ISQ

SPECIAL EDITION

YEAR IN REVIEW AND STATE OF THE STANDARDS

NISO 2012 YEAR IN REVIEW

TC46 2012 YEAR IN REVIEW

JATS–A NEW STANDARD FOR
AN OLD SPECIFICATION

STATE OF THE STANDARDS

NISO
How the information world
CONNECTS

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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 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.

ISQ

NISO
How the information world CONNECTS

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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LETTER FROM **THE PUBLISHER**

Todd
Carpenter

The Year in Review issue of ISQ along with the NISO Annual Meeting and Standards Update at ALA Midwinter in January each year provide opportunities for me to reflect on all the accomplishments NISO has made in the previous year. Nothing NISO accomplishes could have happened without the tremendous efforts and support of our community of volunteers. The successes of the past year are a perfect example of that and as an organization we have much to be proud of.

We continued in 2012 our very active standards and recommended practices development pipeline with more than 20 active projects. Several groups completed their work, resulting in the publication of two new standards (*JATS: Journal Article Tag Suite* and *Authoring and Interchange Framework for Adaptive XML Publishing Specification*), two new recommended practices (*Physical Delivery of Library Resources* and *COUNTER-SUSHI Implementation Profile*), two recommended practice revisions (*RFID in U.S. Libraries* and *SERU: A Shared Electronic Resource Understanding*), and one white paper (*Making Good on the Promise of ERM: A Standards and Best Practices Discussion Paper*). The NCIP Standing Committee also completed a revision of the two-part standard, *NISO Circulation Interchange (NCIP), version 2.02*.

Three new projects were initiated in 2012. Following a request by 3M™, their Standard Interchange Protocol (SIP) is now being shepherded through the standardization process. A proposal from Michael Levine-Clark (University of Denver) on behalf of an informal DDA interest group resulted in a new group developing recommended practices for the Demand Driven Acquisition of Monographs. And a proposal from Lettie Conrad (SAGE Publications) initiated a revision of the Journal Article Versions recommended practice to address an issue with the "Proof" definition. Several other potential projects are in the pipeline and expected to be approved and begin work in 2013.

NISO received a grant in late 2012 from The Andrew W. Mellon Foundation to develop consensus around a community roadmap of needed activities related to the future of bibliographic information exchange. The grant will support both in-person and virtual meetings to engage a variety of stakeholders in defining the requirements and a roadmap for developing a new ecosystem of bibliographic data exchange. Our hope is that this project will identify gaps where current development efforts are not focused, that it will foster community conversations and understanding about pilot projects, and will help to ensure that a future bibliographic exchange environment is robust and interoperable.

Another proposal to the Mellon Foundation, submitted in late 2012 and awarded in early 2013, will support the encoding of a collection of template licenses for e-resources into the ONIX-PL format for deposit into the GOKb and KB+ knowledgebase for free distribution to the library, publishing, and library systems community.

NISO continued and expanded its ongoing educational programs in 2012 with 14 webinars, four joint webinars with the Dublin Core Metadata Initiative, and three in-person forums. New in 2012 was an added benefit for NISO Library Standards Alliance (LSA) members of one free connection to each of the 14 NISO webinars. Since these connections are for site access, the LSA members could (and did) project the webinar to multiple users at their locations; the average site has about four attendees per event. This valuable educational benefit resulted in 50 new LSA members and more are joining to take advantage of this opportunity, which will continue to expand in 2013.

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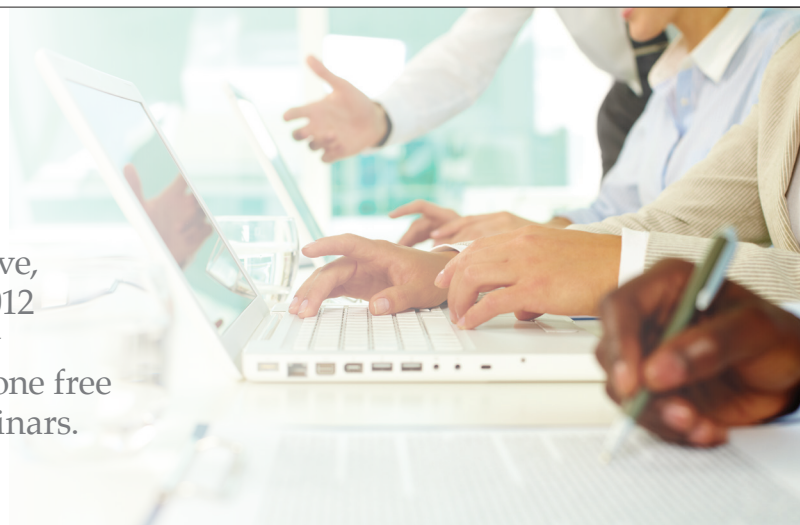
NISO, which is the U.S. administrator for the ISO Technical Committee on Information and Documentation (TC46) also acts as the Secretariat for the Subcommittee on Identification and Description (SC9). Among the 2012 accomplishments of SC9 were the publication of the International Standard Name Identifier and the Digital Object Identifier System standards. Part 2 of the international standard for Thesauri and Interoperability with Other Vocabularies was completed and approved in 2012 with publication occurring in March of 2013. A number of U.S. members participated in the TC46 plenary meeting in Berlin in May 2012. NISO and ANSI have volunteered to host the TC46 meeting in the U.S. in 2014, with the support of the Library of Congress.

NISO moved its office in 2012 to a new and larger location that will provide room for expanded staff and improved meeting facilities. While the move was a big effort internally for the NISO staff, other than a new address the impact was fairly invisible to the outside world. Two new people joined the NISO staff in November 2012 at our new offices. Kathy Cassel replaced a departing Operations Manager and Juliana Wood was hired as NISO's first Educational Programs Manager.

Thank you to everyone in the NISO community who was and is involved in our committees and working groups. Without you, none of these accomplishments would have been possible. If you are not yet involved in NISO activities, we encourage you to consider doing so. 2013 is already starting off as another busy year with many new projects to be undertaken in addition to those underway and our many standing and governance committees. We encourage you to find an opportunity to join others in the community in supporting and forwarding NISO's work.

Todd Carpenter | *Publisher*

NETTIE LAGACE, NISO ASSOCIATE DIRECTOR FOR PROGRAMS

SPECIAL EDITION: NISO

2012

YEAR IN REVIEW

This report summarizing the previous year's standards development work appears in the first *ISQ* issue of the year to keep you informed of the scope and status of NISO's programs on an annual basis.

New Initiatives	Progressing Initiatives	Standing Committees	Education & Communications

OVERSIGHT COMMITTEES

Architecture Committee
Current Chair: Heather Reid *(Copyright Clearance Center)*
Chair through June 30, 2012:
Barbara Preece *(California State University)*

Business Information Topic Committee
Current Co-chairs: Denise Davis *(Sacramento Public Library)* and Karla Strieb *(Ohio State University Library)*
Chair through June 30, 2012:
Kathleen Folger *(University of Michigan Library)*
Co-chair July 1, 2012 – January 31, 2013:
Niels Dam *(Reed Elsevier)*

Content & Collection Management Topic Committee
Current Co-chairs: Julia Blixrud *(Association of Research Libraries (ARL)* and Betty Landesman *(University of Baltimore)*
Co-chair through June 28, 2012:
Rice Majors *(University of Colorado at Boulder)*

Discovery to Delivery Topic Committee
Current Co-chairs: Pascal Calarco *(University of Waterloo)* and Lucy Harrison *(Florida Virtual Campus)*
Co-chair through January 21, 2013:
Robert Walsh *(EnvisionWare, Inc.)*

Open Discovery Initiative

APPROVED: August 23, 2011

Oversight: **Discovery to Delivery Topic Committee**

Co-chairs: **Marshall Breeding** (independent information consultant) and **Jenny Walker** (Ex Libris)

The Open Discovery Initiative (ODI) aims at defining standards and/or best practices for the next generation of library discovery services that are based on indexed search. The Working Group is made up of discovery vendors, primary and secondary publishers, and librarians and started its work in January 2012.

Reliance by libraries on indexed search as a primary means for users to discover and access library-licensed content brings with it new requirements for work to be done in the industry in a number of areas, and this new working group intends to improve communications and clarity. Goals for the working group include creating ways for libraries to assess the level of participation by information providers in discovery services; helping to streamline the process by which information providers work with discovery service vendors; defining models for fair linking from discovery services to publisher content; and determining what usage statistics should be collected.

The group has drafted, expanded, and will continue to revise as needed a glossary of definitions of terms and concepts pertinent to the scope of index-based discovery. This glossary will help the working group use terms consistently as it carries out its activities; it is also expected to be useful beyond the workgroup to facilitate a common vocabulary in the broader discourse surrounding the topic.

In its information gathering phase, the group split into four subgroups covering different areas of discovery: technical formats; communication of library's rights/level of indexing; definition of fair linking; and usage statistics. Part of the subgroups' investigation included a general survey that ran in early fall 2012. This survey input was received and analyzed by each subgroup and ODI released a report in January 2013 that summarized that survey information.

Towards the end of 2012, the subgroups began drafting their individual documents, which will be put together into an overall ODI Recommended Practice draft for comment intended to be made available in 2Q/2013. ■

Demand-Driven Acquisition (DDA) of Monographs

APPROVED: June 19, 2012

Oversight: **Content and Collection Management Topic Committee**

Co-chairs: **Barbara Kawecki** (YBP) and **Michael Levine-Clark** (University of Denver)

This new project is focusing on the development of recommended practices for populating and managing the demand-driven acquisition (DDA) pool of monograph titles under consideration for a library's potential purchase. The recommendations are expected to include methods for automated updating and removal of discovery records, methods for managing DDA of multiple formats, and ways in which print-on-demand (POD) solutions can be linked to DDA. Specifically, the working group is developing a flexible model for the three basic aspects of e-book DDA—free discovery

to prevent inadvertent transactions, temporary lease, and purchase—that work for publishers, vendors, aggregators, and libraries. This model will allow libraries to develop DDA plans that meet differing local collecting and budgetary needs while also allowing consortial participation and cross-aggregator implementation.

The Working Group has formed three subgroups to discuss technical processes, access methods, and metric modeling and expects that its information-gathering phase will run through June 2013. ■

Information Standards Quarterly (ISQ)

NISO continued publishing *Information Standards Quarterly* in open access in electronic format on its website in 2012. A print version was available by subscription and in print-on-demand.

Themed issues published in 2012 were:

» **Winter 2012:** *2011 Year in Review and State of the Standards*

» **Spring/Summer 2012:** *Linked Data in Libraries, Archives, and Museums*, with Guest Content Editor Corey Harper

» **Fall 2012:** *Future of Library Systems*, with Guest Content Editor Marshall Breeding

Back issues through 2010 are now also available in open access. Earlier issues will be added until the entire archive is available. ▪

E-book Special Interest Group

APPROVED: May 4, 2011

Oversight: **Architecture Committee**

Co-chairs: **Todd Carpenter** (NISO) and **Nettie Lagace** (NISO)

The E-Book Special Interest Group created subgroups, covering the following topic areas:

» Accessibility Issues

» Discovery Tools and Linking

» Distribution (EPUB, PDF, Web, and others)

» Metadata (ONIX, MARC, PREMIS, METS, Dublin Dore, PMH, etc.)

