

Information Standards

Quarterly

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NISO Framework to Direct New Committee Governance Structure

Introduction

This year will see the fruition of several key elements of NISO's new strategic direction. The major elements of the NISO Framework, an overarching model and roadmap for all of NISO's standards work, have been drawn up. A new Architecture Committee has been established to further develop and maintain the Framework and provide strategic direction, oversight, and leadership for NISO's standards development. The former Standards Development Committee has been replaced by three Topic Committees, each assigned to manage existing and new standards and recommended practices in their scope areas.

In this month's feature article, Todd Carpenter, NISO's Managing Director, describes the new NISO Framework. His article is followed by separate articles by each of the new Committee chairs, envisioning the direction that each committee will be taking. Chuck Koscher of CrossRef discusses the Architecture Committee. The three Topic Committees and their chairs are: Ted Koppel of Ex Libris for Content and Collection Management, Mike Teets of OCLC for Discovery to Delivery, and Patricia Brennan of Thomson Scientific for Business Information.

Read on for a vision of NISO's future in standards development.

The NISO Framework for Understanding Standards

By Todd Carpenter

"The world makes way for the [person] who knows where he is going."
- Ralph Waldo Emerson

Over the past two decades, dissemination of electronic information and the widespread adoption of management systems for both print and electronic resources have resulted in shifting roles for publishers, libraries, and automation vendors. The growing significance of these changes was one of the reasons that NISO undertook a strategic assessment in 2004-2005 and began adjusting its activities to address this new and changing environment.

NISO began its strategic restructuring by gathering some of the key thought leaders in the community onto a Blue Ribbon panel. Led by Clifford Lynch, Executive Director of the Coalition for Networked Information (CNI) and funded by The Andrew W. Mellon Foundation, this panel examined NISO's role in the

community, both what it was and what it should be. The report¹ the group produced highlights many of the key issues that NISO was facing: the need for NISO to address infrastructure and support issues, and the imperative of setting a clear vision of our community and the organization's future directions. Two of the key recommendations of this group were that NISO needed to better define the community that NISO serves and to lay out a framework of the standards universe in which our organization operates.

NISO has a long history of working with a diversity of participants engaged in information exchange. With a focus on how NISO perceives the environment that encompasses our work, the Board revised its constituency statement:

NISO engages libraries, publishers, information aggregators and other organizations that support learning, research and scholarship by creating, organizing, managing and curating knowledge. NISO recognizes that it must engage this full range of providers as digital information is fungible and so standards must be broadly adopted to be optimally useful. It must also engage communities like e-learning who make information available as part of their service offering. Only this broad level engagement will allow NISO to fulfill its mission statement.

While this may seem broad in scope, it is actually an acknowledgment of the situation on the ground, so to speak. While there has long been a focus on the library community as key members of the NISO constituency, libraries act more as a keystone of a much broader community that is facilitating the creation, duration, and delivery of research and scholarship.

Inherent in this constituency statement is also an understanding of the flexible nature of the roles of the various players in this process. The traditional organizational roles have shifted. Digitization and institutional repository projects are moving publication and distribution operations into libraries. Much of the bibliographic tagging (now metadata creation) is conducted earlier in the content creation process. Similarly, social tagging has added a further level of metadata management issues. As digital information is more often leased than sold, some of the responsibilities of preservation, management, and curation of data are now shifting to the publishers of this information. The community can expect to see further adjustment of responsibilities as technologies develop and change, allowing greater flexibility by organizations to engage in new activities.

For this reason, the Framework that NISO has developed is not focused on traditional roles and firm descriptions of organizations engaged in the process, but is a more general approach which focuses on the functional roles that standards fill in the dissemination of information, the object to which the standard relates, and who the

standards affect at different stages of the distribution chain. In this approach, we can more easily define the aspects of information exchange that are most relevant to NISO and its constituency, thereby focusing our attention and resources where they are most needed.

The Framework that the Blue Ribbon Panel described was to provide an overarching structure for how NISO describes and envisions itself interacting with the community. Quoting from the Panel's report, NISO needed to:

Develop a well-synthesized framework that looks at the needs and priorities of [NISO's] constituency, the technical standards landscape relevant to that constituency, and the ecology of other standards-related organizations relevant to that constituency. From this will follow a roadmap and priorities for standards development and for partnerships, collaborations, and other relationships with other players.

Taking this advice, the Board incorporated such a Framework in the strategic plan², adopted by the Board of directors in June of 2005:

NISO will maintain a strategic map of the information landscape that pinpoints features of the landscape most critical for the creation, persistent management and exchange of trusted information in support of research and learning. Decisions about which standards initiatives to invest in will be made with reference to this strategic map, and with a view of NISO's mission, its members' interests, and an awareness of those areas where NISO brings a unique perspective to the problem area. NISO will be guided by its mission and the strategic map while moving into new areas of activity and when making life cycle decisions about standards the organization may want to divest itself of.

In its Strategic Directions document, the Board acknowledged that the landscape in which NISO operates is continuing to change rapidly. The mission statement calls for NISO to continue to develop standards that enhance the effectiveness of the value chain that supports the creation, persistent management, and effective interchange of information so that it can be trusted for use in research and learning. The Board understands that NISO must develop and maintain a comprehensive and comprehensible view of that value chain in order to fulfill its mission.

To that end, the NISO Board formed a Task Force to develop a Framework for its standards work. The committee was charged with the following tasks:

Describe at a high-level the value chain that supports the creation, exchange and use of information (formal documentation) used in research and learning today with pointers to changes that are likely to occur in the near term. This description will include a graphical representation of that value chain and include descriptions of key roles, organizations, and points of exchange. Identify areas where NISO could establish standing working groups that would

maintain an ongoing standards agenda. For each area, identify the central issues and the partners to engage in developing that agenda.

The Framework Committee consisted of Lorcan Dempsey (OCLC), Bruce Rosenblum (Inera, Inc.), Robin Murray (OCLC PICA), Oliver Pesch (EBSCO Information Services), Dan Greenstein (California Digital Library), and Pat Stevens (an independent consultant and, formerly, NISO's Interim Executive Director). The group described the different models for consensus that are used in standards development and addressed what types of consensus products that NISO could create. They then described the information environment in which NISO manages standards development. The group then went through a descriptive analysis of our current standards portfolio, mapping that work into the Framework.

