

INFORMATION STANDARDS QUARTERLY

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TOPIC: STANDARDS IMPLEMENTATION BENEFITS

NISO CIRCULATION
INTERCHANGE PROTOCOL (NCIP)
IMPLEMENTATION COST SAVINGS

SCHOLARLY iQ AND SUSHI
IMPLEMENTATION

BENEFITS FROM USING SERU:
A SHARED ELECTRONIC
RESOURCE UNDERSTANDING

INNOVATION AND
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- 11 Identify This! Identify That! New Identifiers and New Uses (NISO Webinar)
- 20 NISO Standards Update at ALA Midwinter 2012 (Dallas, TX)

FEBRUARY

- 8 Embracing the Cloud: Real Life Examples of Library Cloud Implementation (NISO Webinar)
- 22 NISO/DCMI Joint Webinar

MARCH

- March Two-Part NISO Webinar: Understanding Critical Elements of E-books: Standards for Formatting and Metadata
- 14 EPUB3: Putting Electronic Books into a Package
- 21 Find That E-Book—or Not: How Metadata Matters

APRIL

- 11 What to Expect When You're Expecting a Platform Change (NISO Webinar)
- 25 NISO/DCMI Joint Webinar
- 30 Tracking it Back to the Source: Managing and Citing Research Data (NISO Forum, Denver, CO)

MAY

- Two-Part NISO Webinar: Understanding Critical Elements of E-books: Acquiring, Sharing & Preserving
- 16 Can I Access the World? Involving Users in E-book Acquisition and Sharing
- 23 Heritage Lost? Ensuring the Preservation of E-books

JUNE

- 13 Making Better Decision with Usage Statistics (NISO Webinar)
- 21 NISO/BISG Forum: The Changing Standards Landscape (Pre-conference workshop, Anaheim, CA)
- 21-26 NISO at ALA Annual 2012 (Anaheim, CA)

AUGUST

- 8 Content on the Go: Mobile Access to E-Resources (NISO Webinar)
- 22 NISO/DCMI Joint Webinar

SEPTEMBER

- 12 Understanding Critical Elements of E-books: The Social Reading Experience of Sharing Bookmarks and Annotations (NISO Webinar)
- 26 Discovery and Delivery: Innovations and Challenges (NISO Webinar)

OCTOBER

- 10 MARC and FRBR: Friends or Foes? (NISO Webinar)
- 18-19 The E-book Renaissance, Part II: Challenges and Opportunities (NISO Forum, Boston, MA)
- 24 NISO/DCMI Joint Webinar

NOVEMBER

- 14 Beyond Publish or Perish: Alternative Metrics for Scholarship (NISO Webinar)

DECEMBER

- 12 Connecting the Dots: Constellations in the Linked Data Universe (NISO Webinar)

ISQ

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INFORMATION STANDARDS QUARTERLY (ISQ) is a publication by the National Information Standards Organization (NISO). ISQ is NISO's print and electronic magazine for communicating standards-based technology and best practices in library, publishing, and information technology, particularly where these three areas overlap. ISQ reports on the progress of active developments and also on implementations, case studies, and best practices that show potentially replicable efforts.

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STANDARDS IN DEVELOPMENT

NISO IS WORKING

to make electronic content more accessible.

Researchers and library patrons are increasingly expecting instant access to the information they need. While the availability of electronic content grows daily and standards such as OpenURL have drastically improved discovery, impediments still remain. At NISO, a number of current projects are underway to improve discovery, access, and delivery of content:

KBART: Phase II



PHASE I of the joint NISO/UKSG KBART (Knowledge Bases and Related Tools) project resulted in practical recommendations for exchanging metadata between content providers and knowledge base developers. These recommendations are intuitive, easy for content providers to implement, and easy for knowledge base developers to process.

PHASE II builds on that work to focus on the more advanced, complex issues that cause problems in this area. Learn how to implement the recommendations from Phase I and about the next stage of this work at www.niso.org/workrooms/kbart.

IOTA: Improving OpenURLs Through Analytics



IOTA is a two-year project to investigate the feasibility of creating industry-wide, transparent, and scalable metrics for evaluating and comparing the quality of OpenURL implementations across content providers. At this time, nearly 9 million OpenURLs have been analyzed from log files. The reports created from this analysis allow publishers to see where they can make improvements to their OpenURL strings so that the maximum number of OpenURL requests can be resolved—bringing more readers to their products. Visit openurlquality.niso.org to view the metrics and learn how to add your data to the project. Find out more at www.niso.org/workrooms/openurlquality.

Presentation and Identification of E-Journals (PIE-J)



Unless journal websites accurately and uniformly list all the titles under which content was published, user access to desired journal articles is considerably diminished. When journals change titles or publishers, their content must remain easily accessible. This working group will be developing recommendations that will provide much-needed guidance on the presentation of e-journals to publishers and platform providers—particularly in the areas of title presentation, accurate use of the ISSN, and citation practices—that will solve some long-standing concerns of serials librarians. See www.niso.org/workrooms/ejournalpresentation/ for more information.

Physical Delivery of Library Resources

Physical library materials are still abundant and the transfer of materials between libraries is increasing. The increased volume and costs of library delivery is creating a demand for more information about how to run efficient and effective delivery operations. This working group is developing recommended practices that focus on three key areas: the physical move, automation, and the management of physical delivery. While the recommendations are directed towards separately administered libraries, many of the recommendations will also apply to delivery between branches of a single library system. Find out more at: www.niso.org/workrooms/physdel.

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FROM THE EDITOR

Most *ISQ* readers are aware, at least in an abstract way, of the benefits of standards—among them, systems interoperability, faster time to market, improved productivity, and cost savings. But who among us couldn't use some help in explaining these benefits in more concrete ways to customers or suppliers or management or colleagues? In this issue of *Information Standards Quarterly*, we focus on several specific examples of the benefits of implementing standards, ranging from savings in staff time to improved customer service and a way to attract new customers.

MARY JACKSON (Auto-Graphics, Inc.) quantifies the productivity benefits of implementing the NISO Circulation Interchange Protocol (NCIP) standard and illustrates the savings with case studies and before and after workflow comparisons. She also shows how to use the online NCIP Savings Calculator to determine what your potential savings could be.

GARY VAN OVERBORG, JOHN MILLIGAN, and MICHAEL LEE (Scholarly iQ) illustrate how their company, in its role as an intermediary between publishers and libraries in providing usage statistics, was able to improve services to both through their implementation of the Standardized Usage Statistics Harvesting Initiative (SUSHI) protocol. They also show the additional benefits that implementers can provide to each other in sharing experiences and tools as part of the implementation effort.

MARY E. MARSHALL (ADC) describes her experience with the American arm of an international publisher as an early implementer of SERU (Shared Electronic Resource Understanding) to streamline the journal licensing process, saving time and costs for both the publisher and its library customers. She is now looking forward to the upcoming revision of SERU that will extend its use to other types of e-resources, such as e-books.

JOHN SACK (HighWire) provides an opinion piece to dispel the myth that standards prevent innovation, and explains how the two concepts can work together for the benefit of each.

Perhaps their stories will encourage you to consider further implementation of standards and help you to justify those implementations. If you'd like to share your examples of the benefits of standards, please contact me at editor@niso.org. doi: 10.3789/isqv23n4.2011.01

Cynthia A. Hodgson

Cynthia A. Hodgson | *NISO Managing Editor*

MARY E. JACKSON

STAFF COST SAVINGS\$

FROM IMPLEMENTING THE NISO CIRCULATION INTERCHANGE PROTOCOL (NCIP)

This article provides an overview of the NCIP standard and associated profiles, discusses how the standard and profiles help streamline a library's workflow, and summarizes library activities the standard does not support. It then illustrates how libraries can benefit from implementing NCIP between their resource sharing and circulation systems by describing several NCIP implementations. Finally, this article provides a tool for individuals to measure potential staff cost savings when using an NCIP-compliant resource sharing system. The paper and calculator will help state librarians, statewide resource sharing managers, library directors, and resource sharing staff to understand how implementing NCIP will streamline library workflow and reduce staff costs.

What is NCIP?

The NISO Circulation Interchange Protocol (NCIP) is a technical standard, or communications protocol, approved by the National Information Standards Organization (NISO) and the American National Standards Institute (ANSI) that defines the exchange of messages between and among computer-based applications to enable them to perform the functions necessary to lend and borrow items, to provide controlled access to electronic resources, and to facilitate co-operative management of these functions. It is intended to facilitate interoperability between dissimilar circulation systems in a consortium or library group. The standard assumes that the consortium has existing agreements to cooperate and share materials using a circulation-based model. NCIP also streamlines resource sharing within a library as it permits the library's resource sharing or interlibrary loan (ILL) system to interact with its local circulation system. Finally, the standard permits a library's self-service kiosk to interact with its circulation system.



The standard is formally known as ANSI/NISO Z39.83-2008, NISO Circulation Interchange Protocol (NCIP), Parts 1 and 2. Version 2, approved in 2008, brought enhanced extensibility, improved self-service and error handling, and addressed issues that surrounded the first version of the standard.

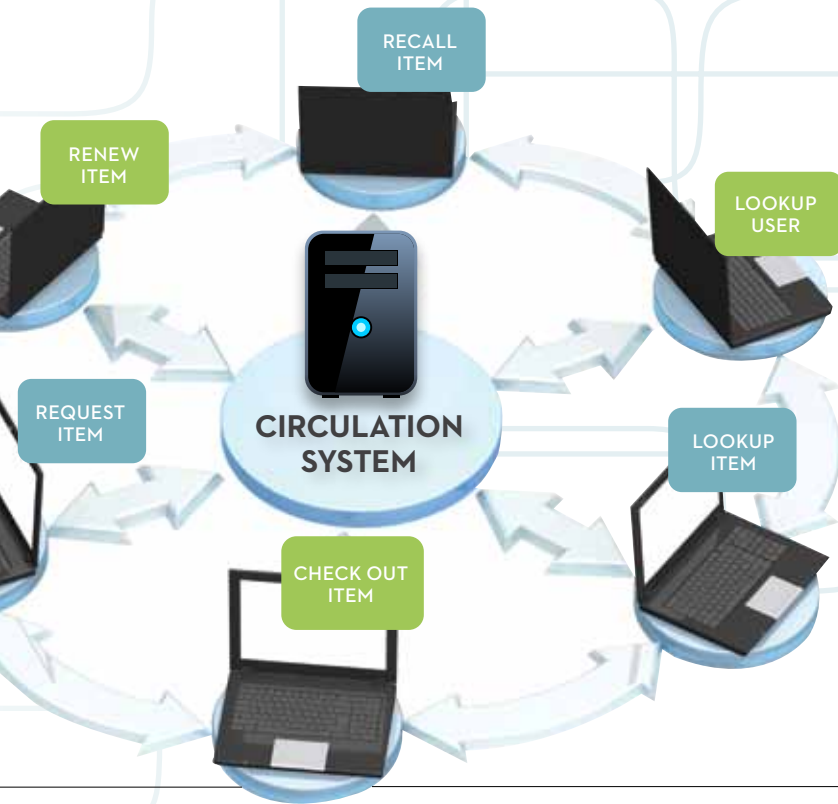
- » **Part 1: Protocol** defines the messages, data elements, and the associated rules of syntax and semantics.
- » **Part 2: Implementation Profile 1** defines a practical implementation structure for NCIP.

