

ISQ

INFORMATION STANDARDS QUARTERLY

FALL 2010 | VOL 22 | ISSUE 4 | ISSN 1041-0031

SPECIAL ISSUE: RESOURCE SHARING

USING RESOURCE
SHARING STANDARDS
IN THE ORBIS CASCADE
ALLIANCE CONSORTIAL
BORROWING SYSTEM

ROUNDUP OF RESOURCE
SHARING TOOLS & PROJECTS

FUNDING MODELS
FOR COOPERATIVE
INFORMATION RESOURCES
AND REPOSITORIES

NISO PHYSICAL DELIVERY OF
RESOURCES WORKING GROUP




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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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NISO Open Teleconferences

Join us each month for NISO's Open Teleconferences—an ongoing series of calls held on the second Monday of each month as a way to keep the community **informed** of NISO's activities. The calls also provide an opportunity for you to give feedback to NISO on our activities or make suggestions about new activities we should be engaging in.

The call is free and anyone is welcome to participate in the conversation. All calls are held from 3:00 - 4:00 p.m. Eastern time.

COMING SOON: Announcement of a joint NISO/DCMI series of webinars

JANUARY

- 7-11 NISO at ALA Midwinter 2011 (San Diego, CA)
- 12 January 12: The Three S's of Electronic Resource Management: Systems, Standards, and Subscriptions (NISO Webinar)

FEBRUARY

- 9 Back from the Endangered List: Using Authority Data to Enhance the Semantic Web (NISO Webinar)

MARCH

- 9 Patrons, ILL, and Acquisitions (NISO Webinar)

APRIL

- April Two-Part Webinar: RFID Systems (NISO Webinar)
- 13 RFID Systems: An Introduction (Part 1)
- 20 RFID Systems (Part 2)
- 14 Mobile Technologies in Libraries (NISO One-Day Forum - Location TBA)

MAY

- May Two-Part Webinar: The Future of Integrated Library Systems (NISO Webinar)
- 11 The Future of ILS: RDA & Cataloging (Part 1)
- 18 The Future of ILS: User Interaction (Part 2)

JUNE

- 8 Linking the Semantic Web Together (NISO Webinar)
- 23-28 NISO at ALA Annual (New Orleans, LA)
- 24 NISO/BISG Forum: The Changing Standards Landscape
- 26 NISO Update

JULY

No events are held this month.

AUGUST

- 10 Managing Physical Storage (NISO Webinar)

SEPTEMBER

- 14 Preserving Digital Content (NISO Webinar)

OCTOBER

- NISO Two-Part Webinar: Data (NISO Webinar)
- 12 Data: Supplemental Materials (Part 1)
- 19 Data: Technical Management (Part 2)
- 24-25 The E-books Environment (NISO Two-Day Forum - Location TBA)

NOVEMBER

- 9 New Discovery Tools (NISO Webinar)

DECEMBER

- 14 Assessment Metrics (NISO Webinar)





Peter
Murray

FROM THE GUEST CONTENT EDITOR

Do More...With Someone Else

It comes as no surprise in today's economic conditions that the mantra of "do more with less" is often repeated. For libraries, there simply isn't enough money to buy and hold everything that patrons might want. Although that has been true for a long time, as has the professional ethic to share the information resources we have to the greatest extent possible, pressures are increasing to find new partnerships and new workflows that improve service to patrons and reduce the costs of doing so.

This issue contains articles that illustrate new approaches and improvements to resource sharing. One **feature article** is an exploration by KYLE BANERJEE and ANYA ARNOLD of the standards and protocols used by the Orbis Cascade Alliance Consortial Borrowing System. The first consortium to use the WorldCat Navigator software, the Alliance is at the forefront of pushing interoperability between various systems. Their experience points to practical issues when standards such as Z39.50 and NCIP are used to connect multi-party, multi-system environments. A second feature contains a compilation of some of the new tools, systems, and standards that are available for resource sharing. One or more might be right for you.

As important as standards are in making the data bits flow smoothly from place-to-place, the ways in which projects are financed and sustained are key to enabling those bits to keep flowing. In the **opinion** section of this issue are two articles that address funding models for cooperative information resources and repositories. First, EDWARD ZALTA and URI NODELMAN, Principal Editor and Senior Editor of the Stanford Encyclopedia of Philosophy (SEP), review the successes and the challenges of their effort to endow a fund for the maintenance and expansion of an open access encyclopedia. SEP started by soliciting commitments first from libraries and private donors, then from individuals. Now they are striving to find new "carrots" for contributors to make up the difference in the hopes of avoiding "sticks" that may result in closed access. In the second article, OYA

RIEGER and SIMEON WARNER discuss the early stages of finding a sustainable business model for the arXiv service. Up to this point it has been supported by the generosity of the host institution. Twenty years after it was founded and ten years after it moved from Los Alamos National Laboratory to Cornell University, an international advisory group is now working on a business plan for the long-term sustainability of arXiv.

The **member spotlight** is an interview with SUSAN CAMPBELL of the College Center for Library Automation (CCLA) in Florida. CCLA is making use of standards such as COUNTER/SUSHI, NCIP, and Open URL to support their consortium members.

Much of the focus today seems to be on electronic resources, but a substantial volume of physical materials are still being shared and finding cost-effective ways of doing this is more important than ever. In the **NISO Reports** section VALERIE HORTON and DIANA SACHS-SILVEIRA, co-chairs of the Physical Delivery of Library Resources working group, provide an update on their work to create a recommended practice for optimizing the sharing of items between libraries.

In times of "do more with less" perhaps the phrase we should take to heart is "do more with someone else." By combining efforts we can be greater than the sum of our parts. We need to stretch, enhance, and redefine the standards and processes used today to meet this new, critical mission. I hope this issue of ISQ helps you find ways to do just that.

Peter E. Murray | Assistant Director for Technology Service
Development at LYRASIS

KYLE BANERJEE & ANYA N. ARNOLD

USING
RESOURCE SHARING
STANDARDS IN THE

ORBIS CASCADE ALLIANCE

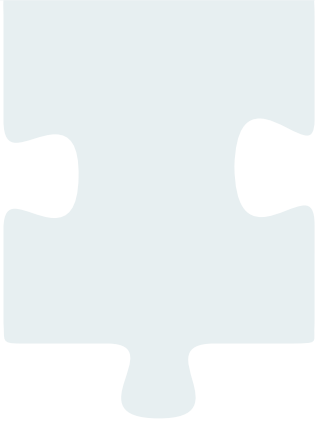
CONSORTIAL BORROWING SYSTEM

In December 2008, the Orbis Cascade Alliance (“the Alliance”) migrated to WorldCat Navigator (“Navigator”) to support consortial borrowing. Consortial borrowing is different from interlibrary loan (ILL) in that it is both unmediated and fully automated so it uses a much more streamlined circulation workflow. The purpose of Navigator is to allow any patron from an Alliance member library to request items owned by any Alliance library and provide the staff functionality necessary to process those requests.

Navigator serves TWO distinct proposes:

1 **Patron discovery:** This is provided by a group instance of WorldCat Local (<http://summit.orbiscascade.org>) where patrons can see and place unmediated requests for items owned by the Alliance, as well as those not held by the Alliance, in one discovery system.

2 **Staff request processing:** Consortial borrowing is a cross between traditional circulation and ILL workflows. To serve patron needs and allow efficient request processing, the system automates functions such as placing holds, checking materials in and out of each local ILS, creating temporary bibliographic and item records, and triggering notices to patrons. Standards play an essential role in automating resource sharing within the Alliance. However, there are certain critical functions where standards cannot yet be used so workarounds have been implemented.



Background

The Alliance is a consortium of 36 academic libraries in the Pacific Northwest that serves a combined total of roughly 250,000 patrons. The member libraries of Orbis Cascade Alliance are committed to making their combined collections available as a single collection—meaning that any patron can check out materials from any library without limitation.

From 1995 to 2008, the Alliance used Innovative Interfaces’ (III) INN-Reach software to facilitate borrowing and lending of materials. INN-Reach allowed libraries with III Millennium systems to use a basic circulation workflow for consortial borrowing. By policy, Alliance patrons requested physical materials from any library as if they were a local patron. Non-returnables such as article photocopies were requested via ILL.

In March of 2008, the Alliance’s governing body voted to migrate to a new consortial borrowing system: OCLC’s WorldCat Navigator. In December 2008, the Alliance started using Navigator in production. Although INN-Reach and Navigator are designed to fulfill many of the same functions, Navigator also supports discovery and processing of ILL materials and other nonreturnable requests and, since it is based on standards, Navigator is potentially better suited to groups with multiple ILS platforms.

CONTINUED »

Limitations of standards in resource sharing

While standards have been essential to the success of Navigator, standards support alone would not have been sufficient for a successful resource sharing product. Excluding authentication with local campus systems and authorization issues, all that Navigator needs to function well is good Z39.50 and NISO Circulation Interchange Protocol (NCIP) support. However, the Millennium systems that Alliance libraries use can neither initiate NCIP messages nor respond to them from Navigator. Moreover, for reasons that will be discussed later, using Z39.50 is problematic for providing consortial borrowing services.

The reality is that standards are helpful for facilitating certain operations, but not others—even when a standard exists specifically to support that function. The general challenges to using standards for resource sharing include the following:

- ➔ Available standards do not adequately address some practical concerns. *For example, if implemented strictly, patrons must pick up items at their affiliated library and no other.*
- ➔ Systems implement standards in unusable or suboptimal ways. *Screen scraping is faster and more reliable than using standards for some operations.*
- ➔ Data necessary to use the standard properly do not exist, are inconsistent, or are provided in a form that cannot be used directly. *For example, automatic volume selection is problematic because enumeration is expressed inconsistently.*

Standards-based services in Navigator

There are several opportunities for standards support in the lifecycle of a typical consortial request:

- 1 Identifying requestable materials (lending)
- 2 Authenticating patrons (borrowing)
- 3 Placing holds (lending and borrowing)
- 4 Checking materials in/out (lending and borrowing)
- 5 Shipping/Receiving (lending and borrowing)
- 6 Generating temporary records (borrowing)

Although the list appears formidable, only a small number of standards are usable in some form by Navigator in the Alliance set up:

- 1 Z39.50: Identification of lendable materials
- 2 LDAP, Shibboleth: Patron authentication
- 3 NCIP: Place holds, ship, check in/out
- 4 MARC: Identification
- 5 OpenURL: Redirection of requests for non-loanable materials

Additionally, if an item desired by the patron is not loanable (i.e., it is electronic or the request should be fulfilled as a nonreturnable), Navigator must redirect the request to a system designed to facilitate such requests.