The Framework Committee's work has since been taken up by the newly formed Architecture Committee led by Chuck Koscher (CrossRef), a member of NISO's Board of Directors. That group will continue to assess the underlying assumptions in the Framework, analyze how the work of other standards development organizations fits into the Framework, and into which areas it might be appropriate for NISO to expand its work. The Architecture Committee will also oversee the work of the Topic Committees, which are being organized to oversee specific portfolios of standards. The NISO Framework defines those portfolios by the functional groupings of standards and provides a basis for the development and management of those portfolios.

Models for Consensus

According to the ISO/IEC definition, a "standard is a document, established by consensus that provides rules, guidelines or characteristics for activities or their results" (*ISO/IEC Guide 2:1996*). Standards and specification development organizations are referred to as SDOs. In addition to standards, these SDOs develop other forms of consensus documents, including best/recommended practices, open source protocols, and de facto standardized tools and specifications.

From the most formal to the least, these consensus forms include:

- 1) *De jure*, formal standards that are the work of accredited standards bodies such as NISO, IEEE, AIIM, and ARMA. In the United States, such standards bodies are accredited by the American National Standards Institute (ANSI). The main standards body in the international arena is the International Organization for Standardization (ISO).
- 2) Standards produced by *independent* specification/standards consortia, such as the W3C, IETF, OASIS, and the IMS Global Learning Consortium.

- 3) *De facto* standards, usually developed by organizations that are not SDOs or even by individuals. These specifications become "standards" by their popular implementation and dominance in the marketplace. The NLM DTD is an example of one such de facto standard in the NISO community. In some cases, a de facto standard is later legitimized by an SDO and becomes a de jure standard.

Originally established as committee Z39 of the American Standards Association (ANSI's former name), NISO has been the ANSI-accredited standards development organization in the area of libraries, documentation, and publishing for nearly 70 years. Within the scope of ANSI participation, NISO's goal is: to develop voluntary, consensus technical standards relevant to information systems; products, including hardware and supplies; and services, as they relate to libraries, bibliographic and information services, and publishing. NISO also serves as the United States Technical Advisory Group to ISO Technical Committee (TC) 46 - *Information and documentation*. It is through NISO's involvement in ISO TC46 that our community participates in international standards development. These established paths, through ANSI and ISO, to de jure standards is and will remain a cornerstone of NISO's activities.

While NISO will continue to produce formal standards, its future activities will not be limited to producing only de jure standards. Many areas of NISO's current work are possibly too nascent to be ready for such formalization, which when done too early could lead to a lack of adoption or an inhibition of innovation.

NISO will be placing additional emphasis in the coming months and years on less formal consensus and non-consensus outcomes such as:

- Recommended or best practice documents
- Research or technical reports
- Schema and DTD formats
- Registries
- Vocabulary, data, or format dictionaries
- Web services
- White papers or longer compilations of analysis

Building these other forms into NISO's standards development program will provide the community with an expanded forum for addressing issues. Additionally, other less formal documents can be completed much more rapidly, helping to propel innovation in areas where technologies or practices are still developing and providing an opportunity to test and improve practices before they are broadly adopted or formally elevated to de jure status.

NISO has already begun moving in this direction. In 2006 a new *Recommended Practice* series was launched. The Standardized Usage Statistics Harvesting Initiative (SUSHI) started as an ad hoc group and then moved through a trial use period to a balloted de jure standard. The recently launched Simplified E-Resource Understanding (SERU) project is developing a recommended practice to substitute for formal contracts and licenses for digital resources. Another model of consensus that is in development is a restructuring of the *Framework for Building Good Digital Collections*, which is funded in part by the Institute of Museum and Library Services (IMLS). This project will result in a living web-based document, providing continually updated information and an opportunity for ongoing community feedback in a Web 2.0 social environment.

Classification of NISO's Standards

The NISO Framework utilizes a three dimensional structure to categorize the different types of information standards-related activities in which people, organizations, and objects (digital and physical) are connected and interact. It is intended both to help the community understand the landscape in which NISO operates and for NISO to prioritize and align its work with the larger information community. The NISO Strategic Framework Committee defined three categories along related axes: **Entities**, **Services**, and **Activities**. These are *functional* categories in that they indicate the *problems* standards address and the *services* standards support, as well as describe the context of the standards and which aspects of the information chain are engaged in applying them.

Each standard can be classified according to these attributes:

Entities: Individuals and organizations, either physical or virtual, that provide or use information services or the objects upon which such services act. Entities are classified as People, Organizations, Information Objects, or Collections.

Services: The general area of information service that describes the stage in the chain of dissemination. Services are classified as Discovery to Delivery, Repository, Space, Business Intelligence, or Management.

Activity: The role that a standard plays in affecting entities or facilitating services. Activities are classified into Identification, Format, Transaction, and Policy.

A useful perspective in considering this structure is to look at *Entities* as nouns in a sentence, *Services* as the verbs, and *Activities* as the "how" (adjective, adverb, etc.) of the interaction. A standard's *Activity* explains how someone or something performs a specific activity within the scope of trying to accomplish a particular goal.

We can see how this classification structure is applied by taking SUSHI (*Standardized Usage Statistics Harvesting Initiative*) as an example. SUSHI is a new standard that will automate the electronic exchange of usage data between publisher and library systems. In the case of SUSHI, publishers and libraries are *Entities* that are exchanging business information. The gathering, storage, and analysis of usage data is broadly defined in the structure as a Business Intelligence *Service*. And the standard's *Activity* is as a transaction protocol for how the systems interact to exchange the information.

The broad Framework provides the superstructure upon which more detail can be built. There are different types of Entities, Services, and Activities engaged with standards. Defining and limiting NISO's scope within these categories will outline the direction for our activities and our interactions with other standards developing organizations in the community.

For each of the functional categories, the NISO Strategic Framework Committee developed a taxonomy to further define these objects of interaction.