The NCIP protocol includes 46 messages; each message has an initiating query (for example, from the ILL system to the circulation system) and a response (e.g., from the circulation system back to the ILL system). Another way of looking at NCIP messages is based on their behavior. There are three significant types of behaviors:

- 1 **Inquiries or lookups:** Examples: What is the name associated with ID 987654321? How many books does the patron have checked out? What are their titles?
- 2 **Actions:** Examples: Authenticate the user. Check out this item. Place a reserve on this title. Return this item. Register this individual as a new user.
- 3 **Notifications:** Examples: The ILL system informs the circulation system that the item has been checked in. The ILL system informs the circulation system that the item has been returned.

The standard is maintained by the NISO NCIP Standing Committee (NCIP-SC), formerly the NCIP Implementers Group. Through in-person meetings and monthly conference calls, the group reviews reported bugs and enhancement requests, plans educational activities to promote and publicize the standard, and serves as an advisory body to the NCIP Maintenance Agency, EnvisionWare, Inc.

CONTINUED »



For the resource sharing core message set, the resource sharing system always sends the messages to the circulation system and the circulation system always responds. This decision was based on the way vendors had already implemented NCIP messaging.

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NCIP Core Messages

In 2009 the NCIP Standing Committee developed a core message set to simplify implementation, address the perceived barriers to implementing version 1, and to facilitate support of a common, baseline workflow. The Committee identified which NCIP messages had already been implemented by vendors and, from that list, defined a core message set for resource sharing.

For the resource sharing core message set, the resource sharing system always sends the messages to the circulation system and the circulation system always responds. This decision was based on the way vendors had already implemented NCIP messaging. The full standard also provides for the circulation system to initiate messages.

The nine messages in the resource sharing core message set are:

1. Accept Item
2. Cancel Request Item
3. Check In Item
4. Check Out Item
5. Lookup Item
6. Lookup User
7. Recall Item
8. Renew Item
9. Request Item

NCIP Application Profiles

An Application Profile describes how the NCIP protocol is used to support a specific environment or process with a given set of practices and policies. Each application profile prescribes the specific set of NCIP messages needed to support that application. Three key application profiles support the NCIP protocol: circulation/interlibrary loan (CILL) interaction, direct consortial borrowing (DCB), and self-service circulation.

➔ **Circulation/interlibrary loan interaction (CILL):** NCIP supports the linking of a library's circulation system and its interlibrary loan system. Without NCIP, a library staff member must check out an item to be loaned on the circulation system and then separately update the request in the ILL system to indicate the item has been shipped. On the borrowing side, a library staff member may need to create a temporary bibliographic and item record manually in the local circulation system to be able to check out the borrowed item to the patron. By using NCIP the library's circulation system and its ILL system can exchange information about patrons and items automatically—eliminating duplicate data entry, lessening manual intervention, and ensuring consistency in loan information, bibliographic information, and transaction updates.

- ➔ **Direct Consortial Borrowing (DCB):** Some library consortia now share materials among members and track them as circulation transactions rather than interlibrary loan transactions. In this way, the individual circulation systems record and track loans without the need of a separate interlibrary loan system. To date, DCB has generally been implemented using a third-party software application interfacing between disparate circulation systems. The DCB application manages transactions and uses NCIP messages to communicate with the local circulation systems.
- ➔ **Self Service:** Some libraries provide self-service online circulation systems to allow patrons to do their own checkout and status tracking. NCIP supports a self-service application, including an offline recovery mode.

The CILL Profile and the Interlibrary Loan Workflow

The NCIP-compliant CILL Profile defines the complete set of messages needed to manage interlibrary loan transactions between a library's ILL system and its circulation system.

On the borrowing side, when a patron logs into the ILL system, the ILL system sends an NCIP message to the circulation system to validate the status of the individual. A valid, unblocked patron can search, find records, and submit ILL requests. When the requested item arrives at the borrowing library and the staff member updates the request to *Received*, the ILL system sends an NCIP message to the circulation system to create a temporary bibliographic and item record. Depending on local policy, the ILL or circulation system can electronically notify the patron. The circulation staff member checks out the item to the patron, who is notified that the item is ready for pick-up. When the patron returns the item to the library, the ILL staff member updates the ILL request to *Returned*, which triggers the NCIP message to the circulation system to discharge the item from the patron. Depending on the local circulation system, the temporary bibliographic and item record may be removed or suppressed, but this functionality is outside the NCIP standard. Additional NCIP messages support renewals, recalls, overdues, and all other typical borrowing functions.

On the lending side, a new request is received in the ILL system and a staff member retrieves the item from the stacks or branch library. At the time of shipment to the requesting library, the ILL staff member updates the ILL transaction to *Shipped* and an NCIP message is sent to the circulation system, which checks the item out to the borrowing library. When the item is returned to the ILL department, the staff member updates the ILL request to *Checked In* and the ILL system sends an NCIP message to the circulation system to discharge the item from the borrowing library. Additional NCIP messages support other lending functions such as recalling an item, sending an overdue notice, and sending fines or fees.

A typical, and manual, borrowing workflow may include 22 or more steps. With NCIP, the number of borrowing steps is reduced by 50 percent to just 11 steps. On the lending side, the traditional manual workflow of 14 steps is reduced to 8 steps when using NCIP, or 42% fewer steps. The detailed workflow comparison with and without NCIP is available on the NISO ISQ website. The specific steps each ILL staff member performs may vary depending on local policies and workflow. However this workflow reflects a typical borrowing and lending transaction.

WITHOUT NCIP VS. WITH NCIP

50%

A typical, and manual, **BORROWING** workflow may include 22 or more steps. With NCIP, the number of borrowing steps is reduced by 50 percent to just 11 steps.

42%

On the **LENDING** side, the traditional manual workflow of 14 steps is reduced to 8 steps when using NCIP, or 42 percent fewer steps.



🔗 For a more detailed workflow comparison with and without NCIP, log on to www.niso.org/publications/isq/2011/v23no4/jackson.

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IMPLEMENTING NCIP: CASE STUDIES



VERNON PARISH LIBRARY

NCIP reduced processing time by 80%, Vernon Parish saved 69 hours per year on borrowing.

Vernon Parish Library in Louisiana implemented NCIP between LoanSHARK, an Auto-Graphics AGent Resource Sharing™ system, and its circulation system, The Library Corporation's (TLC) Library•Solution®. According to Howard Coy, Library Director, the implementation process was drawn out. Vernon Parish first began working with TLC in January 2007 and in March 2007, was given a “realistic” timeline of three months. In January 2008, Auto-Graphics began discussions with TLC and started testing in October of that year. In February, 2009 TLC added another staff member to work on and complete the coding to support NCIP and by June of that year, TLC installed NCIP on Vernon Parish's circulation server. Vernon Parish finally began using NCIP in a production mode in February, 2010. This extended timetable illustrates the complexity of a library working with two vendors, each with different development schedules.

On the borrowing side, NCIP adds a bibliographic record of the borrowed item to the circulation database. The circulation system automatically removes the record when the loaned item has been returned. Although this step is outside of the NCIP standard, it is a great workflow enhancement. The patron's circulation record now shows complete title/author information rather than brief, and possibly inaccurate, information entered by a staff member in the pre-NCIP workflow.

The time to process an ILL transaction is now “a fraction of the time it once took.” Although Vernon Parish did not quantify the staff cost savings it gained, it is possible to estimate those savings. In 2009 Vernon Parish borrowed an average of 43 items per month, or 516 items annually. If it took 10 minutes to process a borrowing request using the pre-NCIP workflow, and NCIP reduced processing time by 80% (both typical times), Vernon Parish saved 4,128 minutes per year on borrowing, or 69 hours. If the ILL staff members reduced their processing time by 90%, Vernon Parish would have saved 4,644 minutes, or 77 hours. Vernon Parish has implemented only the borrowing side of NCIP because at the time Vernon Parish implemented NCIP, TLC had no immediate plans to implement the NCIP messages required to support lending.

Howard Coy summed up their NCIP implementation with the following: “I don't know how we functioned so long without NCIP.”



EAST HAMPTON, CONNECTICUT PUBLIC LIBRARY

End-to-end, borrowing supported by CILL takes 61% less time to execute than requests that require staff intervention.

East Hampton, Connecticut Public Library implemented NCIP between reQuest, an AGent Resource Sharing system from Auto-Graphics, Inc., and its local circulation system, AGent VERSO™. According to Library Director Sue Berescik, “Roughly speaking, [the Auto-Graphics Circulation-Interlibrary Loan Link] CILL has allowed us to reduce the amount of time we spend on ILL borrowing and lending requests by 55.5%, while increasing our ILL volume from 1,472 requests in 2007 to 2,449 requests in 2009, or a 66% increase. Our library staff would not have been able to handle the significant increase in ILL requests without CILL. We continue to see the greatest staff time savings on the borrowing side. End-to-end, borrowing supported by CILL takes 61% less time to execute than requests that require staff intervention.”

Berescik also reported that the efficiencies provided by CILL in the reduction of the number of steps to complete ILL transactions has allowed staff to provide less “on-system” time managing interlibrary loan requests. Specifically:

- » Before CILL, about 20 of 24 allocated staff hours per week were spent on interlibrary loan, or 83.3% of the allocated hours.
- » After CILL, 5 of 18 allocated staff hours per week are spent on interlibrary loan, or just 27.8% of the allocated hours.

She concluded: “Overall, CILL has provided us with time savings both in the form of fewer hours and a lower percentage of total hours spent on ILL. This has provided us with the opportunity to divert resources to supporting public programs, person-to-person services, and both traditional and technological outreach efforts.”



BOSTON LIBRARY CONSORTIUM

SirsiDynix estimated that an NCIP-enabled circulation system reduced costs by up to 75% to less than \$8 per transaction compared with the average of nearly \$30 for a mediated interlibrary loan transaction.

When the Boston Library Consortium implemented the NCIP-compliant SirsiDynix URSA direct consortial borrowing system in 2003, SirsiDynix estimated that an NCIP-enabled circulation system reduced costs by up to 75% to less than \$8 per transaction compared with the average of nearly \$30 for a mediated interlibrary loan transaction.” These estimates include staff, communication, delivery, and other direct costs associated with the transaction.



How much will YOU save?

Use the NCIP Savings Calculator

www4.auto-graphics.com/ncipsavingscalculator/

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What NCIP does not Support

The NCIP standard was written with one basic assumption: the item to be shared is known. Thus, the standard does not support the discovery of an item, which is done using other standards such as Z39.50. NCIP does not require participating libraries to lend items; whether a specific item is made available to send to the requesting library is a local library or consortium policy.

NCIP does not require libraries to change policies such as the length of the loan period, whether renewals are granted, whether fees are charged, or how to handle lost or damaged items. Those policies are set by individual lenders, or may be set by a consortium, and NCIP messaging will support those local policies.

