From ISO 2788 to ISO 25964: The Evolution of Thesaurus Standards

Development of Resource Synchronization Standard

State of the Standards

ISO AND TC46
2011 Year In Review

From ISO 2788 to ISO 25964: The Evolution of Thesaurus Standards

Special Edition: Year In Review and State of the Standards
This report summarizing the previous year’s standards development work appears in the first issue of the year of ISQ to keep you informed of the scope and status of NISO’s programs on an annual basis.

If you would like to be involved with NISO standards development, contact the NISO office by phone (301.654.2512) or via e-mail (nisohq@niso.org).
Open Discovery Initiative

APPROVED: August 23, 2011

Discovery to Delivery Topic Committee

Chairs: **Marshall Breeding** (Vanderbilt University), **Jenny Walker** (Ex Libris)

Following an invitational meeting convened at the ALA Annual Conference in New Orleans on June 26, 2011, to gauge interest in developing standards or recommended practices for next generation library discovery services, the meeting convenors submitted a new work item proposal to NISO to launch an Open Discovery Initiative (ODI).

Newer discovery services based on indexed search have the ability to deliver more sophisticated services with instant performance, compared to the federated search techniques used previously. These discovery services depend on the cooperation of information providers to provide access to metadata, and increasingly also to the full-text of information resources, in order to create effective indexes. With these indexes built based on private agreements and ad hoc exchange methodologies between information providers and discovery service creators, it is often not clear to the subscribing libraries what content is indexed; what is indexed in full text, by citations only, or both; and whether the metadata derives from aggregated databases or directly from the full-text.

There was general agreement among the attendees present at the ALA meeting regarding the need for: a standard way for information providers to provide content to discovery service creators, a consistent vocabulary regarding all the elements involved, clarity in the business rules that apply to the content once indexed, and clear descriptors regarding the extent of indexing performed for each item or collection of content and the level of availability of the content.

The new ODI working group started its work in January 2012 to define best practices for the new generation of library discovery services that are based on indexed search. Goals for the working group include: creating ways for libraries to assess the level of participation by information providers in discovery services; identifying ways 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.

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Physical Delivery of Library Resources Working Group

APPROVED: September 1, 2009

Discovery to Delivery Topic Committee

Chairs: **Valerie Horton** (Colorado Library Consortium), **Diana Sachs-Silveira** (Novare Library Services)

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

Following a public comment period in July–August 2011, this Working Group completed the recommended practice *Physical Delivery of Library Resources*, which was published in January 2012. It focuses on three key areas: the physical move, automation, and the management of physical delivery. While the scope of the document is limited to the external delivery of items between separately administered libraries, many of the recommendations could apply to delivery between branches of a single library system, as well. Ranging from labeling and containers to automation and contracting with courier services, this Recommended Practice addresses both the lending and the borrowing libraries’ activities related to delivering and returning a physical item.

The Working Group examined closely the workflow of resource sharing from patron to borrowing library to lending library and back. Best practices were identified at each step that would make services more efficient. The recommendations cover things as small as rubber banding and as large as automated material handling systems.

All libraries involved in resource sharing—as well as delivery, sorting, courier, and transportation service providers—are encouraged to adopt these recommendations.
Educational Programs

NISO continued its robust educational programs in 2011 with three in-person forums, including the fifth annual NISO/BISG forum at ALA Annual, as well as fourteen webinars (including two related parts for three events). Over 175 people attended NISO’s forums, and an additional 1000 sites registered for NISO webinars. With an average of four people viewing the live webinars at each site, that’s close to 5000 people benefiting from NISO’s education events! Since registrants have access for a year to the webinar recorded versions, even more people were able to learn from these events.

The Dublin Core Metadata Initiative expanded its partnership with NISO to present three webinars that drew participants from over 200 sites. This partnership continues into 2012 with four joint webinars.

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

Slide presentations from all of the events and the webinars, and audio recordings of the open teleconferences, are available on the NISO website in the 2011 events area.