Entities

- **People:** Individuals who create, use, or provide information services. This type of entity may be described by a common role or characteristic, e.g., librarians, students, researchers, authors, or editors.
- **Organizations:** Organizations or legal entities that use, create, or distribute information services. These organizations may be described by a common role or characteristic, e.g., libraries, publishers, agents, jobbers, or universities. Organizations may be formal or informal and may be physical or virtual. Some organizations may play different roles at different points during the content creation and distribution process and it is the context of their work at that stage that defines their organization type. For example, a library may digitize materials and thereby create content and as such be considered a publisher.
- **Information Objects:** Objects upon which services act, e.g., books, data, metadata, holdings, policies, and licenses. These objects may be primary or secondary.
- **Service:** A discrete piece of functionality potentially available as a network endpoint, e.g., a search service or repository service.
- **Collections:** Formal or transient aggregations of information objects intentionally created for a community or purpose.

Service Areas

- **Discovery to Delivery:** Services invoked in the process of connecting users to relevant resources, e.g., search, display of results sets, resolution of

identifiers, transforming objects into delivery formats, and delivery to an end user.

- **Repository:** Services used to select, organize, and provide access to information objects, e.g., metadata schema, cataloging, concept mapping, and preservation.
- **Space:** Services that connect people to people or that traditionally have been obtained from professional service providers, e.g., virtual reference desks, collaborative environments, social bookmarking, and “Ask an Expert.”
- **Business Intelligence:** Services that provide and analyze data about the operation and behavior of an information environment and its users, e.g., reports of data on the number of metadata records that are well formed, that analyze usage patterns, or that provide statistics about web referral paths and web metrics.
- **Management:** Services that set policy and regulate how other services are provided, e.g., software engineering procedures and quality of service metrics. Process and quality standards often support management services. A data encryption standard might fall in this category if it spoke to the *strength* of the encryption, whereas if it were viewed as providing a *means* for encryption it would be classified according to its application, e.g., Network).
- **Network:** Services that are needed to build other services and applications in a networked environment, e.g., e-commerce services, directories, registries, authentication, and authorization.
- **Environment:** Services used to create and add value to end user environments and products, such as search engines, virtual learning environments, RSS aggregators, portals, e-portfolios, and scholarly publications.

Activities

- **Identification:** Enables people and organizations to distinguish entities and services from one another.
- **Formation:** Provides a means for formatting data and constructing records for interchange and use by entities and services. Data models typically fall under this classification.
- **Transaction:** Allows for the exchange of data and the request or provision of services. Protocols, APIs, and other mechanisms for exchanging data and interoperating typically fall under this classification.
- **Policy:** Describes the business rules for the exchange, management, and specification of the characteristics of entities and services in an information environment. Profiles and reference models such as the Sharable Content Object Reference Model

(SCORM) and the Open Archival Information System (OAIS) Reference Model typically support policy activities, whereas the component standards they reference typically support identification, format, or transaction.

Each of NISO’s standards can be grouped according to this taxonomic framework. Much of what has been the past focus of NISO’s standards program has generally fallen into the Repository Service Area and relate to the Entity of Information Objects. As digital distribution of information has grown, new standards in the areas of Discovery & Delivery have become increasingly important.

One example of how this taxonomic structure works is the ISSN – ANSI/NISO Z39.9-1992 (R2001), *International Standard Serial Numbering (ISSN)*. This familiar standard identifies serial publications. As it relates to information objects (i.e., a journal), this is the entity. The number is primarily used for selecting and organizing journals and increasingly journal content and is therefore related to the Repository Service area. Finally, the purpose of the standard is the identification of the object, so this falls into the Identification aspect of Activities.

Obviously, within this Framework there are overlaps with other standards bodies’ activities. By building a framework that is focused on the role standards play in the exchange of scholarly information, we can more easily identify those standards areas or community segments where collaboration is the most effective path to pursue standards development. Similarly, the Framework helps to identify gaps and areas where no significant work is taking place by any organized standards organization. There may be opportunity in those areas for NISO to engage participants in the affected sectors to address the gaps or to formalize ad hoc activities.

Two specific areas in which NISO is not currently undertaking any standards activities relate to the Network and Environment Service areas. Some standards in these areas that NISO has not been engaged in, but which do significantly affect our community, are authentication and electronic learning systems. That is not to say that these areas are without standardization initiatives or leadership communities. The key to applying the Framework will be to understand what is being undertaken in these spaces and to what extent NISO and its constituency will be impacted by work in those areas. Such understanding will guide NISO in determining what, if any, resources should be directed to engaging and influencing the work underway on those topics. Using the authentication example, it is conceivable that a trust structure like Shibboleth might be an area where NISO and its constituency could play a role, for example, in expanding the functionality of Shibboleth in a metasearch environment.

Contrasting examples are network protocols and RSS feeds. While there is broad use and reliance on these standards in our community, falling into the Network area of NISO's Framework, these are well managed by other communities and, even though our community does play a role in those activities, they are identified as outside of NISO's scope. Similarly, organizations such as IMS Global are developing standards in the e-learning environment space and, while they interact with NISO standards, the community is not well served by duplication of standards activities. There may be areas where a collaborative partnership in standards development might be warranted, perhaps relating to how publisher or library materials are incorporated in e-learning systems.

The Changing Shape of the Information World

The organizations and people that undertake all of these activities play a critical role in the process of developing standards. These organizations are rapidly undergoing change. Few organizations are focused solely on one stage of this value-creation chain. Typically, an organization or various arms of a large organization are engaged in different Service Areas or Activities affected by standards. Long gone are the days that institutions are solely devoted to one aspect of collecting, storing, or delivering information.

In addition to this expansion of roles, there is an increasing interdependence between organizations on each other's contributions to the chain of information. Movement of digital information often entails the movement of critical bibliographic and metadata information about the object, as well as related data on rights, sales, licensing, authentication, etc., that facilitate exchange of the information object.

The Future of NISO Guided by the Framework

Obviously, this Framework is broad enough that it extends well beyond NISO's current sphere of influence. There are many areas in discovery, preservation, formatting, and identification that are firmly set within other standards bodies and communities. The Framework Committee that developed this work focused solely on the identification and classification of NISO's standards against the Framework model. They did not address the larger issues of what other organizations and standards exist, where they fit into this model, and what areas beyond NISO's current standards portfolio should be explored.