From a technical perspective, the base standard, Part 1, does not dictate how messages are conveyed. Part 2, the Implementation Profile, describes how messages are encoded (XML) and transmitted (HTTP, HTTPS, or TCP/IP). To date, the vendors who have implemented NCIP have all followed the Part 2 Implementation Profile 1 methods, but that is not a requirement of the standard protocol defined in Part 1.

Challenges Implementing NCIP

Library vendors are at various stages of implementing NCIP with their integrated library system (ILS) and resource sharing systems and have not consistently implemented the same set of messages. Thus once a consortium or individual library decides to implement NCIP, a number of barriers may need to be overcome.

At the consortium level, the ILL system may support only a few of the NCIP messages, but not all of the messages included in the CILL Profile. Some ILL systems support only the patron authentication messages, so staff cost savings will be minimal as staff members will still need to perform duplicative steps to process ILL requests once the patron has been authenticated. Some ILL systems may support

the resource sharing core messages, but not the additional messages in the CILL Profile, again, minimizing workflow efficiencies.

The local library may not have an NCIP-compliant circulation system. Many ILS vendors charge an additional fee for the NCIP module, and the library may not have purchased this module.

If a local library has an NCIP-compliant circulation system it may be using an ILL system that is not NCIP-compliant. Some ILS vendors have opted not to implement NCIP or complete testing with other NCIP implementers. In these cases, the library will not be able to improve their ILL workflow until their vendor adds NCIP compliance to their product.

Most ILS vendors have currently implemented NCIP as a responder only. That is, the circulation system can respond to a query from the resource sharing system but is unable to initiate an NCIP message. Having the circulation system function as a responder only has significant limitations for improving the ILL workflow. For example, a patron will need to return the borrowed item to the ILL office, not to the circulation desk. If the item is returned to the circulation desk, circulation staff would discharge the item from the patron's record, but the circulation system could not send an NCIP message to the ILL system asking the ILL system to update the ILL request to *Returned*. The circulation staff member would need to ask the ILL staff member to update the ILL request manually. Similarly, an item loaned by the local library will need to be returned to the ILL department rather than to circulation desk as the ILL system must send the NCIP message to the circulation system directing the circulation system to check in the item from the borrowing library. The inability for the circulation system to initiate any NCIP messages requires library staff to modify internal procedures so that their workflow fits the limitations of the circulation system rather than the NCIP implementation supporting whatever workflow they have.

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Statewide System	2009–2010 Filled Borrowing & Lending Requests	Number of Hours to Process ILL Requests Statewide				
		Without NCIP	25% NCIP Circ Systems	50% NCIP Circ Systems	75% NCIP Circ Systems	100% NCIP Circ Systems
Connecticut	193,284	32,214	28,187	24,161	20,134	16,107
Kansas	153,049	25,508	22,320	19,131	15,943	12,754
Louisiana	136,676	22,779	19,932	17,085	14,237	11,390
Mississippi	17,027	2,838	2,483	2,128	1,774	1,419
New Jersey	167,971	27,995	24,496	20,996	17,497	13,998
Wisconsin	167,971	27,995	24,496	20,996	17,497	13,998

Figure 1: Staff cost savings for several states using the AGen Resource Sharing system

Cost Savings Using NCIP

The cost savings enjoyed by Vernon Parish Library and East Hampton Public Library (see the Case Studies sidebar) may be greater or lesser than what other libraries have realized. But their averages will be used to illustrate the potential savings that can be realized by using the NCIP CILL Profile between a library's resource sharing system and its circulation system.

Figure 1 estimates staff cost savings on a statewide level for several states using the AGen Resource Sharing system. Several scenarios are provided:

- » All libraries using the ILL system have NCIP-compliant circulation systems.
- » 75% of the libraries are NCIP-compliant.
- » 50% are NCIP-compliant.
- » Just 25% of the libraries have NCIP-compliant circulation systems.

These estimates assume that a staff member spends 10 minutes in processing one borrowing or lending request and also assume a conservative 50% savings in staff time to process borrowing and lending requests after NCIP has been implemented (or now 5 minutes per request). The

savings will be significantly greater if libraries realized a 60 to 75% savings in the amount of time a staff member spends processing one ILL request—a possibility demonstrated by case studies.

These estimates illustrate the significant savings in staff time possible in a state even if only one-quarter of the libraries using an NCIP-compliant resource sharing system have an NCIP-compliant circulation system. Savings may be even greater in libraries that take more than ten minutes to process one request due to more complicated or labor-intensive procedures.

As East Hampton Public Library has done, staff cost savings at the local level can be used to have existing staff perform other library functions that have increased need and value to the library and its patrons.

Calculating Your Cost Savings Using the NCIP Savings Calculator

Developed by Auto-Graphics, the NCIP Savings Calculator permits librarians at the state or individual library level to estimate the total staff cost savings when implementing NCIP between the resource sharing system and one or more local circulation systems.

On the individual library calculator, a user simply enters the hourly rate of the relevant staff member(s), the number of borrowing and/or lending transactions, and selects the number of minutes to process one borrowing request and the minutes for one lending request. The calculator then displays the annual number of hours staff members spend processing ILL requests with and without an NCIP-compliant system, the separate staff cost savings related to lending and borrowing, and the total savings for the library. This calculation assumes a 50% savings in the amount of time to process an ILL request when using NCIP.

Consider an example where a library has an average of 3,444 borrowing transactions and 3,331 lending transactions for the previous fiscal year. If 10 minutes each were saved in processing borrowing and lending transactions, the library would realize a savings of approximately one-third of a staff position that could be spent on other tasks. This is equivalent to a staff cost savings of \$14,115, assuming an hourly rate of \$25.00.

The Statewide Calculator is a tool for state librarians to determine potential statewide savings, but it also works for a consortium. After the user enters the average staff salary and the annual system-wide borrowing and lending transactions, it calculates staff cost savings for each alternative of 25, 50, 75, or 100% of libraries within the state having NCIP-compliant circulation systems interacting with the state's NCIP-compliant resource sharing system.

Conclusion

Implementing NCIP saves significant staff time both for the individual local library and aggregated at the statewide or consortial level. The saved staff time can be directly translated into cost-savings for staff who would be freed to perform other library tasks. Patron satisfaction is increased because libraries are obtaining needed items more quickly as a result of more efficient and less labor-intensive workflow. The quantified aggregated savings can be used to validate a substantial return on investment from the purchase and implementation of the NCIP-compliant resource sharing system.

For example, if just 25 percent of the libraries in New Jersey implemented NCIP in their local circulation systems, the number of hours library staff members spend processing requests would drop from approximately 28,000 to 24,500 hours, or a 13% reduction. If one-half of New Jersey libraries used NCIP with JerseyCAT, the Auto-Graphics' Resource Sharing system, the total number of hours required to process ILL requests would drop by 25 percent. Savings like these are the most compelling reason to implement the NISO Circulation Interchange Protocol. | FE | doi: 10.3789/isqv23n4.2011.02



MARY E. JACKSON <mej@auto-graphics.com> is Product Manager, Resource Sharing at Auto-Graphics, Inc. and a member of the NISO NCIP Standing Committee.

RELEVANT LINKS



Coy, Howard. "Vernon Parish Library NCIP Implementation." Auto-Graphics AGent User Group Meeting, 2011, PowerPoint, slide 13.

East Hampton Public Library Realizes a 75% Reduction in the Number of Allocated Staff Hours to Perform ILL Tasks after Implementing Auto-Graphics' Circulation-Interlibrary Loan Link (CILL). Case Study. www4.auto-graphics.com/solutions/agentresourcesharing/cs_EHPL.htm

NCIP Core Message Set
www.niso.org/workrooms/ncip/core

NCIP Savings Calculator
www4.auto-graphics.com/ncipsavingscalculator/

NCIP Standard, parts 1 & 2, version 2
www.niso.org/standards/z39-83-1-2008/
www.niso.org/standards/z39-83-2-2008/

NCIP Workflow: Detailed comparison with and without NCIP
www.niso.org/publications/isq/2011/v23no4/jackson

NCIP Standing Committee website
www.ncip.info/

Rogers, Michael. Boston Library Consortium Launches NCIP ILL Service. *Library Journal*, May 1, 2003.
www.libraryjournal.com/article/CA292602.html

Gary Van
OverborgJohn
MilliganMichael
Lee

Scholarly iQ and SUSHI: A Case Study

GARY VAN OVERBORG, JOHN MILLIGAN, AND MICHAEL LEE

Scholarly iQ serves over 30 publishers to provide timely and accurate COUNTER-compliant reports to their thousands of subscribing institutions. We have been a leader in COUNTER compliance reporting since 2002. Our publishers enjoy the benefits of an actionable set of key performance indicators plus the power and flexibility of a web analytics and optimization engine which fully integrates with our COUNTER reporting engine and their offline data.

Service-oriented architectures are surging in popularity. Web services, for both publishing and consumption, are working their way across virtually all business interactions. The ability to make data available on demand through standards-based interfaces has transformed the way that organizations interact. *The Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol* standard (ANSI/NISO Z39.93) has brought this transformational technology to the COUNTER reporting space, and throughout its development and adoption, Scholarly iQ has been on the forefront of the effort to take SUSHI mainstream.

Being an early adopter is not without pain, however, and it is the responsibility of early trailblazers to lay guideposts along the way. This case study is a collection of these guideposts. Our objective is to identify some of the struggles, successes, and observations that we have seen along the path and to share those with the community. As with any standard, SUSHI will continue to increase in relevance and utility as its level of adoption expands. It is our hope that our experiences will provide additional direction and motivation to those that are contemplating the pursuit of this innovative protocol.

In this case study, we will first examine some of the challenges that we experienced in our implementation of the SUSHI specification. Then we will discuss some of our observations regarding the current trends in SUSHI adoption and usage. Finally, we look forward to see what SUSHI has on the horizon, and how Scholarly iQ will play a role in that future. We are pleased that you will be making this journey with us.

Being an early adopter is not without pain, however, and it is the responsibility of early trailblazers to *lay guideposts* along the way. This case study is a collection of these guideposts. Our objective is to identify some of the struggles, successes, and observations that we have seen along the path and to share those with the community.



■ CHALLENGES

Scholarly iQ faced a number of challenges as we developed our SUSHI implementation to enable our customers to harvest their usage data electronically in an XML format using an automated retrieval process. In addition to development challenges, we also faced issues when testing the service externally with clients and vendors. These tests exposed other difficulties including compatibility and data related issues.

Development Challenges and Resolutions

One of the main challenges that we faced was figuring out where to begin. Since at the time, SUSHI was a relatively new protocol with little or no information available on any past development, it was difficult to get an understanding of what the first steps should be. We were provided with a SUSHI protocol standards document that included useful information on the schema (XSD) and report objects, however we had no true direction on how to begin. We overcame this challenge by diving in and getting involved with the NISO organization, analyzing how our data translated into the schema provided, and how these pieces fit together to meet the objective of exchanging usage data in a more efficient manner.