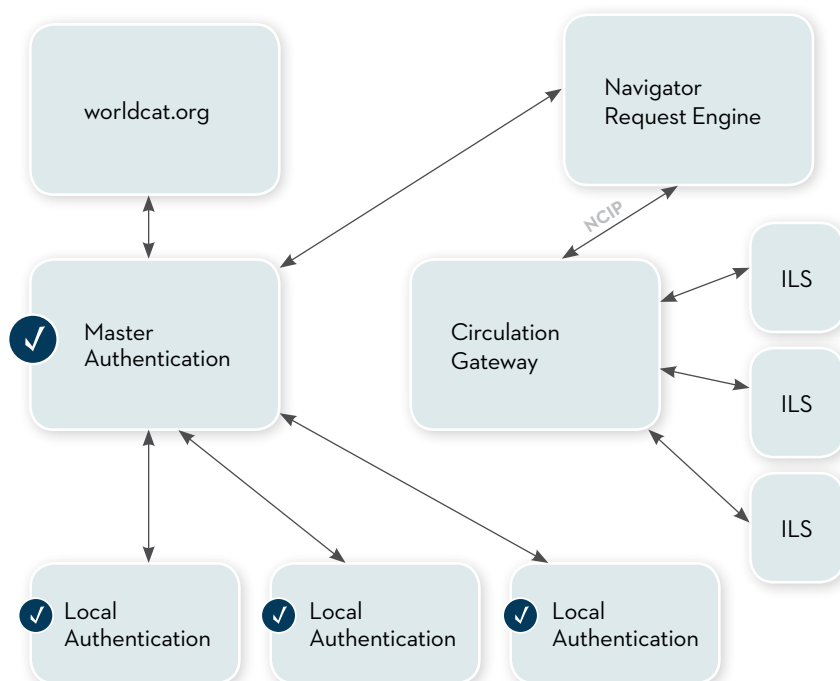


Figure 1: WorldCat Navigator Architecture

Figure 1 demonstrates the basic operation of Navigator. When a user requests an item from the worldcat.org platform, the item information is transferred to a master authentication service. This service consults local authentication services at the member institutions. Upon successful authentication, a user object is sent back to the master authentication service and this is transmitted to the Navigator Request Engine (NRE). NRE only knows how to interact with an ILS using NCIP 1.0. However, since none of the systems in the Alliance support that standard, NRE interacts with a layer known as the Circulation Gateway which translates these messages into actions the local catalogs can understand. The Circulation Gateway is capable of translating these messages into a wide variety of actions, including direct database calls, calling APIs, and other techniques including screen scraping.



Even after a patron has identified a particular item, using Z39.50 is still problematic. It has no mechanism for limiting result sets, so even a search on a single unique control number can result in thousands of items being returned leading to poor performance as well as not returning useful information such as summary holding statements and electronic links.



The NCIP standard also has some inherent limitations. The NCIP protocol does not allow borrowing libraries to change the due date that was transmitted by the lending library.

Standards do not address some practical concerns

If all data were accurate and standards support were ideal, a number of practical considerations would still introduce considerable challenges. Consider the relatively “easy” use case of using Z39.50 to discover lendable materials. Z39.50 cannot be used in a relevancy-based metasearch of the 36 Alliance catalogs because effective relevancy algorithms require unified indexes and performance of broadcast searches is unacceptable. For this reason, Navigator relies on WorldCat holdings to determine which materials to present to patrons.

Even after a patron has identified a particular item, using Z39.50 is still problematic. Z39.50 has no mechanism for limiting result sets, so even a search on a single unique control number can result in thousands of items being returned (e.g., barcoded serial runs) leading to poor performance as well as not returning useful information such as summary holding statements and electronic links. Moreover, the data returned by a Z39.50 search cannot take the library’s loan rules into account, so materials that appear to be available often won’t be.

The NCIP standard also has some inherent limitations. For instance, when an item is checked out, the lending system transmits a due date to the borrowing library. However, it is desirable in a consortial borrowing system for libraries to have policies that define how long patrons can check out materials. Alliance patrons may check out materials for six weeks. But if the lending system sets the due date, it can’t create a due date that will make sense for patrons because time spent in transit, processing, and on the hold shelf varies. If a patron is given five different due dates when checking out eight books, she will understandably be confused. In addition, the patron needs clear overdue notices indicating the six week due date, not one based on when requested items

should arrive by courier at the lending library. The NCIP protocol does not allow borrowing libraries to change the due date that was transmitted by the lending library.

NCIP also presumes institutions will not act on transactions when they are neither the lending nor borrowing library. While this may sound sensible, Alliance patrons may pick up requested materials at any member library, and they may drop them off at any member library. Especially with the growth of distance education programs, it is common for the most convenient library to be located far from the patron’s home library—in many cases, hundreds of miles. Consequently, workarounds that address NCIP’s limitations are necessary to provide this popular service for patrons.

The Alliance libraries address the due date issue by using the borrowing library ILS to perform all circulation functions. The NCIP Accept Item message to the Circulation Gateway triggers the automatic creation of a bibliographic and item record on which a hold is placed. Those actions allow an automatic alert to be sent to patrons informing them that the item can be retrieved from the service desk of their choice. To allow patrons to pick up materials at other libraries, Alliance patrons have had to maintain separate sets of credentials for each institution where they pick up items.

A longer-term solution that is currently being discussed involves using the patron’s home library system to manage the transaction. This allows all circulation activity to be managed in a single place, and it avoids confusion with ILL transactions. Patrons have universal borrowing privileges within the Alliance, but those privileges do not extend to ILL. No elegant solution to allowing patrons to drop materials off anywhere has yet been identified. Currently, these materials are sent to the lending library which must then inform the borrowing library that the material has been returned.

CONTINUED »



A major NCIP pilot project in Montana experienced consistent issues with holds being placed on items held by the wrong library in shared systems.

This occurred because the hold was placed on a bibliographic item, and then the local system frequently selected an item to fill the request from a different library than the one that the request was routed to.

Systems implement standards in unusable or suboptimal ways

NCIP attracts a great deal of attention in the resource sharing community because it defines a protocol specifically designed to support direct consortial borrowing and facilitate exchange of data between circulation and interlibrary loan (ILL) applications. However, confusion surrounding this standard in both the library and vendor communities has been a significant barrier to its use in production work. (Version 2.0 of NCIP, which isn't yet supported by Navigator or any other resource sharing product, was developed to overcome technical limitations in NCIP 1.0.)

Originally, NCIP was conceived as a toolkit-style standard with no minimum requirements for compliance beyond supporting at least one of 45 services, although in 2009 a set of nine core messages was defined. NCIP has many practical applications, and, to illustrate why requirements for compliance seem low, it makes little sense for a self-checkout machine to send messages related to creating/deleting users or agencies, generating user notices, recalling items, and the like. As a practical matter, no circulation system as of this writing supports NCIP messages as an initiator—it appears that implementations have been designed to work with brokering systems developed by the same vendor.

Presuming support of all defined services and all optional parameters—something that no system does—NCIP still does not define how data within the messages are structured, how to transport that data, or what to do with the message when it is received. This allows great flexibility, but it results in far less predictable behavior of NCIP initiators and responders.

For example, a major NCIP pilot project in Montana experienced consistent issues with holds being placed on items held by the wrong library in shared systems. This occurred because the hold was placed on a bibliographic item, and then the local system frequently selected an item to fill the request from a different library than the one that the request was routed to. In December 2007, the pilot was discontinued because it was increasing staff workload rather than reducing it. In fact, one of the findings of the final report was that NCIP 1.0 was not ready for production use.

The problem in the Montana NCIP pilot is not inherent to the NCIP standard because the NCIP protocol defines an Agency ID which could theoretically be used by the responder

to prevent this specific problem. Alternatively, separate responders could be created within the shared system for each library. In short, the devil is in the details and the only way to know what will work is to test.

In addition, system architecture impacts which capabilities standards can provide. For example, NRE queues Navigator transactions each minute and sends NCIP messages serially. As a practical matter, this means that it is not even theoretically possible to give users real time feedback on whether their transactions were successful. Patrons receive failure notices via e-mail sometimes long after they thought their request was successful.

Alliance systems do not support the NCIP services required by Navigator, so OCLC created the Circulation Gateway to translate NRE NCIP messages into actions on the catalog. For example, an Accept Item NCIP message triggers the creation of temporary bibliographic and item records that are loaded into the catalog using the same mechanism that processing staff at local libraries have been using for many years.

Necessary data do not exist, are inconsistent, or are unusable

For standards to work properly, data must be complete, accurate, and consistent. Since variability is inevitable, all levels of Alliance's Navigator implementation are affected. At the discovery level, bytes 6 and 7 in the MARC leader—which determine material type and bibliographic level respectively—change fulfillment options and display. For example, items coded as electronic resources generate a button that points to an OpenURL resolver and items coded as serials generate a button that directs the request to the patron's ILL system. Discovery of electronic materials is still problematic, as it is not possible to attach holdings to many electronic resources. In addition, when libraries attach electronic holdings to the paper print resource record in their local catalog or when a monographic series that contains an entire volume that should be sent to the patron is encoded as a serial, the fulfillment options will not appear properly.

Navigator also has no way to accurately place holds on requests made for enumerated volumes. The multitude of ways libraries express volume data in their catalogs and the variety of ways that patrons ask for these items led to a workaround

where a hold is placed on the first available item, but the generated paging slip shows the volume that the patron requested. When the requested volume is shipped, the hold for the volume that the patron placed the hold on is cancelled. This workaround is labor intensive and results in patrons getting the wrong item.

Once the patron finds an item she wants, authentication presents the next information challenge. Several Alliance institutions serve over 20,000 patrons, so manually maintaining patron files is unacceptable. Ideally, authentication would be provided by campus LDAP or Shibboleth implementations. However, these campus systems do not classify patrons the same way that library systems do. They do not know if patrons have not returned books or have unpaid fines, and they don't know when the patron record expires. In addition, almost all Alliance libraries must provide service to people who are not directly part of the institution—visiting and emeritus faculty, community members, etc. These patrons will also not be in the campus authentication systems. Fortunately, these authentication challenges are trivial to address because the EZProxy software that OCLC requires can consult multiple authentication sources simultaneously and allows programmatic mapping of missing values.

Conclusions

Most of the discussion here focuses on the challenges of using standards for consortial borrowing at the Alliance. Despite these issues and others, the advantages outweigh the disadvantages. Thanks to OpenURL, the same discovery interface patrons use for consortial borrowing allows them to request items via ILL or search for electronic resources.

