DLF Electronic Resources Management Initiative, Phase II: Final Report
December 30th, 2008

Executive Summary

A second phase of the DLF's Electronic Resources Management Initiative was begun in 2005, with a focus on "data standards, issues related to license expression and usage data." Sub-projects of "ERMI 2" that were undertaken and completed by different groups include: careful review of the ERMI "terms of use" data elements and their mapping to the ONIX-PL format; review and recommendations for ILS/ERMS interoperability data standards; development and presentation of several "license mapping" workshops; and development and testing of the SUSHI ("Standardized Usage Statistics Harvesting Initiative") protocol. Work on these projects and further study of whether formal ERM data standards are needed will continue under the auspices of several NISO-related committees.

The final report of the DLF's Electronic Resources Management Initiative ("ERMI": http://www.diglib.org/pubs/dlf102/) was completed in August 2004 and proved instrumental in spurring development of ERM systems and services. The report indicated that some important topics had been addressed incompletely or not at all, due to time constraints and the need to see how important related work like COUNTER would develop. In addition, worthwhile opportunities for refining and extending the ERMI work arose following the publication of the report. A second project phase called "ERMI 2" was proposed and begun in late 2005 under the leadership of a steering committee chaired by Tim Jewell (University of Washington) that also included Adam Chandler (Cornell), Trisha Davis (Ohio State), Sharon Farb (UCLA), Norm Medeiros (Haverford and the Tri-College Consortium), Linda Miller (Library of Congress), Angela Riggio (UCLA), and Nathan Robertson (University of Maryland Law Library).

As proposed (see http://www.diglib.org/standards/dlf-erm05.htm), the focus of ERMI 2 was to be on "data standards, issues related to license expression and usage data" and was intended to achieve a number of more specific goals and produce a series of deliverables. Most goals have been substantially met, though not all have been achieved to the extent originally visualized. For example, while important deliverables were completed, others were reconceived, set aside or added as circumstances and needs shifted within a highly dynamic environment and marketplace. Importantly, the highly collaborative work undertaken has helped define clear paths for pursuing these goals in the future, and in this sense the work of ERMI 2 is complete.

The original ERMI project grew out of a "pre-standardization" workshop in May 2002 that was co-sponsored by the DLF and NISO, and both organizations have provided advice, resources and encouragement since then. As a DLF project, it drew heavily on the experiences of DLF member libraries that were dealing with e-resource management issues and benefited substantially from the federation's culture and history as an incubator of ideas. However, a key issue from the outset has been whether and how its documents might ultimately evolve into more formal and broad-based standards that could address the needs of a wider community.

An important focus of ERMI 2 has therefore been to explore ERM standards development and maintenance and to begin to devise a responsive ongoing plan for them. As a result of active and ongoing discussions with both NISO and DLF leadership, it now seems clear that while the DLF and DLF member libraries are likely to retain strong ongoing interests and make important contributions to ERM standards development and maintenance, NISO's structure and focus place it in the best position to facilitate them for the foreseeable future.

For the following brief final project summary, the original ERMI 2 goals are shown in italics, followed in plain typeface by discussions of what has been accomplished, learned, or proposed

on the basis of ERMI 2 work, along with links to information about related ongoing projects and the groups undertaking it.

Goal 1: Data Standards. *The following 3 activities are envisioned as closely tied to one another:*

a. Devise and offer the means for system vendors, publishers, librarians, and other interested parties to review the ERMI Data Dictionary and Structure documents in the light of actual implementation, practice, and experience to assess their adequacy; determine any required modifications; and issue any necessary revisions.

b. Using the ERMI Data Dictionary and its licensing data elements as a basis -- and working with NISO, EDItEUR and other appropriate publisher, vendor, and library groups on such related initiatives as ONIX for Licensing Terms -- establish practical, standardized ways of describing and communicating e-resource license provisions and related licensing metadata.

c. With NISO, the NISO/EDItEUR Joint Working Party, and other appropriate organizations and groups, undertake a review of options for establishing an organizational structure for addressing ERM standards issues on an ongoing basis.