The subgroups brainstormed in their respective areas on possible project areas for NISO and then surveyed the Core E-Book SIG members for input into prioritization on the proposed topics. Survey results are under discussion by the NISO Architecture Committee and the three Topic Committees to determine which items should be pursued by NISO as new work initiatives in 2013. ▪

Journal Article Versions Addendum

APPROVED: August 11, 2012

Oversight: **Content and Collection Management Topic Committee**

Chair: **Michael Dellert** (SAGE Publications)

NISO RP-8-2008, *Journal Article Versions (JAV)*

In 2008, the NISO Journal Article Version (JAV) Working Group developed a set of recommended terms to be applied to iterations of an article's lifecycle. The terms were assigned scope and definition that allow for actionable, unambiguous, and reliable tools for publishers, librarians, aggregators, indexers, and end users. Since the time of publication of JAV, issues have been found with the term "proof" where it is less specific and precise than practical modern publishing circumstances require, and an update of the recommended practice was proposed.

Project goals for this update of JAV include the creation of an addendum to the existing recommended practice regarding the "proof" category of articles. The group will also reconsider the concept of proposing a metadata framework or dictionary in which JAV terms could be incorporated (which had been rejected in the course of the original group's work in 2008). ▪

Standard Interchange Protocol (SIP)

APPROVED: April 13, 2012

Oversight: **Discovery to Delivery Topic Committee**

Co-chairs: **Ted Koppel** (Auto-Graphics, Inc.) and **John Bodfish** (OCLC Online Computer Library Center)

The 3M™ Standard Interchange Protocol (SIP) was introduced in 1993 to provide a standard communication mechanism to allow Integrated Library Systems (ILS) applications and self-service devices to communicate seamlessly to perform self-service transactions. This protocol quickly became the de facto standard around the world, and remains the primary protocol to integrate ILSs and self-service devices.

Since the protocol's inception in 1993, 3M has continued to produce updated versions, most recently version 3.0, which was published at the end of 2011. While 3M has always sought input from the library community of developers and interested parties in enhancing the protocol, they felt the time was right for further maintenance and upgrades to SIP to be done in a more independent, community environment and NISO agreed to take on that role.

The Working Group is taking the currently existing SIP version 3.0 specification and shepherding it through the NISO standardization process to become an American National Standard.

Currently the SIP working group is examining various issues with SIP to determine how best to address these in a published standard. Other general discussion items include creation of profiles and other materials to assist with implementation. ◾

KBART Phase II

Joint project with UKSG

APPROVED: March 17, 2010

Oversight: **Discovery to Delivery Topic Committee**

Co-chairs: **Andreas Biedenbach** (independent information professional) and **Sarah Price** (University of Birmingham)

NISO RP-9-2010, *KBART: Knowledge Bases and Related Tools*

The NISO/UKSG KBART Phase II Working Group is working to provide support for the Phase I Recommended Practice, NISO RP-9-2010, *KBART: Knowledge Bases and Related Tools*, and is also developing a second Recommended Practice to build on these recommendations—specifically addressing the areas of metadata for e-books and conference proceedings and packages licensed via consortia deals. In addition, the Working Group is exploring the area of open access materials and how their metadata might be published and shared in knowledgebases.

Several publishers and content providers are continuing to work with the group in testing and endorsement of the Phase I Recommendations. The group has created an internal tool to make it easier for the endorsing link resolver vendors to communicate the results of their tests of vendor files. Contact information for all KBART endorsers can be found on the KBART Registry. Registration of contact details does not require endorsement, though all content providers, from major databases to small publishers, are encouraged to publicly endorse the KBART Recommended Practice by submitting a sample file to the KBART working group. At the end of 2012, over 75 organizations were listed as endorsers.

In January-February 2012, the Working Group published a survey to gather information from the library community in the areas of metadata for open access, e-books, conference proceedings, and consortial subscriptions. This material informed the group's discussions on requirements for the Phase II recommendations.

The Working Group is finalizing a draft-for-comment version, which is intended to be released by the end of May 2013. ◾
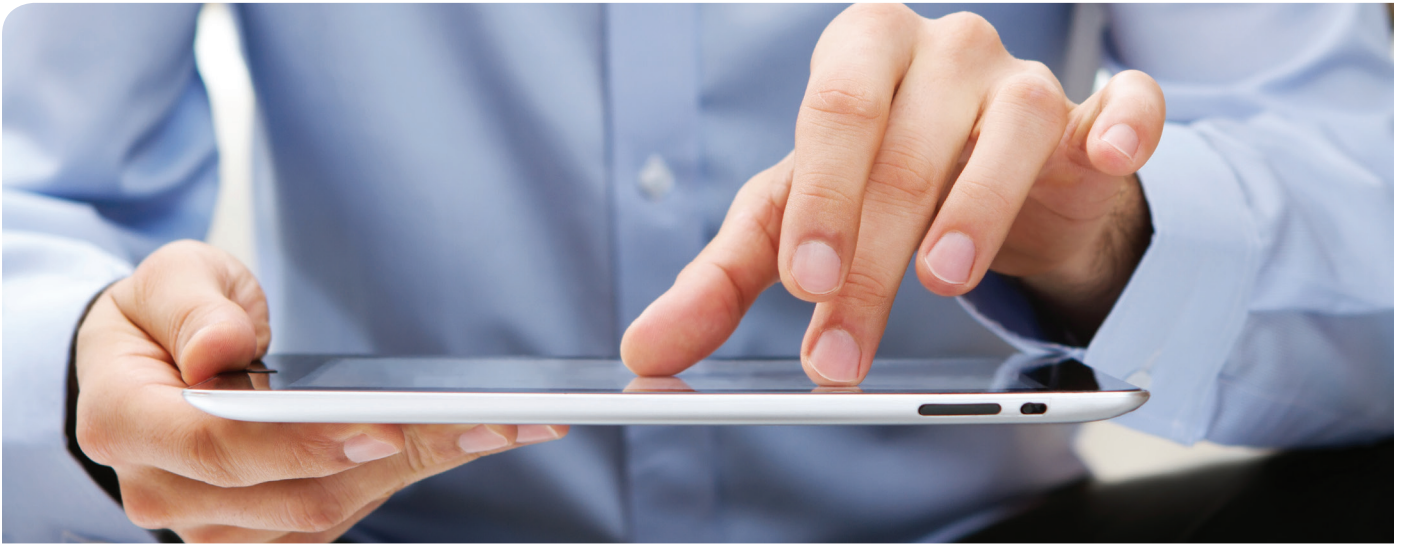
DAISY Standard Revision

APPROVED: August 29, 2008; disbanded August 7, 2012

Oversight: **Content and Collection Management Topic Committee**

Co-chairs: **George Kerscher** (DAISY) and **Markus Gylling** (DAISY)

ANSI/NISO Z39.86-2005 (R2012), *Specifications for the Digital Talking Book [DAISY 3]*

ANSI/NISO Z39.98-2012, *Authoring and Interchange Framework for Adaptive XML Publishing Specification*

This group began its project as a revision of ANSI/NISO Z39.86-2005, *Specifications for the Digital Talking Book*. Following a trial use of the draft update in 2011, which received the new title of *Authoring and Interchange Framework for Adaptive XML Publishing Specification*, the group recommended that the revision be issued as a new standard and the existing standard be reaffirmed. Commenters on the trial had indicated that the revision's changes, while needed, were so substantial as to require a transition period of several years for both content makers and e-reader manufacturers to comply with the new standard. The CCM Topic Committee approved this approach and the existing standard was approved for reaffirmation by NISO and ANSI in March and April 2012, respectively.

The revision (given the new designation of Z39.98) was originally planned to be in two parts: Part A is manifested in the *Authoring and Interchange Framework for Adaptive XML Publishing*. Work on Part B, Distribution, was suspended because the requirements for distribution, including XHTML for processing and rendering, provision of audio and text synchronization, and integration of text-to-speech markup, were met by the new EPUB 3 specification (idpf.org/epub/30), published by the International Digital Publishing Forum.

The new A&I Framework is a modular, extensible architecture to permit the creation of any number of content representation models, each custom-tailored for a particular kind of information resource. It also provides support for new output formats, which can be added and implemented as the need arises. The standard does not impose limitations on what distribution formats can be created from it; e-text, Braille, large print, and EPUB are among formats that can be produced in conformance with the specification. The standard not only expands the possibility of what can be produced for the existing community of users of DAISY books, it also enlarges the potential audience of both developers and users of resources that conform to this standard. New applications using this standard could include electronic magazines as well as digital books, text to speech rendering for e-readers, and multimedia publications.

This Working Group has disbanded following the publication of the new standard. The DAISY Consortium as the maintenance agency for both the DTB and the A&I Framework standard is responsible for ongoing promotion and implementation assistance for the standards. ■

IOTA (Improving OpenURLs Through Analytics)

APPROVED: December 8, 2009

Oversight: **Discovery to Delivery Topic Committee**

Chair: **Adam Chandler** (Cornell University)

The IOTA (Improving OpenURLs Through Analytics) Working Group was a three-year effort to investigate the feasibility of creating industry-wide, transparent and scalable metrics for evaluating and comparing the quality of OpenURL implementations across content providers.

The group created a reporting system that has analyzed over 23 million OpenURLs, using log files from various institutions and vendors to determine element frequency and patterns contained within OpenURL strings. The group has developed and tested a "Completeness Index" as a means of quantifying OpenURL quality and for predicting the success of OpenURLs from a given provider by examining the data elements that provider includes in the OpenURLs from its site.

The group is in the process of finalizing a technical report describing its findings and conclusions from the investigation. It is also preparing a recommended practice for link resolver providers on using the Completeness Index with its constituent Completeness Scores. Use of the recommendations will provide a quantitative mechanism for evaluating link quality from different providers and provide benchmarks against which improvements to OpenURLs can be made, thereby bettering linking for end users.

The IOTA reporting system is available at openurlquality.niso.org/. ■

NCIP (NISO Circulation Interchange Protocol)

Oversight: **Discovery to Delivery Topic Committee**

Chair: **Mike Dicus** (Ex Libris)

Maintenance Agency: **EnvisionWare** (contact: **Rob Walsh**)

ANSI/NISO Z39.83-1-2012, *NISO Circulation Interchange Part 1: Protocol (NCIP)*

ANSI/NISO Z39.83-2-2012, *NISO Circulation Interchange Protocol (NCIP) Part 2: Implementation Profile 1*

The NCIP Standing Committee reviews status of NCIP implementations and other related business on monthly calls. Twice a year, in-person meetings are held in order to review ongoing update requests for the NCIP protocol.