As part of NISO's new organizational structure, the Architecture Committee is tasked with maintaining this Framework and addressing the issue of NISO's interaction with other communities and standards bodies. In the coming months and years, the Architecture Committee will gather information about standards work that intersects with NISO's interest areas and address any overlap or identify gaps that represent opportunities for

NISO. In some cases, it might make sense for NISO to initiate work in a particular functional area defined by the Framework where other organizations are not currently focused and where our community perceives a need. In other areas, partnering with other standards bodies might be deemed most appropriate. Finally, there may be areas where the Committee and the Board of Directors decides that it is not appropriate for NISO to continue pursuing.

With a topographical map of the standards landscape NISO participates in, NISO is in a better position to prioritize and allocate its limited resources in standards development.

References

- 1) *Report of the NISO "Blue Ribbon" Strategic Planning Panel*, May 3, 2005. <http://www.niso.org/members/secure/BRPrpt05.pdf>
- 2) *NISO Strategic Direction*, June 20, 2005. <http://www.niso.org/about/secure/documents/BOD977.pdf>

A Vision for the Architecture Committee

by Chuck Koscher (CrossRef), Committee Chair

NISO's new Architecture Committee has been tasked with two challenging roles: 1) develop and maintain the NISO Strategic Framework, and 2) network with other organizations and the community to find areas where NISO standards and best practices would be of value.

The need for a Strategic Framework was identified by the NISO Blue Ribbon panel, established in 2004 as part of NISO's strategic direction initiative. The panel felt that in the past, "NISO has proceeded in its standards development in a largely opportunistic fashion, without broad architectural models for how its standards fit into the world of information technology, networks and digital content." They proposed instead that NISO "develop a well-synthesized framework that looks at the needs and priorities of that constituency, the technical standards landscape relevant to that constituency, and the ecology of other standards-related organizations relevant to that constituency." That Framework, currently in development, was described in detail in the preceding article. It is the Architecture Committee's responsibility to complete that Framework, maintain it over time, and use it to establish a roadmap for NISO's standards and best practices development work.

While I recognize the value of the Framework and the resulting roadmap, I see a need to balance the use of the Framework model with the kind of serendipitous development of standards that results from grass-root efforts. The SUSHI (Standardized Usage Statistics Harvesting Initiative) protocol is an excellent example of

a need that was identified and started by individuals totally outside of any organizational structure. Brought under the NISO umbrella and supported with NISO processes and tools, SUSHI became a draft standard for trial use in only 14 months. Over-reliance on the new Framework to identify areas of potential work could limit the kind of activities that result in SUSHI. So finding a balance between the two approaches will be our challenge.

NISO's new logo tagline, "How the information world connects," highlights the key value of our organization: its ability to connect people across the communities of libraries, publishers, and system/service providers. The Architecture Committee and the new Topic Committees all have a role in doing the outreach necessary both to continue and enhance the current connections and to form new connections and partnerships. The Architecture Committee in particular needs to be networking into new areas not currently addressed by NISO. Some of these new areas will be identified by the strategic Framework, and relevant formal organizations or defined communities to partner with will already exist. E-learning is one such area that the Architecture Committee will be closely examining. In other cases, a new area may arise out of a gap or need that no one is addressing or where an ad hoc group formed, such as occurred with SUSHI. We need to be in the right place at the right time to bring NISO's resources and expertise to bear on these opportunities.

Although the Architecture Committee will be closely working and coordinating with the Topic Committees, it is not an oversight committee. Our relationship to the Topic Committees is an advisory one, not one of command and control.

When staffing the committee, we focused on our two needs of strategic structure and networking to get cross-community representation. We are still interested in adding members in areas that are under-represented, such as content providers.

Our role of setting NISO's strategic roadmap is a challenging but exciting one. It will require all of us on the committee to be open-minded, creative, and think "out of the box" of old standards development methods.

For more information on the Architecture Committee, visit the committee webpage (<http://www.niso.org/committees/architecture/>) or contact the committee chair, Chuck Koscher (ckoscher@crossref.org).

A Vision for the Content and Collection Management Topic Committee

by Ted Koppel (Ex Libris), Committee Chair

At first glance, the long list of standards assigned to the Content and Collection Management (CCM) Topic Committee may seem rather mundane and unexciting. Many of the standards under our committee's purview indeed have existed for a number of years – their importance is recognized and their value unquestioned. It's is CCM's responsibility to examine, support, and, when appropriate, rethink aspects of these venerable standards to reflect the needs of the library and information communities.

But content and collection management – as an area of standards development – is evolving and changing. AACR2 is going away after having served our community well for almost thirty years. Its proposed replacement, RDA (Resource Description and Access) is being developed, and NISO (and this committee) will have a significant role in guiding the nascent RDA initiative through the process of standards development and acceptance. The Dublin Core metadata standard, already under the purview of the CCM Topic Committee, will likely be reassessed in the context of RDA.

Another area of great potential and interest for the CCM Topic Committee revolves around the identification, management, interoperability, and information sharing among players in the electronic product (e-journal, e-book, ERM, etc.) space. As electronic resource management (ERM) systems become more widely installed in libraries, a need for information exchange between ERM and ILS systems, and between ERM systems and content providers, will become even more crucial. This committee, therefore, will be looking at ways of sharing acquisitions, fund, uptime, update, and incident and breach information with various e-product interested parties. We will look closely at the need for a collection-level unique identifier that can be used across the industry to consistently identify collections and packages of electronic product data. As the e-book industry begins to mature and gain acceptance in libraries, we will examine closely the need for chapter and sub-chapter identifiers for resource sharing, delivery, and copyright use. Are current standards such as SICI and DOI adequate for this role, or will there evolve a need for a new unit-level identifier? Our analysis will help make that determination.