Discussion: Data Standards Work Completed and Future Plans

a. License Expression. As the ERMI data dictionary was in development, work toward a more detailed and differently structured licensing data dictionary had been undertaken independently by EDItEUR as a component of its ONIX suite of messages. Discussions of possible areas of overlap and strategies for collaboration across the two projects started to take place during the initial ERMI project, which helped lead to formation of the NISO License Expression Working Group (http://www.niso.org/workrooms/lewg), co-chaired by ERMI steering group member Nathan Robertson and Alicia Wise from the Publishers Licensing Society. The group was given two charges: to monitor and make recommendations regarding the further development of standards relating to electronic resources and license expression, including but not limited to the ERMI and EDItEUR work; and to actively engage in the development of the ONIX license messaging specification.

By December 2005 a draft mapping of the ERMI license terms to the ONIX set (now referred to as the ONIX Publications License, or "ONIX-PL") was produced with partial support from the DLF. In 2007 an "ONIX ERMI Encoding Format" document that "looked at using a version of ONIX-PL to communicate ERMI license encodings from one library's ERMS to another's, or from an intermediary that offers an ERMI encoding service to a customer library" and an ONIX ERMI Mapping document that would help translate an "ERMI-encoded" license to ONIX-PL were produced. During the course of the analysis that led to these publications, some shortcomings of the ERMI approach began to become clearer and some suggestions for refinement put forward, while the power and flexibility of ONIX-PL framework for expressing license terms began to become more evident. NISO has consequently decided to contribute to further development and promotion of ONIX-PL by forming a new ONIX-PL Working Group.

Project Results: ONIX ERMI Encoding Format, Nov. 19th, 2007 (http://www.niso.org/workrooms/lewg/071119ONIX_ERMIencodingformat.pdf); ONIX ERMI Mapping, Nov. 20th 2007 (http://www.niso.org/workrooms/lewg/071119ONIX_ERMImapping.pdf)

Work to Be Continued by: NISO ONIX-PL Working Group: (http://www.niso.org/apps/org/workgroup/onixpl/)

b. ERMI Data Dictionary Review. As work on ONIX-PL progresses, questions regarding the value, status, and future of the ERMI documents as a de facto standard continue. To help address these questions and advance work focused on ERMI and other standards related to electronic resources, NISO's new Business Information Topics Committee (BITC) would like to better determine how vendors are implementing the ERMI data dictionary and related documents and how libraries are making use of these systems and services. Toward that end, a BITC sub-committee has been proposed to conduct a survey of the current and emerging place of "ERMI" within the broader ERM landscape. More specifically, the group will seek to understand the extent to which

- the ERMI documents have been incorporated into the design of current ERM products and services,
- libraries that have implemented ERMS are making use of ERMI data elements and values -- especially those related to license terms, and
- mapping between ERMI and ONIX-PL has been adopted by vendors and/or is likely to be used by libraries.

The outcome of this survey will be a recommendation from this sub-committee to the Topic Committee as to next steps, including whether the ERMI data elements or a similar standard set of data elements for electronic resource management in libraries should be further developed and maintained, and whether additional data standards are needed to support library e-resource management.

Work to Be Continued by: Subcommittee of NISO Business Information Topics Committee, membership to be determined.

c. Data Standards for ERMS/ILS Interoperability. The goal of this sub-project, formulated after the original project proposal, was to investigate interoperability between the acquisitions modules of integrated library systems (ILS) and electronic resource management systems (ERMS). A project group under the leadership of Norm Medeiros released a draft white paper on the topic in early 2007, followed by a revised version in early 2008. The first section of the paper features four case studies profiling the libraries' institutional environments, consortium considerations, systems architectures (ILS, ERMS, and link resolver), and electronic resource workflows. In addition to shedding light on these libraries' complex systems environments and staffing/workflow transition processes, the case studies yielded a set of seven acquisitions elements deemed critical for exchange between the ILS and ERMS, including purchase order number, price, start and end dates for the subscription period, vendor name, vendor ID, fund code, and invoice number. Each library identified the goal of automated generation of cost-per-use statistics as a catalyst for desiring ILS/ERMS interoperability, although the authors pointed to some challenges to accomplishing that.