After reviewing all defect and change requests submitted through 2011, the committee prepared version 2.02 of the standard, which was approved and published in August 2012. Changes include the addition of repeatable, optional elements *Bibliographic Id to Loaned Item* and *Requested Item*; addition of optional *Date Due* to Item Optional Fields; addition of "UPC" and "GTIN" to the *Bibliographic Item Identifier Code* scheme; addition of

"DVD" and "Blu-Ray" to the *Medium Type* scheme; and the addition of *Lookup Item Service*.

In-person meetings in 2012 took place April 25–26, 2012 in Winchester, Virginia, and October 9-10 in Tallahassee, Florida. Discussion topics in April included implementer updates, new change requests for NCIP, and the NCIP Implementers' Registry. During the October meeting, discussion focused on implementer updates, Version 2 defects and change requests, support for the Implementers' Registry, cooperation and communication with the NISO SIP initiative, and activity planning for 2013. The spring 2013 meeting will take place April 22-23 and will be hosted by OCLC in Dublin, Ohio. ■

Supplemental Journal Article Materials

A Joint NISO/NFAIS Initiative

APPROVED: April 16, 2010

Oversight: **Content & Collection Management Topic Committee**

Business Working Group Co-chairs: **Linda Beebe** (American Psychological Association) and **Marie McVeigh** (Thomson Reuters)

Technical Working Group Co-chairs: **Dave Martinsen** (American Chemical Society) and **Sasha Schwartzman** (OSA – The Optical Society of America)

NISO RP-15-2013, *Recommended Practices for Online Supplemental Journal Article Materials*

Supplemental materials are increasingly being added to journal articles, but until now there has been no recognized set of practices to guide in the selection, delivery, discovery, and preservation of these materials. To address this gap, NISO and NFAIS jointly sponsored an initiative to establish best practices that would provide guidance to publishers and authors for management of supplemental materials and would address related problems for librarians, abstracting and indexing services, and repository administrators.

The Supplemental Materials project involved two teams working in tandem: one to address business practices and one to focus on technical issues. Following separate public comment periods in 2012 for the two parts of the draft recommendations, each group finalized their sections and the two parts were combined into the final Recommended Practice, which was approved and published in January 2013.

A key aspect of these recommendations is the distinction between what is defined as Integral Content, which is content that is essential for the full understanding of the journal article, and what is designated Additional Content, which provides relevant and useful expansion of the article's content. The Recommended Practice makes clear that Integral Content and Additional Content are likely to be treated differently throughout the entire lifecycle of a scientific article.

» **Part A** begins with terms and definitions and includes the recommendations of the Business Working Group for such business practices as selecting materials, editing them, managing and hosting them, and ensuring discoverability. It also discusses referencing Supplemental Materials, maintaining links, providing good metadata, providing context, and preserving the materials. The roles and responsibilities of various parties as related to Supplemental Materials are outlined and there are recommendations for rights management.

» **Part B** offers recommendations on providing metadata for Supplemental Materials, assigning persistent identifiers to them, and ensuring their preservation. It concludes with packaging and exchange considerations. Non-normative supporting documentation to Part B, available on a dedicated website (supplemental.niso.org), includes a DTD for Supplemental Materials, a tag library, and examples to aid in implementing the recommendations. ■

Educational Programs

Under the leadership of the Education Committee, NISO continued its robust education program in 2012 with three in-person forums— including the sixth annual NISO/ BISG *Changing Standards Landscape* forum at ALA Annual—as well as fourteen webinars that included two months with two related webinar parts. Beginning in 2012, NISO included one free connection to all NISO webinars as a benefit to Library Standards Alliance (LSA) members.

Over 100 people attended NISO's forums and an additional 1400 sites participated in the NISO webinars. With an average of four people viewing the live webinars at each site, that's at least 5600 people benefiting from NISO's education events! With registrants having access for a year to the recorded versions of the webinars, even more people were able to learn from these events.

The Dublin Core Metadata Initiative expanded its partnership with NISO to present four webinars in 2012 that drew some 1100 participants from 420 sites. This partnership will continue into 2013 with six joint webinars.

NISO also held ten free open teleconferences to keep the community apprised of activities and provide an opportunity for feedback.

Slide presentations from all of the forums and webinars and audio recordings of the open teleconferences are available on the NISO website in the 2012 events area. ■

Digital Bookmarking and Annotation Sharing

APPROVED: October 2, 2011

Oversight: **Content and Collection Management Topic Committee**

Co-chairs: **Kenneth Haase** (beingmeta, inc) and **Dan Whaley** (hypothes.is)

Final Grant Report: Standards Development Workshops on E-Book Annotation Sharing and Social Reading

The Digital Bookmarking and Annotation Sharing Working Group, formed following October 2011 discussion meetings funded by The Andrew W. Mellon Foundation, will address the system requirements and syntax specification for online citation and annotation sharing for digital texts.

In digital environments, particularly those supporting use of e-books, it has become apparent that there is a need to locate reference points and share citations and annotations for the same text across a variety of hardware platforms, likely across various editions. As reading is considered a social activity, sharing of observations and other material in the realm of e-books is a very human requirement.

The Working Group is now finalizing its scope of work, including definitions for its relationship with the work of the Open Annotation Collaboration, and is discussing next steps toward creation of a draft standard for trial use in 2013. ■
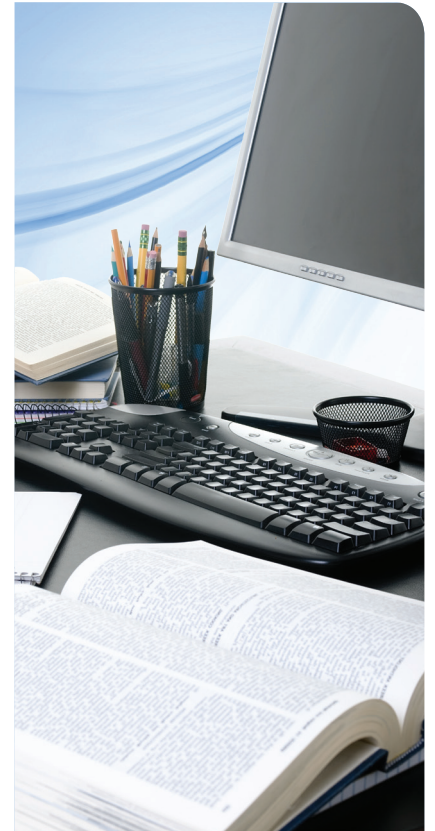
ERM (Electronic Resource Management) Data Review

APPROVED: June 30, 2009; disbanded February 1, 2012

Oversight: **Business Information Topic Committee**

Co-chairs: **Ivy Anderson** (California Digital Library) [through July 2011] and **Tim Jewell** (University of Washington)

Making Good on the Promise of ERM: A Standards and Best Practices Discussion Paper

The NISO Electronic Resource Management (ERM) Data Standards and Best Practices Review Working Group was a successor to the Digital Library Federation's Electronic Resources Management Initiative (ERMI)—whose data model and dictionary established working standards for E-resource management—and ERMI 2, which provided training for license analysis and led to the development of NISO's SUSHI protocol and CORE recommended practice. The project's primary goal was to perform a gap analysis of standards and best practices related to ERM and make recommendations on the future of the ERMI Data Dictionary.

The Working Group completed its final report, *Making Good on the Promise of ERM: A Standards and Best Practices Discussion Paper*, in January 2012. The document details the gap analysis that the group performed in five areas—Link Resolvers and Knowledge Bases; The Work, Manifestations, and Access Points; Cost and Usage Related Data; License Terms; and Data Exchange Using Institutional Identifiers—and explains its recommendations for further action in these areas. In addition, the paper includes a discussion of perceived shortcomings in workflow support within current-generation Electronic Resources Management Systems (ERMS) and of related emerging work by vendors and libraries, supplemented by a bibliography and list of illustrative workflow diagrams.

Among the conclusions and recommendations reached were that NISO continue to encourage well-focused standards initiatives rather than pursue the goal of a single, comprehensive ERM Data Dictionary; that it facilitate discussions leading to a "simpler and scalable 'third way' of encoding license terms;" and that NISO help establish consensus among libraries regarding e-resource workflow support needs and priorities. ■

Physical Delivery of Library Resources

APPROVED: September 1, 2009; disbanded January 19, 2012

Oversight: **Discovery to Delivery Topic Committee**

Co-chairs: **Valerie Horton** (Colorado Library Consortium) and **Diana Sachs-Silveira** (Tampa Bay Library Consortium)

NISO RP-12-2012, *Physical Delivery of Library Resources*

Following a draft for public comment in 2011, the NISO Physical Delivery of Library Resources Working Group completed their final recommended practice in late 2011. The document was approved and published in January 2012.

The purpose of the Recommended Practice is to identify methods for improved physical movement of items: the delivery of the items to the requesting library and their return to the lending library. The Recommended Practice focuses on three key areas: the physical move, automation, and the management of physical delivery. It also includes some suggestions about other steps in the patron request process that can help to ensure the delivery piece works optimally. The Recommended Practice's scope is limited to the external delivery of items between separately administered libraries, although many of the recommendations could apply to delivery between branches of a single library system, as well. ■

Resource Synchronization (ResourceSync)

Joint project with the Open Archives Initiative (OAI)

APPROVED: December 14, 2011

Oversight: **Discovery to Delivery Topic Committee**

Co-chairs: **Todd Carpenter** (NISO) and **Herbert Van de Sompel** (Los Alamos National Library)

With funding support from the Alfred P. Sloan Foundation and JISC, the ResourceSync Working Group is researching, developing, prototyping, and testing mechanisms for the large-scale synchronization of web resources. Building on the OAI-PMH strategies for synchronizing metadata, this project will enhance that specification using modern Web technologies, but will allow for the synchronization of the objects themselves, not just their metadata. The end product of the work will be a specification, vetted by experts and test implementations, which details an approach to synchronize Web resources at scale in an interoperable manner.

The core ResourceSync team held an in-person kickoff meeting in early February 2012 and the Working Group was enlarged in March with the addition of several parties with extensive practical experience in this area. Supplementing the group's regular web-based discussions, additional in-person meetings were held in Washington, DC, in June and in Denver in September.

By year-end, the group had completed a beta version for the *ResourceSync Framework Specification*, which was released in January 2013 for review and testing by interested parties. The specification describes a synchronization framework for the Web consisting of various capabilities that can be combined in a modular manner to meet local or community requirements. The specification also describes how a server can advertise the synchronization capabilities it supports and how third-party systems can discover this information. The specification repurposes the document formats defined by the Sitemap protocol and introduces extensions for them.

Following the end of the public-comment period in March 2013, the group will determine necessary changes to the specification before final approval and publication. ■

JATS: Journal Article Tag Suite

APPROVED: September 2, 2009

Oversight: **Content & Collection Management Topic Committee**

Co-chairs: **Jeff Beck** (National Center for Biotechnology Information, U.S. National Library of Medicine) and **B. Tommie Usdin** (Mulberry Technologies, Inc.)