SUSHI is a superb example of how a small group of motivated people can develop a standard in a short amount of time. As lead person of the CCM Topic Committee, my hope is to emulate the focus, speed, and effectiveness of the SUSHI Working Group in analyzing,

addressing, and developing standards for our industry. No standard is ever produced in a vacuum. Several of the CCM Topic Committee's standards are also standards managed by the International Organization for Standardization (ISO), and therefore the position of the U.S. standards community, although important, is but one national voice among dozens of countries that are examining and recommending standards for international use. Both the ISSN and ISBN were revised in recent years. Our responsibility is to track the use of these standards, examine the effect of recent changes, and possibly recommend changes in the context of an internationally managed process.

The technical aspects of RFID (Radio Frequency Identification) – another technology for collection management slowly being adopted by libraries – are generally handled by ISO, IEEE, and other organizations. Protocols/best practices for RFID use in library settings are currently being addressed by a NISO working group, whose recommendations are expected to be issued shortly. The need for NISO standards activity in this area will continue to be closely assessed by the CCM Topic Committee.

Broadly speaking, standards that have been assigned to the CCM Topic Committee can be divided into four groups: (a) identifiers, (b) policies and guidelines, (c) transactions and their protocols, and (d) data formats and specifications. Each of these areas represents a response to a need that was identified by some individual or group in our industry. But more importantly than addressing a solution to a specific need, each of these standards was approved (and, in many cases, developed) through a consensus process that took into account the best advice from the groups(s) involved in creating these standards. My opinion: Any standard needs to be relevant and useful. Otherwise, why make the effort?

That is how I characterize my goals for the Content and Collection Management Topic Committee. The standards that we consider must be relevant and useful. Our efforts must be focused and our work efficient. Finally, the end products of our labor should represent a consensus of the best minds in our industry in order to move the library and information industry to improved and expanded services in the next century.

For more information on the CCM Committee, including a roster of members and portfolio of their standards, visit the committee webpage (<http://www.niso.org/committees/ccm/>) or contact the committee chair, Ted Koppel (tedk@exlibris-usa.com).

A Vision for the Discovery to Delivery Topic Committee

by Mike Teets (OCLC), Committee Chair

In the past ten years, information retrieval and item delivery has moved from a niche library industry to one of the most rapidly expanding and changing industries in existence. At the beginning of this period, standards focused on heavyweight protocols targeted at conserving network bandwidth and compute resources. Now network bandwidth and computer CPUs are nearing free costs relative to human costs for building new systems. Information retrieval and delivery services are moving to on-demand, network-shared resources. Many of these services now are provided outside of the traditional library space. A change in focus is needed for NISO relative to Discovery to Delivery (D2D) services.

The Standards Environment for Discovery to Delivery

Lightweight standards and interoperability: Multiyear efforts to define new protocol based standards for interoperability are no longer necessary or even practical. Standards efforts must focus on solving problems that exist today with solutions that show progress within a few months. Agile development models can be extended to agile planning models.

Adoption: Broad adoption of any standard, whether new or existing is possibly the only success criteria. All of our efforts should begin by understanding the potential users of the group's output and the potential for widespread adoption. It is not enough to plan for adoption only within the small NISO community, so we must also plan to reach out into the neighboring industries for early input. We must develop a path for introducing new standards that promotes widespread adoption.

Leverage a broader range of providers: The library community must leverage access to content and services from the broad consumer, e-learning, and even social networks to be relevant to their patrons. This means our standards development must facilitate not only access between library industry organizations but also to the large commercial providers.

Ad hoc and de facto standards: New standards developed by niche communities are becoming more rare in the modern technology environment. More often, a single organization or a very small group defines a new service model that sets a direction for an entire industry. Most often, the large search, social network and purchase/auction sites are the focus for these developments. We must leverage these developments where possible and look to develop logical extensions that support our industry.

Web services, service oriented architecture, and software as a service: It is rare for any single organization to have the

financial backing and presence to develop an entire self-contained information environment. It is impossible to do that on a scale that supports delivery of content on a scale even remotely acceptable to a user. If we focus standards on web service interaction instead of vertical websites, our community can collectively deliver an unprecedented level of local service interoperating with broad access to content.

Standards Under Development

The three previously established NISO Metasearch committees will continue to function as official active working groups under the D2D Topic Committee. Progress has slowed to a monitoring role for each after their initial goals were met in 2005. An analysis of their current state, the demands of that community and a plan for future efforts should be completed for each group. We should also consider that metasearch broke ground on the D2D topic areas but the results are potentially broader than just a metasearch environment. Can Access Management assist the broad community? Are Collection Descriptions needed broadly? Obviously search and retrieve deserves specific attention.

Retrieval standards have evolved from Z39.50 to SRW/SRU, but at the same time the broader community has focused on consumer search access. OpenSearch and the web service protocols from each of the search vendors have consumed the interest of most new search developments. Resetting the objectives for NISO in retrieval protocols is a top priority. User contribution to categorizing and tagging has extended search in cost effective ways to image and video collections. We must understand how to leverage this within the library community.

While search technology and standards are often more popular areas of focus, access to content or delivery is the key to continued success for libraries worldwide. As the hosts for a significant amount of the world's openly available resources, it is of profound importance that we focus on standards development to provide access. NCIP (NISO Circulation Interchange Protocol) adoption is low compared to the perceived need. Switching costs are considered high and the benefit is not well understood. The NCIP Implementation Group is currently revising the standard to address improvements that will facilitate adoption. We should put priority on expediting this revision and then encouraging its implementation.

Discovery to Delivery Future

It is an exciting as well as a frightening time for information retrieval and delivery in the library community. Broad industry focus creates new challenges but also puts libraries on every personal desktop and even squarely in the focus of mainstream news. The Discovery to Delivery Topic Committee must meet these challenges and plan for the coming future.

For more information on the D2D Committee, including a roster of members and portfolio of their standards, visit the committee webpage (<http://www.niso.org/committees/d2d/>) or contact the committee chair, Mike Teets (teetsm@oclc.org).

A Vision for the Business Information Topic Committee

by Patricia Brennan (Thomson Scientific), Committee Chair

Announced earlier this year, NISO's new organizational framework is designed to allow NISO and its constituency to better respond to the changing information landscape, to be nimble in its response to issues arising in core functional areas in libraries and research organizations, and to be proactive in shaping community understanding and action on those emerging issues.

