

# ELECTRONIC RESOURCES MANAGEMENT

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By Richard W. Boss

Electronic resources management (ERM) refers to the activity of managing data and metadata about the electronic resources to which libraries subscribe for the use of their staffs and patrons. The resources include citation databases, electronic journals, and full-text books and reference tools. For an increasing number of libraries the task is very time consuming because scores, or even hundreds, of resources are involved. Some libraries spend more than half of their acquisitions budgets on electronic resources.

There are many citation databases that not only index and abstract journal articles, but provide linkages to the text that is cited. Some publishers offer packages that include many electronic resources and some aggregators offer electronic resources from several different publishers. Many of these electronic resources are available in multiple packages and most are available as individual subscriptions. The management of these electronic resources is more complex than the traditional acquisitions activity of libraries because unwanted duplication is costly and complex licensing agreements are involved.

## Electronic Resources – A Management Headache

When libraries had to manage just a few electronic resources, they maintained the subscription records and payment histories in their integrated library systems and the details about trial subscriptions, license negotiation, license terms, and use restrictions in paper files. By the mid-nineties the number of electronic resources that required managing in some libraries became enough of a headache that they created databases to manage their licenses. While that improved control over the licenses, it increased the amount of duplication in data entry as yet one more system was implemented.

Shortly after the turn of the century, a number of major academic research libraries became the in-house development of electronic resources management systems. While they shared information with one another, the development costs for each library were high. For that reason, some libraries turned to the vendors of their integrated library systems for “turnkey” solutions. Among the first of these was the University of Washington

Library. It asked Innovative Interfaces for an ERM (Electronic Resources Management) product. Innovative delivered a product in 2003 and began actively marketing it both as a standalone system and as a fully integrated component of its Millennium integrated library system.

A vendor of integrated library systems is a logical supplier of an ERM product because many of features of such a product are inherent in the technical services modules of an integrated library system and much of the information about the electronic resources is in the patron access catalog and/or in the library portal that is now part of many systems.

## **Requirements for an ERM**

There appears to be consensus that the following information is required for good management of electronic resources:

### **Name of the electronic resource**

The name should be that on the license, but variants of the name, including the name of the print version, if any, should be included.

### **Content**

A description of the content should include the breadth and length of coverage. The extent of the backfile that is available, but not included in the license, should be identified.

### **Producer, licensor, and aggregator**

The producer (e.g., the creator) of the electronic resource should be identified, as should the licensor (e.g., the party controlling the terms of use) and aggregator (e.g., the party who combines various products into a package or suite). For example, the ABI Inform product is licensed by ProQuest, but it is accessed through OCLC, an aggregator. Thus, the aggregator is the provider to the subscriber, rather than the producer or the licensor.

### **Packaging**

Electronic resources that come from a single source may be combined in packages. Titles from multiple sources are also frequently packaged. A library needs to be able to access records by either the name of the electronic resource or the package of which it is a part. As packages, especially packages of journal titles, can have a great number of resources, it is important that it be possible to import information from external sources that itemize package content.

### **License duration and renewal alert**

The beginning and ending dates of the license need to be included, and there should be a renewal alert a fixed number of days prior to expiration. Ninety days is the minimum.

### **Copy of contract**

An electronic copy of the vendor's license should be part of the record, preferably a machine-searchable version that can be searched by keyword. That makes it possible to determine whether something the library wishes to do is allowed under the terms of the contract, promptly respond to questions about the contract, and edit the contract prior to

entering into negotiation for a contract extension or revision.

### **Price and payment terms**

The subscription price (or other basis for pricing) should be included, along with the payment schedule. The field should permit a description of the terms on which the price is based: single site license, site license for each branch or unit, population-based price, charge per use, charge based on overall budget, tie-in with print material, charge per concurrent user, etc.

### **Payment history**

Payment dates, amounts, invoice numbers, and voucher or check numbers should be part of the record. A library should have the option to record internal fund code data so that electronic resources can be properly charged to the appropriate units from year to year.

### **Access method(s) and resource link**

The access method(s) should be spelled out, and the URL should be included. Separate URLs or a URL and a referring URL and access method descriptions may be needed for resources accessed both locally and remotely.

### **Access restrictions**

Is anyone in the library able to access the electronic resource from a workstation? With a registered IP address or through a server? Is the library limited to a specific number of simultaneous users and, if so, how is the number measured? Are remote users who have library ID numbers able to access the electronic resources? It may be necessary to have a field where IP addresses for servers or individual authorized in-library branches or units can be listed.

### **Authentication methods**

Since vendors and libraries sometimes share authentication responsibilities, it is important to indicate all of the authentication methods in use for the database, such as: local users by IP address, remote users authenticated by the vendor using patron barcode number, or by the library using patron barcode number.

### **Vendor contacts**

Names, addresses, phone numbers, and e-mail addresses of sales, customer service, and technical support contacts should be listed with fields to add names for each category, where necessary.

### **Contact history**

All contacts regarding a database or the license should be recorded, including date, issue, and resolution.

### **ERM administrator's record**

It must be possible for the ERM administrator to record decisions with regard to the library profile, display preferences, statistical compilation preferences, and other local options that may be offered by the vendor and exercised by the library.

### **Statistics**

The ERM product must accommodate the fact that vendors provide use statistics in a

variety of ways, including hits, page views, searches, sessions, length of time users were connected to the database, searches per periodical or resource title, items viewed, items printed or e-mailed, and other indicators, including local and remote usage. In preparing reports that compare database usage statistics, it is important to compare all electronic resources using the same indicator and to footnote numbers that do not represent the indicator used elsewhere in the report.