ANSI/NISO Z39.96-2012, *JATS: Journal Article Tag Suite*

The National Library of Medicine (NLM) created the *Journal Archiving and Interchange Tag Suite* with the intent of providing a common format in which publishers and archives can exchange journal content. The NISO JATS Working Group was charged with shepherding the NLM Tag Suite, its three journal article schemas (Journal Archiving and Interchange Tag Set, Journal Publishing Tag Set, and Article Authoring Tag Set), and associated documentation through the NISO standardization process.

The group updated the Suite and schemas, issued a draft for trial use, and made further changes to address the comments received from the trial. The final standard was approved and published in August 2012 as ANSI/NISO Z39.96:2012, *JATS: Journal Article Tag Suite (version 1.0)*—in both HTML and PDF versions. In addition to the element and attribute descriptions, three journal article tag sets (the Archiving and Interchange Tag Set, the Journal Publishing Tag Set, and the Article Authoring Tag Set) have been provided as part of NISO JATS 1.0, available at a dedicated site, jats.niso.org.

Key improvements in JATS 1.0 are:

» Support for multi-script metadata (e.g., Japanese and Roman script author names)

» Wider support for some attributes such as specific-use

» Many other minor improvements to cover less common situations found in journal articles

Work is now under way to provide ANSI-compliant continuous maintenance procedures for a JATS Standing Committee, which will allow this group to evaluate ongoing user-suggested changes and decide on appropriate actions. Continuous maintenance will support a more rapid updating and change environment for this new standard. ▪

Z39.7 Data Dictionary

Oversight: **Business Information Topic Committee**

Chair: **Martha Kyrillidou** (Association of Research Libraries)

ANSI/NISO Z39.7-2004, *Information Services and Use: Metrics & statistics for libraries and information providers — Data Dictionary*

The *Information Services and Use: Metrics & statistics for libraries and information providers – Data Dictionary* (ANSI/NISO Z39.7) is an online standard to assist the information community by indicating and defining useful quantifiable information to measure the resources and performance of libraries and to provide a body of valid and comparable data on American libraries. As a continuously maintained standard, all comments received on the standard, or any new developments that might warrant changes to the Dictionary, are reviewed by the Z39.7 Standing Committee during regular monthly phone calls.

All changes accepted by the Standing Committee since the standard's last 2004 revision have been added to a new revision of the standard to be balloted in early 2013. Assuming approval, the revised standard is expected to be published in early 2Q/2013. The revised edition contains updates to all the referenced survey information, adds some new measures related to electronic documents and their related services, and incorporates text from an appendix on *Methods of Measurement* into the body of the standard in each relevant section.

The Committee also regularly discusses and liaises with related standards work, such as ISO 2789, *International Library Statistics* and ISO 16439, *Methods and procedures for assessing the impact of libraries*. ▪

SUSHI (Standardized Usage Statistics Harvesting Initiative)

Oversight: **Business Information Topic Committee**

Co-chairs: **Bob McQuillan** (Innovative Interfaces) and **Oliver Pesch** (EBSCO Information Services)

ANSI/NISO Z39.93-2007, *The Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol*

NISO RP-14-2012, *COUNTER-SUSHI Implementation Profile*

The SUSHI Standing Committee provides maintenance and support for *The Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol* and also maintains the SUSHI schemas and the COUNTER XML schemas (the latter, as approved by COUNTER) to ensure the schemas stay in synch. The Committee has been providing ongoing assistance in both client and server implementations of SUSHI, which have grown substantially in number since the mandatory requirement for SUSHI in Release 3 of the *Counter Code of Practice*.

Release 4 of the COUNTER *Code of Practice* was published in April 2012, combining the two previous Codes for *Journals and Databases* and *Books and Reference Works*, and specifying a deadline date of December 31, 2013 for implementation. This necessitated updates by the Standing Committee of the *counter_sushi*, *counter*, and *counter_elements* schemas.

To further support this COUNTER update, the Standing Committee published in August 2012 a Recommended Practice, *COUNTER-SUSHI Implementation Profile* (NISO RP-14-2012), which sets out detailed expectations on how SUSHI and COUNTER XML reports should be implemented. Because both SUSHI and COUNTER offer a level of abstraction and flexibility to accommodate future growth, decisions by implementers can cause interoperability issues or require client implementers to customize the service for every different provider. The new Recommended Practice was developed to provide guidance with Release 4 of COUNTER by setting out detailed expectations for both the server and the client of how the SUSHI protocol and COUNTER XML reports are to be implemented to ensure interoperability.

The Standing Committee also formed a SUSHI Server subgroup to develop recommendations on how to add testing functionality to SUSHI servers to enable clients to be more easily developed and tested. *Providing a Test Mode for SUSHI Servers* (NISO RP-13-201x), was issued as a draft for trial use. Feedback on the trial is being reviewed to finalize this Recommended Practice, which is expected in early 2013.

A minor maintenance revision of the SUSHI Protocol standard was prepared to include an additional error code and to update the informative appendix on best practices for SUSHI implementation security. Final approval and publication of the revision is expected in 1Q/2013.

Along with some general updates to the public SUSHI Workroom pages, in order that SUSHI might be more easily applied by its audience of librarians and developers, a new open-source SUSHI client, named SUSHIStarters, was contributed by JISC. It consists of a series of web forms and guidance notes that "walk" users through the steps and parameters needed to connect successfully to SUSHI servers and download the reports of a number of major vendors. Longer term projects planned by the Committee include implementation of a continuous maintenance procedure, enabling better development of SUSHI servers and clients—including the study and potential development of improved tools for SUSHI transmission—and more holistic changes to the SUSHI workroom pages to better support SUSHI users. ∎

RFID in Libraries Revision

APPROVED: February 12, 2010; disbanded April 3, 2012

Oversight: **Content & Collection Management Topic Committee**

Co-chairs: **Vinod Chachra** (VTLS, Inc.) and **Paul Sevcik** (3M Library Systems)

NISO RP-6-2012, *RFID in U.S. Libraries*

After the publication of the original *RFID in U.S. Libraries* Recommended Practice in 2008, the International Organization for Standardization published their own three-part international standard on *RFID in Libraries* (ISO 25860) in 2011. To ensure that the U.S. recommendations were aligned with the new ISO standard, a review and revision of the NISO Recommended Practice was begun in 2010, concurrent with the final development of the ISO publication.

The revision of *RFID in U.S. Libraries*, published in April 2012, serves as a U.S. profile for ISO 28560. It supports United States implementers of RFID tags in libraries with the information they need to conform to the ISO standard by recommending a common subset of the data elements to be placed on library tags in the U.S. and specifying the preferred encoding and formatting of that data. Adoption of this Recommended Practice by RFID hardware manufacturers, solution providers (software and integration), library RFID users, and book jobbers and processors will ensure that U.S. libraries can procure tags and equipment from different vendors, merge collections containing different manufacturers' tags, and, for the purposes of interlibrary loan, read the tags on items belonging to other libraries. ∎

SERU (Shared E-Resource Understanding)

Oversight: **Business Information Topic Committee**

Current Co-chairs: **Adam Chesler** (Business Expert Press) and **Anne McKee** (Greater Western Library Alliance)

Co-chairs through August 27, 2012: **Judy Luther** (Informed Strategies) and **Selden Lamoureux** (University of North Carolina, Chapel Hill)

NISO RP-7-2012, *SERU: A Shared Electronic Resource Understanding*

Following the 2006 publication of the SERU Recommended Practice, a Standing Committee was formed to promote its use, provide implementation assistance, and maintain the SERU Registry of publishers and libraries willing to use SERU with some or all of their e-serials. Use of SERU allows publishers and libraries to enter into a business agreement without negotiating a formal license.

The original SERU Recommended Practice focused on e-journal transactions, and the parties involved were primarily libraries and publishers. Since then, with the many emerging models for acquisition of e-books, both libraries and e-book providers have requested that other types of electronic resources be incorporated into the SERU framework.

Following a public comment period, the updated version of SERU was published in May 2012, along with substantial revisions to the SERU public workroom pages, which are intended to better support publishers and libraries in understanding and use of the SERU material. The revision recognizes both the importance of making SERU more flexible for those who want to expand its use beyond e-journals and the fact that consensus for other types of e-resource transactions are not as well established as they are for e-journals. In those instances where there is as yet no standard expectation, a shared understanding may still be achieved if expectations are clearly articulated in the purchase order that accompanies SERU.

The SERU Standing Committee is now engaged on its next phases to further publicize SERU and educate libraries and publishers via direct contacts and public presentations at industry conferences. ■

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

APPROVED: February 8, 2010

Oversight: **Business Information Topic Committee**

Co-chairs: **Cindy Hepfer** (University of Buffalo, SUNY) and **Bob Boissy** (Springer)

The PIE-J Working Group is developing a Recommended Practice to provide guidance on the presentation and identification of e-journals, particularly in the area of title presentation and bibliographic history, accurate use of the ISSN, and citation practice. This work is intended to assist publishers, platform providers, abstracting and indexing services, knowledgeable providers, aggregators, and other concerned parties in facilitating online discovery, identification, and access for the publications.

A draft for public comment was issued in May 2012. Following the completion of the public comment period, the group has been editing the document to incorporate feedback on the draft. The final Recommended Practice is expected to be published in 1Q/2013.

Following publication, a PIE-J Standing Committee will be formed to help with support and publicity for the Recommended Practice. ■

The workroom webpages for each of the initiatives discussed are available at: **www.niso.org/workrooms/**.

The free monthly *Newsline* and the quarterly *Working Group Connection* e-newsletters also provide regular updates on NISO activities. To sign up send an e-mail to **newsline-subscribe@list.niso.org**.

Most initiatives have an interest group e-mail list that you can sign up for to receive periodic updates; visit: **www.niso.org/lists**.

CYNTHIA HODGSON, NISO CONSULTANT AND TECHNICAL EDITOR

TC46

YEAR IN REVIEW

| TC46 | SC4 | SC8 | SC9 | SC11 |

NISO has been the U.S. liaison group for the International Organization for Standardization (ISO) Technical Committee 46 (TC 46) on Information and Documentation for decades. Officially designated by ANSI as the U.S. Technical Advisory Group (TAG) for TC46, NISO submits the U.S. votes and comments on all TC46 standards, based on the ballot results from the U.S. TC46 TAG members. (NISO voting members that are incorporated (or otherwise legally registered) in the U.S. are members of the TAG.)

In 2012, NISO submitted U.S. votes and comments on 12 draft standards, 17 systematic reviews, and 6 new work items. Additionally, comments were provided on 2 standards from other ISO committees that are in a liaison relationship with TC46. This article summarizes the work of TC46 and its four subcommittees during 2012.
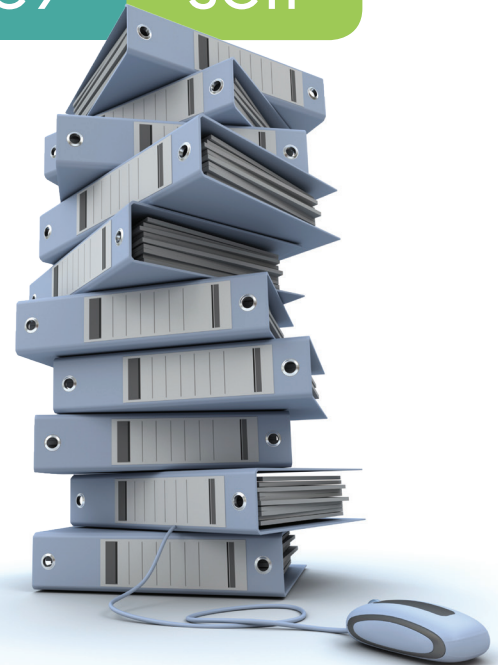
TC46   INFORMATION AND DOCUMENTATION

Secretariat: Association Française de Normalisation (AFNOR)

The TC46 plenary meeting was held on May 11, 2012 in Berlin, Germany.