More importantly, Navigator's standards-based interfaces make it possible for libraries with different ILS systems to join the Alliance's consortial borrowing system and provide a mechanism by which Alliance members can migrate to other systems without leaving the consortium. No system lasts forever and there is virtually no chance that all libraries would have the staff and monetary resources to migrate at the same time, but standards make it possible for new systems to communicate with Navigator via NCIP or one of the Circulation Gateway's supported protocols. As a result, libraries can migrate to new systems as technology cycles progress without disrupting either local or consortial level services to patrons.

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RELEVANT LINKS



Bodfish, John. *Benefits of NCIP in VDX*. Session presented at VUGANZ at Alia, Perth, Australia, September 18, 2006.

www.oclc.org/fr/fr/news/events/presentations/2006/Benefits_of_NCIP_in_VDX.ppt

EZProxy

www.oclc.org/ezproxy/

Information Retrieval: Application Service Definition & Protocol Specification, ANSI/NISO Z39.50-2003 (R2009)

www.niso.org/standards/z39-50-2003/

Innovative Interface, Inc. INN-Reach

www.iii.com/products/inn_reach.shtml

Lightweight Directory Access Protocol (LDAP): Technical Specification Road Map, RFC 4510. Internet Engineering Task Force, June 2006.

tools.ietf.org/html/rfc4510

MARC 21 Formats

www.loc.gov/marc/marcdocx.html

Montana NCIP Home Delivery Report. OCLC, 2009.

www.oclc.org/services/brochures/213652usf_montana_ncip_home_delivery_report.pdf

NCIP Core Message Set

www.niso.org/workrooms/ncip/core/

NCIP Implementer Registry

www.ncip.info/implementer_registry

[NISO] Circulation Interchange Protocol (NCIP) [version 1.0], ANSI/NISO Z39.83 (Part 1)-2002

www.niso.org/standards/z39-83-1-2002/

NISO Circulation Interchange Part 1: Protocol (NCIP) [version 2.0], ANSI/NISO Z39.83-1-2008

www.niso.org/standards/z39-83-1-2008/

OCLC WorldCat Navigator

www.oclc.org/us/en/navigator/

The OpenURL Framework for Context-Sensitive Services, ANSI/NISO Z39.88-2004 (R2010)

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

Orbis Cascade Alliance

www.orbiscascade.org/

Orbis Cascade Alliance WorldCat Summit

summit.orbiscascade.org

Shibboleth® System

shibboleth.internet2.edu/

ROUN

OF RESOURCE SHARING TOOLS

1

NCIP Core Message Set

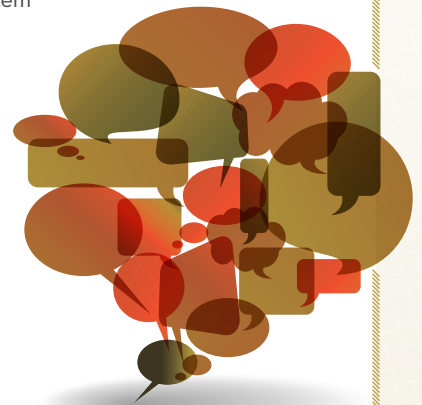
The NISO Circulation Interchange Protocol (NCIP) Implementers Group has provided a simple roadmap for a basic implementation of NCIP (ANSI/NISO Z39.83-2008) by defining a Core Message Set.

The full NCIP standard provides specifications for 45 messages for use in resource sharing and self-service applications. The identified nine NCIP Core Messages provide the major functionality needed for implementing the standard. Responding applications need only to support this core set of messages, which reduces the effort needed to become NCIP compliant. Initiating applications may still use additional messages, but the definition of a core set of messages will make it much easier for librarians and systems vendors to implement NCIP.

The messages in the core set are:

- » Accept Item
- » Cancel Request Item
- » Check In Item
- » Check Out Item
- » Lookup Item
- » Lookup User
- » Recall Item
- » Renew Item
- » Request Item

 For more information, go to: www.niso.org/workrooms/ncip/core



DUWP

TOOLS AND PROJECTS

Most of the major ILS suppliers have some resource sharing module with their product. In addition to those, there are a number of non-vendor initiatives with some innovative approaches or open-resource tools to aid in sharing. This article highlights some of those as well as some standards that will be important for interoperability.

2

RapidILL

RapidILL is a resource sharing system that was designed by ILL staff at Colorado State University Libraries to provide fast and cost effective article requesting and delivery through Interlibrary Loan.

The service is composed of pools of libraries—referred to as “pods”—that have committed to provide sharing within their pod. Some pods are private, e.g. the ARL pod that is exclusive to ARL libraries, while others like the “Cosmo” pod are open to all Rapid participating libraries. Joining multiple pods is encouraged.

Rapid works independently of a library’s ILS. After joining, a library supplies all of its journal

holdings, including electronic journals—but any material that is not available for lending can be marked as blocked. Since there is a reciprocal lending policy, there are no invoicing costs.

In addition to automating many of the tasks involved with article ILL, Rapid also runs requests against a database of over 3 million open access articles and if a match is found the request can often be filled in less than five minutes.

ⓧ For more information, go to: rapidill.org

CONTINUED »

3

eXtensible Catalog Open-Source NCIP Toolkit

The eXtensible Catalog (XC) project has an open-source toolkit for the NISO Circulation Interchange Protocol (NCIP) version 1.0 and the toolkit for version 2.0 is underway.

The NCIP Toolkit allows XC and other user-interface clients “to interact with an ILS for authentication requests, live circulation status lookups, and circulation requests.” The Toolkit acts as an intermediary between a compatible ILS and NCIP clients. The XC Project plans to include NCIP toolkit connectors for a wide range of popular commercial and open-source integrated library systems.

The Toolkit developer documentation describes how to use the open source code to create an interface between any particular ILS and the NCIP Toolkit. Currently connectors for NCIP 1.0 are available for Voyager and Aleph from Ex Libris and the Innovative Interface Oracle implementation of the Millennium ILS.

Building on the work of the DLF ILS-DI Task Force, a working group collaboration of that task force, OCLC team members, and the eXtensible Catalog Organization, an implementation of version 2.0 of the NCIP standard, derived from the OCLC Web-scale Management Services codebase, is being

added to the eXtensible Catalog’s open-source NCIP Toolkit.

The first contribution for NCIP 2.0 will support the NCIP Lookup Item service, which enables libraries to retrieve item status from their ILS in real time, making it possible for third-party discovery interfaces such as the eXtensible Catalog, VuFind, and WorldCat Local to incorporate this in their displays to patrons. Many popular discovery systems do not store item level identifiers, therefore the group plans to create a custom “NCIP-like” service that will allow for lookups based on bibliographic identifiers. The response will return information for all items associated with the identifier. Following this initial release, OCLC will work in conjunction with the Task Force members to establish a project plan to expand both the number of supported NCIP 2.0 services and ILS connection components.

The NCIP Toolkit is licensed under the MIT License, which allows for commercial reuse.

For more information, visit www.extensiblecatalog.org



4

ShareILL!

The ShareILL Wiki provides a gateway to all aspects of ILL, document delivery, and resource sharing with links to resources that include: finding aids and verification tools, codes and guidelines, library networks and consortia, software and systems, standards, copyright and licensing, training, conferences, discussion lists and more.

The wiki is fully open without login for reading. Registered users can contribute to content. ShareILL is administered by Mary Hollerich (Lewis University) and Linda Frederickson (Washington State University).

For more information, go to: www.shareill.org/index.php?title=Main_Page

5

Jangle (*Just Another Next Generation Library Environment*)

Jangle is an open source protocol designed to provide access to the data within a library system such as an ILS or ERM. It utilizes a Jangle Core API based on the Atom Publishing Protocol, which is the externally available interface, and a federation of connectors to the specific library systems being accessed.

While not designed specifically for resource sharing, interlibrary loan is one of the envisioned applications for Jangle. Disparate library systems could utilize the Jangle interface to provide borrowers with status information or even deliver electronic resources to the user. Specialized reporting or request generations for materials are other possibilities. A BorrowerSchema and ReservationSchema have been developed and an experimental NCIPXMLSchemaForBorrowers is in prototype.

The Jangle project opens up the possibility of building a large variety of applications that will interact with the data hidden within a library system.

 For more information, go to: www.jangle.org

6

RFID Standards for Library Applications

Using RFID tags on library materials offers many opportunities for automating the circulation and interlibrary loan processes, including more patron self-service. For ILL and consortial borrowing, standardization especially in how the tags are coded is critical to ensure interoperability.

The International Standards Organization's Technical Committee 46 on Information and documentation is nearing completion of a three part standard, ISO 29560, *Information and documentation – RFID in libraries*. The standard specifies a model for the use of Radio Frequency Identification (RFID) tags for items appropriate for the needs of all types of libraries, including academic, public, corporate, special, and school. Part 1 establishes an abstract data model for the use of RFID tags. Two different encoding alternatives are offered. Part 2 defines encoding based on ISO/IEC 15962 (*Radio frequency identification (RFID) for item management – Data protocol: data encoding rules and logical memory functions*) and Part 3 defines fixed length encoding. Final publication of the standard is expected in 2011.

 For the NISO RP, go to: www.niso.org/publications/rp/

In light of the anticipated publication of the ISO standard, NISO's RFID working group is undertaking a revision of the recommended practice, *RFID in U.S. Libraries* (NISO-RP-6-2008) to ensure it is in compliance with the final international standard. Among other goals, the recommended practice was developed to allow for true interoperability among libraries; i.e., a tag in one library can be used seamlessly by another, even if they have different suppliers for tags, hardware, and software. It includes recommendations for the data model elements, encoding, security, and migration to ISO standard-compliant tags. Although updates to the document will be made in 2011, the current version provides much useful information that libraries can utilize right now.



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7

FulFILLment ILL System

FulFILLment™ is an open source project being developed by Equinox Software, Inc. under contract with OHIONET to create a “hybrid physical/virtual union catalog and ILL system for seamlessly sharing resources between libraries, regardless of the ILS each library happens to use.”

FulFILLment leverages the underlying architecture of Evergreen, an open-source consortial ILS. According to the developers, “libraries which are happy with their current ILS can still keep it because FulFILLment will be able to communicate with it. However, FulFILLment will also have the scalability of Evergreen and be able to handle the needs of large scale, consolidated consortia. It will combine the best of both worlds.” The project is also using the Jangle code (see box #5) to exchange data with various ILSs. FulFILLment is scheduled for completion by the end of the fourth quarter in 2011.

