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TOPIC: FUTURE OF LIBRARY SYSTEMS

THE FUTURE OF LIBRARY SYSTEMS:
LIBRARY SERVICES PLATFORMS

ALMA AT PURDUE

OCLC'S WORLDSHARE
MANAGEMENT

THE ORANGE COUNTY LIBRARY
SYSTEM ENVIRONMENT

KUALI OLE: A COLLABORATIVE
COMMUNITY MODEL

HARD CORE: NOT ALL
USEFUL STANDARDS CATCH ON



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Hard CORE: Not All Useful Standards Catch On

CORE—the acronym stands for Cost of Resource Exchange—was a standards initiative, under the National Information Standards Organization (NISO) umbrella, that took place between 2008 and 2010. CORE was designed to facilitate the transfer of cost, invoice, and related financial information from an integrated library system (ILS)—using data created in the acquisitions module—to an electronic resource management (ERM) system.

By transferring acquisitions-related data dealing with electronic resources to the ERM system, the ERM could combine that data with usage (and other) statistical measures to derive cost-per-use and related reports in the ERM. Although the original CORE specification derived from the need to transfer data from an ILS to an ERM, any two business applications could make use of this format for simple and efficient data exchange.

A little history

To properly describe why the CORE concept evolved as it did, it is useful to examine several trends that took place in the late 1990s and the early 2000s regarding the Integrated Library System and how it was structured and sold. Prior to the late 1990s, early ILS vendor products were tightly integrated. This meant that a vendor's OPAC, circulation system, acquisitions system, serials system, etc. were designed to work as a single unit and there was no reasonably simple way to tie together the best individual modules of different ILS to create a system that was truly the "best in class" for a specific library's needs. In essence, the library had to use the modules provided by the vendor, good or bad.

Early moves towards the "dis-integration" of the ILS began to take place around 2001-2002. Federated searching (metasearching) was introduced as a product capable of simultaneously searching an OPAC and any number of external databases, and reporting the results in a single "scoreboard." Early federated search projects often used screen scraping and proprietary search connectors, but

many took advantage of Z39.50 and leveraged related work on CQL (Common Query language) and SRW and SRU (search/retrieval via Web and search/retrieval via URL).

The NISO Metasearch Initiative—several working groups to devise protocols and standards relating to discovery, efficient searching, and standardized retrieval—took place in 2003 and a year or two after. The overall high-level result of federated searching was to promote the separation of the search process from the ILS—in short, to "outsource" certain aspects of searching. Federated search as a technique has continued to evolve in the last five to eight years and is now largely supplanted by the so-called Discovery Platforms, which act as large centralized indexes to data sources of all types (including library catalogs), then provide links to the actual information, wherever it may reside.

Another example of this "dis-integration" would be The Library Corporation's introduction of the Online Selection Assistant (OSA) in 2004. OSA is a web-based acquisitions, purchasing, and fund control system for libraries using any ILS. OSA was designed from the start to be agnostic; it works with and transfers data to and from a variety of ILS systems.

A final example of this dis-integration would be the rise of hosted (third party) serials management systems—in particular dealing with electronic serials content—such as those sold by Serials Solutions and its competitors. Although the Serials Solutions product line (and ownership) has changed over the last several years, their original products

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(link resolution, electronic package management, and bibliographic control of those complicated serials records) should be seen as third-party products that acted in concert with, but separate from, the ILS.

The move to ERM

As more and more library resources became available online, libraries had to adjust to that new content delivery mechanism. Libraries had been purchasing electronic resources, of course, for decades prior to the mid-2000s. Most academic libraries had subscriptions to search Dialog, SDC, or BRS databases as early as the mid-1970s. However, appearance of the World Wide Web, and vendor sophistication in understanding how to leverage the Web, enabled the move away from printed serial issues to digital availability of full-text articles as the ultimate product to be delivered to the library user.

