The Quest for the Holy Grail: Too Many ERM Systems Are Not Enough!

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The Quest for the Holy Grail: Too Many ERM Systems Are Not Enough!

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Abstract

Combining punctual statistical data compilation, access to real-time order and payment information, and harmonious workflow and reporting tools in one place has long been the Holy Grail for libraries seeking a reliable means for tracking costly electronic resources. This is the tale of two academic libraries that have adopted very different types of electronic resource management systems (ERMS) to attain these goals. This proceeding will provide complementary case studies of the implementation process at Binghamton University where two commercial ERM systems are used, and at The University of Texas at Tyler where an open source ERM is utilized.

Does the Grail Exist?

Historians have long questioned the existence of the Holy Grail. As electronic resources continue to proliferate, we librarians also find ourselves pondering a similar question with regards to the existence of an effective management system that will allow us to assert effective control over e-journals, e-books, digital objects, etc. There are many options, but which one will best serve our purposes?

A Tale of Two Commercial ERMS: Binghamton University, SUNY

Context is key in determining which Electronic Resource Management Systems (ERMS) to select and implement. Obviously, this requires defining who we are as an organization and what our goals are. What types of education programs do we offer? What are the needs of those we are serving, that is, students, faculty, staff, and public patrons? How do we want to accomplish the tasks necessary to effectively manage the electronic resources on which we spend the bulk of our acquisitions budget?

As the premier public university of the Northeast, Binghamton University, State University of New York (SUNY) has an enrollment of approximately 15,000 students with programs offering undergraduate, graduate, and doctoral degrees. The scope of the University Libraries' collection consists of 2.4 million print volumes, 93,414 print journals, and over 300 databases as well as a multitude of content held in other formats, including audiovisual and locally created digital objects. Collection management goals focus on supporting the curriculums of accredited programs in Arts and Sciences, Community and Public Affairs, Computer Science, Nursing, Education, Management, and Engineering, among others.

Hired as the new Electronic Resources Librarian in December 2012, I was charged with identifying local staff information needs, workflow gaps, and existing electronic resource management practices. To hedge our bets during the assessment process, I conducted multiple interviews with staff from Public Services, Technical Services, Library Technology/Web Services, and Administration to ascertain each audience's information needs while setting up several trials for different ERMS products, both commercial and open source. Technical skill levels vary from department to department as do information needs. Technical Services possesses expertise with ALEPH, monitoring billing cycles, and tracking statistical usage details while Systems staff is adroit with e-resource set up and troubleshooting. The bibliographers in Public Services are familiar with faculty and curriculum demands, spending a great deal of time vetting and marketing appropriate resources.

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Members of the Public Services, Technical Services, and Library Technology/Web Services uniformly expressed strong interest in creating a central repository that could effectively support management of the entire e-resource lifecycle. Based on the aggregate feedback of staff interviews, live demonstrations, and trials, all involved parties agreed that the ERMS should include tools to facilitate and track collaborative interdepartmental workflows and have the ability to generate statistical, cost-per-use reports to help affect collection management objectives and budget goals. Bibliographers wanted the ability to formulate simple queries and generate reports that can be easily formatted to share with nontechnical teaching faculty.

Furthermore, library administrators emphasized their preference to have an electronic management system that could be easily mapped for future data migrations. At SUNY it is not a matter of if we will have to move to another ILS but when, so it is absolutely necessary to ensure that data input into the ERMS can be easily exported into whatever new Unified Resource Manager is chosen to replace the ALEPH legacy system in the future.

Prior to my arrival, the sole electronic resource system in use was EBSCO's ERM Essentials which had not yet been fully implemented. The cumulative responses of staff polled revealed several objectives that we subsequently adopted as benchmarks when comparing potential ERMS during the trial phase. The lengthy menu of functional requirements mandated by trial participants included:

- Support for acquisition and management tasks pertinent to licensed e-resources, including those supplied via consortia arrangements;
- Providing descriptions of resources at the package (database) level and contents (e.g., e-journals) as they relate to the package record;
- The ability to encode and publicly displaying licensed rights relevant to e-reserves, course packs, and interlibrary loan;
- Tracking mechanisms for electronic resources from point of order through licensing and final access;
- The provision of real-time updates concerning changes to data providers and access platforms;
- Compiling contact information for all content providers, logging problems with resources and providers;
- Creation of customizable e-mail alerts that would trigger notices to users when actions are expected or required;
- Ability to embed files and/or link license documents to resource records;
- Facilitate retrieval of COUNTER and non-COUNTER usage statistics with the option to enable autoharvesting for SUSHI-compliant vendors; and
- Logging technical access issues for resources and providers.