 For more information, see: www.fulfillment-ill.org

8

Rethinking Resource Sharing Initiative

Begun in 2005 with the publication of a white paper—*It's Time to Think Again about Resource Sharing*—this ad hoc group advocates for a revolution in the way libraries conduct resource sharing. Their manifesto includes these principles:

1. Restrictions shall only be imposed as necessary by individual institutions with the goal that the lowest-possible-barriers-to-fulfillment are presented to the user.
2. Library users shall be given appropriate options for delivery format, method of delivery, and fulfillment type, including loan, copy, digital copy, and purchase.
3. Global access to sharable resources shall be encouraged through formal and informal networking agreements with the goal towards lowest-barrier-to-fulfillment.
4. Sharable resources shall include those held in cultural institutions of all sorts: libraries, archives, museums, and the expertise of those employed in such places.
5. Reference services are a vital component to resource sharing and delivery and shall be made readily accessible from any initial “can’t supply this” response. No material that is findable should be totally unattainable.
6. Libraries should offer service at a fair price rather than refuse but should strive to achieve services that are not more expensive than commercial services, e.g. bookshops.
7. Library registration should be as easy as signing up for commercial web based services. Everyone can be a library user.

Among the activities included in their strategic plan through 2012, the group is developing tool kits to help libraries implement resource sharing in line with the manifesto principles, documenting best practice workflow examples, and creating a “GetIt” browser plug-in tool (currently available for Firefox). | FE | doi: 10.3789/isqv22n4.2010.03

 For more information, go to: rethinkingresourcesharing.com



TOPIC: Funding Models for Cooperative Information Resources and Repositories



Edward N. Zalta



Uri Nodelman

EDWARD N. ZALTA AND URI NODELMAN

The Funding Experience of the Stanford Encyclopedia of Philosophy

In 2003, the Stanford Encyclopedia of Philosophy (SEP)—an open-access, online reference work—partnered with library organizations ICOLC, SPARC, and SOLINET to build an endowment of \$4.125 million to sustain the SEP for the long-term (a 5% annual payout from which would cover the SEP’s \$200,000/year budget). The plan called for \$3 million to be raised from the world-wide library community and for Stanford to raise the rest from private individuals. Academic libraries would support the plan by paying voluntary one-time membership dues to join a membership organization (SEPIA = Stanford Encyclopedia of Philosophy International Association) in return for member benefits. One innovative part of the plan was that the money received from the libraries would be protected and invested in a special escrow account in Stanford’s endowment (for the sole use of the SEP) governed by the condition that dues would be returned to the contributing libraries should the SEP project ever terminate, together with any unspent interest and appreciation.

In many ways, this plan was successful. Many libraries at institutions around the world have contributed funds to support a freely available publication. The National Endowment for the Humanities awarded us a Challenge Grant, promising \$500,000 in matching funds if the library community reached

half its goal. During the years 2004–2008, when library budgets were hard pressed but before the economic downturn, the world-wide library community raised \$2.3 million (including the \$500,000 from the NEH) towards its \$3 million goal. Stanford University met its goal of raising \$1.125 million from private individuals for the SEP. So by the end of our official fundraising period in 2008, the SEP had raised \$3.425 million of its \$4.125 million goal, and the library community had only \$700,000 left to raise. As an incentive that is part of our funding model, the library community will gain representation on an SEP Governing Board when they reach their goal.

But since 2008, few libraries have joined SEPIA, despite our library partners’ best efforts—perhaps partly due to the economic downturn. Also, the shortfall has grown to \$1 million because the complete endowment was not raised within the original four year period. The SEP has therefore developed a new way to supplement its annual income while remaining open access. We formed a

membership organization (Friends of the SEP Society) for individuals, and in return for modest annual membership dues (\$5/year for students, \$10/year for associates, and \$25/year for professionals), members receive access to specially-formatted PDF versions of SEP entries, which are freely available in HTML on the web. While this raises about 5–10% of our budget, it doesn’t fully close the funding gap. Fortunately, the Stanford administration has been covering our budget shortfall each year.

The SEP therefore faces the “free rider” problem—many institutions that make use of the SEP are able to ride free because the SEP has been supported by others and remains committed to open access. Free-riding institutions undermine the long-term sustainability of the project. Though 62 of the 110 universities offering a Ph.D. in philosophy in the U.S. and Canada have fully supported the SEP, there are

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The SEP therefore faces the “free rider” problem... because the SEP has been supported by others and remains committed to open access.

So we'd like to ask the librarians who have supported our innovative funding model: What can we do to convince the free riders to join SEPIA and support the SEP? Would the SEP now be justified in implementing negative incentives for free riders with significant SEP usage to replace our reliance on positive incentives for joining SEPIA?



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some major exceptions. For example, one major university in the U.S. accessed the SEP about 16,000 times from about 6,000 different computers in just the 2009–2010 academic year. Readers at this institution have been accessing the SEP at a growing rate for 15 years, but we have not found a way to get the library to join SEPIA. (As a U.S. institution offering a Ph.D. in philosophy, the recommended one-time dues is \$15,750.) Outside the U.S. and Canada, the response from institutions in Australia, New Zealand, and some European countries has been good (the U.K. made a national commitment through JISC, for example), but despite significant usage, we have received support from only one library in China and Spain, and nothing from libraries in France, Italy, and Japan.

The SEP recognizes that it is the first and foremost duty of the library to spend its money to make resources available to its constituents that it can't otherwise make available without spending that money. We also recognize that an economic downturn places even greater pressures on libraries to discharge this duty in a responsible way. However, had the SEP been behind a subscription wall, charging \$1,000/year for subscription-based access since, say, 2000, the major university noted above might well have felt the need to subscribe (given how highly the SEP is regarded and given the potential demand reflected by

actual usage statistics) and would have now paid \$10,000 in cumulative fees, with the prospect of paying \$1,000/year or more for the next 20 years and beyond. Moreover, under many typical electronic licenses, those fees would simply disappear: if the library were to stop the subscription, they would have little or nothing to show for it—they would not have received copies of our archives to build their collection, and their money would have been spent directly on SEP operations rather than being managed and put to work in a protected fund (with the promise of being returned should the project ever terminate).

Thus, given some reasonable assumptions, the library community would have paid more for the SEP in the long run had we adopted a traditional subscription-based model requiring annual payments. So we'd like to ask the librarians who have supported our innovative funding model: What can we do to convince the free riders to join SEPIA and support the SEP? Would the SEP now be justified in implementing negative incentives for free riders with significant SEP usage to replace our reliance on positive incentives for joining SEPIA? The SEP could easily configure its web server so that pages sent to free-riding institutions have a nuisance factor, such as keeping a banner flagging the institution's lack of support in a fixed position while the reader scrolls down

the page, or interposing webpages that require a second click-through to reach the free content. The SEP could construct a "name and shame" webpage of the largest non-contributing (academic) institutional users. All of these disincentives would be consistent with the idea that our content remains freely available. But we have been reluctant to adopt such measures; we've (a) assumed that positive incentives will engender good will among the library community and (b) relied on librarians to convince their free-riding colleagues to join the cause. But if we are to survive, we have to complete our fund-raising goals. What argument should we use, what methods should we deploy, and what changes might we make to our model to convince a librarian at an institution with significant access statistics that the right thing to do is to join the world-wide library community's effort to sustain the SEP or, having done so, to exhort their non-contributing colleagues to stop their free riding?

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[OPINION]

TOPIC: Funding Models for Cooperative Information Resources and Repositories



Oya Y. Rieger



Simeon Warner

OYA Y. RIEGER AND SIMEON WARNER

Developing Sustainability Strategies for arXiv

In January 2010, Cornell University Library announced a new business model to broaden the funding base for the arXiv.org online scientific repository. arXiv will remain free for readers and submitters, but the Library has established a voluntary, collaborative business model to engage institutions that benefit most from arXiv. Started in 1991, arXiv is recognized as an exemplary disciplinary repository and open-access distribution service for research articles. As of October 2010, it includes over 630,000 e-prints that are used by hundreds of thousands of researchers from all over the world (Figure 1). arXiv has transformed the scholarly communication infrastructure of multiple fields of physics and plays an increasingly prominent role in mathematics, computer science, and other disciplines (Figure 2). Since it moved to Cornell in the summer of 2001, the Cornell University Library has provided the bulk of arXiv's operating costs, which are currently at \$400,000 per year.

An Interim Business Model

The first phase of the sustainability planning process included a landscape analysis and a survey of arXiv stakeholders' positions and opinions on arXiv's future. Also critical during this assessment phase was expanding our understanding of the income models for open access and understanding the pros and cons of emerging practices. Based on a review of available funding models [Guthrie et al., 2008 and Crow, 2009] and an extensive survey of arXiv stakeholders, we considered several support options that are compatible with the Cornell University Library's mission. These included: sponsorship and advertising; donations; endowment; fees generated by "freemium" services; and support from funding bodies, scholarly and professional societies, and publishers. We did not consider imposing article processing charges or submission fees because barrier-free submission and use is one of the founding principles of arXiv. The arXiv business model white paper further describes our planning process as well as addressing the questions raised by stakeholders during the input gathering process.