SUSHI (Standardized Usage Statistics Harvesting Initiative) Standing Committee

Business Information Topic Committee

Chairs: Bob McQuillan (Innovate Interfaces, Inc.), Oliver Pesch (EBSCO Information Services)


To address feedback from some SUSHI client implementers who had difficulty in testing their implementation, a SUSHI Server subcommittee of the Standing Committee drafted Providing a Test Mode for SUSHI Servers (NISO RP-13-201x) and issued it for trial use, ending in early 2012.

The full Standing Committee developed a new draft recommended practice, COUNTER-SUSHI Implementation Profile (NISO RP-14-201x), which provides a practical implementation structure to be used in the creation of reports and services related to harvesting of COUNTER Release 4 reports using the NISO SUSHI Protocol. While SUSHI compliance was introduced in Release 3 of COUNTER, the draft Release 4—which has an implementation deadline of December 31, 2013—now includes demonstration of SUSHI compliance as part of the audit. The draft COUNTER-SUSHI recommended practice was issued for a public comment period, also ending in early 2012.

The committee’s support for implementers continued in 2011 with new sample COUNTER reports added to the SUSHI Reports Registry, new organizations joining the SUSHI Server Registry, and an active SUSHI Developers e-mail list to answer inquiries. Several SUSHI implementers shared their experiences in articles in Information Standards Quarterly in the Winter 2011 and the Fall 2011 issues.

As part of NISO’s Memorandum of Understanding with Project COUNTER, the NISO SUSHI Standing Committee has responsibility for maintaining both the COUNTER and the SUSHI schemas. Both the counter-sushi and the counter schemas were updated to support COUNTER Release 4.
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I2 (Institutional Identifiers) Working Group

APPROVED: January 10, 2008

Business Information Topic Committee

Chairs: Grace Agnew (Rutgers, The State University of New Jersey), Oliver Pesch (EBSCO Information Services)


The I2 Working Group held a number of discussions in 2011 with the International Standard Name Identifier International Agency (ISNI-IA), who will be the registration authority for the international standard ISO 27729, Information and documentation – International standard name identifier (ISNI). The ISNI standard was developed to provide a unique identifier for “public identities of parties” throughout the media content industries. The I2 Working Group saw an opportunity to extend the use of the ISNI to institutional identification, rather than creating yet another identifier for this purpose.

ISNI-IA was very receptive to the proposal and the two groups worked together to harmonize their metadata schemes and ensure that the necessary metadata for institutional identification could be collected. I2 is also working with the ISNI-IA to identify organizations within the information supply chain who would be willing to be a regional registration agency for institutional use of the ISNI identifier.

The I2 Working Group will be finishing up its project with a report to summarize its work and the successful conclusion of the implementation of a workable institutional identifier, under ISNI, to make the information supply chain work better.
Information Standards Quarterly (ISQ)

Four themed issues of ISQ were published in 2011:
- Winter 2011: 2010 Year in Review
- Spring 2011: Views of the E-book Renaissance
- Summer 2011: Organization and People Identifiers
- Fall 2011: Standards Implementation Benefits

For the first time, NISO published the electronic version of the Information Standards Quarterly magazine in open access. Full issues and individual articles can be downloaded in PDF format from www.niso.org/publications/isq/. The print edition continued to be available to subscribers and members who opted in. A print-on-demand capability was made available to others who wish to purchase individual print issues.

The popularity of the open access was clear from the hundreds, even thousands, of downloads of individual articles and of the full issues. Back issues of the magazine and its predecessor newsletters will be posted online in open access in 2012.

CORE (Cost of Resource Exchange) Standing Committee

Business Information Topic Committee

Chair: Kathy Klemperer (Harrassowitz)

NISO RP -10-2010, Cost of Resource Exchange (CORE) Protocol

The CORE Standing Committee developed a logo (shown above) to assist in outreach efforts to encourage the adoption of the CORE Recommended Practice, which defines an XML schema to facilitate the exchange of cost data and other financial information related to the acquisition of library resources between two automated systems.