The paper also reports on conversations held with product managers and other relevant staff of the leading ERMS. Those interviewed agreed that interoperability between the ILS and ERMS was strategically important, but difficult to achieve given the lack of an open identifier standard for e-resource packages and package constituents. Those interviewed disagreed about the future role of ERMS, with opinions ranging from the ERMS as a module of the ILS to the ERMS supplanting most of the features of the ILS. The paper concludes with a recap of the general value of ILS/ERMS interoperability and

some of the more significant barriers to achieving it. Finally, it is proposed that further discussions among ILS,ERMS, subscription agents and other stakeholders take place and focus on establishing agreement on a small set of elements for exchange and the development of standard identifiers. A detailed look at identifiers is included as an appendix.

Project Results: Norm Medeiros et al.: *White Paper on Interoperability between Acquisitions Modules of Integrated Library Systems and Electronic Resource Management Systems*
(http://www.diglib.org/standards/ERMI_Interop_Report_20080108.pdf)

Work to Be Continued by: NISO CORE (Cost of Resources Exchange) Initiative and CORE Working Group (http://www.niso.org/workrooms/core)

Goal 2: Professional Training in License Term Mapping.

Working closely with the appropriate groups working on the data standards issues mentioned above and building on the pilot ARL/DLF license language "mapping" workshop presented at the 2005 ALA Annual Conference, develop appropriate course materials and training opportunities to support the description and sharing of license information.

Discussion: License Term Mapping Work Completed and Proposed Future Action

While dozens of the data elements included in the original ERMI data dictionary dealt with "terms of use" from licenses, the data elements and proposed values had not been tested or widely used by libraries, nor had there been an effort to provide instruction and guidance in doing so. In 2006-2007, the DLF partnered with the Association of Research Libraries (ARL) to develop and present several workshops for mapping license language to Electronic Resource Management systems. Four workshops were presented, and the final project report cited below includes details about the curriculum and workshop handouts. It also provides an evaluative summary of the outcomes and recommendations for future efforts in license education and mapping.

Among the themes that emerged from the workshops were that mapping licenses is more difficult than it sounds (pointing to a need for simplicity in the mapping and records process), and that even relatively "simple" licenses carry with them many interpretation issues. The license mapping workshops also suggested that there is an urgent need for basic licensing education and that libraries have widely varying approaches to license interpretation. Until these issues can be addressed, agreement on license mapping codes will be difficult to reach.

Project Results: Trisha L. Davis and Diane Grover: *Professional Training in License Term Mapping to ERM Systems:*
(http://www.diglib.org/standards/ERMI_Mapping_Report_20080408.pdf)

Followup Work Proposed: That the DLF partner with other library associations, such as ALA/ALCTS, ARL and NISO, to offer licensing education.

Goal 3: E-Resource Usage Statistics.

Work closely with the Association of Research Libraries, Project COUNTER and other organizations and initiatives to further develop and refine requirements and data

standards related to vendor/publisher-supplied usage statistics within the ERM environment.

Discussion: E- Resource Usage Statistics.

The primary deliverable for this segment of ERMI 2 was development of "a protocol for automated delivery of COUNTER-compliant vendor usage data to ERM systems, and a demonstration of its use in practice." Envisioned as a way to dramatically reduce the time spent by library staff in gathering and reporting usage data, this idea and project was named SUSHI (for "Standardized Usage Statistics Harvesting Initiative") by its originators. The Initiative has been sponsored and supported by NISO, and co-chaired by ERMI 2 steering committee member Adam Chandler and EBSCO's Oliver Pesch – both of whom also serve on the COUNTER Executive Committee. Following an aggressive development and trial/testing process, SUSHI become an official NISO standard (ANSI/NISO Z39.93-2007) in late 2007, and will be required for COUNTER compliance under Release 3 of the COUNTER Code of Practice for Journals and Databases, set to go into effect in 2009.

Project Results: *Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol* standard (ANSI/NISO Z39.93): (http://www.niso.org/workrooms/sushi/)

Work to Be Continued by: SUSHI Working Group, same url as above.

Goal 4: Coordinate ERMI work with related initiatives*, including the joint DLF/NISO/Editeur License Information Exchange Standard Working Group and the proposed Institution Registry.*

Discussion: coordination with these and other initiatives and related work groups has been actively pursued throughout the project.

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