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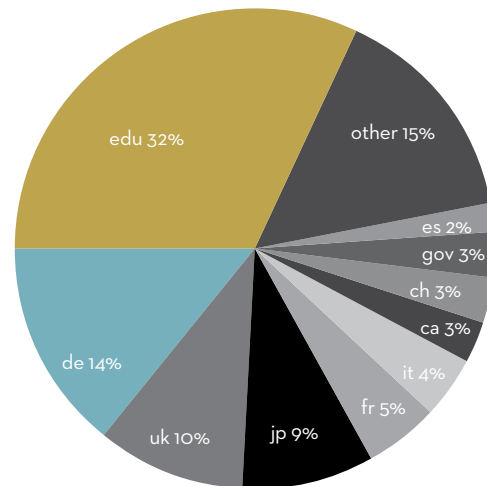


FIGURE 1: arXiv institutional downloads at main site by Internet domain of institutions (2009)

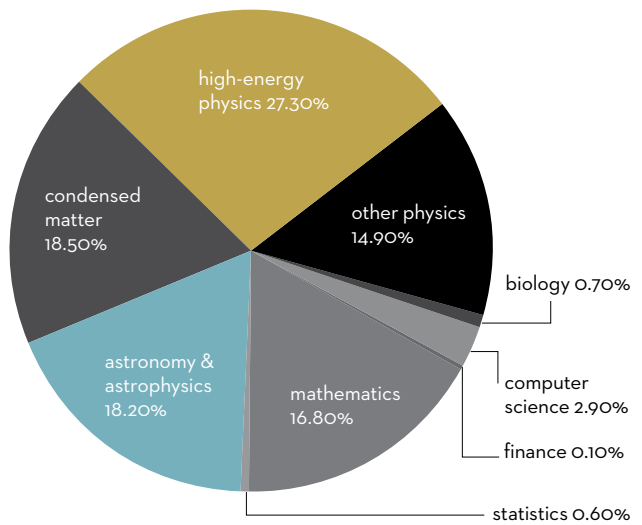


FIGURE 2: arXiv submissions by subject, 1991-2009

Based on this initial planning work, we decided to implement an interim business model for 2010–2012 as we realized that a thorough business planning process will require additional time and necessitate broader collaborations and engagement from many stakeholders including scientists, libraries, research centers, societies, publishers, and funding agencies. The interim model aims to generate funds through recurring subsidies from libraries at academic institutions, research centers, government laboratories, and other organizations that are the heaviest users of arXiv. The 3-tiered institutional support model targets the top 200 institutions representing the most active users of arXiv and suggests institutional contributions within the range of \$4,000 and \$2,300 per year. Cornell University Library will continue to provide 15% of arXiv's operating budget. Since announcing our collaborative business model in January 2010, we have secured pledges from 122 institutions, totaling to \$340,000 in contributions.

We have been encouraged with the international support from Australia, Canada, China, Germany, India, Israel, Japan, Switzerland, the United Kingdom, and the United States. The strong response to our support request—almost meeting our fundraising goal in the first year—validates our interim model and suggests that the approach may be a viable component of a long-term strategy. Although the interim institutional contribution model has garnered strong support, we realize that it is a transitional strategy that needs to be further assessed and developed. One of our goals is to understand the underlying reasons for non participation as some of the top 200 institutions targeted for pledges have either not responded to our requests or indicated that they do not intend to contribute.

Developing a Long-Term Sustainability Strategy

Over the next couple of years we will develop a long-term business plan that provides a framework to sustain and further develop arXiv. To this end, we formed an international advisory group, which will serve an essential consultative role in developing diverse and durable sustainability strategies for this critical international resource. Our business model needs to be responsive to the shifting ecology of scholarly publishing. arXiv complements, rather than competes with, the commercial and scholarly society journal publishing market. Based on requests from several publishers and societies with publications in physics and mathematics, we have been exploring how to expand our current institutional contribution model to invite support from relevant publishers and societies. Included in our business planning process is looking into other potential funding sources such as related foundations and agencies. We also have been considering the role of the Sponsoring Consortium for Open Access Publishing in Particle Physics (SCOAP³) initiative for our financial planning.

An integral part of our business planning process is assessing the technologies, standards, services, and policies

that constitute arXiv. The sustainability of arXiv also depends on enabling interoperability and creating efficiencies among repositories with related and complementary content to reduce duplicate efforts. We will strengthen existing collaborations, such as those with INSPIRE (an information system that aims to integrate existing databases and repositories to host the entire corpus of the high-energy physics (HEP) literature worldwide) and with NASA ADS (a digital library portal for researchers in astronomy and physics), and develop additional partnerships that allow arXiv to provide better services. As we collectively address the creation and management of community-based infrastructures, we need to factor in issues such as financial needs, user requirements, robust discovery features, innovation in scholarly communication, quality control, and enduring access. The Library is committed to maintaining arXiv as an open access service, free to submitters and users alike. However, we believe that as a public good, arXiv should be supported by those institutions that use it the most. Keeping open access academic resources such as arXiv sustainable involves not only covering the operational costs but also continuing to enhance their value based on the needs of the user community.

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arXiv
arxiv.org/

arXiv Business Model White Paper, January 2010
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INSPIRE
www.projecthepinspire.net

NASA Astrophysics Data System (ADS)
adswww.harvard.edu/

SCOAP³ – Sponsoring Consortium for Open Access Publishing in Particle Physics
scoap3.org



RELEVANT
LINKS

SP [SPOTLIGHT]



Susan Campbell
 Research and Development
 Consultant at CCLA and
 the organization's NISO
 voting representative

College Center for Library Automation: Florida's LINCC for Public Colleges

In line with this issue's theme of resource sharing, our member spotlight is the College Center for Library Automation (CCLA). Susan Campbell, Research and Development Consultant at CCLA and the organization's NISO voting representative, responded to the ISQ editor's questions about her organization and their involvement with resource sharing and standards.

“At the core of the LINCC system is a single database of bibliographic records representing the aggregate library collections of Florida’s 28 public colleges. CCLA manages and maintains this shared database for the colleges, facilitating efficient searching and resource sharing among libraries.”

Q For our readers who aren't familiar with CCLA, can you briefly explain who you are and what you do?

The College Center for Library Automation, CCLA, is a unique, state-funded organization established in 1989 by the Florida Legislature with offices and a centralized computing facility headquartered in Tallahassee, Florida.

We provide a suite of automated library services to Florida's 28 public colleges—80 campus libraries in 65 cities—that are used by more than one million college students, faculty, and staff throughout the state. Our core product is “LINCC,” the Library Information Network for Cooperative Content. LINCC has three key components:

- » LINCCWeb, a web portal that college students use for research and to find the books and resources they need. Accessible from LINCCWeb is a shared catalog of the library materials at every public college library in Florida.
- » A statewide collection of e-books, full-text journals, articles, databases, and other e-resources.
- » A library management system (ILS) that librarians use behind the scenes at their colleges to catalog, circulate, and manage their library collections.

Q This issue of ISQ is focusing on Resource Sharing. Can you tell us about CCLA's role in resource sharing for Florida's colleges?

At the core of the LINCC system is a single database of bibliographic records representing the aggregate library collections of Florida's 28 public colleges. CCLA manages and maintains this shared database for the colleges, facilitating efficient searching and resource sharing among libraries.

We have worked with our ILS software vendor, Ex Libris, to develop a standards-based, integrated interlibrary loan module in which all Florida colleges can freely share their resources. Our single, shared database environment enables students to quickly and easily place a request for an item, regardless of which Florida college owns it. Borrowing and lending is facilitated by Florida's Library Network Statewide Ground Delivery service.

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“CCLA collaborated with the Tampa Bay Library Consortium on Florida’s statewide *Ask a Librarian* online reference service, which makes library staff and resources available in real time via live chat, phone, text, or e-mail.”

In the past we supported and maintained a statewide document delivery program based on Ariel software, and we recently released a white paper to colleges addressing current trends in document delivery methods. On the e-resources side, we negotiate local licensing with database vendors on behalf of interested colleges, enabling them to match resources to local curriculum needs. We then provide student access to those resources through LINCCWeb.

We are currently working on partnerships with Florida’s state universities to expand LINCC’s existing resource sharing capabilities to include joint use libraries.

Q A lot of the services you provide seem to be technology-related. What kinds of technology have you implemented to support your members?

We use a variety of technologies to provide additional access to our services.

We offer “LINCCWeb Mobile” for access to LINCCWeb from a phone or other mobile device. Among the more popular student-focused technologies that we offer is a small, downloadable LINCCWeb toolbar. The toolbar attaches to the student’s browser so college library resources are conveniently accessible any time they are needed. We are also working with colleges to integrate LINCCWeb into local course management systems.

CCLA collaborated with the Tampa Bay Library Consortium on Florida’s statewide *Ask a Librarian* online reference service, which makes library staff and resources available in real time via live chat, phone, text, or e-mail.

We are currently undertaking statewide implementation of our next-generation LINCCWeb, based on Ex Libris’ Primo discovery platform. Our implementation permits local customization, returns faceted results with availability and call number on the initial screen, permits tagging and reviews, and has built-in links to the *Ask a Librarian* service. We use metasearch and a link resolver to provide A-Z database lists and return context-sensitive links to full-text.

And on the open source front, we recently released open source code that we developed to facilitate collection of usage statistics from commercial e-resources vendors. While we endorse and support both COUNTER and SUSHI for reporting, we have developed this approach while waiting for broader adoption of these standards.

Q Technology depends heavily on standards. How has CCLA incorporated standards into its products/services and how has that benefitted you? What standards are particularly important to you?

We have close working relationships with our vendors to ensure that standards are incorporated into the products and services we provide. For example, our next-generation discovery tool, based on the Primo platform, is heavily reliant on the OpenURL standard. We continue to encourage the integration of NCIP (NISO Circulation Interchange Protocol) messages into our ILS. We are careful to include language about COUNTER compliance in our e-resource licenses. When the inclusion of standards into products and services is well thought-out and well executed, we have been very happy with the resulting interoperability and cross-platform standardization.

Since we often have to tie together software that is operating on different platforms, we are always interested in standards that make that happen more smoothly. For example, one initiative that we are watching closely is NISO’s ESPReSSO project (Establishing Suggested Practices Regarding Single Sign-On Authentication). Easy and sustainable authentication to licensed resources across

platforms would be extremely valuable to our colleges and students.

Looking beyond library-specific standards, we are very interested in XML, HTML5, and the increasing ubiquity of smartphones and the standards that support them. We are especially interested in the wider adoption of cross-platform e-book reader standards.

Q How has CCLA been involved in standards or best practices development? How does being involved at the development level benefit your organization?

We have long been a voting member of NISO, and have also been an active participant in the Metasearch Initiative's Authentication and Access Management Committee, the NCIP Implementers Group, and the Discovery to Delivery Topic Committee.

We are encouraged by the recent developments by the NCIP Standing Committee (formerly the Implementers Group) to communicate changes and information about implementations. We look forward to more transparency about support for the NCIP nine core messages at the data/element level, ways to compare vendor support, and suggestions for more effective RFPs. In our consortia environment, where colleges have a need to work closely with university libraries and public libraries, we believe NCIP could be a potential solution for many resource sharing needs.

Q What problem areas have you encountered that would benefit from further standards or best practices development?

Better definitions of compliance and more standardized implementations of services in the vendor community would benefit libraries. For many standards, a test-bed to verify functionality would be helpful to certify that the standard has been implemented properly and meets clearly defined expectations. Flowcharts and graphs help describe the standard, but don't go far enough. A certification that the implementation of a standard has succeeded in meeting well defined criteria would be very helpful.

We are particularly interested in the development of additional COUNTER definitions. We believe the efforts to develop a way to count "search" as a user activity, separate from the counting of "search" as a server activity, will help give a more accurate and useful representation of database usage.

| QA | doi: 10.3789/isqv22n4.2010.06



"Looking beyond library-specific standards, we are very interested in XML, HTML5, and the increasing ubiquity of smartphones and the standards that support them. We are especially interested in the wider adoption of cross-platform e-book reader standards."