A set of FAQs was posted to the CORE webpage including: General Questions, Librarian Questions, and Systems Developers & Subscription Vendors. The group is developing scenarios to illustrate applications of the CORE protocol. The ERM group (see separate box) included in its white paper a recommendation to system vendors to add CORE implementation to their development plans.

JATS: Journal Article Tag Suite Working Group

APPROVED: September 2, 2009

Content and Collection Management Topic Committee

Chairs: Jeff Beck (National Center for Biotechnology Information, U.S. National Library of Medicine), B. Tommie Usdin (Mulberry Technologies, Inc.)

NISO Z39.96-201x, JATS: Journal Article Tag Suite

The JATS working group has revised version 3.0 of the National Library of Medicine (NLM) Journal Archiving and Interchange Tag Suite to handle outstanding requests related to the earlier version and to make it an ANSI/NISO standard. The revision, which merged the three parts of the suite—Archiving and Interchange, Journal Publishing, and Article Authoring—was issued as a draft standard for trial use (NISO Z39.96-201x) from March 30 - September 30, 2011. Supporting documentation, including schemas in DTD, RELAX NG, and W3C schema formats, was also made available during the trial.

The Working Group has spent considerable time since the trial ended responding to the many content- and schema-related comments and suggestions. A final version is expected to be ready for ballot by NISO Voting Members in the second quarter of 2012.

The draft for trial use was marked as version 4.0 to follow the previous NLM 3.0 version. However, the final published standard will be balloted as version 1.0 of NISO Z39.96.
E-book Special Interest Group

APPROVED: May 4, 2011

Architecture Committee

Chairs: Todd Carpenter (NISO), Nettie Lagace (NISO)

Due to the wide-ranging interest in e-books and the many standards-related issues involved, the Architecture Committee launched an E-book Special Interest Group (SIG) to identify and prioritize where NISO should engage. The E-book SIG is charged with exploring a range of industry best practices and standards related to the creation, distribution, discovery, delivery, and preservation of digital book content. Following a May call for participation, a Core group was formed that identified and formed the following subgroups:

» Accessibility
» Discovery Tools and Linking
» Distribution
» Metadata

Each subgroup generated a number of possible project areas for NISO to pursue, which the Core E-Book SIG members reviewed for prioritization. Several new work items for 2012 are expected from this first phase of work from the E-Book SIG.

KBART Phase II Working Group

A Joint NISO/UKSG Initiative

APPROVED: March 17, 2010

Discovery to Delivery Topic Committee

Chairs: Andreas Biedenbach (independent information professional), Sarah Pearson (University of Birmingham)

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

In addition to providing support for the Phase I Recommended Practice, KBART Phase II is building on the 2010 document and focusing on the more advanced, complex issues that cause problems related to OpenURL Knowledge Bases, including accessibility of e-books, conference proceedings, hosting services, and open access content.

The group is working on metadata changes or additions to the original recommended practice that are needed to address the broadened content types. To obtain additional input on open access content and consortial needs, a survey was developed to send to the community via mailing lists in early 2012. The group is also starting to give thought to the topic of sustainability of metadata testing and long-term adoption within the national and international landscape.

The Working Group made substantial progress in 2011 in advancing the adoption of the Phase I Recommended Practice. A KBART Registry of knowledge base supply chain contacts is available, as well as a list of organizations that have officially endorsed KBART. Endorsers must supply a sample file, which the Working Group reviews; following approval that it meets the KBART recommendations and the provider making the sample file publicly available, the provider is added to the KBART endorsers list. Over 75 providers were on the endorsers list at the end of 2011. The RP is also gaining traction within consortial licenses, most notably within the UK with the JISC/NESLi2 model license, which is including KBART for 2012.
DAISY Standard Revision Working Group

**APPROVED:** August 29, 2008

**Content and Collection Management Topic Committee**

Chairs: George Kerscher (DAISY), Markus Gylling (DAISY)


The revision to the 2005 Digital Talking Book (DTB) standard, commonly known as the DAISY standard, was envisioned to be in two parts, one on the authoring and interchange framework and one on distribution. Part A, Authoring and Interchange Framework for Adaptive XML Publishing Specification, was issued as a draft for trial use from March 28–September 28, 2011.