Most online content vendors marketed their electronic serial collections (and continue to do so) in the context of packages. A single package might include anywhere from 50 to 5000 individual journal titles, with each title including one (or many issues) during the course of a year. A library would purchase the vendor serial packages; the content vendor, in turn, licensed libraries to use that content, subject to copyright, digital rights management, embargos, and various other factors affecting how their digital products might be used.

The Digital Library Foundation (DLF) commissioned a study on electronic resources in 2002 that resulted in the publication of a document entitled *Electronic Resource Management: Report of the DLF ERM Initiative* (the green book). The document, published in 2004, acted as a basis for the development of a number of ERM systems in the library industry (Endeavor's Meridian, Ex Libris' Verde, as well as products from EBSCO and Serials Solutions).

At a very high level the DLF ERM document dealt with the lifecycle of electronic resources, including how they were acquired, how they were implemented, what permissions users had, licensing, usage statistics, etc. It described hundreds of data elements (and their interactions) that had been identified as important to libraries in managing their electronic resources. A second electronic resource management initiative, known as ERMI 2, began not long after the original document was published to address certain topics and issues that had arisen since the original document was published. The ERMI 2 document was published in 2008.

Several standards initiatives can be tied (either directly or indirectly) to the ERM "green book" and the development and use of electronic resource management systems. Among these initiatives are:

- » **The Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol (ANSI/NISO Z39.93:2007)** defines an XML schema for a single straightforward way for publishers of electronic content to provide usage-based statistics (particularly COUNTER reports) to library customers and for libraries to easily harvest them.
- » **ESPreSSO (Establishing Suggested Practices Regarding Single Sign On, NISO RP-11-2011)** recommends best practices for allowing a user to sign on only once and have access to multiple resources across numerous servers at different points in the online searching and retrieval process.
- » **PIE-J (Presentation & Identification of E-Journals, NISO RP 16-201x)** is a forthcoming recommended practice that will provide guidance on the presentation and identification of e-journals— particularly in the areas of title presentation and

bibliographic history, accurate use of the ISSN, and citation practice—to facilitate online discovery, identification, and access for the publications.

- » **ONIX-PL (ONIX for Publications Licenses)** is a messaging format for the delivery of publisher licensing information in a transferable and machine-readable XML format.
- » **SERU (Shared Electronic Resource Understanding, NISO RP-7-2012)** is a recommended practice that articulates standard business practices that protect both the library's and the publisher's interests for the usage of e-resources without the need for a formal licensing document.
- » **KBART (Knowledge Bases And Related Tools, NISO RP-9-2010)** defines common, industry-wide best practices for the distribution of publisher metadata to knowledgebases used in OpenURL linking between search results and the referenced e-resources.
- » And of course, **CORE**.

Where did CORE come from?

As with so many ideas in technology, customer needs pushed the idea of an exchange of acquisitions data between an electronic resources management system and an ILS. Ed Riding (then an ILS product manager at SirsiDynix, now Collections Program Manager at the LDS Church History Library) and I (then the Verde product manager at Ex Libris, now VERSO ILS Product Manager at Auto-Graphics, Inc.) had a mutual customer. That customer was using the Dynix Horizon ILS but had chosen Verde as their ERM system. The customer wanted to retrieve statistical information on usage through COUNTER-formatted reports and ultimately harvest those reports automatically using SUSHI (when that protocol was complete.) However, the library's electronic resources purchasing data, and specifically the package pricing, resided in the serials management module of the library's ILS. Without having both usage data and pricing data in the same place, the library was forced to devise a series of complex spreadsheets and data exports to come up with rational cost-per-use measures. Although the use of cost-per-use data has been controversial in the past, it is one (of many) factors used by libraries to justify their continued subscriptions to electronic resources.

At the same time, Jeff Aipperspach (then a product manager at Serials Solutions, now with Avalara) had similar needs. Serials Solutions, a third-party, non-ILS vendor, needed an efficient way to extract acquisitions and invoice data from their customers' ILS systems and load that into the Serials Solutions servers to deliver similar cost analysis and to add value to the Serials Solutions electronic resource management system.