Alternate Methods of Document Delivery white paper

staff.lincc.net/docs/document_delivery_methods.pdf

Ask a Librarian (Florida)

info.askalibrarian.org

Automated Vendor Statistics (AVS) code

code.google.com/p/automatedvendorstats

CCLA website

www.cclaflorida.org

COUNTER

www.projectcounter.org/

ESPreSSO working group webpage

www.niso.org/workrooms/sso

Ex Libris Primo

www.exlibrisgroup.com/category/PrimoOverview

LINCCWEB

www.linccweb.org

NCIP standard (ANSI/NISO Z39.83)

www.niso.org/workrooms/ncip

NCIP Standing Committee

www.ncip.info/

SUSHI standard (ANSI/NISO Z39.93)

www.niso.org/workrooms/sushi



RELEVANT LINKS



Valerie Horton



Diana Sachs-Silveira

VALERIE HORTON AND DIANA SACHS-SILVEIRA

Physical Delivery of Library Resources Working Group

In July 2009, NISO's Discovery to Delivery Topic Committee approved a new project proposal to develop a Recommended Practice for the Physical Delivery of Library Resources. The submitted proposal provided evidence that even in this digital age of information library patron borrowing and lending was skyrocketing:

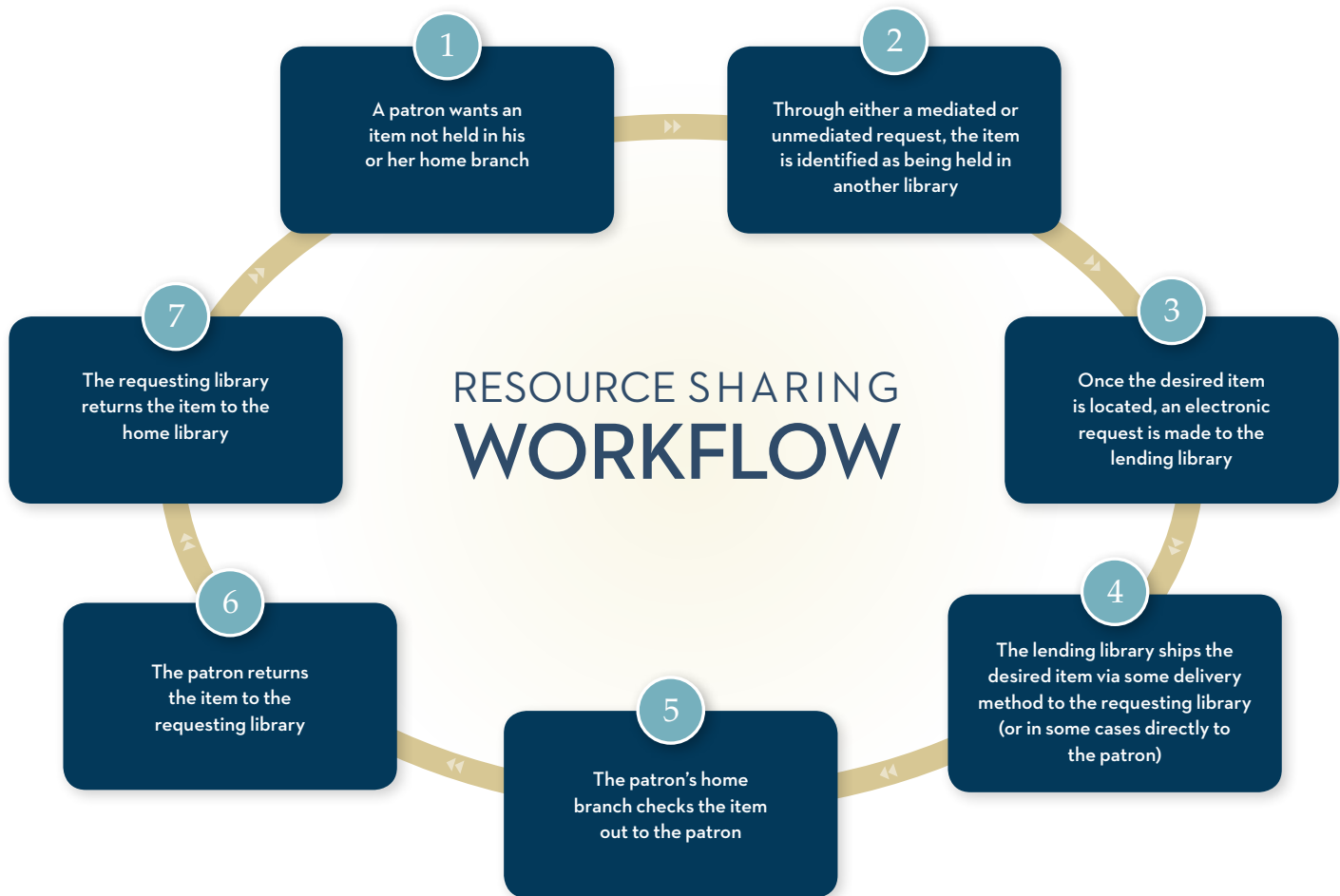
- **A Library Research Service fact sheet** shows that for nationwide ILL borrowing, returnable rates are up 40.8% between 2000 and 2006, and in Colorado that increase is 107.4%.
- **A Primary Research Group study** found that 77% of academic libraries participate in state or provincial resource sharing networks above and beyond the 10,000,000 interlibrary loan (ILL) transactions that OCLC annually processes.
- **The same Primary Research Group study** found that the mean annual amount paid by individual academic libraries for delivery was \$6,856, with some libraries paying as high as \$60,000.
- **A 2008 survey** published in *Moving Materials: Physical Delivery in Libraries* found that library delivery systems are moving millions of items a year. One system reported 15 million deliveries.
- **A Library Research Service 2008 survey** showed that library delivery systems can cost as much as \$2,250,000 depending on the amount of materials moved.

The rapid growth in resource sharing is causing similar growth in both the use and costs of delivery systems. At \$4.00 per USPS ILL transaction, we estimated that American libraries are paying over \$25,000,000 to ship interlibrary loan items by mail each year.

These growing costs at the same time that libraries are experiencing budget difficulties has increased the pressure to become more efficient and effective in the resource sharing of physical materials. Additionally many libraries, consortiums, and vendors had developed their systems and procedures for managing delivery independently, which was creating more difficulties as libraries began trying to interoperate with other delivery systems to expand resource sharing.

Three different groups that had been formed to share knowledge about delivery expressed interest in working with NISO:

- 1 **Moving Mountains Project** - an ad hoc group with a steering committee of nine library delivery experts
- 2 **Rethinking Resource Sharing's Physical Delivery Committee** - a group of fourteen library delivery experts focusing on home delivery, international delivery, and the impact of digitization on delivery services
- 3 **American Library Association's Association of Specialized Cooperative Library Agencies (ASCLA), Interlibrary Cooperation & Networking Section** - sponsors a Physical Delivery Discussion Group that meets at every ALA Annual and Midwinter Conference and regularly sponsors programs at ALA conferences on delivery



The NISO Physical Delivery Working Group was charged to create recommended standards to improve performance and reduce cost of moving materials between a library that owns an item and another library whose patron wants to use the item. The variety of organizations represented by the Working Group members (see sidebar) has ensured that different perspectives from vendors, colleges, state delivery, consortium delivery, etc. are considered. The collaboration among the members has really enriched the process of developing the recommended practice.

Resource Sharing Workflow

Resource sharing begins with a patron wanting an item that is not available within the patron's specific library or branch and ends with the item being returned to the lending library. The specific steps in the workflow are shown in Figure 1.

The Physical Delivery Working Group's recommended practice is focused on the delivery of the items to the borrowing library (#4 in Figure 1) and its return to the lending library (#7). While our focus is on the delivery piece in its many aspects, the entire system impacts how the delivery takes place. Within these recommended practices, we are making several suggestions about the other steps in the patron request process to ensure the delivery piece works optimally.

Recommended Practice

The scope of the recommended practice is limited to the external delivery of items between separately administered libraries, although the recommendations are expected to be of value for branches of a single library system as well. External delivery can be based on consortia delivery within a shared system, region, state, or country. It can also be items moving through a standard interlibrary loan request.

CONTINUED »

Recommendations are included on the following topics:

➤ **Physical move**

- » Identification through production of a pick slip, routing slip, or combination of both.
- » Item packaging, labeling, and transportation containers
- » Destination designation and label quality
- » Connecting a label to a packaged item
- » Transport container requirements
- » Package tracking
- » Environmental considerations
- » Delivery facilities
- » Automated systems

➤ **Connections between separate administrative services**

- » International delivery
- » Direct delivery to patrons
- » Managing a courier system
- » Reducing deliveries

- As an example, the recommendation on item packaging requirements is based on the “minimal use” rule, which means the goal is to keep the packaging to a minimum and to handle the item as little as possible. Specifically:
 - » Packaging material should be able to be reused multiple, even 100s or 1000s of times. At times, disposable packing may be required; in those circumstances we recommend using the smallest size of packaging material available, and using packaging material that is made of recycled components. The less packaging material used, the less repetitive the work and the greener the process.
 - » Due to labor, cost, and environmental considerations, we do not recommend individual wrapping of items or use of bubble envelopes. (However, see next point about rare or fragile items.) Padded envelopes should not be sealed, stapled, taped, or otherwise closed. This will allow the envelope to be reused more times.
 - » Packaging needs to be appropriate to the fragileness and rarity of the item. There will be additional packaging as the item’s value and fragility increases. We also recognize that special collections and archival materials have their

TABLE 1: Item Packaging Preferences

PACKAGING	PRODUCT EXAMPLES	DIRECT COST PER UNIT	WORK FLOW IMPACT	ENVIRONMENTAL IMPACT*
UNPACKAGED	Placing items in transport containers with no labeling or packaging.	none	low	least impact
RUBBER BANDED	Alliance® Pale Crepe Gold™ Rubber Bands In 1 Lb. Box, #117B, 7" x 1/8", Box Of 315	low	minimal	low impact
ENCLOSED IN REUSABLE PLASTIC OR NYLON BAGS	Multiple vendor options	high	minimal	low impact
REUSABLE JIFFY BAGS	Jiffy Rigi Bag® Recycled Mailers, 14 1/4" x 18 1/2", Kraft, Pack Of 75	medium	minimal	high impact
PAPER BANDED		varies	high	medium impact
SINGLE USE PACKAGING		varies	minimal	not recommended

* Scale: Low = less than \$1; Medium = \$2-\$4; High = \$4 and above

own unique packaging requirements, but those requirements are outside of the scope of this document.