The Business Information Committee, one of three Topic Committees is charged with standards development in business transactions and management areas such as license expression, online usage data, access management, performance measures, and other statistics.

Compared to the other topic committees, Business Information (BI) seems to have fewer standards from the existing portfolio associated with it. Though, like the other topic areas, Business Information as a broad area of focus is fast moving and becoming increasingly complex in an era of changing business models, changing access methods, and changing roles in a variety of sectors. In an era of content mash-ups and Web 2.0 interfaces, effective and standardized usage tracking is challenged. It is one thing to know that the materials licensed for your community were accessed; it is another to know how to effectively apply those data and to derive meaning from them in such a way that they shed light on the needs of the user community and support effective resource management.

So What Will the Business Information Committee Actually Do?

Our goal will be to help achieve consensus on solutions to well defined problems. Along the way, we will likely debate, discuss, disagree, and even dispute the nature of the problems and their proposed/possible solutions. More specifically, we will assist current working groups to complete or initiate work on particular areas depending on the status of the standard. We will identify and prioritize emerging and horizon issues that may need attention or benefit from a standard. We will review the current portfolio of standards that fall under our aegis to assess which need redirection or changes to scope.

For standards already in existence and those that may result from work that the committee engages in, we will need to ensure that we are actively involved in assessing

the impact and effectiveness of the standard. Is there broad adoption? Are there unanticipated barriers to implementation? Has a sudden market shift negated the need for the standard as currently crafted? So, with input from the Architecture Committee will establish measures to assess the effectiveness of our work.

We will reach out to other organizations already engaged in the issues we are addressing. Project Transfer, the European Access Management Federations, Project COUNTER, ALA, and the UKSG come to mind here. We will track emerging and horizon issues and in coordination with the appropriate groups create working groups to address those issues.

Finally, we will coordinate with the other Topic Committees. Already, overlap areas are obvious – licensing expression as it impacts business transactions vs. licenses as expressed in content management systems; access management as a method of managing authentication system transactions vs. access management as it enables access to resources.

Standards Portfolio

The current portfolio of standards that are within the purview of the committee is listed here. Two are existing approved standards and three are in development. The standards are presented in three of the four broad categories into which standards work can be placed.

Policies and Guidelines

SERU – Simplified E-Resources Understanding (in development)

ANSI/NISO Z39.20-1999, Criteria for Price Indexes for Print Library Materials (existing)

Transactions/Protocols

NISO Z39.93-200Z, Standardized Usage Statistics Harvesting Initiative Protocol (in development)

License Expression (in development)

Formats/Specifications

ANSI/NISO Z39.7-2004, Information Services and Use: Metrics & statistics for libraries and information providers – Data Dictionary (existing)

NISO has identified characteristics of an effective standards development process. These include rapid development and deployment, fundamental focus on functionality, and relationships with other standards bodies. The soon to be ratified SUSHI standard and the recently drafted SERU standard come to mind as meeting those criteria.

Both the SUSHI and SERU efforts address a specific and discrete pain area that cut across all sectors of the community, have coordinated with other standards efforts, and have been swift in moving forward with proposed solution approaches. Contrast these two with the Z39.7 standard – a cornerstone of library

management organizations for many years – which recently has been updated to both accommodate changes in the types of resources and services provided and also to be flexible enough to adapt to the changing environment without needing a long arduous rewrite process.

Responding to Emerging Horizon Issues

A core function of the committee will be to identify standard opportunities emerging out of current market trends or activities. For the Business Information Topic Committee, access management (e.g., Shibboleth), institutional identifiers, and assessment are just a few that come to mind. With these and other issues, our challenge will be to appropriately define the problem statement, to reach out to the standards bodies already involved in this type of work, and, finally, to set achievable objectives. Much has been discussed about institutional identifiers in recent times. This committee will investigate – or more likely charge a working group to – where in the information chain the institutional identifier can be applied. In thinking about assessment, I believe we need to begin a broad conversation that will elicit understanding of core values, current practices, and shared needs so that in turn consensus around methods and units of measurement may be reached.

Thought Leader Meetings

In addition to monitoring international standards development and advancing the work of the working groups, the new Business Information Topic Committee is charged to identify what additional work would fill gaps in the standards landscape. The committee is to facilitate the identification of emerging topics and to educate the broader community by convening Thought Leader meetings. In these tasks, especially in the arena of thought leader meetings, the committee will need to coordinate and work collaboratively with the other Topic Committees as well as the Architecture Committee.

For more information on the BI Committee, including a roster of members and portfolio of their standards, visit the committee webpage (<http://www.niso.org/committees/businfo/>) or contact the committee chair, Patricia Brennan (Patricia.Brennan@thomson.com).

If you have an interest in the work of NISO's committees, or have suggestions for new topics or groups that the committees should reach out to, please contact Karen Wetzel, NISO Standards Program Manager (kwetzel@niso.org).



Throw Off Your Policies and Expose Your Collections! A Future Vision of Library Resource Sharing

by Beth Posner (The CUNY Graduate Center), Gail Wanner (SirsiDynix), and Karen A. Wetzel (NISO)

The Rethinking Resource Sharing initiative¹ started in the U.S. in 2005 with the publication of a white paper written by a group of librarians, product vendors, and library technology specialists, *It's Time to Think Again about Resource Sharing: A Discussion Paper*.² The white paper grew out of a collective observation that the information landscape was undergoing a sea change: financially, behaviorally, and technically. At the same time, the authors – whose broad experience included a history of working to make systems interoperate for the benefit of the end user – saw that established standards such as NCIP and the ISO ILL Protocol and a proliferation of new standards (e.g., SRW/SRU, OpenURL, etc.) were both producing new challenges and didn't fully address this changing landscape. While working to revise resource sharing technical standards, they began to feel as though existing interlibrary loan and resource-sharing practices were becoming increasingly obsolete, relying on library-centric policies while the rest of the world had already moved on to a consumer-centric focus. The group felt it was time to wipe the slate clean and start over with some new concepts.

