Going down the open road: open source software and library management systems

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In a presentation I made at Umbrella in Hatfield in June 2007 (and available via Aberystwyth University’s institutional repository\(^1\)) I outlined some current issues and developments in library management systems (LMS). Following a brief historical look at the ‘do-it yourself’ systems of the 1960s and 1970s, the co-operative systems, the ‘turnkey’ systems, and then the integrated LMS from various commercial companies of the late 1980s and 1990s, the spate of mergers and acquisitions of these companies, as well as the involvement of private equity firms, was described. Such changes inevitably affect those working in libraries who are responsible for the day-to-day running and maintenance of an LMS and Chad\(^2\) has reported on moves towards open source software (OSS) for LMS along with encouragement from UK central and local government for this.

OSS appeared in the mid-1980s with the creation of the GNU (or GNU’s not Unix) project which aimed at developing a freely available operating system that was like Unix. The GNU website\(^3\) provides a definition of free software which refers to four kinds of freedom for users of OSS, namely to:

- run the program for any purpose
- study how the program works and be able to adapt it
- redistribute copies as appropriate
- improve the program, and release such improvements to the public, so that the whole community benefits.

Unesco’s CDS/ISIS software\(^4\), which was developed in the mid-1980s mainly as a text-retrieval package, but has been used for LMS, especially in developing countries can be considered an early example of OSS in the LMS area. In 1999 a website, OSS4lib\(^5\) was launched from Yale Medical Library in the US with a mission of “building better and free systems for use in libraries” and contains useful information on developments, mainly in the US, for OSS and libraries. Also in 1999 work began in New Zealand on the first OSS LMS, Koha\(^6\), which has, according to the Koha developers wiki\(^7\), been implemented in various types of library in the following geographic areas: Africa (9); Asia (30); Australia and New Zealand ((16); Canada and the US (34); Central America (1); Europe (37); and South America (7). Unesco continues to support OSS and its portal covering OSS and digital libraries\(^8\) has links to 13 software systems, including Koha. Another OSS for LMS is Evergreen\(^9\), developed for the Public Information Network for Electronic Services (PINES) in the US state of Georgia which comprises 270 libraries, a collection of eight million items and 1.5 million borrowers\(^10\). In April 2007 it was announced that all public libraries in British Columbia, Canada will adopt a phased implementation of Evergreen in a system to be known as BC PINES. Marshall Breeding, a renowned US commentator on LMS, first wrote about OSS for LMS in 2002 and updated this in 2007 with information on Evergreen and Koha\(^11\).

In the UK many library and information professionals are becoming familiar with OSS for applications such as developing institutional repositories with DSpace\(^12\) or Eprints\(^13\), or for helping to populate course management or e-learning systems run using Moodle\(^14\). Use of OSS for LMS is more limited, although there are some examples. For instance, Handsworth Grammar School in Birmingham has been using Koha since October 2005 following a variety of problems (including lack of support,
difficulties in implementing backup procedures) as well as the high annual cost for maintenance of the previous commercial LMS. In the health sector, examples of Koha users include CAMLIS (Complementary and Alternative Medicine Library and Information Service) at the Royal Homoeopathic Hospital, London as well as the NHS Eastern Counties Library and Knowledge Services Alliance (ECLaSKA).

ECLaSKA reviewed LMSs in 2006 looking for a system which represented good value for money, affordability, flexibility and was in line with government policy. With funds from the National Library for Health a feasibility study was carried out to investigate the use of Koha and in 2007 a project plan was set in place which could involve all the 30 NHS libraries in the East of England (if they so wish) using Koha. Advice on the use of OSS in further and higher education in the UK can be obtained from OSSWatch.

OSS certainly has benefits – but there are also challenges in adopting this approach for an LMS. A certain amount of technical expertise is usually required and staff with such expertise may well be in demand and so may not stay working in the library or information units for too long. One solution is for the library to buy in specialised support and details of such companies providing support for Koha are given on its website. CAMLIS is being implemented using one of these, Turo Technology, and ECLaSKA is using LibLime for some of its development work.

The views of LIS professionals regarding OSS and LMS vary – as was evidenced in a recent ‘flurry’ of e-mails on this topic posted on the lis-pub-libs on JiscMail in August 2007. A doctoral student at the University of the Punjab in Lahore has been gathering data from LIS professionals around the world on their views of the use of OSS in libraries. For those looking for a new LMS in 2007 an OSS approach could be considered.

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