Some members of the NISO revision working group were also participants on the International Digital Publishing Forum (IDPF) committee to revise the EPUB standard. Through their efforts and those of the DAISY Consortium—the maintenance agency for the EPUB standard as well as for the NISO DTB standard—version 3 of the EPUB standard contained sufficient support for the needed accessibility capabilities for the DAISY Revision Working Group to recommend use of EPUB 3 in lieu of developing the planned distribution part of the revision.

Feedback from the trial of Part A indicated that while the significant nature of the changes was welcome, there would be a continued need to use the existing DTB standard until accessible reader technology could make the transition to the new formats, which could take a number of years. As a result, the Working Group proposed, and the Content & Collection Management Topic Committee approved, the issuance of the “revision” as a wholly new standard (Z39.98) and a reaffirmation ballot for the old DTB standard to support its continued use.

While the scope of the 2005 standard was print books, over time it was used for a wide variety of content. The new framework addresses this need for more content types by replacing a single XML language with an XML-based framework that allows the creation of custom “languages” (referred to as profiles) that can be tailored for particular content types. Built on established standards from the W3C and ISO, the new framework utilizes smaller, specialized modules that can be reused and combined in different ways. The standard does not impose any limitations on what kinds of distribution formats can be created from it, including DAISY DTBs, e-text, Braille, and large print. This extends the audience for the standard beyond just accessible publishing to any content creators who want to distribute their material to a variety of users or in multiple formats.

Both the new Framework standard approval ballot and the reaffirmation ballot for the 2005 DTB standard will take place in early 2012.

Z39.7 Data Dictionary Standing Committee

**Business Information Topic Committee**

Chair: Martha Kyrillidou (Association of Research Libraries)


The Standing Committee identified and summarized in 2011 all the approved changes from the continuous maintenance process for updating the Z39.7 standard. This includes integration of the content from the original appendices Methods of Measurement and Measuring the Use of Electronic Library Services into the main body of the standard. The online standard is currently being edited to incorporate those changes.

A ballot by NISO voting members for a new revision of the standard is planned for 2012.

In the latter part of 2011, the Standing Committee also began discussing additional topics related to definitions of the library, value of performance indicators, and maintenance of liaisons with related efforts, some international.
IOTA (Improving OpenURLs Through Analytics) Working Group

Approved: December 8, 2009

Discovery to Delivery Topic Committee

Chair: Adam Chandler (Cornell University)

Oversight of the IOTA Working Group was moved from the Business Information Topic Committee to Discovery to Delivery to provide better linkage with other groups, such as KBART, that are working on streamlining access through link resolvers. IOTA and the NISO/UKSG KBART Phase II Working Group have already had discussions about potential collaboration on link-to syntax that couples link resolvers to content providers. Link-to syntax issues are estimated to be the cause of one-third of OpenURL failures.

Over 21.5 million OpenURLs had been analyzed by year-end 2011 from log files supplied by various sources. Available IOTA reports show—for a particular source vendor or database—the element or string pattern variations, core element frequency, and string pattern frequency. Such variations and patterns can illustrate potential problems that will be encountered when responding to OpenURL queries. The working group has also developed an algorithm to compute a new “completeness” score that tests the assumption that more information makes for a better OpenURL and that particular elements are more important than others (addressed through element weighting).

Work continues on improving the data loading and the user interface, updating the IOTA website for better readability and access, new and updated documentation, new support examples, and general bug fixes and outreach support through meeting presentations. Published articles on IOTA appeared in the February issue of Against the Grain and in the March/April 2011 issue of D-Lib.

Both vendors and participating libraries continue to be encouraged to provide data to help with analysis.

NCIP (NISO Circulation Interchange Protocol) Standing Committee

Discovery to Delivery Topic Committee

Chair: Mike Dicus (Ex Libris), Rob Walsh (EnvisionWare)

Maintenance Agency: EnvisionWare


An Introduction to NCIP, which provides a basic introduction to NCIP for libraries and implementers and links to sources of additional information about the standard, was published on the NCIP website in April 2011.