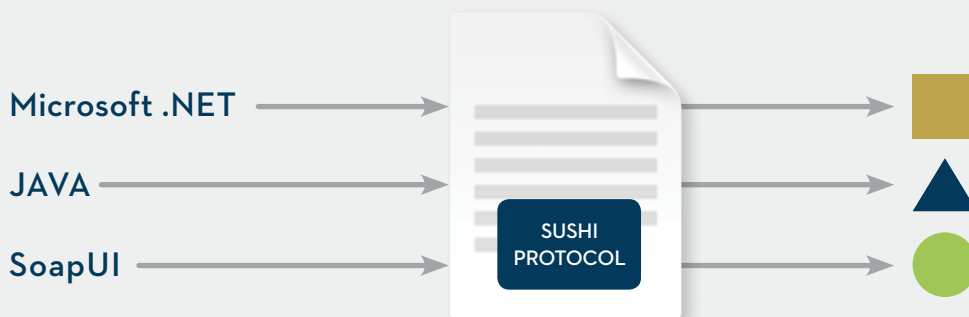
All of the elements needed to create a SUSHI Web Service were reviewed including:

- » Core SUSHI XML schema (XSD)
- » Web Service Description Language Document (WSDL)
- » Report Request Diagram
- » Report Response Diagram

In addition to these items, we also consulted the COUNTER Release 3 schema, WSDL, and report diagrams. We were then able to create a flow diagram illustrating where each of these elements fit into our overall development process. This allowed us to design the business and data layers that are critical for a low maintenance, yet highly scalable architecture. We used the Microsoft .NET technology stack for this implementation and within a few months, we had a fully operational SUSHI web server and service that could support multiple vendors.

Subsequent to starting the development, more information became available from developers and vendors that contributed information to the SUSHI community but most of this information was related to the input. Finding samples of the output (i.e. the Report Responses) was still difficult to come by during the early stages of SUSHI implementation. To assist future development efforts, Scholarly iQ made contributions to the community by providing various sample SUSHI reports that allowed other developers to see how to structure their Report Response.

CONTINUED »



CHALLENGE: The SUSHI protocol document may be subject to interpretation. In this case, there were critical differences in the way each tool processed requests.

SOLUTION: Working closely with vendors that provide client services was essential to ensure that we were able to handle a variety of SUSHI clients appropriately.

Finding Client Applications and Vendors to Test the Service

Now that we had what we felt was a fully operational and internally tested SUSHI web service, we needed to test the waters externally. One of the only tools that was available at the time to harvest usage data from a SUSHI web service was from the Euclid Project. This CGI-based tool helped us to harvest usage with a raw XML report response. As we began to look for vendors that were interested in testing their SUSHI client, we were contacted by Innovative Interfaces, Inc. They had just completed their SUSHI-based client and needed a service to test it against. This was definitely to our mutual advantage and though we had high hopes that the initial testing would be successful, it wasn't. We were plagued by permissions problems and other issues pertaining to calling conventions such as WSDL vs. ASMX. Once we resolved these issues, Innovative Interfaces was able to successfully harvest usage data from our SUSHI web service.

Compatibility Testing with Various Clients

After successful testing with Innovative Interfaces, we had the opportunity to test a new open source SUSHI client with Serials Solutions. It was then that we found out that the SUSHI protocol document may be subject to interpretation. In this case, there were critical differences in the way each tool processed requests. Working closely with vendors that provide client services was essential to ensure that we were able to handle a variety of SUSHI clients appropriately. This testing gave us the opportunity to enhance our services to meet various harvesting requests, while at the same time maintaining conformance to the standard SUSHI and COUNTER 3 protocols.

XML Restricted Characters in the Data

The Scholarly iQ SUSHI web service was put into operation in June of 2009. The challenge now was to harden the service in a production environment. While the service itself seemed stable, data-related issues started to appear that we did not consider during initial testing. One of our customers who had signed up with our service and started harvesting usage data reported that they were receiving an error in their output relating to an XML parsing issue at a particular line. This in turn, caused the Report Response object to fail; however it did not contain a standard SUSHI exception code, but rather a database exception that was not clear to the problem at hand. After thorough troubleshooting, we identified the issue to be related to response data that contained special or “restricted characters,” which violated the structure of a well-formed XML document as defined by the parser.

For example, a journal title may contain an ampersand (“&”) instead of the word “and”. This may be fine when reading data to be displayed in a report or web form, but it will cause XML parsing issues which results in an “illegal characters in path” exception.

Once we identified these cases, the solution was simple. We created a method within the web service using regular expressions that would check for these “special characters” and have them replaced with their “reference” equivalents on the data side prior to parsing. Therefore, scrubbing the data prior to sending a response resolved the issue.

Performance

As with any data service, performance and throughput are always of primary importance. When we initially designed our SUSHI web service, we were concerned about how the volume of data returned to the user during web service consumption would impact performance. Over the years, we have structured our data by horizontally partitioning the data across vendors and reporting years. This served us well in the long run as we were able to build the SUSHI web service to retrieve data from specific data sources instead of needlessly sifting through multitudes of records contained in one data repository for all years and vendors.

Changing of Historical Data

Inevitably, usage data will need to be reprocessed for various reasons. Sometimes multiple months of historical data will need to be re-processed. When this happens, institutions and consortia must be notified of the impacted date range so that they can retrieve the updated statistics via SUSHI. To assist with this effort, we developed thorough logging mechanisms that track who is using our SUSHI web service and how the service is being used (i.e., which reports are being downloaded, what date ranges are being used, and what is the frequency of these downloads). We are then able to verify that all impacted accounts are able to re-pull the corrected usage data and, if needed, “push” the updated statistics.

CONTINUED »

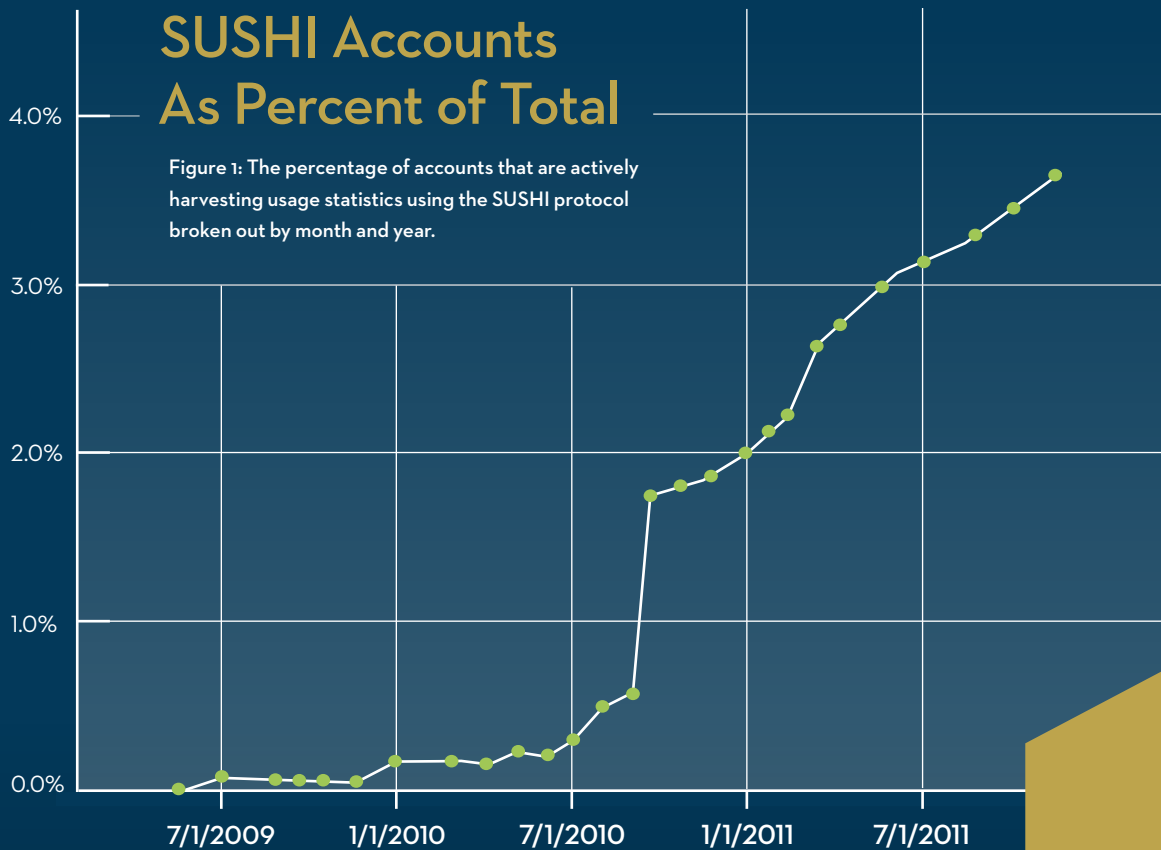


CHALLENGE: A journal title may contain an ampersand (“&”) instead of the word “and”. This may be fine when reading data to be displayed in a report or web form, but it will cause XML parsing issues which results in an “illegal characters in path” exception.

SOLUTION: Create a method within the web service using regular expressions that would check for these “special characters” and have them replaced with their “reference” equivalents on the data side prior to parsing.

SUSHI Accounts As Percent of Total

Figure 1: The percentage of accounts that are actively harvesting usage statistics using the SUSHI protocol broken out by month and year.



TRENDS

Since the SUSHI implementation is still somewhat new, it is difficult to make general statements about specific trends because there is not enough data available. While our initial analysis indicated that we were trending toward an increase in SUSHI harvesting, with a corresponding decrease in traditional report harvesting, there is simply not enough data yet to be able to say definitively that there is a statistically significant relationship in the time series analysis. However we will continue to monitor these trends and report our findings via our website and twitter.

What we can say definitively at this point in time is that while the current percentage of SUSHI harvesting accounts versus traditional harvesting accounts is small at 3.5%, it is increasing rapidly. In fact, it is increasing so rapidly that Scholarly iQ has invested in augmenting our application infrastructure with new tools that our clients can use to facilitate the sign-up process of creating new harvesting accounts that allow access to our service. Figure 1 represents the percentage of accounts that are actively harvesting usage statistics using the SUSHI protocol broken out by month and year.

While the current percentage of SUSHI harvesting accounts versus traditional harvesting accounts is small at 3.5%, it is increasing rapidly.



LOOKING TO THE FUTURE

As the COUNTER standards continue to evolve with the upcoming Release 4, so too will the SUSHI standard in order to adapt to these latest initiatives. Scholarly iQ is already in the planning phases to support the new versions and we strongly recommend vendors providing SUSHI service do the same as early as possible.

There are many ongoing discussions and protocol implementation proposals for the next release of SUSHI for COUNTER Release 4. Many new items will be introduced, both required and optional. Included are new report IDs, identifiers, item data types, categories, and metric types. Because of these changes, the schemas that provide for the delivery of COUNTER reports via SUSHI will need to be updated, and therefore all SUSHI harvesting servers must be updated to be compliant for the next SUSHI release. For SUSHI developers, it is imperative that they stay current regarding the next release of the SUSHI protocol by visiting the Standardized Usage Statistics Harvesting Initiative (SUSHI) website. The SUSHI Developers e-mail list is also an excellent source of information and support.