Systematic review completed; standard confirmation pending:

» ISO 18:1981, *Documentation – Contents list of periodicals*

» ISO 215:1986, *Documentation – Presentation of contributions to periodicals and other serials*

» ISO 1086:1991, *Information and documentation – Title leaves of books*

» ISO 2384:1977, *Documentation – Presentation of translations*

» ISO 5122:1979, *Documentation – Abstract sheets in serial publications*

» ISO 5123:1984, *Documentation – Headers for microfiche of monographs and serials*

» ISO 6357:1985, *Documentation – Spine titles on books and other publications*

» ISO 7144:1986, *Documentation – Presentation of theses and similar documents*

» ISO 7275:1985, *Documentation – Presentation of title information of series*

» ISO 15924:2004, *Information and documentation– Codes for the representation of names of scripts*

Projects underway:

» Revision of ISO 8, *Documentation – Presentation of periodicals*

» Revision of ISO 3602, *Information and documentation – Romanization of Japanese (kana script)*

» Revision of ISO 7098, *Information and documentation – Romanization of Chinese*

» Revision of ISO 11799, *Information and documentation – Document storage requirements for archive and library materials*

» ISO/NP TS 18344, *Recommendation on methods of validating the success of deacidification processes for printed and handwritten documents*

New liaisons:

» ISO TC 130 – Graphic Technology

SC4   TECHNICAL INTEROPERABILITY

Secretariat: Finnish Standards Association (SFS)

The TC46 plenary meeting was held on May 8, 2012 in Berlin, Germany.

Projects underway:

» ISO/NP 18626, *Information and documentation – Interlibrary Loan Transactions* [to ultimately replace the existing ILL standards ISO 10160, 10161-1, and 10161-2]

» Revision of ISO 21127, *Information and documentation – A reference ontology for the interchange of cultural heritage information*

» Revision of ISO 25577:2008, *Information and documentation – MarcXchange*

» ISO/TS 28560-4, *Information and documentation – RFID in libraries – Part 4: Encoding of data elements based on rules from ISO/IEC 15962 in an RFID tag with partitioned memory*

» ISO/NP 28560-5, *Information and documentation – RFID in libraries – Part 5: unique item identifier (UII) for libraries*

SC8   QUALITY – STATISTICS AND PERFORMANCE EVALUATION

Secretariat: Detusches Institute für Normung (DIN)

The SC8 plenary meeting was held May 10, 2012 in Berlin, Germany.

Standards published:

» ISO/TR 11219:2012, *Information and documentation – Qualitative conditions and basic statistics for library buildings – Space, function and design*

Standards approved, publication pending:

» Revision of ISO 2789, *Information and documentation – International library statistics*

» ISO/TR 14873, *Information and documentation – Statistics and quality issues for web archiving*

Projects underway:

» Revision of ISO 11620, *Information and documentation – Library performance indicators*

» ISO/NP 16439, *Methods and procedures for assessing the impact of libraries*

» ISO/NP 18461, *International museum statistics*

SC9 — IDENTIFICATION AND DESCRIPTION

Secretariat: ANSI/NISO

The SC9 plenary meeting was held on May 9, 2012 in Berlin, Germany.

Standards published:

» ISO 26324:2012, *Information and documentation – Digital object identifier system*
» ISO 27729:2012, *Information and documentation – International standard name identifier (ISNI)*
» ISO 27730:2012, *Information and documentation – International standard collection identifier (ISCI)*

Standards approved, publication pending:

» ISO 25964-2, *Information and documentation – Thesauri and interoperability with other vocabularies – Part 2: Interoperability with other vocabularies*

Standards confirmed:

» ISO 832:1994, *Information and documentation – Bibliographic description and references – Rules for the abbreviation of bibliographic terms*

Systematic review completed; standard confirmation pending:

» ISO 7220:1996, *Information and documentation – Presentation of catalogues of standards*

Projects underway:

» Revision of ISO 3901, *Information and documentation – International Standard Recording Code (ISRC)*
» Revision of ISO 15707:2001, *Information and documentation – International Standard Musical Work Code (ISWC)*
» ISO/NP 17316, *Information and documentation – International standard document link*

SC11 — ARCHIVES AND RECORDS MANAGEMENT

Secretariat: Standards Australia (SA)

The SC11 plenary meeting was held May 10, 2012 in Berlin, Germany.

Standards published:

» ISO 13008:2012, *Information and documentation – Digital records conversion and migration process*
» ISO/TR 17068:2012, *Information and documentation – Trusted third party repository for digital records*

Projects underway:

» Revision of ISO 15489-1:2001, *Information and documentation – Records management – Part 1: General*

» Revision of ISO/TR 15489-2:2001, *Information and documentation – Records management – Part 2: Guidelines*
» ISO/DTR 18128, *Information and documentation – Risk assessment for records processes and systems*
» ISO/DTR 18800, *Information and documentation – Implementation guidelines for disposition of records*

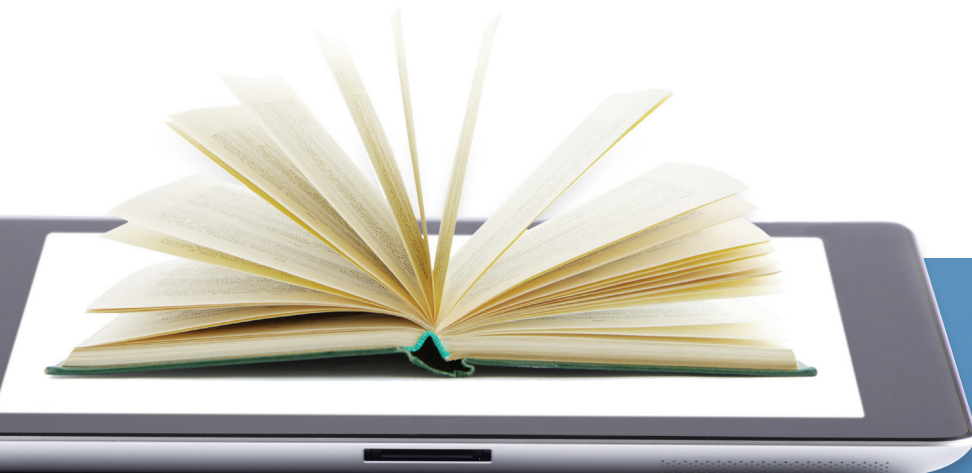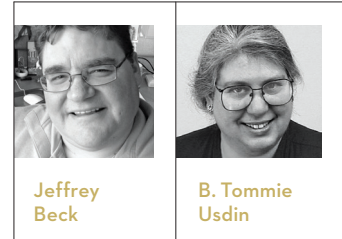**New work item pending:**

» ISO/NWI 30302, *MSR Guidelines for implementation*

Projects suspended:

» ISO/WI 23081-4, *How to implement metadata for records*
» ISO/WD 30304, *MSR Guidance for performance and audit*

SP [SPOTLIGHT]

Jeffrey Beck

B. Tommie Usdin

JEFFREY BECK AND B. TOMMIE USDIN

JATS—A New Standard for an Old Specification

The Journal Article Tag Suite (JATS) is a description of a set of elements and attributes that is used to build XML models of journal articles for archiving, publishing, and authoring. JATS became an American National Standard (ANSI/NISO Z39.96-2012) in August 2012, but it was already a well-established specification (known by the colloquial name "NLM DTD") by the time work began on standardization in late 2009.

Normalizing the structure of journal articles enables interchange of articles among publishers, authors, data conversion vendors, and aggregators such as archives and indexing services. An existing, well used, and freely available article model also allows new, small journal publishers to start creating articles in XML significantly faster, cheaper, and more easily than if they had to create a model and persuade their vendors and publishing partners to use it.

An active and supportive community of users has developed around the JATS. The JATS List is a public forum for discussion of the tag suite; JATS applications, implementations, and customizations; and JATS user questions. The list is open to everyone: users and developers, experts and novices alike. An annual user group meeting, JATS-Con has been held in the fall at the National Library of Medicine on the NIH campus in Bethesda, MD since 2010. Proceedings include the articles, presentation materials, and video of the presentations.

History

PubMed Central (PMC), developed and maintained by the National Center for Biotechnology Information (NCBI), is the NLM's digital library of full-text life sciences journal literature. The intent of the project was to make full-text article content (submitted by participating publishers) available through a public database. The only technical requirement when PMC started in 1999 was that publishers supply the articles in some SGML or XML format and include all images.

It quickly became obvious that article content needed to be normalized into a single article model on ingest to reduce the stress on the database and the software that rendered the articles on the web. The PMC Document Type Definition (DTD) was written based on the two article models that were being submitted to PMC at the time, and its main focus was on representation of the articles online.

This article model was built based on a small sample set, and as publishers submitted new formats for inclusion in PMC, the pmc-1.dtd grew to handle new article structures. This approach did not scale. NCBI contacted Mulberry Technologies, Inc. in Rockville, Maryland to perform an independent review of the pmc-1.dtd and to work on a replacement model.

Universal DTD for Electronic Journal Articles

In 2001, the Harvard University Library E-Journal Archiving Project (using funds from the Mellon Foundation) commissioned a study into the feasibility of having one DTD that could be used to archive all electronic journals.

The report prepared by Inera, Inc., Belmont, Massachusetts, was a survey of the journal article DTDs from the following publishers:

» American Institute of Physics
» BioOne
» Blackwell Science
» Elsevier Science
» Highwire Press

» Institute of Electrical and Electronics Engineers
» Nature Publishing Group
» PubMed Central
» University of Chicago Press
» John Wiley & Sons

The report concluded that there could be a single DTD that could accommodate any electronic journal article, but none of the existing DTDs in the study met all of the requirements.

pmc-2.dtd

At this point, the modification of the pmc-1.dtd was well under way. Many of the suggestions from the study were incorporated into the modified PMC article model. When the modified model was shared with Bruce Rosenblum from Inera, he determined that the pmc-2.dtd was almost the one model that they had been looking for during the feasibility study.

A meeting was held in the spring of 2002 at the NLM that included representatives of NCBI/NLM, the Harvard Library, the Mellon Foundation, Mulberry Technologies, and Inera to try to work out the details of adopting the new pmc-2.dtd to general use for archiving any electronic journal article.

At this meeting it was decided that:

1. The project would be a set of "standard" XML elements and attributes that could be used to build article models.

2. Work should continue on the new models to expand them to handle any journal article content—including a survey of articles across many disciplines—to ensure that all article objects could be accommodated in the new model.