The NCIP Implementers Registry continues to grow and is available to libraries as an assessment tool for evaluation of a system’s use of NCIP for interoperability with other applications. In addition to full profiles for each vendor listed, the registry information can be filtered by NCIP version, role (initiator vs. responder), and by service (resource sharing vs. self-service).

The Standing Committee completed in 2011 a revision to both parts of the standard, identified as version 2.02, that incorporates real-world feedback and experience into the standard with changes that improve the usefulness and practicality of the various services. In addition to the earlier changes from a maintenance release (2.01), the revision adds:

- a repeatable, optional Bibliographic Id to Loaned Item and Requested Item; optional Date Due to Item Optional Fields;
- UPC and GTIN to Bibliographic Item Identifier Code scheme;
- and DVD and Blu-Ray to Medium Type scheme. One of the larger changes is the addition of a Lookup Item Set service that allows an initiator to query a set of items that may share some kind of relationship with a single request. The revision will be presented to NISO Voting Members for approval in the first quarter of 2012.

The NCIP Standing Committee reviews status of implementations and other general business on monthly calls. Twice a year, in-person meetings are held to review ongoing updates to the NCIP protocol. The next in-person meeting will be April 25-26, 2012 in Winchester, Virginia, hosted by TLC. The closing date for updates to be submitted for discussion at this meeting is March 1, 2012.
Supplemental Journal Article Materials Project

A Joint NISO/NFAIS Initiative

APPROVED: April 16, 2010

Content and Collection Management Topic Committee

Business Working Group Chairs: Linda Beebe (American Psychological Association), Marie McVeigh (Thomson Reuters)

Technical Working Group Chairs: Dave Martinsen (American Chemical Society), Sasha Schwartzman (American Geophysical Union)

This goal of this joint project with the National Federation of Advanced Information Services (NFAIS) is to create a Recommended Practice for publisher inclusion, handling, display, and preservation of supplemental journal article materials. The Business Working Group is addressing the semantic and policy issues related to delivering materials that are supplemental to scholarly journal articles, and the Technical Working Group is focusing on syntactic and structural issues.

Three types of supplemental material have been defined:

» **Integral content** critical to understanding the work reported, but where technical, business, or logistical issues prevent inclusion in the core article

» **Additional content** that expands on the core article with added details and context

» **Other related content** that the author wishes to make the reader aware of but which the publisher does not host and has no responsibility or authority for

The Business Working Group has issued a draft for public comment, through February 29, 2012, of its recommendations across a wide spectrum of processes from selecting and editing supplemental material to hosting, referencing, metadata, and preservation.

The Technical Working Group is drafting recommendations for persistent identification, archiving and preservation, and metadata. The metadata covers what is needed for the supplemental materials, how the journal article indicates the existence of supplemental material, and the journal article package. The group continues to work on metadata issues related to the heterogeneity of supplemental materials (i.e., both integral and additional content in the same archive or file), relationships between objects, hierarchies and recurrence of materials, and granularity levels. While a supplemental materials metadata schema is in development, the group is closely looking at integration with existing tag sets such as JATS (see separate box).

The completed Technical Working Group draft will also be issued for public comment. When comments on both parts have been addressed, the recommendations will be integrated for publication.
Digital Bookmarking and Annotation Sharing

APPROVED: October 2, 2011

Content and Collection Management Topic Committee

Chairs: TBA

NISO and the Internet Archive

Following an invitational planning meeting in May 2011 to discuss issues surrounding e-book bookmarking, annotation sharing, and social reading, NISO and the Internet Archive submitted a grant proposal to The Andrew W. Mellon Foundation to support two pre-standardization workshops on the topic. The grant was received and the workshops held in October 2011 in conjunction with the Frankfurt Book Fair and the Books in Browsers meetings. The workshops were highly interactive with reviews of related projects, identification of issues that could benefit from standards development, and a discussion of requirements and technical issues for a standard bookmark and note syntax.