Along the way, Scholarly iQ plans to continue sharing our knowledge base and observed trending data with the community. We are happy to provide assistance to those wishing to pursue these latest standards. To contact us or to stay current on our recent developments, please visit the Scholarly iQ website or follow us via twitter. We hope that our experiences and observations will be helpful to the community and to anyone who is in the process of or contemplating their own implementations of this pioneering protocol. | IP | doi: 10.3789/isqv23n4.2011.03

GARY VAN OVERBORG <gary.vanoverborg@scholarlyiq.com> is Founder and CEO with Scholarly iQ. **JOHN MILLIGAN** <john.milligan@scholarlyiq.com> is Director of Application Development with Scholarly iQ. **MICHAEL LEE** <michael.lee@scholarlyiq.com> is Lead Data Specialist with Scholarly iQ.

Stay up-to-date on the latest trends by visiting our website or following us on twitter:



www.scholarlyiq.com



twitter.com/#1/scholarlyiq

Euclid Project

docs.google.com/View?docid=d2dhjwd_140d923m7fh&pli=1

Scholarly iQ website

www.scholarlyiq.com

SUSHI E-mail list

To sign up send an e-mail to sushi-developers-subscribe@list.niso.org

SUSHI standard (ANSI/NISO Z39.93)

www.niso.org/standards/z39-93-2007/

SUSHI Report Response Samples

www.niso.org/workrooms/sushi/reports/

SUSHI Schemas and Diagrams

www.niso.org/schemas/sushi

SUSHI Tools & Development Aids

www.niso.org/workrooms/sushi/tools/



RELEVANT
LINKS

Mary E.
Marshall

Implications for a Medium Sized Publisher Using SERU: *A Shared Electronic Resource Understanding*

MARY E. MARSHALL

THE PROBLEM: In 2007, a medium-sized publisher was expanding rapidly into digital publications. One of my tasks as a consultant for sales initiatives was to develop the sales activities for digital products. The licensing of digital content was an important and potentially very time consuming task. The headquarters of this publisher was in Europe. They had an established United States-based business that offered books and standing orders for titles in the humanities, social sciences, and natural sciences. The primary institutional market was academic libraries and selective research institutions.

For the original digital product—databases—there were three pricing models: subscription, purchase with maintenance fees, and one time purchase with ownership and no updates. The strategic direction was focused on the transition from print to either print and online, or online only for all subjects. At the same time, the company was expanding through the acquisition of content from other publishers and through internal growth with new titles and increased output for targeted subjects in both print and digital format. In anticipation of the transition to a completely integrated e-publishing platform by 2008, the publisher wanted the new system to manage current products and plan for an increase in the volume of digital products and licenses.

The challenge was to develop a robust sales plan, including licensing, and minimize the internal work without increasing the internal staff for the North American office. The North American office had four employees with no experience with licensing. For the rest of the world sales, the headquarters handled licensing along with rights management and permissions. However, as a separate corporation under United States law, a special process was needed for the North American office for both the existing and forthcoming digital products. A new set of *Terms of Service* would be introduced in 2008 with the simultaneous publishing of new monographs in print and online and an expanded list of journals, again in print and online. The number of database offerings would

As part of the sales cycle, a tracking process using an Excel™ workbook was put in place recording all agreements, modifications to the generic license, and digitized copies of executed licenses, with on-site storage of the original printed documents.



increase as well. All of these digital products would require licensing. Since U.S. law was the governing law, there was an attorney on call for contract agreements and licensing issues. The potential time and cost of using a professional for licensing was rejected. Until platform rollout in 2008, the existing licenses would be used with changes as required as a result of a review by headquarters or for consistency with licensing standards for North American libraries. A practical solution would be needed to manage the anticipated volume of licenses with existing staff.

Licensing Process Before SERU

Initially, the English language generic version of the licensing agreements ranged from four to eight pages with two or more pages for schedules with specific terms for the subscription access, price, and contact information. Completion of the generic license involved inserting the appropriate information for each institution and/or each product. Then discussion and negotiation involved usually one but sometimes two to three individuals from the licensing library and one from the company—sometimes as many as five individuals in total. In some cases, previous agreements that had not been renegotiated for the resources acquired from other companies involved locating and reviewing the original agreements and updating them through the use of amendments. Working with a support person, I negotiated, revised, and with assistance, prepared final agreements to be executed by both parties. This work was approximately 15% of the monthly billable hours.

As part of the sales cycle, a tracking process using an Excel™ workbook was put in place recording all agreements, modifications to the generic license, and digitized copies of executed licenses, with on-site storage of the original printed documents. A staff person spent approximately 10% of her weekly time on license revisions, tracking, and physical handling of the executable documents through signature. While the volume varied across the year, an average time

spent by staff and myself was 24 hours per month, but as many as 18 hours for a single, complicated license when required by an institution. Fortunately, through online sharing of the license drafts and changes, the negotiation became more efficient. Even so, licensing was still a major time factor in the sales cycle both for the library and for the publisher. This method shortened the time between review and agreement. Reams of paper were used in the process.

SERU Offers an Alternative

In 2007, the National Information Standards Organization (NISO) had initiated a project called Shared E-Resources Understanding (SERU) to develop an acceptable alternative to the existing cumbersome licensing process that libraries and publishers were using. In 2008, at the time our project's licensing volume was steadily increasing, the SERU Working Group was progressing from a concept, group discussions, drafts, and ultimately into approval of a NISO Recommended Practice.

Since time is a valued resource, I continued to track the process of the SERU Working Group as a possible alternative for our licensing. Our ultimate goal was to deliver access for the users in the timeliest, least stressful, and most efficient method possible. The SERU worked looked like it might accomplish those goals.

In anticipation of adopting the NISO Recommended Practice, we discussed with librarians and members of the SERU Working Group the viability of testing the concept. There was acceptance to the idea, as stated by the SERU group, that:

"...the creation of a license is not required for the creation of a binding contractual agreement. The invoicing/purchase order/payment process is generally sufficient for the creation of a contractual relationship. Normal contract law and copyright law, of course, apply."

CONTINUED »

Dear _____

In the absence of a separate license agreement, <client name> and <publisher> agree to follow the SERU guidelines of NISO RP-7-2008 and accessible at the NISO SERU website." <http://www.niso.org/publications/rp/RP-7-2008.pdf>.

<For single product order, add the cost and pricing model - purchase with annual update, annual rental fee, or subscription with term >.
<For multiple products, "This agreement applies to the following products: then insert a table with product name, type of pricing, whether subscription or purchase with access or annual term.>

If using a purchase order, <client name> should issue a purchase order containing the dollar amount as indicated and the product title and term, if applicable. The purchase order should also include this sentence, "In the absence of a separate license agreement, <client name> and <publisher> follow the SERU guidelines as published at the NISO SERU website: <http://www.niso.org/publications/rp/RP-7-2008.pdf>."

Invoice Note:

<Publisher> invoice will include this sentence: "In the absence of a separate license agreement, <client name> and <publisher> will follow the SERU guidelines as published at the NISO SERU website: <http://www.niso.org/publications/rp/RP-7-2008.pdf>."



Figure 1: Email message from publisher to library

The acceptance of this concept helped demonstrate that the perception by librarians and publishers that licenses for e-resources were required was resulting in backlogs or the inability of smaller publishers to offer licenses due to lack of internal licensing expertise. Some publishers even resisted transitioning to digital formats because of the potential legal burden. After years of working with licenses, especially with large publishers for significant investments, I recognized that where there was an existing successful business relationship between a publisher and the library, that relationship already included an element of trust based on prior transactions. This enabled me to recommend to the publisher that they be an early adopter of SERU. For the licensing project described above, the simplified SERU procedure was welcomed as a time saving and customer satisfaction improvement— less work, less stress, and less time from order to access.

Following publication of the SERU Recommended Practice (NISO RP-7-2008), a Registry was established where both publishers and libraries could express interest in using SERU for some or all of the relevant electronic products. When the opportunity existed for participating in the SERU Registry, the publisher signed up and received a timely listing on the Registry. Registration is voluntary but very important to create the awareness of which institutions, both publishers and libraries, are actively participating in the use of SERU.

The SERU Process

The first step for using SERU in lieu of the standard license process was to check the NISO SERU Registry for participating libraries. Our sales group checked the Registry and shared with any of the listed customers or prospects that the publisher was willing to use SERU. If the customer, or prospective customer, library was not listed in the SERU Registry, sales would briefly explain the value of SERU emphasizing the time savings and simplicity of a SERU business agreement. (There are now over 170 libraries or consortia listed in the SERU Registry.)

With digital products there are multiple individuals in various positions in the licensing institution who are involved with the e-resource acquisition and management process. One benefit of the SERU Registry was the provision of a specific contact person when the library was interested in using SERU. This eliminated a lot of time in finding the right person who both knew about SERU and could ensure authorization of acquiring the e-resource without a formal license.

The major difference with use of SERU is that all the legal terms we spent so much time in developing and customizing for each customer were now eliminated. The more traditional and familiar purchase order terms including what is being bought for what price and for how long was all that was needed to get an authorized approval.

When a library requested or agreed to SERU terms for a subscription, sales support provided a personalized SERU form e-mail and instructions on how and when to use SERU. (See Figure 1).

This form was created in consultation with librarians using SERU terms to ensure consistency and provide speedier processing of the terms/orders. As more libraries have signed up on the Registry, these SERU agreements have been used by existing customers with prior licenses in lieu of license amendments. Again, the time savings were welcomed by the librarians and their staff.

Three EASY Steps to Using SERU



1

STEP 1: READ THE GUIDELINES

NISO RP-7-2008, *SERU: A Shared Electronic Resource Understanding. A Recommended Practice of the National Information Standards Organization* prepared by the NISO SERU Working Group. February 2008.

www.niso.org/publications/rp/RP-7-2008.pdf



2

STEP 2: SCAN THE SERU REGISTRY

This listing provides publishers and libraries a one-stop place to identify who is interested in using SERU, including publishers (62), content providers(2), libraries (164), and consortia(8).

www.niso.org/workrooms/seru/registry/



3

STEP 3: SIGN UP

Join by completing the Registry short sign-up form.

www.niso.org/workrooms/seru/registry/signup

For more information on the process and to sign up for the SERUInfo Listserv, visit the SERU webpage: www.niso.org/workrooms/seru/

Following agreement to use SERU terms and the above e-mail communication and receipt of the library's order, an invoice process is completed in 15-30 minutes, depending on the size of the order. By May 2009, there were 11 libraries with SERU agreements in place with the publisher. These 11 libraries represented many more than 11 digital subscriptions. The time saved varied based on the volume of new subscription sales. In 2009, I estimated with the range of product types and required revisions for licenses that these 11 accounts using SERU saved more than 100 work hours, valued at over \$6,000. (This estimate is conservative.) For a license amendment the time saved is approximately one hour. Equally as important as the cost savings is the reduction in overtime often needed to complete licenses, improved customer service support, and staff time that could be moved from licensing administration to promoting and selling the products.