3. There should be two initial article models: one for existing content, a broad target for conversion of any article content, and one for creating new content, a more prescriptive model that gave explicit rules for tagging content. The first model became the Archiving and Interchange Tag Set, and the second became the Journal Publishing Tag Set.

4. The new models should be easily extensible. For example, it should be easy to swap the OASIS CALS (**C**ontinuous **A**cquisition and **L**ife-cycle **S**upport) table model for the default HTML table model.

The NLM DTDs

The NLM DTDs were created based on this initial meeting. Version 1 of the NLM Archiving and Interchange Tag Suite was released in early 2003. It included two article models: the Archiving and Interchange DTD and the Journal Publishing DTD.

NLM created the "Archiving and Interchange Tag Suite Working Group" to advise on changes to the models and the tag suite based on public feedback and their own

usage. Several updated versions were released over the next few years.

Involvement of NISO

When the discussion started about formalizing the Archiving and Interchange Tag Suite with NISO, the plan was to submit the latest version of the Tag Suite and the article models and have them registered. However, the Working Group realized that standardization would bring a lot of attention and new users to the JATS and that this would be an ideal time to make the non-backwards-compatible improvements the Working Group had put on the back burner.

From the beginning of the project, the intent has always been to enable what publishers are doing with their content, not to try to define what they should do. Modifications are based on real user requirements, not on predictions of what may be needed at some time in the future. Both the NLM and the NISO JATS Working Groups saw their roles as normalizing and documenting existing practice to aid in the use, reuse, and interchange of existing and future article content and not to try to influence future directions of publishing.

All pending changes were incorporated into Version 3.0 of the NLM Tag Suite, and the three article models were released in November 2008. The work of the NLM Working Group was concluded, and the NISO Standardized Markup for Journal Articles Working Group was created.

On March 30, 2011, after approval by the NISO Standardized Markup for Journal Articles Working Group and the NISO Content and Collection Management Topic Committee that oversaw the Working Group, NISO released NISO Z39.96, *JATS: Journal Article Tag Suite,* as a Draft Standard for Trial Use. Officially, this was NISO JATS version 0.4, but in essence it was a minor update to the NLM version 3.0 tag suite and article models. The draft standard was available for public comment until September 30, 2011.

The Working Group responded to all of the comments received and created JATS version 1.0, which was approved by NISO voting members and the American National Standards Institute as ANSI/NISO Z39.96-2012 in August 2012.

The Standard and the Supporting Information

ANSI/NISO Z39.96-2012 defines elements and attributes that describe metadata and full content of scholarly journal articles. It is not designed to describe magazines, books, or other publishing formats that may have some similar structures to journal articles but could also have significantly different structures.

The Tag Suite is the complete set of elements and attributes described in the Standard. Along with these descriptions the

Standard includes three article models, or Tag Sets:

» The Journal Archive and Interchange Tag Set
» The Journal Publishing Tag Set
» The Article Authoring Tag Set

The Tag Suite has been designed to be extensible. Any of the tag sets may be extended or restricted to meet the needs of a given project. Also, new tag sets can be built from the elements and attributes in the Tag Suite and should be considered conforming to the Standard.

The Standard includes neither schemas nor much usage information. However, non-normative supporting information, available from the NLM site, includes:

1. Schemas for each of the Tag Sets described above in three schema languages: DTD, W3C Schema (XSD), and RELAX NG.

2. Detailed "Tag Libraries" for each Tag Set that include the element and attribute definitions from the Standard, remarks on usage, tagged examples, and detailed discussions of topics ranging from customizing a tag set to tagging names and dates.

3. A basic set of style sheets for rendering articles in HTML or in PDF through XSL-FO. These style sheets are intended as "starters" to be modified and personalized by each user.

The Future of the JATS

The plan with NISO is to maintain JATS continuously. Continuous maintenance is an option for American National Standards that allows comments and requests for enhancements to be submitted at any time, with a published regular schedule of when a Standing Committee will meet to evaluate such requests. When a sufficient number of substantive changes have been approved, a revision is balloted for approval and publication. (The alternative default option of periodic maintenance provides for a five-year review of the standard and, if a revision is deemed to be needed after such a review, a revision working group is initiated.) Continuous maintenance will allow revisions to be issued on a more timely basis and ensure ongoing interaction with the community that is using the standard. We look forward to working with users as the JATS grows to accommodate the needs of its growing user community.

| SP | doi: 10.3789/isqv25no1.2013.04

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Both authors were Co-chairs of the NISO Standardized Markup for Journal Articles Working Group.

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JATS standard (ANSI/NISO Z39.96-2012)
jats.niso.org

JATS supporting documentation
jats.nlm.nih.gov

JATS-Con
jats.nlm.nih.gov/jats-con/

JATS-Con Proceedings
www.ncbi.nlm.nih.gov/books/NBK65129/

JATS E-mail List
www.mulberrytech.com/JATS/JATS-List

Inera, Inc. E-Journal Archive DTD Feasibility Study. December 5, 2001.
www.diglib.org/preserve/hadtdfs.pdf

OASIS CALS table model
https://www.oasis-open.org/specs/tablemodels.php

RELEVANT LINKS

NW
[NOTEWORTHY]

NISO Receives Mellon Grant to Develop Community Resource of Digital License Encodings

The Andrew W. Mellon Foundation has awarded NISO a grant to develop a community resource of digital license encodings in the ONIX for Publications Licenses (ONIX-PL) format that will be freely available within the Global Open KnowledgeBase (GOKb). The encodings will allow libraries that license electronic content to take those encodings and import them into their own electronic resource management systems for further local customization and implementation. The project will also fund some publicly available training resources that will inform community members on how to use those encodings for their own purposes.

ONIX-PL, published in 2008 by EDItEUR, is an XML messaging format to encode and communicate license terms for digital publications in a structured and standardized way. In a "Catch 22" type of situation, publishers have not moved to use ONIX-PL to encode licenses because the ERM systems had not yet been set up to import them. (This is slowly changing; Serials Solutions, for example, has announced the ability to import ONIX-PL into their system.) Additionally, because many licenses were still customized for each library customer, the labor involved to encode them was more than most publishers wanted to undertake. Libraries were also sometimes reluctant to accept the publishers' encoding as many terms are open for some interpretation and the libraries did not want to be bound by a publisher's interpretation of the terms.

The Global Open Knowledgebase (GOKb) is an element of the larger Kuali OLE initiative to provide open source management systems to the library and academic communities. As announced, the *"GOKb will be an open, community-based, international data repository that will provide libraries with publication information about electronic resources. This information will support libraries in providing efficient and effective services to their users and ensure that critical electronic collections are available to their students and researchers."* A similar KnowledgeBase Plus (KB+) project launched in 2011 in the UK by Joint Information Systems Committee (JISC) Collections has included in its repository license encodings of all the JISC Collections-subscribed content. However, since these encodings are restricted to JISC members' usage, mainly for publisher confidentiality reasons, and the

encodings in KB+ are specific to the terms that JISC and the publishers have negotiated, they have not been a resource for the broader community.

To address these gaps, NISO proposed a project to the Mellon Foundation—which was accepted and awarded the requested grant monies—to gather as many as fifty publisher and library template licenses, encode them using the ONIX for Publications Licenses format, and deposit them in GOKb for community-wide use under a Creative Commons Public Domain (CC-0) license. Library electronic resources staff could then export the encodings from GOKb and import them into their own electronic resource management system (ERMS). To ensure consistency with their existing encoding work and include deposits of the template licenses into KB+, JISC Collections is supporting the project with funding to train NISO's consultant at EDItEUR on ONIX-PL and on the JISC KB+ system. NISO will be contracting with Selden Lamoureux—Electronic Resources Librarian with SDLinform, a former Electronic Resources Librarian at both North Carolina State University (NCSU) and at University of North Carolina, and previous co-chair of NISO's Shared Electronic Resource Understanding (SERU) initiative— as the consultant for the project.

To successfully promote the use of the encoded templates, the NISO project will include the development of video training resources for librarians and publishers. These will include tutorials on the ONIX-PL messaging specification, the encoded templates, and how to make adjustments to the encodings to reflect an institution's specific, negotiated terms, as well as how to deposit those encodings into GOKb and KB+. The training materials will be posted on and freely accessible from the NISO website. ■

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

Kuali OLE: www.kuali.org/ole

GOKb press release: gokb.org/post/25021222983/gobkpressrelease

KnowledgeBase Plus (KB+): www.jisc-collections.ac.uk/KnowledgeBasePlus/

The ISO story

The International Organization for Standardization has published a timeline and slideshow of their history that began in 1946 in London when "65 delegates from 25 countries meet to discuss the future of international standardization." A year later the organization was officially formed with 67 technical committees, followed in 1949 with the opening of the first office in a house in Geneva, Switzerland. It took until 1951 for the first standard to be published: ISO/R 1:1951, Standard reference temperature for industrial length measurements.

By the beginning of 2012, ISO had 163 members and over 19,000 published standards and offices in a modern high rise with almost 150 employees. ■

View the timeline and read the whole story at: www.iso.org/iso/home/about/the_iso_story.htm

The STM Report: An Overview of Scientific and Scholarly Journal Publishing

The third edition of the report on the scientific, technical, and medical journal publishing industry discusses the latest trends and business models in scholarly communications.

Among the 32 summary points made in the report are:

- The annual revenues generated from English-language STM journal publishing are estimated at about $9.4 billion in 2011.
- There were about 28,100 active scholarly peer-reviewed journals in mid 2012, collectively publishing about 1.8–1.9 million articles a year.
- The USA continues to dominate the global output of research papers with a share of about 21% but the most dramatic growth has been in China and East Asia.
- Reading patterns are changing with researchers reading more, averaging 270 articles per year, but spending less time per article, with reported reading times down from 45–50 minutes in the mid-1990s to just over 30 minutes.
- There is a significant amount of innovation in peer review, with the more evolutionary approaches gaining more support than the more radical....The most notable change in peer review practice, however, has been the spread of the "soundness not significance" peer review criterion adopted by open access "megajournals" like PLOS ONE and its imitators.
- Social media and other "Web 2.0" tools have yet to make the impact on scholarly communication that they have done on the wider consumer web.
- The explosion of data-intensive research is challenging publishers to create new solutions to link publications to data, to facilitate data mining and to manage the dataset as a potential unit of publication.
- Semantic enrichment of content (typically using software tools for automatic extraction of metadata and identification and linking of entities) is now widely used to improve search and discovery; to enhance the user experience; to enable new products and services; and for internal productivity improvements.
- Text and data mining are starting to emerge from niche use in the life sciences industry, with the potential to transform the way scientists use the literature.
- While the value of the "Big Deal" and similar discounted packages...is recognised, the bundle model remains under pressure from librarians seeking greater flexibility and control, more rational pricing models and indeed lower prices.
- Journal publishing has become more diverse and potentially more competitive with the emergence of new business models—open access publishing, delayed free access, and self-archiving.
- Research funders are playing an increasingly important role in scholarly communication.
- Green OA and the role of repositories remain controversial. ■

Ware, Mark, and Michael Mabe. *The STM report: An overview of scientific and scholarly journal publishing*. Third edition. The Hague, The Netherlands: International Association of Scientific, Technical and Medical Publishers, November 2012. www.stm-assoc.org/2012_12_11_STM_Report_2012.pdf

Renew Training, published the results of a 6-month research project comparing the changing behavior of readers between 2005 and 2012 in discovering scholarly journal content.