As mentioned previously, Binghamton University already subscribed to the ERM Essentials service. However, given the rapidly evolving ERMS landscape in conjunction with the hiring of new personnel, library administrators wanted to reassess the viability of the existing ERMS as well as other systems. Following several in-depth interviews, vendor demonstrations, and hands-on trials, staff consensus was that although ERM Essentials and 360 Resource Manager with 360 Counter are quite similar in terms of functionality, all user audiences stated a preference for the Serials Solutions product interface, citing it as more intuitive to navigate.

While the ability to generate statistical usage reports and cost per use for resources were cited as top priorities, we need to remember that not all content providers or libraries utilize the same counting mechanisms. Plus, our situation is unique, and we need to be realistic and progress from that position rather than set an impossible benchmark for ourselves when it comes to managing our online collections. And because time is short, we cannot track down every bit of quantitative data associated with any given resource or title. There are important qualitative

issues that must be considered and weighted accordingly to maintain a proper sense of where the resources being evaluated falls in the spectrum.

EBSCO remains our primary subscription agent, and we still harvest some data from EBSCOnet and ERM Essentials, including multiple year pricing history with fund codes and general license agreement information, so we have retained the service for the time being. Binghamton University was already using Serials Solutions products (i.e., 360 Core, 360 Link) due to a wider SUNY system decision and has been tracking its libraries' holdings using 360 Core since 2006. The staff enthusiasm for one system over the other ultimately tipped the balance toward subscribing to 360 Resource Manager with 360 Counter.

Both ERM Essentials and 360 Counter offer an add-on service by which usage statistics are collected biannually by vendor staff. EBSCO calls this service its "Usage Consolidation" service while Serials Solutions has dubbed it the "Data Retrieval Service" (DRS). The primary difference is pricing. EBSCO provides a set number of platforms for a fixed price and then there is an additional charge for any platforms over that number. Serials Solutions's DRS has no set cap for the number of platforms.

As the Electronic Resources Librarian, I undertook the daunting task of hunting down the numerous spreadsheets and other e-resource documentation scattered across departments, available on the staff intranet, the library shared drive, and stored on individual staff computers. My efforts were aided by the newly formed ERM Working Group comprised of representatives from each department. The group works together to address policy issues regarding e-resources, identify workflow gaps to eliminate duplication of efforts, and decide what kinds of transactions should be counted and why.

In order to efficiently populate 360 Resource Manager and 360 Counter, we found it helpful to review all local documentation to ascertain the currency of flowcharts, checklists, and other tools. Our findings helped inform us of areas for possible improvements as well as ideas for staffing different phases of our implementation. During the collocation process, I also surveyed available vendor training tools to verify how our internal procedures might dovetail and mesh with the documentation provided by the ERMS vendors. Both EBSCO and Serials Solutions happen to have excellent documentation that can be incorporated into local workflows.

Population of the Data Retrieval Service form started by manually keying the log in credentials we use for retrieving statistics from publisher web sites. Now the DRS form is exported as a CSV file and revised by merging it with local spreadsheets as additional administrative details are uncovered or change. The updated form can then be uploaded into 360 Counter or Vendor Metadata Statistics modules according to standardized report status. Enabling SUSHI in 360 Counter for vendors offering the autoharvesting service was fairly simple with the process requiring us to obtain Requestor ID and Customer ID from the vendor to add to the DRS form and check off which reports to receive. Another useful aspect of 360 Counter is that if a content provider is not adhering to COUNTER and/or SUSHI protocols, then the entry will be grayed out and frozen in the DRS form. In these instances, Serials Solutions staff works with the vendors to rectify the situation.

Counting Online Usage of Networked Electronic Resources (COUNTER) is an international initiative designed to improve the reliability of online usage statistics and is supported by the vendor, intermediary, and librarian communities. The COUNTER Code of Practice is a publication that defines the standards and protocols that define report types and specify their content, format, delivery mechanisms and data processing rules. The Serials Solutions ERMS accepts JR1, JR1a, JR2, DB1, DB2, and DB3 reports as per COUNTER Release 3 but is not yet accepting Release 4 (the most current release). This is expected to change in December 2013/January 2014 with the advent of Intota Assessment.

Many vendors offer both COUNTER and non-COUNTER reports, so it is essential to know what types of reports your content providers supply to their customers. In 360 Resource Manager, the

Vendor Metadata Statistics, 360 Usage Statistics, and 360 Counter modules allow users to differentiate between standards and assign data sets by provider, database, and resources as necessary and decide which other conditions, such as file formats, frequency, and delivery mechanisms, must be satisfied in gathering usage metrics from all available sources. The 360 Usage Statistics automatically draws and stores search data gleaned from the 360 Core, 360 Link, and 360 MARC Updates services to which we also subscribe.