Going Beyond the Current SERU

With the acceptance and even delight, "Oh, good!" with which librarians have welcomed the SERU option, there is increasing interest in extending the approach to other pricing models, including purchase. Since SERU is designed for subscription types of acquisitions, the publisher has adopted their own terms to use for a purchase pricing model using a similar communication between library and sales, but applying the relevant purchase business terms in the e-mail and on the invoice to the library. Recognizing this type of

business need, the SERU Working Group is currently in the process of updating the NISO Recommended Practice to cover non-journal e-resources, such as e-books, and additional types of acquisition and use models.

In conclusion, SERU will not replace or eliminate all license agreements. There will always be situations still requiring a license. For example, there are several states where the state institutions are tightly managed in terms of the allowable business contracts and licenses. In other situations, the most common reason given by librarians whose institutions are not willing to use SERU is inertia by one or more people involved in the process. The NISO SERU Standing Committee is continuing its education and promotion activities to overcome this inertia, including FAQs on the SERU website. They have encouraged the use of logos and short promotional messages from publishers and directly to librarians to help institutions announce and promote their SERU participation. As a result, the list of organizations on the SERU Registry continues to grow.

In conclusion, as Anne McKee, Program Officer for Resource Sharing, Great Western Library Alliance, said, "It's as easy as sliced bread, a no brainer!...When a subscription product is being evaluated and then purchased through the consortium by a member library, the work is greatly simplified." | IP | doi: 10.3789/isqv23n4.2011.04

MARY E. MARSHALL <memfan@hotmail.com> is a consultant with ADC (a design consultancy).

OP

[OPINION]

A judgement formed about something;
a personal view, attitude, or appraisal



JOHN SACK

Innovation and Standardization: Friends not Foes

The scholarly-publishing “industry” has been full of innovation these last 15+ years as the outputs—books and journals at the least, with datasets potentially to follow—have moved almost completely online in a transformative, yet transparent way. Transformative in that it now sounds quaint to talk about “e-journals,” since the “e” is assumed. (We are not quite in that same place with e-books.)

And transparent in the sense that structure of the scholar’s workflow has not been altered substantially as each of the many steps—finding articles, reading articles, managing a literature database, writing and editing a manuscript, etc.—have individually gone online. When an industry’s innovation has both these characteristics, it should be fertile ground for standardization.

There is a natural tension between innovation and standardization. If you standardize too early or in the wrong way, you can actually stifle innovation (the QWERTY keyboard is often cited as an example of this). But standards can also be a lever to enable network effects, as a process can be more rapidly adopted by many parties—including competitors—with greatly expanded utility. Some of us can probably still remember the days when instant messages and text messages couldn’t be sent across different services; you had to have the same cell phone provider to text another phone, or you had to sign in to AOL Messenger to “instant message” another person, who also had to be signed in to AOL.

Our industry has some good examples of successful standards—the DOI™, OpenURL and the NLM XML journal tag suite. But standards aren’t easy. Some standards fail to be adopted even though they may be technically superior (remember Betamax vs. VHS) and others don’t reach final standardization—the institutional ID—despite multiple attempts and being an obviously good idea. There are some historically

important standards that are now the equivalent of an electronic buggy whip—Z39.50 comes to mind—and yet they still show up in RFPs. And there are future standards we have great hope for, such as the Open Researcher & Contributor ID (ORCID), that have big challenges and bright implementers. Sometimes the toughest challenges are not technical but organizational.

Successful standards not only fill a need, but allow for innovation to be accomplished in a standard way—the word “extensibility” is often used to describe a standard that enables this kind of innovation within a standard framework. The HTML standard and the HTTP protocol were certainly excellent examples of this; but web developers saw the chaos that resulted when innovations of the same type were implemented in different ways in different programs. Layout and JavaScript extensions that work differently in Firefox and Internet Explorer are examples of this. We may see this again with HTML 5.

Our industry’s big opportunities for standards are in (at least) two areas:

- 1 Strong identifiers
- 2 Value-chain integration

A strong identifier uniquely identifies an item (or an individual) in a population, whereas a weak identifier can be applied to many individuals. A DOI and a PubMed ID are two typical



Value-chain integration allows two different parts of the scholarly workflow to be *linked* in a way that allows for automated solutions. There is already a lot of this integration now, but it is not highly standardized. **The lack of standards means that different parts of the chain have to connect “inefficiently.”**

examples of strong identifiers in wide use. An author ID (e.g., ORCID) is a strong identifier with very high leverage, if it is made as easy to use as the other IDs, while an individual's name is a weak identifier. Strong IDs are key to building links that work precisely and reliably and in building services for the semantic web.

Value-chain integration allows two different parts of the scholarly workflow to be linked in a way that allows for automated solutions. There is already a lot of this integration, but it is not highly standardized. The lack of standards means that different parts of the chain have to connect “inefficiently”—e.g., a supplier like HighWire has to have one set of rules and tools to support EBSCO and a different set to support OCLC (and vice versa); or a library has to put IP addresses in several different systems in different ways; or an end user has to use different tools or passwords or programs to save information retrieved from different platforms into his or her research-management system. This last example harkens to the early 1990s, prior to the birth of web browsers: each different data source on the Internet needed its own program for access (compare this to apps on a smartphone today). This creates a lot of friction in the system—think of how you react every time you get prompted for a password!—and is an opportunity for us to improve the work lives of our customers. For value-chain integration, the greatest leverage is with standards that benefit end users. HighWire regularly interviews end users of research information and we have heard loud and clear that connecting published information into personal workflow tools is key—and that proprietary tools are just another silo to be avoided.

Our challenge in standardization efforts in these and other areas is the right balance between standards and innovation. To effectively interoperate, we can't all do our own thing. But by allowing innovations such as extensions or apps within a standardized environment, we can still encourage new ideas and paradigms. And over time, some of these extensions or apps get integrated into the standardized environment or become new standards themselves.

I O P I doi: 10.3789/isqv23n4.2011.05

JOHN SACK <sack@stanford.edu> is Founding Director at HighWire Press (highwire.stanford.edu/), a leading ePublishing platform for scholarly publishers, societies, associations, and university presses.

DOI; Digital Object Identifier standard (ANSI/NISO Z39.84)

www.niso.org/standards/z39-84-2005/

HTML 5

dev.w3.org/html5/spec/

NLM XML Journal Article Tag Suite (draft standard NISO Z39.96)

www.niso.org/standards/z39-96/

OpenURL standard (ANSI/NISO Z39.88)

www.niso.org/standards/z39-88-2004/

ORCID project

orcid.org/



**RELEVANT
LINKS**



NISO LAUNCHES T TO DEVELOP STANDARDS A

1 Digital Bookmarking and Annotation Sharing

The electronic book has many advantages over its print counterpart. But one area where print still has the advantage is in the creation and sharing of bookmarks and annotations. It's difficult to reference a quote from page 157 of a particular e-book, because in an environment where text is reflowable and reformattable based on screen size, device orientation, or user preference, the concept of "page 157" is meaningless. Likewise, if a user of one e-book platform creates an annotation in her copy of *Pride and Prejudice*, there is no easy way for her to share this annotation with a user of a different e-book platform.

For both casual readers as well as professional and academic researchers, such pointers and sharing capability needs to work across reading systems to enable social uses of books, articles, and grey literature that range from personal memory aids to citations and critical analysis, as well as deep inter-linking. The ability for social sharing of bookmarks and annotations represents a huge potential opportunity in the e-book marketplace.

At present, no standards exist in this space although a number of proprietary, platform-specific solutions exist for some, but not all, pieces of the problem. Some community-specific efforts have also proposed solutions. One of these, the Open Annotation Collaboration, has defined a distributed architecture for annotations based on a customizable Resource Description Framework (RDF) syntax; however, other functionality such as location (bookmark) syntax has not yet been specified. The International Digital Publishers Forum (IDPF), who developed the open EPUB standard, is exploring a syntax for locating a text location within a file, based on some work initially done by Adobe.

To address the need for cross-platform standards in this space, NISO and the Internet Archive, with funding from the Andrew W. Mellon Foundation, held two standard incubation workshops in October 2011 in conjunction with the Frankfurt Book Fair (Frankfurt, Germany) and the Books in Browsers meeting (San Francisco). Representatives from major stakeholders in all areas of the e-book supply and delivery chain discussed requirements, critical components, and possible approaches.

Following the meetings, NISO initiated a new Working Group to use the meeting output and develop a syntax specification for how bookmarks and annotations are located in digital books. A preliminary goal has been established for a trial use standard in late 2012.

An interest group e-mail list has been established for anyone interested in following the group's work.

| NR | doi: 10.3789/isqv23n4.2011.06

Digital Bookmarking and Annotation New Work Item Proposal

www.niso.org/apps/group_public/document.php?document_id=7152&wg_abbrev=ccm

E-book Annotation Sharing and Social Reading Meetings

www.niso.org/topics/ccm/e-book_annotation/

E-mail Interest Group List

www.niso.org/lists/bookmarks

International Digital Publishers Forum

www.idpf.org

Open Annotation Collaboration

www.openannotation.org/



RELEVANT
LINKS

WO NEW INITIATIVES ND RECOMMENDED PRACTICES



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2 Open Discovery Initiative

A new generation of library discovery services has entered the marketplace in the last few years. Unlike their federated search predecessors, the new services follow the web search engine model of creating and searching their own aggregated index of the relevant content. By indexing the content in advance, discovery services have the ability to deliver more sophisticated services with instant performance.

In order to create effective indexes, these discovery services depend on the cooperation of the information providers to provide access to metadata and often to the full-text of information resources. Often, the indexes have been built based on private agreements and ad hoc exchange methodologies between information providers and discovery service creators.

Libraries increasingly rely on these index-based discovery services as the strategic interface through which their patrons gain access to the breadth of information that is available to them. The content for these services comes from a range of information providers and products including licensed, purchased, open access, and local institutional sources. Libraries need a clear understanding of the degree of availability of that content in their discovery service of choice. Unfortunately, it is often not clear what specific information is available; whether it is indexed in full text, by citations only, or both; and whether the metadata derives from aggregated databases or directly through the full-text.

At the 2011 ALA Annual Conference in New Orleans, Marshall Breeding (Vanderbilt University), Oren Beit-Arie (Ex Libris), and Jenny Walker (Ex Libris consultant) convened an invitational meeting to gauge interest in establishing a more standard set of practices for the ways that content is represented in discovery services and for the interactions between the creators of these services and the information providers whose resources they represent. Representatives from the major stakeholder groups—libraries, information providers, discovery service providers, NISO as a standards development organization, and NFAIS whose members were also discussing discovery services—were overwhelmingly positive about working together on standards or best practices. NISO agreed to launch a new Open Discovery Initiative to pursue the proposed work.