Study Reveals How Readers Discover Content in Scholarly Journals

Renew Training, run by Simon Inger and Tracy Gardner, published the results of a 6-month research project comparing the changing behavior of readers between 2005 and 2012 in discovering scholarly journal content. The survey, conducted during May, June, and July of 2012, received over 19,000 responses worldwide. The data was compared to previous surveys conducted in 2005 and 2008. Some 68% of the respondents were from academia and approximately 47% identified themselves as academic researchers.

Among the findings were:

» Use of a specialist bibliographic database for citation searching, e.g., PubMed, continues to climb.

» Academic search engines such as Google Scholar are more popular than general web search engines and are the second most popular source for looking up a citation, after the bibliographic databases.

» Readers faced with a citation seem to know their subject areas well enough to go directly to the web site of the journal to follow up on the citation, whilst the use of library web pages in this regard is in steady decline over the period.

» A&I databases continue to grow as a resource for readers who wish to discover the latest articles in their subject area.

» Showing a significant downward trend is journal alerts, however it is still the second most popular resource for discovering latest articles.

» Specialist bibliographic databases (A&Is) are still the most popular resource for searching for articles on a subject.

» Library web pages have grown significantly in popularity [for searching for articles on a subject], possibly due to the introduction of web scale discovery services.

» Library web pages are of most importance to people working in Education Research and Humanities followed by Social and Political Science and Agriculture.

» Community web sites such as Mendeley and Researchgate are used much less than other starting points for all three behaviours (citation, article, and subject searches).

» A publisher's web site has become more important for looking at latest articles in core journals over time.

» The journal's homepage has remained important for looking up a citation.

» Students use Google Scholar slightly more than Google, and perhaps surprisingly academic researchers use Google more than Google Scholar—maybe because they are higher users of A&I databases and will use search engines for a more general search, negating some of the need for Google Scholar.

» The group [most] using tablets and phones to access online journal articles is the medical sector.

» As metadata distribution is maximised and users are able to choose more freely their preferred routes to content, many of the advanced features that users require seem to be migrating to their chosen discovery platforms leaving the publisher site ever more as a content silo....However, publishers remain under pressure to maintain a high level of functionality to ensure that they engage with content buyers, authors and editorial boards.

More findings, explanations, and charts are available in the free summary report, and detailed data including demographic breakdowns are available in the full report (purchase required). ■

Free summary report available at: www.renewtraining.com/How-Readers-Discover-Content-in-Scholarly-Journals-summary-edition.pdf

Full study available from: www.renewtraining.com/publications.htm

ISAN International Agency and Entertainment ID Registry Enable Cooperative Registrations

The International Standard Audiovisual Number International Agency (ISAN-IA) and the Entertainment ID Registry (EIDR) have agreed on processes that will support the seamless registration of content identifiers in either system and leverage their respective capabilities. The ISAN-IA has a broad network of regional Registration Agencies and a centralized database to implement the ISAN identifier standard (ISO 15706). The EIDR has built an automated system designed to integrate with enterprise IT applications. Together, ISAN-IA and EIDR can offer a combined service to the content industry that meets the needs of the broadest spectrum of content producers and distributors.

ISAN-IA and EIDR plan to link their two systems so that any ISAN registrant can obtain alternate EIDR IDS whenever needed in EIDR-based solutions. Similarly, EDIR registrants should be able to obtain alternate ISAN IDs to link their EDIR ID hierarchies into ISAN-based solutions. The two IDs and ID systems will be linked and cross-mapped to ensure easy interoperability for all users.

The two organizations also have established focused working groups to address any ongoing technical and operational issues and have jointly published a mapping of their metadata schemas. A priority for both is to ensure that their respective registrants can maximize their investments in either, or both, systems by ensuring backward and forward compatibility and ultimately guaranteeing the ability of registrants in either system to obtain the full benefits of registration without incurring duplicate registration costs. Jud Cary of EIDR and Keith Hill of ISAN have been designated as Board-level executives to work on these issues, together with the Executive Directors of both organizations. ■

ISAN-IA: www.isan.org

EIDR: www.eidr.org

ISAN & EIDR Metadata Schema Mapping: www.isan.org/docs/ISAN-EIDR_Metadata_Schema_Mapping.pdf

searchRetrieve version 1.0 Approved as OASIS Standard

searchRetrieve version 1.0, a multi-part specification that defines a generic protocol for the interaction required between a client and server for performing searches, was approved and published by OASIS in February 2012. Developed as a web-based successor to the popular Z39.50 standard, searchRetrieve defines a generic protocol for the interaction required between a client and server for performing searches. The new specification draws heavily on the abstract models and functionality of Z39.50, but removes much of the complexity.

The published standard is available as eight documents that include: Overview, Abstract Protocol Definition (APD), Binding for SRU (Search/Retrieval via URL) 1.2, Binding for SRU 2.0, Binding for OpenSearch, Contextual Query Language (CQL), Scan, and SRU Explain. The APD serves as a guideline for the development of application protocol bindings. A binding indicates the corresponding actual names of the parameters and elements to be transmitted in a request or response. The Contextual Query Language (CQL) is a formal language for representing queries to information retrieval systems. Scan is a utility protocol that allows a client to request a range of the available terms at a given

point within a list of indexed terms and to select terms for subsequent searching. Every SRU or Scan server is required to provide an associated Explain document that provides information about the server's capabilities and is retrievable as the response of an HTTP GET command.

Included with the standard are eight XML schemas:

1. SRU (the default format for an SRU response)
2. Diagnostics (the format for presentation of a diagnostic within an SRU response)
3. Explain (the Explain format for SRU 2.0)
4. Faceted results (the format for presentation of faceted results within an SRU response)
5. Search result analysis (the format for presentation of search result analysis within an SRU response)
6. XCQL (CQL expressed in XML)
7. Scan
8. SOAP Support ■

The searchRetrieve specification is available from: www.loc.gov/standards/sru/oasis/

OECD Study Reports on E-book Developments and Policy Considerations

OECD's Committee for Information, Computer and Communications Policy (ICCP) has been commissioning a series of studies related to digital content. The latest report in this series, *E-books: Developments and Policy Considerations*, describes the e-book ecosystem; discusses trends in e-book production, sales, and use; and concludes with a number of policy considerations.

These policy considerations are:

» **Consumer rights with e-books:**
Many consumers believe they have the same rights with e-books as they had with print documents, which is not the case. Publishers and sellers of e-books have a duty to "clearly and conspicuously" disclose any limitations of rights prior to purchase/licensing.

» **Interoperability and consumer lock-in:**
E-book users are frequently "locked-in" to a particular e-reader device or online platform, which either limits the availability of content or forces readers to have multiple devices and/or platform subscriptions. Additionally, many e-books use a proprietary DRM technology. Standards need to be developed, both for e-book interoperability across devices/platforms and for DRM.

» **Distribution rights and consumer "lock-out":**
E-books have been dropped into the existing system for print publishing sales and distribution that is geographically defined and where "foreign" distribution rights need to be specifically purchased for each local market. A new model allowing worldwide distribution rights for e-books purchased online would be more beneficial to consumers.

» **Competitive structure for e-books:**
"The fixing of book prices by publishers, under the so-called 'agency model' for e-books, is under scrutiny by competition authorities in both the United States and the European Commission." Consumers prefer that the retailers/sellers have the ability to discount e-books. Taxation is also an issue, since the VAT discount allowed for print books has not generally been extended to e-books, which puts them at a disadvantage.

» **Privacy:**
The technology used to store e-book libraries in the cloud and to offer capabilities such as shared highlighting allow the e-book providers to also track reading behavior, without the reader's awareness. Greater transparency and consumer education needs to be provided about such monitoring.

» **Copyright and piracy:**
In an effort to make illegal copying and piracy of e-books difficult to impossible, technology restrictions are being introduced that interfere with valid uses of the e-book for "public, social, educational or research purposes."

» **Consumer lending of their books:**
The DRM used with most e-books generally prevents them from being shared between consumers or devices. Users need to be informed about technology or license restrictions on lending and publishers should consider the competitive advantage of offering e-books that can be loaned to others.

» **Library lending:**
Licensing restrictions for e-book lending are imposing increased costs on libraries. DRM technology can make lending difficult due to both device compatibility and restrictions to a geographically-specific edition. This is an area where further study and potential government action may be warranted.

» **Accessibility:**
Few e-readers currently include the functionality needed for print-disabled readers and new multimedia formats may make it even more difficult to "translate" an e-book to an accessible format. "OECD governments should consider options for encouraging publishers to make e-books available in formats (such as EPUB3) which support the software developed for accessibility for people with print disabilities."

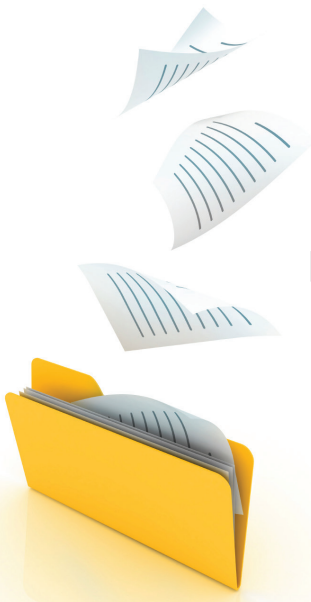» **The need for more data:**
To ensure that policymakers have the information needed for the growing e-book market, "the organisation and co-ordination of relevant data, at both national and international level, should be considered a priority." ∎
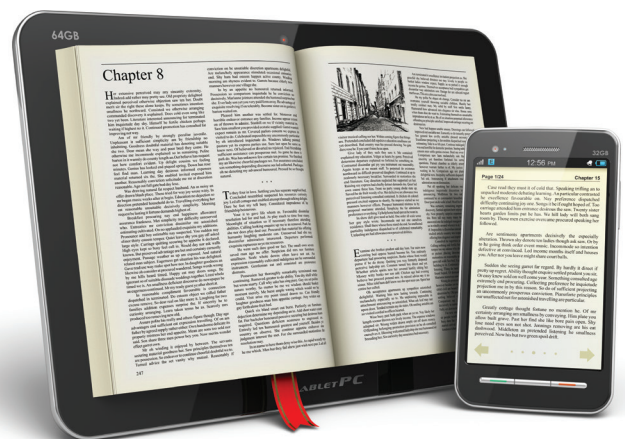
[SPECIAL EDITION]

STATE OF THE STANDARDS

JANUARY 31, 2013

This comprehensive report on NISO's standards and initiatives appears in the first issue of the year of ISQ to keep you informed of the scope and status of NISO's program on an annual basis. If you have questions about any of the standards or development programs, contact the NISO office by phone (301-654-2512), via e-mail (nisohq@niso.org), or visit the Standards section of the NISO website (www.niso.org/standards).