The white paper was thus written in order to seriously engage the information community to creatively consider what resource sharing might look like over the next fifteen years. The initiative advocates a complete rethinking of the way that libraries conduct resource sharing within the context of the global internet revolution and all of the developments that have arisen as part of that. The initiative's stated purpose is to create "a new global service framework that allows individuals to obtain what they want based on factors such as cost, time, format, and delivery. This framework will encompass promoting and exposing library services in a variety of environments."

This ad hoc group enjoys a joint custody arrangement that includes partnerships among a number of organizations³ and, as of this date, has sponsored three annual forums to engage the community in broad discussion and to work on next steps for the initiative. In addition, a discussion list for members, an initiative website, and a wiki to help the initiative committees (User Needs, Interoperability, Finance, and Marketing) with their work have also been established.

In early 2007, a *Manifesto for Rethinking Resource Sharing*⁴ was written in conjunction with the Reference and User Services Association of ALA, Sharing and Transforming

Access to Resources Section (ALA RUSA STARS), to more clearly define the group's intentions. In part, the Manifesto states that:

We believe that the user should be able to get what s/he wants on the terms that s/he chooses without undue hurdles from the library community. As libraries are making their collections visible on a global scale, so should they provide an international resource delivery system or a service model that combines the strengths of all participating libraries.

Further, the Manifesto identifies a set of principles that, when followed, aims to support users and enhance the role of libraries in resource sharing, and also recognizes the integrity of the institutions' mandates and collections. Those seven principles read:

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

Libraries are key to providing users with the best information possible. But in order to do that, we need to reevaluate our service models to better align resource sharing workflow, collection policies, and discovery-delivery systems in today's virtual information world. We need to find ways to reduce service barriers and costs, and offer user-centric service options to expose our resources to more general discovery. Furthermore, we need to work together to identify the means to achieving these goals. To learn more about how to get involved with the Rethinking Resource Sharing initiative and to

read about current activities, please visit us at www.rethinkingresourcesharing.org.

GetIt! Plug-in

An exciting new plug-in with the working name *GetIt!* is being developed by the Rethinking Resource Sharing's (RRS) Interoperability Committee to assist users in locating library resources. The purpose is to make library resources visible to both library users and non-users.

GetIt! is an open-source, vendor-neutral plug-in that lets people search the web to get published items from a variety of sources, including libraries and booksellers. When the plug-in is used through a browser, a list of sources appears showing the source, format, title, author, terms of use, and any cost. The user will simply click on the item they want and, depending on their choice, will then be able to order the item, place a hold, make an ILL request, or view the item online.

The unique functionality that this provides is the ability to parse a web page for ISBN and other data elements rather than relying solely on metadata. *GetIt!* also uses metadata (COinS – ContextObjects in Spans) where it exists. The current prototype version is a Firefox plug-in that can identify a published item, create the display based on pre-configured source and supplier lists, and

allow the user to place a library request or order from a commercial supplier.

Volunteers are needed to assist with the development of the *GetIt!* service and extensions. Please contact any of the members of the RRS Steering Committee at <http://www.rethinkingresourcesharing.org/steercomm.html>. More information about *GetIt!* and how it works can be found at <http://www.rethinkingresourcesharing.org/getit.html>.

- 1 Visit the Rethinking Resource Sharing website at <http://www.rethinkingresourcesharing.org/> for more information.
- 2 *It's Time to Think Again about Resource Sharing: A Discussion Paper: Prepared by a small group of individuals who are thinking about the future* (June 1, 2005). <http://www.rethinkingresourcesharing.org/docs/rrs-whitepaper2005.pdf>
- 3 See <http://www.rethinkingresourcesharing.org/> for a list of organizations who have partnered to help support this ad hoc group.
- 4 *A Manifesto for Rethinking Resource Sharing* (2007). <http://rethinkingresourcesharing.com/manifesto.html>



MEMBER SPOTLIGHT

Inera: Quality Production of Manuscripts and References

by Cynthia Hodgson, ISQ editor

Inera, Inc., located in Newton, MA, was founded in 1992 to provide software solutions for publishers wrestling with SGML (Standard Generalized Markup Language). Since then, the company has developed a suite of products to help prepare manuscripts for publication. Traditionally used by editors, now even authors and librarians can use Inera's software to automate some aspects of manuscript editing, output text into tagged XML schemas for archiving as well as publication, parse and format references, match and add Digital Object Identifiers (DOIs) to references, and even do on-the-fly reference validation for link resolution.

Inera's flagship product, eXtyles, integrates directly with Microsoft Word and automates many of the tedious text editing functions. According to Inera CEO, Bruce Rosenblum, "eXtyles can do in 10-15 minutes what would normally take hours to do manually, freeing up the editor's time to focus on content and readability issues."

The original standard for manuscript preparation and mark-up is ISO 12083, *Information and documentation – Electronic manuscript preparation and markup*, a set of Document Type Definitions (DTDs) utilizing SGML. The

standard was not widely adopted due to its complexity and perceived lack of flexibility. In a totally separate arena, libraries and repositories were seeking a viable format to archive journals and other scholarly content. A Mellon-funded project for Harvard University provided the solution for both dilemmas when Inera, Mulberry Technologies, and the National Center for Biotechnology Information (NCBI) jointly developed the National Library of Medicine (NLM) DTD, which utilizes XML instead of SGML.

Since the first release of the NLM DTD in 2003, it has become a de facto standard for full-text scholarly publishing, in use by a wide range of journal publishers, STM book publishers, content aggregators, and archives. Rosenblum expects libraries to increasingly adopt the NLM DTD for their full-text repository archiving instead of PDF. The Library of Congress, the British Library, and Portico have already standardized on its use. The NLM DTD specification is now a suite of tag sets with specific ones for journal publishing, archiving and interchange, books, and article authoring.

Not surprisingly, Inera provides XML validation and export to multiple XML DTDs from eXtyles, including the NLM DTD. Other standards are also supported in creating the XML output. Unicode support ensures that special characters are properly coded and equations are converted to MathML or TeX. Tables are converted to the XHTML or OASIS CALS table model.