- » The most effective way to transport CDs and DVDs is in flexible, durable plastic cases, so that extra protective packaging is not necessary. If the case is not a durable type, you may place it in a protective envelope.

Table 1 indicates the recommended order of preferences for item packaging, with the first item being the most preferred.

Among the recommendations for transport container requirements are ergonomic considerations such as: “Care should be taken to keep weight limits low to reduce lifting injuries. Lifting can be thought of as an equation that considers how much a healthy worker can lift over an 8-hour period without increased risk of injury.”

The recommended practice also includes suggestions on ways to reduce the volume and/or costs of deliveries. These include: using the closest available copy (geographically), selecting available copy based on delivery route, substituting electronic materials, using floating collections (keeping items at the return location), delivery route clustering (aka transportation hold queue clustering), reserving high-demand titles for local use, hold queue filling based on patron location (rather than date of request).

Next Steps

The group anticipates having the Recommended Practice available for public review and comment in early 2011.

The process has been slow and painful but worthwhile. While most other working groups are focused on the presumably more exciting world of digital information, our group has been researching types of transportation containers, label adhesives, and automated materials handling systems. The volume of loan requests is evidence that the world is still a long way away from being all digital and patrons still depend on their local library to find and supply physical copies of materials, even when not owned by the patron’s own library. This recommended practice should help libraries to continue to provide that service in both an efficient and cost-effective manner.

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ASLCA ICAN

www.ala.org/ala/mgrps/divs/ascla/asclaourassoc/asclasections/ican/ican.cfm

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www.alastore.ala.org/detail.aspx?ID=3089

Moving Mountains Project

clicweb.org/movingmountains/

Physical Delivery Working Group webpage

www.niso.org/workrooms/physdel

Rethinking Resource Sharing Physical Delivery Committee

www.rethinkingresourcesharing.org/delivery.html



RELEVANT
LINKS



CORE was originally intended for publication as a NISO standard. However, following a draft period of trial use, the CORE Working Group and NISO's Business Information Topic Committee voted to approve the document as a Recommended Practice.

Cost of Resource Exchange (CORE) Protocol Published as a NISO Recommended Practice

NISO's latest Recommended Practice is *Cost of Resource Exchange (CORE) Protocol* (NISO RP-10-2010). This Recommended Practice defines an XML schema to facilitate the exchange of financial information related to the acquisition of library resources between systems, such as an ILS and an ERMS. CORE identifies a compact yet useful structure for query and delivery of relevant acquisitions data.

CORE was originally intended for publication as a NISO standard. However, following a draft period of trial use that ended March 2010, the CORE Working Group and NISO's Business Information Topic Committee voted to approve the document as a Recommended Practice. This decision was in part based on the lack of uptake during the trial period as a result of recent economic conditions, and was motivated by the high interest in having CORE available for both current and future development as demand for the exchange of cost

information increases. Making the CORE protocol available now as a Recommended Practice allows ILS and ERM vendors, subscription agents, open-source providers, and other system developers to implement the XML framework for exchanging cost information between systems in their planned development cycles.

A standing committee has been created to monitor the uptake of the Recommended Practice, provide support and outreach on the protocol, and conduct an annual review of the document with the aim of making future recommendation for re-release as a standard publication. Anyone interested in implementing the CORE Recommended Practice, joining the standing committee, or in receiving additional information should contact NISO. ■

Ⓞ For more information, visit the CORE webpage: www.niso.org/workrooms/core/.

BISG Issues Best Practices and Roadmaps for the Book Supply Chain

The Book Industry Study Group (BISG) has issued four new and revised best practices or roadmaps for handling books in the supply chain.

Recommended Best Practices: On Sale Date Compliance, version 1, defines best practices to enable the simultaneous availability of new releases to consumers from all consumer purchasing sources, such as online or bricks-and-mortar retailers with the goal of maintaining a “level playing field” for all trading partners. Available from: www.bisg.org/what-we-do-12-143-recommended-best-practices-on-sale-date-compliance.php

Product Metadata Best Practices for Data Recipients, version 1.3, provides detailed instruction on improving the accuracy of ONIX for Books data throughout the supply chain while speeding the processing of that data among trading partners. A companion publication to the best practices for senders. Available from: www.bisg.org/what-we-do-21-8-product-metadata-best-practices.php

Roadmap of Identifiers, version 3.0, is an update of BISG’s educational tool that provides a graphic presentation of the relationships between key identifiers used by the book industry. It includes a description of each of the identifiers displayed on the roadmap. Available from: www.bisg.org/what-we-do-18-32-roadmap-of-identifiers.php

Roadmap of Organizational Relationships, version 2.0, is complementary to the identifier. It provides a graphic presentation of the various organizations as they relate to each other, and to the processes, functions and/or identifiers they service. Available from: www.bisg.org/what-we-do-18-33-roadmap-of-organizational-relationships.php. ■




DAISYpedia Offers Implementation Advice for Digital Talking Book Standard

The DAISY Consortium has produced DAISYpedia, a wiki designed to assist in and support the implementation of the DAISY/NISO standard ANSI/NISO Z39.86, *Specifications for the Digital Talking Book*, and the new *DAISY Online Delivery Protocol*.

The DAISYpedia offers how-to guides, step-by-step instructions, and training materials on creating publications in DAISY format.

Top level categories on the site are: Introduction to DAISY; Reading the DAISY Way, which includes information about applications and playback devices; Publishing the DAISY Way; and Accessibility, Digital Publishing, Emerging Technologies.

Content in DAISYpedia is created and added to by DAISY experts and the DAISY Community. Those with knowledge or expertise in using the DAISY standard are encouraged to become DAISYpedia editors. ■

 View DAISYpedia at: www.daisy.org/daisypedia

Call for Comments: Revision of Encoded Archival Description (EAD)

The Society of American Archivists Technical Subcommittee for Encoded Archival Description (EAD) is calling for proposed changes to the current version, EAD 2002. The *EAD Document Type Definition* (DTD) is a standard for encoding archival finding aids using Extensible Markup Language (XML). The EAD Elements section of the tag library contains descriptions of 146 elements.

The deadline for change proposals is February 28, 2011. To propose changes, complete the form at: <http://www.archivists.org/standards/ead/eadRevisions.asp>. A separate form should be completed for each change suggested, with a brief description and the rationale for the proposed change. Comments may also be sent by e-mail to ts-ead@archivists.org and should include the information in the form. ■

 For more information, visit: www2.archivists.org/news/2010/call-for-comments-revision-of-encoded-archival-description-ead

KEY SURVEY RESPONSES

“Yes.”

92.1% of respondents answered in the affirmative that standard terms should be applied to journal article versions.

“The Publisher”

When asked who should be responsible for providing this metadata, 51.9% answered “the journal publisher.”

“What about the author?”

Many respondents noticed a missing option for who should be responsible for providing standardized metadata—the author.

“lack of prioritization”

Many cited this as the most likely obstacle for adoption of standardized journal article version terminology.

Survey Conducted to Learn Current Practice in Using Standardized Journal Article Version Terminology

Online publishing allows for the release of multiple versions of journal articles—and these growing practices are redefining our concept of “publishing” and the “version of record.” A NISO survey released in July 2010 to publishers, repository managers, librarians, and other stakeholders aimed to find out if metadata identifying journal article versions is needed, how such metadata—including the recommended metadata terms in the NISO Recommended Practice, NISO RP-8-2008, *Journal Article Versions (JAV): Recommendations of the NISO/ALPSP JAV Technical Working Group*—is currently being used, and what the future might look like. A report of the survey results will be available shortly.

SOME KEY FINDINGS INCLUDE:

When asked if standard terms should be applied to journal article versions, the answer was a clear “Yes”: 92.1% agreed there should be, and only seven (3.7%) disagreed.

When asked who should ultimately be responsible for providing this metadata, results were a bit more mixed. A majority of respondents (51.9%) felt that it is the duty of the journal publishers; 11.1% thought the duty should be assigned to repository managers; 10.1% thought it was up to journal editors; and only 2.1% assigned that task to librarians. There were a large number of “Other” responses (24.9%); many indicated there is no single group that should hold this responsibility. In looking at the written responses in this category, it was clear that the survey omitted one important player as potentially responsible: the author.

When asked about current practices, and whether “your journal, repository, or publishing program distinguish[es] among multiple versions of a single article,” only 25.7% indicated that they do not distinguish multiple article versions. For those that do, 28.3% use version terms, 26.7% use publication dates, and 8.0% use numerical number identifiers other than DOIs. In addition, 60 write-in responses were given under “Other.”

When it comes to adoption, lack of prioritization was the most commonly cited obstacle, followed by challenges with current version policy, resistance to changes in current production workflows, and challenges with current collections policy.

Lettie Conrad, Online Product Manager, SAGE Publications and designer of the NISO survey reviewed the survey results at NISO’s December 13th Open Teleconference call. ■

 For a recorded audio of the call, visit: www.niso.org/news/events/2010/telecon/

NARA Provides Guidance on Managing Records in Cloud Computing Environments

The National Archives and Records Administration (NARA) has issued Bulletin 2010-04 to federal agencies to formally articulate NARA's view of agencies' records management responsibilities and considerations when managing records in cloud environments.

NARA cites the National Institute of Standards and Technology's definition of cloud computing as "a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

NARA identified several records-related issues that agencies using cloud computing could encounter including: the possible inability to implement records disposition schedules and manage records throughout their life cycle, lack of architecture and standards that will ensure the trustworthiness and sustainability of records, difficulty of totally removing or in migrating records, unidentified contingencies in the event the cloud provider goes bankrupt or out of business.

Among other recommendations, NARA states that agencies should include their records management officer in the planning, development, deployment, and use of cloud computing solutions. Although written for the government, anyone considering outsourcing records to the cloud will find this document of value. ■

🔗 Read the full bulletin at: archives.gov/records-mgmt/bulletins/2010/2010-05.html



LAC Canada Publishes File Format Guidelines for Preservation and Long-Term Access

Library and Archives Canada (LAC) has issued version 1.0 of the guidelines for the supported file formats for their Trusted Digital Repository (TDR).

Two levels of support are designated: 1) Recommended, which are the formats LAC believes are sustainable over a long period of time, and 2) Acceptable for transfer, which are the most commonly used formats from the Government of Canada collections that LAC will be preserving in the TDR. As part of the process for accepting files in the TDR, formats are normalized into one of the recommended formats to create the preservation master.