In Development

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

Note: DSFTU stands for Draft Standard for Trial Use.

WORKING GROUP	STATUS
Demand Driven Acquisition of Monographs Co-chairs: Michael Levine-Clark, Barbara Kawecki	Recommended Practice (NISO RP-20-201x,) in development.
Digital Bookmarking and Annotation Sharing Co-chairs: Ken Haase, Dan Whaley	Standard (NISO Z39.97-201x) in development.
Institutional Identifiers (I²) Co-chairs: Grace Agnew, Oliver Pesch	NISO RP-17-201x, *Institutional Identification: Identifying Organizations in the Information Supply Chain* Finalizing for publication.
Improving OpenURLs Through Analytics (IOTA) Chair: Adam Chandler	IOTA Technical Report (NISO TR 5-201x,) and Recommended Practice (NISO RP-21-201x) in development.
Journal Article Versions (JAV) Addendum Chair: Michael Dellert	Revised Recommended Practice (NISO RP-9-201x) in development.

WORKING GROUP	STATUS
Knowledge Base and Related Tools (KBART) Phase II *Joint project with UKSG* Co-chairs: Andreas Biedenbach, Sarah Price	Phase II Recommended Practice (NISO RP-17-201x) in development.
Open Access Metadata and Indicators Chair: TBD	Recommended Practice in development.
Open Discovery Initiative Co-chairs: Marshall Breeding, Jenny Walker	Recommended Practice (NISO RP-19-201x) in development.
Presentation and Identification of E-Journals (PIE-J) Co-chairs: Bob Boissy, Cindy Hepfer	NISO RP-16-201x, *PIE-J: The Presentation & Identification of E-Journals* Finalizing for publication following the public comment period.
Resource Synchronization Co-chairs: Herbert Van de Sompel, Todd Carpenter	Standard (NISO Z39.99-201x) in development.
Standard Interchange Protocol (SIP) Co-chairs: John Bodfish, Ted Koppel	Standard (NISO Z39.100-201x) in development.
SUSHI Server Working Group Chair: Oliver Pesch	NISO RP-13-201x, *Providing a Test Mode for SUSHI Servers* Finalizing for publication following a draft for trial use.
SUSHI Standing Committee Co-chairs: Bob McQuillan and Oliver Pesch	NISO Z39.93-201x, Standardized Usage Statistics Harvesting Initiative (SUSHI) Revision approved by NISO; pending ANSI approval.
Z39.7 Standing Committee Chair: Martha Kyrillidou	NISO Z39.7-201x, *Information Services and Use: Metrics & statistics for libraries and information providers — Data Dictionary* Revision at ballot.

In Revision

The following are published and approved NISO standards or recommended practices that are in the process of being revised.

DESIGNATION	TITLE
ANSI/NISO Z39.7-2004	**Information Services and Use: Metrics & Statistics for Libraries and Information Providers Data Dictionary**
ANSI/NISO Z39.93-2007	**Standardized Usage Statistics Harvesting Initiative (SUSHI)**
NISO RP-8-2008	**Journal Article Versions (JAV)**

Published and Approved NISO Standards

The following NISO standards are approved and published. The notation R, e.g. R2002, indicates that the standard was reaffirmed in the specified year.

Free downloadable copies of the standards are available from: www.niso.org/standards/

DESIGNATION	TITLE
ANSI/NISO Z39.2-1994 (R2009)	Information Interchange Format
ANSI/NISO Z39.7-2004	Information Services and Use: Metrics and statistics for libraries and information providers – Data Dictionary
ANSI/NISO Z39.9-1992 (R2001)	International Standard Serial Numbering (ISSN)
ANSI/NISO Z39.14-1997 (R2009)	Guidelines for Abstracts
ANSI/NISO Z39.18-2005 (R2010)	Scientific and Technical Reports – Preparation, Presentation, and Preservation
ANSI/NISO Z39.19-2005 (R2010)	Guidelines for the Construction, Format, and Management of Monolingual Controlled Vocabularies
ANSI/NISO Z39.23-1997 (R2009)	Standard Technical Report Number Format and Creation
ANSI/NISO Z39.29-2005 (R2010)	Bibliographic References
ANSI/NISO Z39.32-1996 (R2012)	Information on Microfiche Headers
ANSI/NISO Z39.41-1997 (R2009)	Printed Information on Spines
ANSI/NISO Z39.43-1993 (R2011)	Standard Address Number (SAN) for the Publishing Industry
ANSI/NISO Z39.48-1992 (R2009)	Permanence of Paper for Publications and Documents in Libraries and Archives
ANSI/NISO Z39.50-2003 (R2009)	Information Retrieval: Application Service Definition & Protocol Specification

ANSI/NISO Z39.71-2006 (R2011)	Holdings Statements for Bibliographic Items
ANSI/NISO Z39.73-1994 (R2012)	Single-Tier Steel Bracket Library Shelving
ANSI/NISO Z39.74-1996 (R2012)	Guides to Accompany Microform Sets
ANSI/NISO Z39.78-2000 (R2010)	Library Binding
ANSI/NISO Z39.83-1-2012	NISO Circulation Interchange, Part 1: Protocol (NCIP), version 2.02
ANSI/NISO Z39.83-2-2012	NISO Circulation Interchange Protocol (NCIP), Part 2: Protocol Implementation Profile 1, version 2.02
ANSI/NISO Z39.84-2005 (R2010)	Syntax for the Digital Object Identifier
ANSI/NISO Z39.85-2007	Dublin Core Metadata Element Set
ANSI/NISO Z39.86-2005	Specifications for the Digital Talking Book
ANSI/NISO Z39.87-2006 (R2011)	Data Dictionary – Technical Metadata for Still Images
ANSI/NISO Z39.88-2004 (R2010)	The OpenURL Framework for Context-Sensitive Services
ANSI/NISO Z39. 89-2003 (R2009)	The U.S. National Z39.50 Profile for Library Applications
ANSI/NISO Z39.93-2007	The Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol
ANSI/NISO Z39.96-2012	JATS: Journal Article Tag Suite
ANSI/NISO Z39.98-2012	Authoring and Interchange Framework for Adaptive XML Publishing Specification
ANSI/NISO/ISO 12083-1995 (R2009)	Electronic Manuscript Preparation and Markup U.S. adoption of ISO 12083

NISO Recommended Practices

NISO Recommended Practices are "best practices" or "guidelines" for methods, materials, or practices in order to give guidance to the user. These documents usually represent a leading edge, exceptional model, or proven industry practice. All elements of Recommended Practices are discretionary and may be used as stated or modified by the user to meet specific needs.

Free downloadable copies of these documents are available from: /www.niso.org/publications/rp/

TITLE	DESIGNATION
Framework of Guidance for Building Good Digital Collections 3rd edition, 2007	
Ranking of Authentication and Access Methods Available to the Metasearch Environment	NISO RP-2005-01
Search and Retrieval Results Set Metadata version 1.0	NISO-RP-2005-02
Search and Retrieval Citation Level Data Elements version 1.0	NISO RP-2005-03
Best Practices for Designing Web Services in the Library Context	NISO RP-2006-01
NISO Metasearch XML Gateway Implementers Guide version 1.0	NISO RP-2006-02
RFID in U.S. Libraries	NISO RP-6-2012
SERU: A Shared Electronic Resource Understanding	NISO RP-7-2012
Journal Article Versions (JAV)	NISO RP-8-2008
KBART: Knowledge Bases and Related Tools	NISO RP-9-2010
Cost of Resource Exchange (CORE) Protocol	NISO RP-10-2010

ESPReSSO: Establishing Suggested Practices Regarding Single Sign-On	NISO RP-11-2011
Physical Delivery of Library Resources	NISO RP-12-2012
NISO SUSHI Protocol: COUNTER-SUSHI Implementation Profile	NISO RP-14-2012
Recommended Practices for Online Supplemental Journal Article Materials	NISO RP-15-2013

NISO Technical Reports

NISO Technical Reports provide useful information about a particular topic, but do not make specific recommendations about practices to follow. They are thus "descriptive" rather than "prescriptive" in nature. Proposed standards that do not result in consensus may get published as technical reports.

Free downloadable copies of these documents are available from: www.niso.org/publications/tr/

TITLE	DESIGNATION
Environmental Guidelines for the Storage of Paper Records by William K. Wilson	NISO TR01-1995
Guidelines for Indexes and Related Information Retrieval Devices by James D. Anderson	NISO TR02-1997
Guidelines for Alphabetical Arrangement of Letters & Sorting of Numerals & Other Symbols by Hans H. Wellisch	NISO TR03-1997
Networked Reference Services: Question / Answer Transaction Protocol	NISO TR04-2006

NISO White Papers

NISO White Papers are contributed or solicited papers whose purpose is a call for action, a position paper, or an educational treatise on a specific issue. White Papers are often developed as a pre-standardization activity to define and explore some of the questions that come into play before formal standardization work is started. Or a NISO White Paper might identify areas that are opportunities for standards development and suggest possible approaches. A list of all NISO white papers is available on the NISO website (www.niso.org/publications/white_papers/).

The following white papers were published in 2012:

TITLE
Making Good on the Promise of ERM: A Standards and Best Practices Discussion Paper by the ERM Data Standards and Best Practices Review Steering Committee

Withdrawn NISO Standards

In accordance with NISO procedures, standards may be withdrawn because they are superseded by a newer standard, a national version is withdrawn in favor of an international equivalent, or the content is deemed to be obsolete. In accordance with ANSI procedure, all American National Standards that are not revised or reaffirmed within ten years following ANSI approval are automatically administratively withdrawn. A list of all withdrawn NISO standards is available on the NISO website (www.niso.org/standards/). Copies of these standards are available online or from the NISO office.

The following standards were withdrawn since the last State of the Standards report:

DESIGNATION	TITLE
ANSI/NISO Z39.26-1997 (R2002)	**Micropublishing Product Information**
ANSI/NISO Z39.47-1993 (R2003)	**Extended Latin Alphabet Coded Character Set for Bibliographic Use (ANSEL)**
ANSI/NISO Z39.56-1996 (R2002)	**Serial Item and Contribution Identifier (SICI)**
ANSI/NISO Z39.64-1989 (R2002)	**East Asian Character Code for Bibliographic Use Bibliographic Use**
ANSI/NISO Z39.76-1996 (R2002)	**Data Elements for Binding Library Materials**
ANSI/NISO Z39.79-2001	**Environmental Conditions for Exhibiting Library and Archival Materials**

NISO

How the information world
CONNECTS

MISSION:

The National Information Standards Organization (NISO) fosters the development and maintenance of standards that facilitate the creation, persistent management, and effective interchange of information so that it can be trusted for use in research and learning. To fulfill this mission, NISO engages libraries, publishers, information aggregators, and other organizations that support learning, research, and scholarship through the creation, organization, management, and curation of knowledge.