Jeff, Ed, and I proposed to NISO a new project, which we later named CORE, to facilitate the exchange of cost and invoice information. Our proposal identified three primary goals:

- 1 To develop and refine a list of data elements for exchange between the source and the target (the ILS and the ERM)
- 2 To create a transport protocol that would be lightweight and useful in transferring this data, both on a one by one (title) basis and in batch
- 3 To create use cases describing how acquisitions-related data transfer could be useful not just in exchanging data between ERMs and ILS, but also in distributing other sorts of acquisitions data (between, for example, a consortium central office and its consortium members)

A NISO working group was organized and began its work in mid-2008. The original working group comprised a number of ILS and serials management vendors and had broad representation from the academic library community. We published a draft standard for trial use (DSFTU) in mid-2009. The DSFTU described a compact and useful XML structure for the delivery and exchange of relevant acquisitions data. As is normal after the release of a DSFTU, the library world has a year to develop and test the usefulness of the standard—and report flaws and errors—before it goes out to a formal vote to approve the standard by the NISO membership.

So what happened?

Unfortunately, very little. The NISO CORE DSFTU was released in spring 2009, during the depths of the “Great Recession.” Many ILS software vendors were retrenching and reducing staff and were loath to take on new development projects at that time. Further, the DSFTU was released in the spring—about six months after most vendors had determined what that year's development roadmap and budget would be.

In addition, there was some resistance on the part of some ILS software vendors to develop interoperability software that would, essentially, give their customers flexibility to move away from that software vendor's own product or use separate vendors for ILS and ERM. By not building interoperable software, an ILS system could keep its own customers captive.

Finally, by that point, Jeff and I had each, independently, moved from our ERM-based employment to other positions. The critical mass supporting CORE was no longer in place to continue to promote it within our companies.

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What is the status of CORE today?

NISO, in addition to publishing formal ANSI-accredited standards, also publishes a series of Recommended Practices. These are considered to be guidelines or best practices and do not have the force of an official standard; they can be used or modified by users to meet their own specific needs. A decision was made by the Business Information Topic Committee, which oversaw the CORE Working Group, to publish CORE as a Recommended Practice (NISO RP-10-2010), rather than as a standard.

After publication of the Recommended Practice, the original NISO CORE Working Group disbanded. In its place, NISO created a Standing Committee, currently consisting of eight people, to support the Recommended Practice and answer questions about CORE. The Standing Committee is also charged with promoting the Recommended Practice and periodically assessing whether there is enough interest in CORE to restart the formal standards process.

For more information on CORE including the final Recommended Practice, FAQs, background information, the original working group roster, and the Standing Committee roster, visit the CORE project webpage.

Lessons learned

Since publication of the DSFTU in 2009, the electronic resource management world has continued to evolve. E-books—barely contemplated in the 2004 ERMI Report—have become a significant portion of library purchasing. E-books present an entirely different set of management challenges than did the package-based electronic serials that were the main concern in 2004.

ERMs as standalone products are also morphing. Ex Libris' Verde has become a portion of their new Alma Unified Resource Management (URM) product, which is described as “support[ing] the entire suite of library operations—selection, acquisition, metadata management, digitization, and fulfillment—for the full spectrum of library materials, regardless of format or location.” One can see this effort perhaps as an attempt to “re-integrate” the ILS (including the ERM module) after a decade of going the other way.

That said, I am still convinced that there is a need for a lightweight standard exchange mechanism that can deliver acquisitions invoice and financial data from the ILS to other applications. Perhaps, as e-books proliferate and are provided from multiple vendors, additional interoperability and data sharing requirements will be identified, for example, to

assess library effectiveness, justify the library's budget, and improve the library's collection for the benefit of the user. It is likely that in the next few years, as libraries again want to promote interoperability between disparate systems, CORE will be seen as the right tool for the job.

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CORE project webpage

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www.niso.org/workrooms/piej

ONIX-PL specification

www.editeur.org/21/ONIX-PL/

SERU project webpage

www.niso.org/workrooms/seru

SUSHI project webpage

www.niso.org/workrooms/sushi



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