Among the areas proposed for the new working group to address are:

- » A standard way for information providers to provide content to discovery service creators
- » Clarity in the business rules that apply to the content once indexed
- » A standard exchange of data describing what rights to the content apply within the discovery service
- » Models for fair linking from the discovery service to the publisher content
- » Clear descriptors regarding the extent of indexing performed for each item or collection of content and the level of availability of the content
- » A standard approach to exchanging data in support of usage reports

An interest group list for this project is available for those who would like to receive updates on the Working Group's progress and provide feedback to the group on its work.

I NR I doi:10.3789/isqv23n4.2011.07

Open Discovery New Work Item Proposal

www.niso.org/apps/group_public/document.php?document_id=7099&wg_abbrev=d2d

E-mail Interest Group List

www.niso.org/lists/opendiscovery

Jason Vaughan. *Web Scale Discovery What and Why? In: Web Scale Discovery Services. Library Technology Reports, Volume 47, Number 1, January 2011, pp 5-11.*

<http://alatechsource.metapress.com/content/p2148444086n7r7t/fulltext.html>



RELEVANT
LINKS



ESPreSSO Single-Sign-on Authentication Recommended Practice Published

NISO has published a new Recommended Practice, *ESPreSSO: Establishing Suggested Practices Regarding Single Sign-On* (NISO RP-11-2011), that identifies practical solutions for improving the use of single sign-on authentication technologies to ensure a seamless experience for the user.


Currently a hybrid environment of authentication practices exists, including older methods of userid/password, IP authentication, or proxy servers along with newer federated authentication protocols such as Athens and Shibboleth. This recommended practice identifies changes that can be made immediately to improve the authentication experience for the user, even in a hybrid situation, while encouraging both publishers/service providers and libraries to transition to the newer Security Assertion Markup Language (SAML)-based authentication, such as Shibboleth.

“With the growing use of mobile devices and remote access, the older authentication methods are not manageable for either the content provider or the library,” explains Steve Carmody, IT Architect, Computing and Information Services, at Brown University and co-chair of the NISO ESPReSSO Working Group. “The ESPReSSO recommendations will help bridge the transition to more robust authentication methods that better match the needs of today’s users and eliminate the need for multiple identities.”

“The growing use of web discovery services over the older federated search method have only increased the need

for single sign-on authentication and consistency of access and context for the user,” states Harry Kaplanian, Director of Technology, Serials Solutions, Inc., and co-chair of the NISO ESPReSSO Working Group. “With a discovery service portal, users are often unaware that they will ultimately be accessing resources across a broad spectrum of platforms and providers, and the multiple back-end logins that occur can be both confusing and frustrating. In addition to addressing this situation, the ESPReSSO recommendations also identify methods that can be used to maintain users’ privacy while still offering them advanced functionality, such as saving searches between sessions.”

This recommended practice is the result of the NISO Chair’s Initiative—a project of the chair of NISO’s Board of Directors, focusing on a specific issue that would benefit from study and the development of a recommended practice or standard. Oliver Pesch, Chief Strategist for E-Resource Access and Management Services at EBSCO Information Services and the 2008-2009 Chair of NISO’s Board of Directors, chose the issue of standardizing seamless, item-level linking through single sign-on (SSO) authentication technologies in a networked information environment. ■

 The ESPReSSO Recommended Practice is available at: www.niso.org/publications/rp.

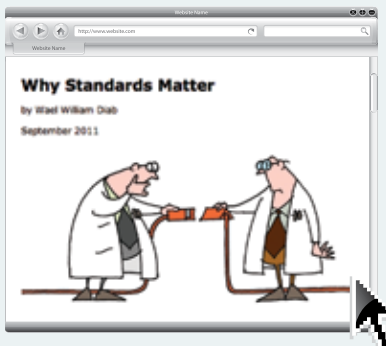
IEEE Standards Education E-zine Launches Inaugural Issue

The IEEE Standards Education Committee and its Editorial Board recently launched the inaugural issue of their new digital magazine titled, *IEEE Standards Education eZine*. This free quarterly publication explores the three fundamental dynamics of standards—technology, economics, and politics. It includes topics intended to promote standards education for engineering curriculums and also highlights the importance of continuing education on standards developments. Various educators and practitioners from around the world share their experiences, challenges, and application of the standards we interact with on a daily basis.

Information on student application projects and grants sponsored by the Standards Education Committee, will accompany standards education materials, featured articles, and notifications for standards education events. ■

🔗 View the IEEE Standards Education e-Magazine at: <http://iee-elearning.org/outreach/mod/book/view.php?id=315>

This FREE quarterly publication explores the three fundamental dynamics of standards—technology, economics, and politics.



“As digital publications evolve from digitized text into enhanced eBooks and new forms of expression, EPUB 3 will dramatically expand the ability of authors and publishers to deliver richer experiences to their readers across disparate devices, in browsers and in apps.” — Bill McCoy, Executive Director, IDPF

EPUB 3 Becomes Final IDPF Specification

EPUB 3.0, a major revision to the global standard interchange and delivery format for e-books and other digital publications, has been elevated by the membership of the International Digital Publishing Forum (IDPF) to a final IDPF Recommended Specification. The EPUB 3 Working Group was chartered in May 2010 and included over 100 contributors from across the globe.

Based on HTML5, EPUB 3.0 adds support for rich media (audio, video), interactivity (JavaScript), global language support (including vertical writing), styling and layout enhancements, SVG, embedded fonts, expanded metadata facilities, MathML, and synchronization of audio with text and other enhancements for accessibility.

“EPUB has become the industry standard format for digital publications based on Web Standards that are structured, reliable, device-independent, and accessible,” said Bill McCoy, Executive Director, IDPF. “As digital publications evolve from digitized text into enhanced eBooks and new forms of expression, EPUB 3 will dramatically expand the ability of authors and publishers to deliver richer experiences to their readers across disparate devices, in browsers and in apps.”


EPUB 3 features have already been delivered by a number of reading systems and content authoring tools. Now that EPUB 3.0 is a final specification, superseding EPUB 2.0.1 as the current version of EPUB, the IDPF anticipates that comprehensive EPUB 3 support will be forthcoming from a number of solution providers during the coming year. ■

🔗 EPUB 3.0 is available at: <http://idpf.org/epub/30>

W3C Library Linked Data Incubator Group Issues Final Report

The W3C Library Linked Data Incubator Group was chartered in May 2010 “to help increase global interoperability of library data on the Web, by bringing together people involved in Semantic Web activities—focusing on Linked Data—in the library community and beyond, building on existing initiatives, and identifying collaboration tracks for the future... This final report of the Incubator Group examines how Semantic Web standards and Linked Data principles can be used to make the valuable information assets that libraries create and curate — resources such as bibliographic data, authorities, and concept schemes — more visible and re-usable outside of their original library context on the wider Web.”

The report describes the benefits of using linked data and details the current situation, followed by recommendations for the various stakeholders (see highlights below). Appendices include an inventory of existing library Linked Data resources, a listing of illustrative relevant technologies and tools, and a discussion of semantic alignment.

 View the Library Linked Data Incubator Report at: www.w3.org/2005/Incubator/ld/XGR-ld-2011025/

■ Recommendations for LIBRARY LEADERSHIP are:

1. Identify sets of data as possible candidates for early exposure as Linked Data.
2. Foster a discussion about Open Data and rights.

■ Recommendations for STANDARDS BODIES AND PARTICIPANTS are:

1. Increase library participation in Semantic Web standardization.
2. Develop library data standards that are compatible with Linked Data.
3. Develop and disseminate best-practice design patterns tailored to library Linked Data.

■ Recommendations for DATA AND SYSTEMS DESIGNERS are:

1. Design and test user services based on Linked Data capabilities.
2. Create URIs for the items in library datasets.
3. Develop policies for managing Linked Data vocabularies and their URIs.
4. Express library data by re-using or mapping to existing Linked Data vocabularies.

■ Recommendations for LIBRARIANS AND ARCHIVISTS are:

1. Preserve Linked Data element sets and value vocabularies.
2. Apply library experience in curation and long-term preservation to Linked Data datasets.


New VRA Core 4.0 Implementation Registry

The *VRA Core* is a data standard for the description of works of visual culture as well as the images that document them. The *VRA Core* metadata can capture descriptive information as well as indicate relationships between works and images. The new *Implementation Registry* provides an opportunity for current and potential users to view publicly available implementations of the standard.

Records in the registry include:

- » Institution Name
- » Dept or Org within institution
- » Collection name using Core 4.0
- » Brief summary of collection and use of Core4
- » URL to publically accessible portion of collection
- » Documentation (links or file attachments of tools, profiles, or other documentation useful to understanding the collection's use of Core4)
- » Contact(s) (name, email, phone)
- » Submission Date

Currently, twelve collections from seven organizations are included. Additional users of CORE 4.0 are encouraged to add their collection to the registry by posting their information to the VRACore listserv (<http://listserv.loc.gov/listarch/vracore.html>) or by contacting Trish Rose-Sandler (trosesandler@gmail.com). ■

 The VRA Core Implementation Registry is available at: www.vraweb.org/projects/vracore4/vracore_registry.html

The new Implementation Registry provides an opportunity for current and potential users to view publicly available implementations of the standard.

The Library of Congress Issues Initial Plan for its Bibliographic Framework Transition Initiative

The Library of Congress issued *A Bibliographic Framework for the Digital Age* in October 2011 to identify the requirements for the new bibliographic framework to replace the Z39.2/MARC carriers for bibliographic information that have been in use for decades.

The new bibliographic framework is intended to be more of an environment than a format. It will be focused on the Web environment, Linked Data principles and mechanisms, and the W3C Resource Description Framework (RDF) as a basic data model. One of the goals of the framework is to better enable the integration of library data and other cultural heritage data on the Web for more expansive user access to information.

While accommodation of RDA (Resource Description and Access) will be a key factor, the framework is intended to be agnostic to specific cataloging rules and data models so that it can support other formats as well, such as DACS (Describing Archives, a Content Standard), VRA (Visual Resources Association) Core, and CCO (Cataloging Cultural Objects).


The plan recognizes the need to continue supporting MARC during the transition, and, most likely, for years to come as libraries determine their timetable for making a change.

The Library of Congress will be developing a grant application to support a two-year initiative to organize consultative groups (national and international) and to support development and prototyping activities. Supported activities are expected to include: developing models and scenarios for interaction within the information community, assembling and reviewing ontologies currently used or under development, developing domain ontologies for the description of resources and related data in scope, organizing prototypes and reference implementations.

To follow the activities of the initiative, sign up for the Bibliographic Transition listserv at listserv.loc.gov/listarch/bibframe.html.

 The Bibliographic Framework Initiative website: www.loc.gov/marc/transition/

The NISO SUSHI Standing Committee have developed a draft Recommended Practice and issued it for a public comment period ending on January 20, 2012.