To date, only 360 Counter can be used to generate cost-per-use statistics, but there is a chance that this functionality may spread to other reporting features since the PivotLink software currently underpinning the reports infrastructure will soon be replaced by Intota Assessment. Other popular features offered by the present 360 Counter configuration will most likely remain unchanged, such as the ability to batch load statistical spreadsheets and one-click access to a comprehensive report load summary page.

According to Serials Solutions representatives, there are no plans to alter how users can view the error logs for reports that refuse to upload due to COUNTER formatting errors, but added functions like being able to edit reports on the fly without exiting the module can be expected. Prefiltered reports, including accreditation reports, will be retained and possibly expanded according to customer enhancement requests. For examples of customized consolidation reports, canned reports, and accreditation reports, please refer to the presentation slides available on the 2013 Charleston Conference web site (http://www.katina.info/conference/2013-conference-slides/).

Here at Binghamton University, we are very pleased and excited by the progress that we have made thus far in implementing our new ERMS. Although a lot of work remains, we have set clear priorities for effective triage in continuing full-scale population of the 360 Resource Manager. We are fortunate to have a talented in-house programmer who is working on a SQL script that will allow our cost data to be maintained in the ERMS by automatically extracting it from ALEPH and uploading into 360 Resource Manager. In the meantime, we are taking a project-based approach to ensure that all license details and historical cost data are accurately entered in the system. Several staff members have begun utilizing the ERMS, and we eagerly anticipate the number of regular system users to grow significantly following the onsite consultation visit that will take place on November 21–22, 2013, under the guidance of an experienced Serials Solutions' trainer. These sessions will be followed by additional group and individual training that will be customized based on staff needs.

Working with Open Source: University of Texas at Tyler

The University of Texas at Tyler (UT Tyler) is part of the University of Texas System, which consists of nine universities of higher education and six health institutions (The University of Texas System, 2013). Tyler is located in the piney woods of east Texas, and the university is housed on a park-like campus of 259 acres with about 7,000 enrolled students. The student population consists of mostly undergraduates, but UT Tyler does offer 43 master's programs and 2 doctoral programs (UT Tyler, 2001).

Our search for the perfect electronic resource management system began when the former Electronic Resources Librarian requested help creating a Microsoft Access database to track renewals and invoices instead of the spreadsheets and paper files she was using at the time. We have over 200 vendors, about 160 databases, more than 45,000 e-books, and more than 200,000 electronic journals. After some deliberation over features and functionality, and considering the magnitude of what needed to be tracked, it was determined that what the system actually needed was an electronic resource management system (ERMS).

The technical services department at UT Tyler consists of two professional librarians; two library assistants; and two part-time student workers to manage systems, library technical support, electronic resources, cataloging, acquisitions, and collection development. The small staff and variety of responsibilities meant limitations on

time and resources for an ERMS search and implementation. As the two professional librarians in the department, the project ultimately fell to us. Working with a small staff can be very limiting in terms of the time available to commit to a large-scale project like an ERMS implementation, but it can also be freeing. While there are less staff resources devoted to the project, there are also fewer users and consumers of the ERMS to consult.

The ERMS system that we selected and implemented was CORAL. CORAL is an open source ERMS, and the decision to use CORAL was influenced by the overarching movement to open source at our library. At UT Tyler we implemented five open source systems within 2 years in a move largely motivated by budget cuts. In the fiscal year beginning in 2010, University administration asked the library director to cut a substantial amount from the ongoing budget without the loss of any staff. Transitioning to an open source ILS was the only operating expense large enough to meet the budget demands and the only change we could make without negatively affecting the students by reducing content or services. While preparing to migrate to the Koha ILS, the CORAL open source ERMS was selected and implemented.

Money is not the only reason to consider open source. There is a saying in the open source community that it is free as in lunch but also free as in speech. With some proprietary systems, users are forced to work around a product designed as a one-size-fits-all solution. The development cycle can be slow, and there is not always a clear way for customers to contribute or influence the direction of development. In contrast, open source software usually has a quick development cycle and always includes the ability to customize the software as needed without waiting for enhancement requests. Users have the right to implement the software however they like, improve it, and share it (Bianchi, Duncan, & LeMaistre, 2013).

Changing Expectations

The freedom to develop the system is key because while CORAL met our initial needs, our expectations continued to evolve. At the beginning, all we needed was a system to track renewals, but soon the pressure to collect and analyze the usage metrics of electronic resources became increasingly important.

Before the update to CORAL Usage, we kept statistics in the Resources module on the Attachments tab. We compiled the various comma-separated text files in one multitab Microsoft Excel spreadsheet and attached it to the applicable CORAL resource record. At the time, it seemed like an appropriate solution because it was similar to the former system of saving the statistics on a computer but with the added element of having them located within the ERMS and accessible to other staff and librarians.

