics of each program:

PMB (<http://www.sigb.net>)

PMB is a library automation system created in France in 2002 under the CeCILL licence. It is an open source software licence created by the French government which offers the same conditions and freedoms as the general public licence (GPL) for open source software.

PMB is designed for medium-sized and large libraries, and can also manage networks of libraries integrated in a collective catalogue. The cataloguing format used is UNIMARC but it incorporates format conversion and importation systems (USMARC and XML, among others).

Characteristics

Some of the main characteristics offered by the system are:

- Management of authority data (by author, publisher, collection),
- Management of a thesaurus of subject areas,
- Use of the Z39.50 protocol,
- Automation of the DSI,
- Control of serial publications,
- Management of journal summaries and storage,
- System for producing back-up copies.

Modules

The following modules are included:

- Administration of the system. How to parametrize the configuration of the system, manage the system's users, produce back-up copies, etc.,
- Cataloguing. For monographs, serial publications, acquisition of records from the Z39.50 catalogue, creation of lists of records (for novelties, saved searches, etc.),
- Loan,
- Authorities. For authors, publishers, collections and classification. Includes the creation of a thesaurus by subject area,
- DSI,
- OPAC.

Openbiblio (<http://obiblio.sourceforge.net>)

Openbiblio is an integrated library management system, created in 2002 under General Public Licence (GNU- GPL). Openbiblio is designed for small libraries, above all school libraries. The catalogue format is UNIMARC but records may be imported from other compatible formats.

Characteristics

- User alerts via predesigned messages.
- Control of fines for late returns of documents.
- Statistical models for the use of the library and the material.

Module

- Loan. Administering users' data, loans, returns, reservations and fines.
- Cataloguing. Control of bibliographical records and their copies.
- Administration. Configuration and management of the system, including the authorizations of the system administration staff.

- Reports. Management of statistics, reports and messages to users.
- OPAC.

Potnia (<http://potnia.sourceforge.net>)

Potnia creates thematic directories, for the management of scientific resources, journals, publications, and so on. It was created in 2003 by the Directorate General of Universities of the Spanish Ministry of Education, Culture and Sport.

The structure and description of the records in Potnia are compliant with the Dublin Core metadata set.

Functions

- Search for records. In addition to basic searches, an advanced search option is included which allows definition of the fields to be searched (by title, key word, description or subject) and combinations using the Boolean operators and, or, and not.
- Administration of the system, for adding, modifying or deleting records in the data base, and for managing the list of subjects.
- Home page, showing the list of subjects of the records in the data base. Under each subject heading, the records classified under the subject can be consulted, and details of each one may be accessed.

Alfresco (<http://www.alfresco.com>)

Alfresco is an ECM, an Enterprise Content Manager. Among its applications is document management. It was created in 2005 by members of Documentum and Interwoven. Alfresco is an open code software, able to access the source code for the user community and provide high quality service for the development of the system. The commercial benefit is provided by the system's support package, including manuals, training and maintenance.

There is also an area for the user community to contribute additional features to the program. These modifications are under the Alfresco Public Licence (<http://forge.alfresco.com/>).

Characteristics

- Deposit of electronic documents in their original format (doc, xls, tif, html, jpg, pdf, video, audio, cad, etc.),
- Document visualizers,
- Groupings by folder and classification chart,
- System of information retrieval, basic and advanced search, file, folder and contents search,
- Management and control of work flows,
- Management of users and levels of access,
- History of versions.

Functions

- Provides a common space for the classification of documentation by folders,
- Allows addition of documents from the local network or creation of new ones from the same system (in HTML, TXT or XML format),
- Manages rules of contents for transforming formats automatically, creating work flows, etc.,
- Forum space for specific folders or documents,

- Edition and modification of the metadata in each document, where one can also see the history of the versions created,
- Creation of work copies,
- Management of the profiles of the users of the system, their privileges and authorizations.

DSpace (<http://www.dspace.org>)

DSpace is a management system for institutional deposits (repositories) created by the MIT Libraries (Massachusetts Institute of Technology) and Hewlett-Packard (HP) in 2002. It is distributed under an Open Source Licence (BSD Berkeley Software Distribution), an open source software licence with certain restrictions not included in the GNU GPL licence. This type of licence allows the use and modification of the source code and the commercial use of the product.

DSpace allows the management of different types of materials (preprints, technical reports, images, videos, etc.), and helps to digitalize an organization's scientific production.

Characteristics

- Supports any type of material: documents, theses, images, audio, video, etc.
- The records are saved in Dublin Core format.
- Able to interoperate with other systems in the organization.
- All records have a persistent identifier.
- Allows format migration towards IFF, SGML, XML, AIFF, PDF. It does not guarantee the migration of owner formats such as Microsoft Word, PowerPoint, Lotus 1-2-3, wordPerfect.