"The creators of the SUSHI standard and the COUNTER XML schema were forward looking and created products that could handle future needs." – Oliver Pesch

NISO Issues COUNTER-SUSHI Implementation Profile for Public Comment

The NISO SUSHI Standing Committee has developed a draft Recommended Practice, *NISO SUSHI Protocol: COUNTER-SUSHI Implementation Profile* (NISO RP-14-201X), and issued it for a public comment period ending on January 20, 2012. This Recommended Practice provides a practical implementation structure to be used in the creation of reports and services related to harvesting of COUNTER Release 4 reports using the NISO SUSHI Protocol. *The Standardized Usage Statistics Harvesting (SUSHI) Protocol* was issued as a standard (ANSI/NISO Z39.93) in 2007 to simplify and automate the harvesting of COUNTER usage reports by libraries from the growing number of information providers they work with. COUNTER (Counting Online Usage of Networked Electronic Resources) is an international initiative that published its first Code of Practice in 2003 and issued Draft Release 4 of the *COUNTER Code of Practice for e-Resources* in October 2011. The comment period for the *COUNTER-SUSHI Implementation Profile* and COUNTER Release 4 end on the same date. XML schemas supporting the draft *Implementation Profile* and draft Release 4 of the *Counter Code of Practice* have also been published by NISO for review during the comment period.

"The creators of the SUSHI standard and the COUNTER XML schema were forward looking and created products that could handle future needs," explains Oliver Pesch, Chief Strategist for E-Resource Access and Management Services at EBSCO Information Services and co-chair of the NISO SUSHI Standing Committee that developed the Implementation Profile. "Accommodation of such future growth requires a level of abstraction and flexibility to be built in, but that can result in decisions by implementers that could cause

interoperability issues or require client implementers to customize the service for every different provider. The *COUNTER-SUSHI Implementation Profile* was developed to provide guidance with Release 4 of COUNTER by setting out detailed expectations for both the server and the client of how the SUSHI protocol and COUNTER XML reports are to be implemented to ensure interoperability."

"SUSHI implementation became a COUNTER compliance requirement with Release 3 of the *COUNTER Code of Practice*," states Bob McQuillan, Senior Product Manager at Innovative Interfaces, Inc. and co-chair of the NISO SUSHI Standing Committee. "The new draft Release 4 of the *COUNTER Code of Practice* is a single, integrated Code of Practice covering journals, databases and books, as well as multimedia content. This *COUNTER-SUSHI Implementation Profile* supports the changes in Release 4 and was developed with the intention that it could be used by COUNTER auditors to verify compliance of a content provider's SUSHI server." ■

ⓧ The *NISO SUSHI Protocol: COUNTER-SUSHI Implementation Profile* and online commenting form are available at: www.niso.org/publications/rp-14-201x/.

Links to the referenced schemas and additional implementation guidance for SUSHI can be found on the SUSHI webpages at: www.niso.org/workrooms/sushi/.

The draft Release 4 of the COUNTER Code of Practice is available on the COUNTER website at: www.projectcounter.org/code_practice.html.

PREMIS OWL Ontology Available

The PREMIS Editorial Committee has published an OWL ontology for the *PREMIS Data Dictionary for Preservation Metadata* version 2.1, a digital preservation standard based on the OAIS reference model. This PREMIS OWL ontology tries to stick as closely as possible to the PREMIS Data Dictionary, which was developed by experts in the domain of long-term preservation and already had clearly defined semantics for its metadata elements. Until now the PREMIS Data Dictionary was only implemented as an XML schema, which remains ideal for creating, validating, and storing the preservation metadata of a particular digital asset.

This OWL ontology allows one to express the same information in RDF. With this alternative serialization, information can be more easily interconnected, especially between different repository databases. Information in RDF can be also easily and flexibly queried, which can be an interesting option for the data management function of a repository. The PREMIS OWL ontology also reaches out to preservation-specific vocabularies already published by the Library of Congress on id.loc.gov. For all these reasons, the OWL design of PREMIS should NOT be considered as a replacement for the XML Schema: the two of them should rather be considered complementary. ■

🔗 For more information, visit:
www.loc.gov/standards/premis/owlOntology-announcement.html

JISC Collections Issues Journal Transfer Guidelines

JISC Collections, a membership organization that supports the procurement of digital content for education and research in the UK, has issued *Society Journal Publishing: Transfer Guidelines to Help Achieve a Successful Transition*. "The purpose of this publication is to draw the attention of those societies involved in journal publishing, to the problems that can occur for libraries and their users when societies move their journals to a new publisher or from in-house publishing, and to offer guidelines that societies may consider adopting, to achieve a more successful transition."

A survey that JISC Collections conducted among UK university librarians identified four major problems:

- 1 Loss of access by users to journal content
- 2 Pricing issues
- 3 The amount of time needed to amend library systems and records
- 4 Uncertainty about arrangements for librarians' perpetual access rights to past subscribed content.

Publishers are advised to follow a checklist of practices in the guidelines document that includes:

- » Establish a timetable that provides for the transition to be complete well before a new journal year begins.
- » Both old and new publisher should endorse and follow the *TRANSFER Code of Practice*, developed in 2008 by the UKSG.
- » Arrangements should be made between old and new publisher that provide for access rights by subscribers to past content.
- » Include subscription agents in early communications about the title transfer, pricing, timing, etc.
- » The new publisher should supply journal title data to link resolver suppliers' knowledge bases on a timely basis to ensure access to content at the start of the new subscription year is not interrupted. Publishers are encouraged to endorse the NISO/UKSG *KBART: Knowledge Bases and Related Tools* (NISO RP-9-2010) recommended practice. ■

🔗 JISC Collections Journal Transfer Guide: www.jisc-collections.ac.uk/News/journal-transfer-guide/

UKSG TRANSFER Code of Practice: www.uksg.org/Transfer/Code

NISO/UKSG KBART Recommended Practice: www.niso.org/publications/rp/RP-2010-09.pdf

| NW | doi: 10.3789/isqv23n4.2011.08



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SD [STANDARDS IN DEVELOPMENT: *November 15, 2011*]

In Development or Revision

Listed below are the NISO working groups that are currently developing new or revised standards, recommended practices, or reports. Refer to the NISO website (www.niso.org/workrooms/) and the *Newsline* quarterly supplements, *Working Group Connection* (www.niso.org/publications/newsline/), for updates on the working group activities.

WORKING GROUP	STATUS
DAISY Revision Co-chairs: Markus Gylling, George Kerscher	NISO Z39.86-201x, Part A, Authoring and Interchange Framework Finalizing for publication following the DSFTU period.
Digital Bookmarking and Annotation Sharing	Working Group being formed.
ERM Data Standards & Best Practices Review Co-chairs: Ivy Anderson, Tim Jewell	Technical Report in development.
Institutional Identifiers (I²) Co-chairs: Grace Agnew, Oliver Pesch	Recommended practice regarding the use of the International Standard Name Identifier (ISNI) for institutional identifiers in development.
Improving OpenURLs Through Analytics (IOTA) Chair: Adam Chandler	Technical Report in development.
Knowledge Base and Related Tools (KBART) Phase II <i>Joint project with UKSG</i> Co-chairs: Andreas Biedenbach, Sarah Pearson	Phase II Recommended Practice in development.
Open Discovery Initiative	Working Group being formed.
Physical Delivery of Library Materials Co-chairs: Valerie Horton, Diana Sachs-Silveira	NISO-RP-12-201x, Physical Delivery of Library Materials Finalizing for publication following the public comment period.
Presentation and Identification of E-Journals (PIE-J) Co-chairs: Bob Boissy, Cindy Hepfer	Recommended Practice in development.
RFID for Library Applications Revision Co-chairs: Vinod Chachra, Paul Sevcik	NISO RP-6-201x, RFID in U.S. Libraries Finalizing for publication following the public comment period.
Shared Electronic Resource Understanding (SERU) Co-chairs: Judy Luther, Selden Lamoureux, Karla Strieb	NISO RP-7-201x, Shared Electronic Resource Understanding (SERU) Revision to Recommended Practice in development.
Standardized Markup for Journal Articles Co-chairs: Jeff Beck, B. Tommie Usdin	Z39.96-201x, JATS: Journal Article Tag Suite Finalizing for publication following the DSFTU period.
SUSHI (Standardized Usage Statistics Harvesting Initiative) Standing Committee Co-chairs: Oliver Pesch, Bob McMillan	NISO RP-14-201x, NISO SUSHI Protocol: COUNTER-SUSHI Implementation Profile To be issued for public comment from December 1, 2011–January 20, 2012.
Supplemental Journal Article Materials <i>Joint project with NFAIS</i> Co-chairs Business Working Group: Linda Beebe, Marie McVeigh Co-chairs Technical Working Group: Dave Martinsen, Alexander (Sasha) Schwarzman	Recommended Practice in Development.
Z39.7 Standing Committee Chair: Martha Kyrillidou	NISO Z39.7-201x, Information Services and Use: Metrics & statistics for libraries and information providers – Data Dictionary Revision in development.



STRUCTURING CONTENT FOR USE

DAISY REVISION

Simplification, Broader Application Key

ANSI/NISO Z39.86, formerly called *Specifications for the Digital Talking Book* – more commonly known as DAISY, in recognition of the Maintenance Agency for this standard – has undergone revision to reduce complexity, improve and extend the user experience, support materials beyond the book (e.g., newspapers, audio tours, museum exhibits, presentations, and more), align with mainstream publishing, and allow for innovation. DAISY allows for content to be transformed into multiple output formats, including accessible formats such as Braille, DAISY DTBs, and large print. The revised standard, *Authoring and Interchange Framework* completed a trial period and is being finalized for publication in early 2012.

JATS: JOURNAL ARTICLE TAG SUITE

Standardized Markup for Journal Articles

JATS (NISO Z39.96) provides a common format in which publishers and archives can exchange journal content. Based on the long-standing and well-accepted NLM Journal Archiving and Interchange Tag Suite, this standard defines elements and attributes that describe metadata and full content of scholarly journal articles. Three tag sets are included: Journal Archive & Interchange, Journal Publishing, and Article Authoring. Comments from a trial period are under review and the standard is being prepared for an early 2012 publication.

SUPPLEMENTAL JOURNAL MATERIALS

A Joint NISO/NFAIS Project


This project is developing recommended practices for publisher inclusion, handling, display, and preservation of supplemental journal article materials. A Business Working Group is focusing on semantic and policy issues related to delivering materials that are supplemental to scholarly journal articles, while the Technical Working Group addresses issues such as metadata, persistent identifiers, linking mechanisms, packaging, and more. The Business recommendations will be issued for public comment in January 2012.

Where to Get More information:

DAISY: Authoring and Interchange Framework


Co-chairs: Markus Gylling, DAISY Consortium;
George Kerscher, DAISY Consortium

 www.niso.org/workrooms/daisy

 www.daisy.org/zw/Main_Page

JATS: Journal Article Tag Suite


Co-chairs: Jeff Beck, NCBI, National Library
of Medicine; B. Tommie Usdin, Mulberry
Technologies, Inc.

 www.niso.org/workrooms/journalmarkup

NISO/NFAIS Supplemental Journal Article Materials

Business Working Group Co-chairs: Linda Beebe,
American Psychological Association; Marie
McVeigh, Thomson Reuters

Technical Working Group Co-chairs: Dave
Martinsen, American Chemical Society; Sasha
Schwarzman, American Geophysical Union

 www.niso.org/workrooms/supplemental



NISO

www.niso.org