Eventually we began to need something more than a storage solution for statistics. The process of manually visiting each vendor web site and downloading and compiling the statistics was incredibly cumbersome. The SUSHI standard which was increasing in popularity offered a practical solution to that.

Ideally the system would also be able to compare and compile statistics. Another problem with separate spreadsheets stored as attachments is that the data were siloed. There was no easy way to compare full-text downloads in EBSCO to those in ebrary. We spent a lot of time compiling spreadsheets that would compare data across platforms, but by the time they were deliverable, the statistics were often already outdated.

Unfortunately, the existing CORAL Usage Statistics module was not there yet. While it had a fascinating reports option which would compare and compile statistics across platforms, at the time CORAL could only ingest JR1 and JR1a reports. Information from database and book reports was also essential to our workflow of electronic resource analysis. On top of that, the only method for getting those statistics into the database was through a manual file import screen.

Hiring a Developer

The solution to our problem was to hire a developer to code the features we needed. We

had some experience with open source development with Koha, doing in-house bug fixing and being a "vendor" for a student computer science capstone project. This would be the first time to hire out for development, and it was due to not having the time or in-house skills to create what was wanted, but instead having end of year funds.

In May 2013, there was some discussion flying about on the CORAL listserv about the lack of compliance with COUNTER Release 4 and mention of adding SUSHI-harvesting functionality to CORAL.

Following this discussion, we reached out specifically to Benjamin Heet, formerly at Notre Dame University Libraries, now the Electronic Resources Librarian at the North Carolina State University Libraries and one of the original developers of CORAL. Ben recommended Robin Schaaf from the University of Notre Dame who was also an original CORAL developer and was willing to take on some contract work outside of her duties at the University of Notre Dame Libraries.

Having two of the original developers at the table was an ideal starting point, but some internal roadblocks had to be addressed before the work could get started. The end of the fiscal year was fast approaching, and by that time a purchase order would have to be created and a deliverable would need to shortly follow. Three months is sufficient time to order almost anything normally acquired for the collection, but to pay for a system enhancement that was yet to be designed or implemented was another story. Luckily Robin was willing to devote many a night and weekend to the task, and we were able to circumvent the time-consuming request for proposal (RFP) process by managing our expectations and keeping the price paid for the development below the minimum price that would require an RFP. In addition, having a trusted developer who understood CORAL, both from a coding and end-user perspective, allowed us the freedom to set three broad priorities rather than detailing every aspect of the desired functionality.

After some discussion with Benjamin Heet, he was able to summarize our three priorities as follows. This exact text was used to hire Robin and guide her in the development work.

- Top Priority:
    - Compliance with COUNTER release 4 for JR1, JR1a, DB1, BR1, and BR2 reports (this is the latest release, caused some format and data changes to the reports)
    - Add support for DB1, BR1 and BR2 reports
    - Include ability to export these reports in the reporting add-on
- Second Priority:
    - Inclusion of SUSHI-harvesting capability (perhaps using the open source SUSHI harvester recently discussed on the discussion list)
- Third Priority:
    - Add support for JR2, DB2, and BR3 reports (turn-away reports)
    - Include ability to export these reports in the reporting add-on

Ultimately there was only time for Robin to complete priorities one and two. You can view a demonstration of the completed usage statistics module in UT Tyler's institutional repository (Duncan & LeMaistre, 2013). Rather than have Robin complete the third priority, we asked her to push the code to the community.

Lessons Learned

This was our first time paying for development work, and we are pleased with the results. Working with an experienced developer was a positive experience we would like to repeat, but there are also some things we would do differently in the future.

First, we would have scheduled check-ins. Some technical difficulties at the beginning of the project prevented Robin from knowing that we

had everything in place for her to get started. Likewise, we did not know that she had not already begun work. If we had scheduled check-ins, we would have been looking for communication from one another rather than waiting patiently for a response.

Second, next time we would include support and installation of the code after development. Robin has been generous with her time and available to us with some of the issues we had getting started, but that was not part of the work we hired her for. We still have one outstanding bug with the code, and the community is working on it, but in the future we would want to ensure that some postdevelopment support was part of the contract.

Finally, we would allow more time for testing. The testing portion of the development was rushed due to end of year financial deadlines. If we had allowed more time, we might have discovered the few bugs that were fixed after the release of code to the community.

Overall we are satisfied with the improvements to the usage statistics module, but we are still searching for the Holy Grail of Electronic Resource Management solutions. Some of the development we would like to see in the future are more enhancements to the report options, some integration with our open source ILS Koha, and integration with some of our other systems that would make CORAL more of a one-stop shop for electronic resource management. We do not think we will ever find the Holy Grail because as systems improve our expectations also rise, but with open source we have found a system that can rise with them.

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