A major step in the improvement of usage statistics for electronic journals was made in January 2003 when the COUNTER (Counting Online Usage of Networked Electronic Resources) Code of Practice for Journals and Databases was released. It set a uniform standard for reporting usage statistics. Most vendors of electronic journals now meet the COUNTER requirements. An effort is now underway to develop a Code of Practice for Book and Reference Works. Even after COUNTER-compliance became widespread, libraries found that combining information from multiple sources was time consuming because it involved going to a number of vendor Websites, locating the desired statistics, and either displaying them or downloading and Excel file.

SUSHI (Standardized Usage Statistics Harvesting Initiative) is the promised answer for electronically merging and analyzing usage data from multiple sources without accessing each one separately. SUSHI was released by NISO as a draft standard for trial use in September, 2006 and was scheduled to become NISO Z39.93 before the end of 2007. The standard defines an automated request and response model for the harvesting of electronic resources usage data utilizing a Web services framework that can replace the user-mediated collection of usage data report. It works with COUNTER. For more information, see [http://www.niso.org/committees/SUSHI/SUSHI\\_comm.html/](http://www.niso.org/committees/SUSHI/SUSHI_comm.html/)

## **Use statistics and cost per use**

It should be possible to calculate the cost per use of an electronic resource by dividing the annual subscription price by the number of uses of an electronic resource. While that does not show whether the database was useful, it does help to identify expensive electronic resources. For example, one library found that its electronic resources cost as little as \$.19 and as much as \$6.30 per use. It was then able to review all of those that cost more than \$1.00 per use with a view to promoting use or canceling in favor of a more suitable electronic resource. Usage data is generally available from the database provider or aggregator. With SUSHI, the task of importing the data into an ERM is simplified. The next step is making it possible to combine usage and cost information to determine the cost per use.

## **Who sees what?**

The person(s) responsible for managing the licenses for electronic resources must have access to all of the foregoing information, but parts of the information should be available to others. Public services staff and patrons should be able to see journal holdings statements, access URLs, printing permissions, interlibrary loan policies, and other information that will help them access electronic resources. Multiple layers of security should be provided through passwording.

## Requirements development

Libraries that are developing requirements for an ERM product should consult: "Report of the DLF Electronic Resource Management Initiative (DLF ERMI)--Appendix A: Functional Requirements for Electronic Resource Management" The requirements, which were adapted from requirements developed at Harvard and MIT are more extensive than what has been described in this paper, and are the most useful available as of early 2007. The URL is <http://www.diglib.org/pubs/dlfermi0408>

## Offerings of Integrated library system vendors

As of early 2007, only Ex Libris, Innovative Interfaces, and VTLIS had completed an ERM product and installed it at a number of libraries. Each substantially incorporated all of the data elements itemized herein and the requirements developed by DLF ERMI. The greatest shortcoming of the products is the difficulty of managing use statistics and determining the cost per use. All three vendors have announced their support for COUNTER and SUSI, and at least one had set the determination of cost per use as a development goal as of early 2007.

The Ex Libris ([www.exlibrisgroup.com](http://www.exlibrisgroup.com)) product is known as Verde. While designed to work with its ALEPH integrated library system and its SFX Link Resolver, it can be interfaced with a range of applications, including other acquisitions, cataloging, patron access catalogs, and metasearch tools using Web Services.

The Innovative Interfaces ([www.iii.com](http://www.iii.com)) product is known as Electronic Resource Manager. It is available both fully integrated with Millennium and as a standalone product that can be interfaced with other systems.

The VTLIS ([www.vtls.com](http://www.vtls.com)) product is known as Verify. It is available integrated with the Virtua integrated library system or as a standalone system.

## Alternatives to vendors of integrated library system

The Colorado Alliance (<http://grweb.coalition.org>) offers a hosted solution to help librarians manage subscriptions to electronic resources. Known as "Gold Rush," it has fewer features than the products offered by the aforementioned vendors of integrated library systems. One of its most attractive features is tool to compare database content so that choices among providers that have similar offerings can be made and duplication can be minimized.

Ebsco Information Services ([www.ebsco.com/home/ejournals](http://www.ebsco.com/home/ejournals)) also offers features that help with e-journal management tasks for the more than 40,000 unique titles in 525 databases and e-journal packages available through it. Ebsco supports COUNTER and SUSI.

Serials Solutions ([www.serialssolutions.com](http://www.serialssolutions.com)) offers ERMS (Electronic Resource Management System) as a hosted solution. It is tightly integrated with its resource discovery (link resolution) service, but it can be used with federated searching and link

resolution products from other vendors. The vendor has committed to the support of COUNTER and SUSHI.

## ERM Product Pricing

The most common basis for pricing is on the number of electronic resources being managed. However, most prices are negotiated when a library is particularly large or small, when a consortium is the licensee, or whether the software is installed in the library or is hosted at the vendor' ASP (Application Service Provider) facility.

When a capital outlay is involved, pricing usually begins at \$20,000 to \$30,000 for year one. This approach is appropriate for libraries with scores or hundreds of electronic resources.

When a hosted solution is pursued, the minimum cost is \$4,000 per year for Gold Rush. The cost per library in a consortium drops as the number of participating libraries increases. The prices for hosted solutions from other vendors factor the number of electronic resources managed and/or library budget into the pricing.

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