Criteria used for determining the recommended formats included: openness/transparency; adoption as a preservation standard internationally by national libraries, archives, and other memory institutions; stability/compatibility;

dependencies/interoperability; and standardization, i.e. the degree a format has gone through rigorous formal standardization. The guidelines provide details on each of these criteria for meeting different rating levels.

Specific formats are listed in the categories of text, audio, digital video, still images, web archiving, structured data: databases, structured data: statistical and qualitative analysis, structured data: scientific, geospatial, computer aided design: technical drawing, computer aided design: CASE, and source code and scripts. For text, for example, recommended formats include EPUB, XHTML, XML, HTML, MIME, ODF, PDF/A, RTF, SGML, and plain text. ■

🔗 View the full guidelines at: www.collectionscanada.gc.ca/digital-initiatives/012018-2210-e.html

LC Study Assesses State of Sound Recording Preservation and Access

The *State of Recorded Sound Preservation in the United States: A National Legacy at Risk in the Digital Age*, commissioned by The Library of Congress (LC) National Recording Preservation Board, documents the state of recorded sound preservation in the United States and warns of a serious national problem. Already, “many important recordings have been lost or have become unplayable since the introduction of recorded sound in the late-nineteenth century.”

Authors Rob Bamberger and Sam Brylawski emphasize that “there is no correlation between the risk to sound recordings and their age. Recordings created in digital formats are at particular risk.” Their report describes the current state of the problem, the complex technical landscape involved with recording preservation, the need for education to train professionals in audio preservation and archives management, and the obstacles that U.S. Copyright Law places on sound recording preservation.

The report was mandated in 2000 with the passage of the *National Recording Preservation Act*, which established a National Recording Preservation Board and a National Recording Registry under the auspices of the Library of Congress. One of the tasks assigned to the new Board was this study on sound recording preservation and restoration. A National Recording Preservation Plan, also mandated under the Act, is scheduled for completion by the end of 2010. It will make specific recommendations for addressing the complex problems revealed in the current study. ■

ⓧ The full study and related reports are available from:
www.clir.org/pubs/abstract/pub148abst.html



MPS Shares Results of Librarian Survey on Usage Statistics

MPS Limited, a Macmillan company, conducted a survey of librarians in September 2010 “to understand more about how usage statistics, and in particular COUNTER-compliant usage statistics, are being used.” A total of 313 librarians, mainly from the UK, US, Australia, New Zealand, mainland Europe, and Canada, responded.

The survey’s key findings were:

- » For 86% of respondents, usage statistics influence their purchasing decisions.
- » 97% of librarians use usage statistics, with 87% of librarians using COUNTER-compliant usage statistics for e-journals and 66% for e-books.
- » 48% of those who aren’t yet using COUNTER-compliant usage data for e-books expect to be doing so within the next year.
- » 90% of librarians stated that COUNTER-compliant usage statistics are vital or important for e-journals and 74% find them vital or important for e-books. ■

ⓧ For the complete survey results, visit: macmillanpublishingsolutions.com/AboutUs/librarian_survey.aspx?utm_source=PR20101020&utm_medium=pdf&utm_content=Counter&utm_campaign=Librarian-Survey





The two top potential impacts of new search and discovery technologies that respondents selected were in forming collaborative knowledge networks and linking data sets to published research.

Elsevier Online Opinion Survey Reveals Researchers Ready to Push Scientific Search and Discovery to the Next Level

This past summer Elsevier asked its Science Direct users to respond to an online survey on the future of search and discovery and received 1200 responses from 100 countries representing 20 different fields. 97% indicated that open data was very or somewhat important to the future of search and discovery and 80% agreed that the availability of APIs will be critical to enabling solutions for finding and accessing data. Over 2/3 expressed interest in being involved with the development of such solutions, but less than 1/3 thought their organization would support their involvement. No one type of proposed application was a clear leader; interest was shown in “customized search (18%); those that extract data to elicit more meaningful insight (17%); apps that show

content which trusted peers find valuable (16%); those that provide personalized content delivery based on my interests and background (16%); and apps offering analytical tools that are able to target trends, look at historical research output and text/data mine to create semantic relationships across scientific content (16%).” The two top potential impacts of new search and discovery technologies that respondents selected were in forming collaborative knowledge networks and linking data sets to published research.

Highlights of the *Future of Search and Discovery* survey were shared during an Elsevier-hosted webinar. Interested parties can register to view a replay of the webinar. ■

🔗 Read the full release about the survey findings at: www.elsevier.com/wps/find/authored_newsitem.cws_home/companynews05_01700



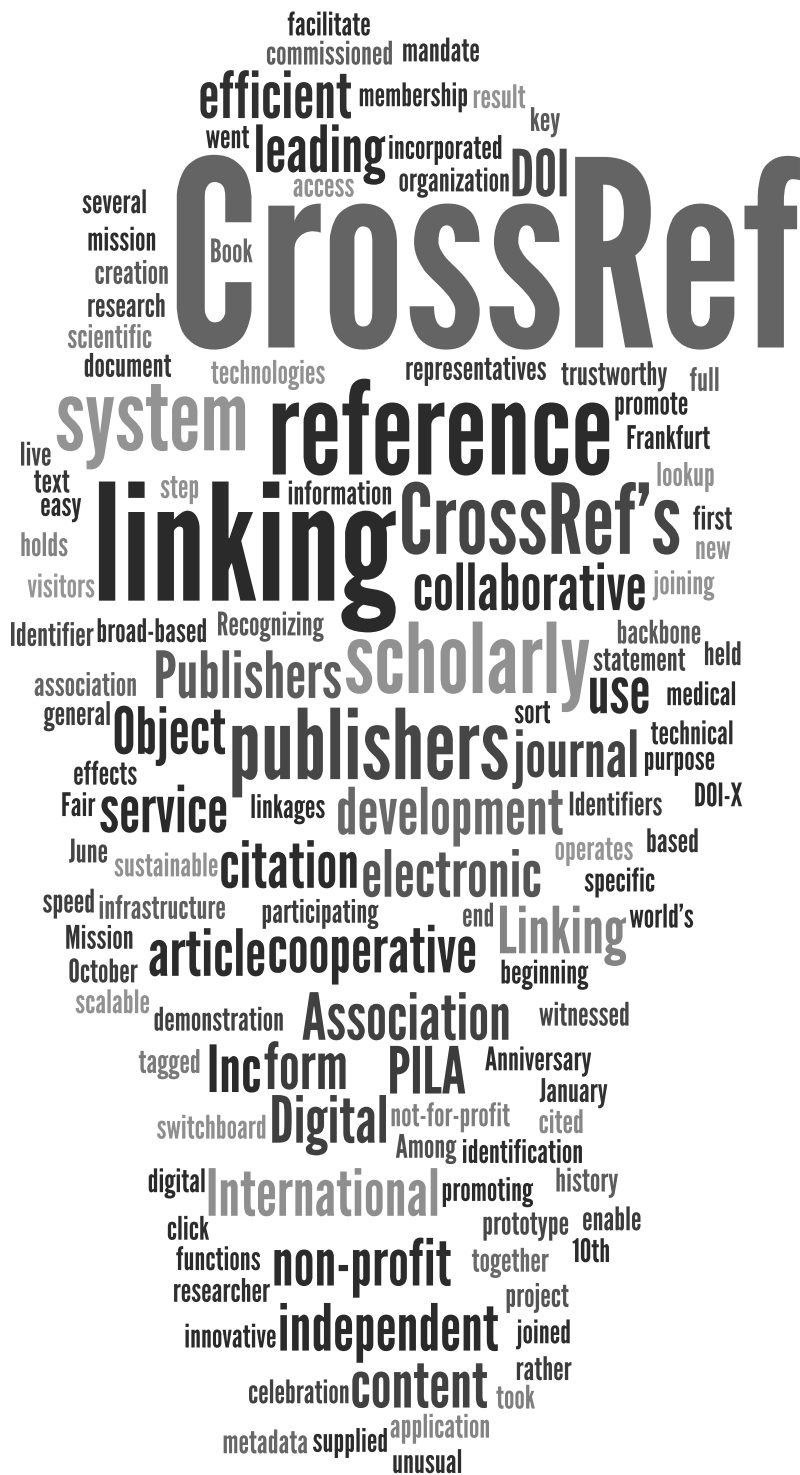
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SD [STANDARDS IN DEVELOPMENT: *November 1, 2010*]

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 *Newsline* (www.niso.org/publications/newsline/) for updates on the Working Group activities.

WORKING GROUP	STATUS
DAISY Revision Co-chairs: Markus Gylling, George Kerscher	Z39.86-201x, Specifications for the Digital Talking Book Standard revision in development. <i>Part A, Authoring and Interchange Framework, issued for public comment.</i>
ERM Data Standards & Best Practices Review Co-chairs: Ivy Anderson, Tim Jewell	Technical Report in development.
Establishing Suggested Practices Regarding Single Sign-On (ESPreSSO) Co-chairs: Steve Carmody, Harry Kaplanian	Recommended Practice in development.
Improving OpenURLs Through Analytics (IOTA) Chair: Adam Chandler	Technical Report in development.
Institutional Identifiers (I²) Co-chairs: Grace Agnew, Oliver Pesch	Z39.94-201x, Institutional Identifiers Standard in development. Midterm Work to Date document released for public comment.
Knowledge Base and Related Tools (KBART) Phase II <i>Joint project with UKSG</i> Co-chairs: Andreas Biedenbach, Sarah Pearson	NISO RP-9-2010, KBART: Knowledge Bases and Related Tools Phase I Recommended Practice issued January 2010. Phase II Recommended Practice in development.
Physical Delivery of Library Materials Co-chairs: Valerie Horton, Diana Sachs-Silveira	Recommended Practice in development.
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 Revision in development.
Standardized Markup for Journal Articles Co-chairs: Jeff Beck, B. Tommie Usdin	Z39.96-201x, Standardized Markup for Journal Articles Standard in development.
Supplemental Journal Article Materials Co-chairs Business Working Group: Linda Beebe, Marie McVeigh Co-chairs Technical Working Group: Dave Martinsen, Alexander (Sasha) Schwarzman	Recommended Practice in Development.



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*Survey conducted as part of the Library Journal registration process for the Primo Central June 16, 2010 webinar. 610 out of 759 respondents checked EXTREMELY or VERY in response to the question: "How important is it that the provider of a platform for discovery-and-delivery of publisher content be content neutral?"