E-Prints (<http://www.eprints.org>)

E-Prints is a system for the creation of institutional repositories of scientific production, theses, reports, etc. created in this community. It was created by the University of Southampton in 2000. E-Prints uses the XML and Dublin Core metadata formats based on the OAI-PMH. It is thus able to support different types of documents and data formats for storage and provides open access to their contents.

Characteristics

- Dublin Core metadata format,
- Repository of all types of material: text, image, etc.,
- Content syndication,
- Includes a bibliography manager,
- Basic and advanced search options.

Tematres (<http://www.r020.com.ar/tematres>)

Tematres is a web application for the management of thesauri, created in Argentina in 2004. This program is also designed for the creation of web browsers, digital library directories, and control of documentary languages.

Characteristics

- Terms are related by: equivalence, hierarchy and/or association.
- Unlimited quantity of related terms, hierarchical levels and non-preferred terms.
- Multiple scope notes, historical notes and bibliographical notes per term.

- Control of repeated terms.
- Systematic and alphabetic browsing.
- Exportation formats into XML, Dublin Core, RDF SKOS-Core, Zthes, etc.
- General search engine.

Rebase (<http://rebase.sourceforge.net>)

Rebase is a software management package for bibliographies and bibliographical quotations that works under a multiuser web interface. It was created in Germany in 2002 under General Public Licence (GNU-GPL).

Rebase is designed to create collections of bibliographical references imported from different academic databases and to extract them in quotation form for text bibliographies.

Characteristics

- Basic or advanced search
- Content syndication
- Quotation format: HTML, RTF, PDF, LaTeX
- Import formats: BibTeX, Endnote, RIS, RefWorks, PubMed, ISI Web of Science, CSA Illumina, Copac, MODS XML
- Export formats: BibTeX, Endnote, RIS, MODS XML, XML of the Library of Congress and OpenDocument

Parallel activities

As well as providing access to programs, their manuals and other back-up material, we also held a series of demonstrations at the Faculty of Library and Documentation Sciences. The sessions were open to students and professionals. The sessions given were:

- Experience with Openbiblio at the Bambylor Resources Centre and demonstration of the PMB program.
This session presented two automation programs, Openbiblio and PMB. The director of the Bambylor Resources Centre in Manresa described the centre's project for the implementation of Openbiblio at the centre, and explained some details referring to the functioning of the program.
- Next, one of the organizers of the presentation outlined the main characteristics of the PMB program. This presentation was particularly interesting, since it allowed a comparison of two library management programs in a single session.
- Presentation of the project "UPCommons: global access to knowledge": an account of the application of the Dspace program at the Polytechnical University of Catalonia (UPC).
The UPCommons project is the UPC's institutional repository. The librarian at the UPC described the objectives and services offered by the project, and the computer expert responsible for technical support explained its functioning.
This session was also very interesting. It presented a real case of the functioning of the program and explored the technical side of the management of the service.
- Demonstration of E-Prints: One of the lecturers at the Faculty of Library and Documentation Sciences gave a demonstration of the E-Prints program, for the implementation of institutional repositories.

- Demonstration of Alfresco: One of the organizers of the exhibition presented a demonstration of the characteristics and use of the electronic document management program, Alfresco.
- Demonstration of Tematres: One of the lecturers at the Faculty of Library and Documentation Sciences gave a demonstration of the Tematres program, for the management of thesauri and documentary languages.

Conclusion

This virtual laboratory began as a means of testing and promoting of the open source software currently available for libraries. It has developed into a valuable learning environment for both teachers and students and provides material for teaching practice in a variety of subjects.

References

- Arano, S. (2005). Los tesauros y las ontologías en la biblioteconomía y la documentación. *Hipertext.net*, núm. 3, from <http://www.hipertext.net>.
- Crow, R. (2004). [Institutional repository software options: questions and answers with the experts with representatives from ARNO, CDSware, DSpace, Fedora, GNU Eprints, i-Tor, MPG eDoc and MyCoRe], *CERN Workshop on Innovations in Scholarly Communication : Implementing the benefits of OAI (OAI3)*, CERN (Geneva, Switzerland).
- Russo Gallo, P. (2006). PMB : programari lliure d'automatització de biblioteques. *BiD: textos universitaris de biblioteconomia i documentació*, desembre, núm. 17, from http://www2.ub.edu/bid/consulta_articulos.php?fichero=17russo.htm.
- Serrano Muñoz, J. & Prats Prat, J. (2005). Repertorios abiertos : el libre acceso a contenidos. *Revista de Universidad y Sociedad del Conocimiento*, núm. 2 (2).
- Tramullas, J. (2005). Herramientas de software libre para la gestión de contenidos. *Hipertext.net*, núm. 3, from <http://www.hipertext.net>.