A new work item to develop a standard for how bookmarks and notes should be located in a digital text, especially in online environments that might be continually updated or mutable, was presented to the NISO Voting Members and approved on October 2, 2012. The output from the two workshops held later that same month will be inputs to the new working group’s work.

At year’s end, the working group was in the process of being formed from experts, workshop participants, and other interested stakeholders.

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

APPROVED: February 8, 2010

Business Information Topic Committee

Chairs: Cindy Hepfer (University of Buffalo, SUNY), Bob Boissy (Springer)

The PIE-J Working Group is in the final stages of completing its 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.

Recommended practices have been developed for journal title and citation information, title changes and title history, use of the ISSN, the enumeration system, publication information, access to content, and preservation of content digitized from print. The group has compiled appendices with a number of real-life examples of best practice, resources for determining the title/ISSN history of a journal, and discussions of the use of ISSN and DOI.

Following completion, expected in 1st quarter of 2012, the draft Recommended Practice will be issued for a public comment period.
ESPReSSo (Establishing Suggested Practices Regarding Single Sign-On) Working Group

**APPROVED:** April 22, 2009

**Discovery to Delivery Topic Committee**

*Chairs: Harry Kaplanian (Serials Solutions), Steven Carmody (Brown University)*


Following a public comment period in May and June, 2011, the ESPReSSo Working Group’s recommended practice on Establishing Suggested Practices Regarding Single Sign-On was published in November.

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

Specifically, ESPReSSo recommends best practices related to selection of authentication method and transparent flow between the service provider (SP) site and the identity provider (IdP) site during authentication. Recommendations to service providers include the preferred location for login links and input boxes, standard approaches for guiding users to a desired authentication method, address any issues, and provide progress reports to the AC.

The ESPReSSo Working Group is now in the process of forming a Standing Committee, to help with promotion and uptake of the Recommended Practice.
ERM Data Review Working Group

**APPROVED:** June 30, 2009

**Business Information Topic Committee**

**Chairs:** Ivy Anderson (California Digital Library), Tim Jewell (University of Washington)

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

Charged with undertaking a “gap analysis” regarding electronic resource management (ERM)-related data, standards, and best practices, the ERM Data Review Working Group completed its report, *Making Good on the Promise of ERM*, which was published in January 2012.

The standards review and findings focused on five categories: link resolvers and knowledge bases; the work, manifestations, and access points; cost and usage-related data; license terms; and data exchange using institutional identifiers. A more extensive review was completed for fourteen of the most relevant standards and the data elements for each were mapped to the elements defined in the Digital Library Federation ERMI report. Also discussed was how ERM systems could improve their workflow support—a shortcoming in most existing systems—and a detailed workflow best practices bibliography and a list of illustrative workflow diagrams were included.

A number of recommendations were made for NISO consideration that would improve the use and interoperability of ERM. The Business Information Topic Committee will be working with the ERM group to identify specific new work items for NISO.

The workroom webpages for each of the initiatives discussed are available at: [www.niso.org/workrooms/](http://www.niso.org/workrooms/).

RFID in Libraries Revision Working Group

**APPROVED:** February 12, 2010

**Content and Collection Management Topic Committee**

**Chairs:** Vinod Chachra (VTLs, Inc.), Paul Sevcik (3M Library Systems)

*NISO RP-6-2008, RFID in U.S. Libraries*

A revision to the 2008 recommended practice was undertaken to address new technology developments and to eliminate any ambiguities with the three-part ISO *RFID in Libraries* standard (ISO 28560) that was published in March 2011.

The draft revision, designed to be a U.S. profile to the ISO standard, was issued for public comment from May 10–June 9, 2011. The Working Group made some further revisions to address the comments and the final recommended practice is expected to be published in the 1st quarter of 2012.

The RP is expected to be used by RFID hardware manufacturers, solution providers (software and integration), library RFID users, book jobbers and processors, and related organizations in the United States.

I FE I doi: 10.3789/isqv24n1.2012.02

The free monthly *Newsline* and the quarterly *Working Group Connection* e-newslets 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](http://www.niso.org/lists).