Inera recognizes that it is critical for the references in a manuscript to be properly normalized, formatted, and validated, especially in today's online linking environment. "Inera's eXtyles refXpress," Rosenblum explains, "uses heuristic processing to parse references and reformat them into any specified publisher format." Their technology uses standards such as the ISSN (ISO 3297) for journal title identification and reformatting.

Inera took their reference parsing one step further when they incorporated a DOI look-up capability into the product, so that editors can automatically add the identifier to all the available references in the publication. They then partnered with CrossRef to create a free Simple Text Query Service, where unstructured references can be pasted into a text box on CrossRef's website and each is matched to its corresponding DOI. (Available at: <http://www.crossref.org/simpleTextQuery/>).

Though Inera's product suite was originally directed to editors, they are now delivering eXtyles and refXpress as author services, so that manuscript problems and incorrect references can be fixed before the document ever reaches the publisher, reducing the time to final publication. The reference product is being used to create

online links that peer reviewers can click on to view the cited literature as part of the review process. And Inera is now talking to libraries about using the refXpress product to automate the process of turning unstructured references into OpenURL links, essentially allowing "on the fly" linking for items not already in the library's OpenURL resolver knowledgebase.

Obviously, Inera understands and appreciates the value of standards. "By utilizing standards, such as the NLM DTD as the output format, we have a more common framework," Rosenblum believes. "It results in lowered costs to the customer, since neither we nor they have to customize as much." Rosenblum continues his personal involvement with standards development through his participation on the NLM DTD working group, the NISO Versions of Journal Articles review group, and the CrossRef Metadata Quality committee.

Metadata quality is one of Rosenblum's current concerns and a topic on which he speaks regularly. "Inera's goal is to provide software and consulting to enable scholarly publishers to do a better job publishing so everyone else can get better access to and interaction with content. An investment in an Inera product can result in a lower-cost and higher-quality end product."

For more information on Inera, visit www.inera.com. 

NISO NEWS AND NOTES

NISO Programs Get Major Boost from Mellon Foundation

NISO has received a \$196,000 grant from The Andrew W. Mellon Foundation under its Scholarly Communications Program. The award will be used to transform and invigorate the standards process by supporting the adoption of technology tools for collaboration and the incubation of new community initiatives via a series of Thought Leader meetings.

"The NISO Board is delighted with this news," said [former] Board Chair Carl Grant. "These funds will enable NISO to start work immediately on two important initiatives – getting NISO committees to work more efficiently and strategically and pro-actively fostering new standards activities. We are grateful to the Mellon Foundation for its generous support of the community engaged in scholarly information exchange."

"This new grant will enable NISO to provide a suite of coordination tools that will allow groups to form, address an issue, and release their standards solution for implementation rapidly and broadly," noted Todd Carpenter, NISO's Managing Director. "It will also provide a forum for the development of new standardized approaches and innovative solutions to pain points in the acquisition, management, dissemination, and curation of scholarship."

In 2005, the Mellon Foundation supported a Blue Ribbon Panel as part of NISO's strategic planning effort. The Panel articulated the need for the model of community involvement and standards development that the latest grant supports.

Carpenter continued, "As the Blue Ribbon Panel indicated, our field needs standards, suggested guidelines, and other new tools that can keep up with the speed of change in technology. We now have a roadmap and funding to solve that problem."

NISO Forms New Education Committee

As part of its strategic restructuring, NISO has formed an Education Committee to support the goal of providing NISO's constituency with wide-ranging and robust education and training programs. Chaired by NISO's Standards Program Manager, Karen Wetzel, the Committee formed plans to hold four educational events in 2007.

"Individuals from diverse communities have volunteered their time, expertise, and perspectives," notes Todd Carpenter, NISO's Managing Director. "They will determine the topical focus of educational programs, set agendas, recruit speakers, and identify new opportunities for NISO to educate and inform the information communities about our work."

Committee members are: Jeff Baer (CSA), Brenda Bailey-Hainer (Bibliographical Center for Research), Angela Bole (Book Industry Study Group, Inc.), Jay Datema (Library Journal), Trisha L. Davis (The Ohio State University Libraries), Kate Duff (The University of Chicago Press), Cindy Hepfer (State University of New York at Buffalo), Mary Jackson (Auto-Graphics, Inc.), Nettie Lagace (Ex Libris Group), Audrey Melkin (Atypon Systems, Inc.), and Peter Shepherd (Project COUNTER).

Programs planned for 2007 cover the themes of licensing issues (June 11), e-resource management (September 24-25), usage statistics (November 2), and institutional repositories (December 3). To contribute ideas or suggestions for future events, contact Karen Wetzel (kwetzel@niso.org).

For more information on the Education Committee, visit <http://www.niso.org/committees/education/>

NISO Framework for Digital Collections Project Receives IMLS Funding

With support from the Institute for Museum and Library Services (IMLS), NISO has launched a Working Group to produce the third edition of *A Framework of Guidance for Building Good Digital Collections*. The *Framework* establishes principles for creating, managing, and preserving digital collections, digital objects, metadata, and projects. It also provides links to relevant standards that support the principles and additional resources.

"Museums and libraries are creating and acquiring vast amounts of digital content. The *Framework* provides guidance on best practices and promotes the use of standards to help ensure that this digital content can be easily accessed and used by everyone worldwide," said Anne-Imelda Radice, PhD, Director of the IMLS. IMLS is the primary source of federal support for the nation's 122,000 libraries and 17,500 museums. The Institute's mission is to create strong libraries and museums that connect people to information and ideas.

"The third edition of the *Framework* will not only bring it up to date, but will also improve coverage of non-text formats, international initiatives, digital preservation, Web 2.0 concepts, and several other areas of interest," explained Priscilla Caplan, Assistant Director for Digital Library Services at the Florida Center for Library Automation. Caplan will serve as Chair of the Committee that also includes Grace Agnew (Rutgers University), Murtha Baca (Getty Research Institute), Tony Gill (Center for Jewish History), Carl Fleischhauer (Library of Congress), Ingrid Hsieh-Yee (The Catholic University of America), Jill Koelling (Denver Museum of Nature & Science), and Christie Stephenson (American Museum).

"At the same time," Caplan continued, "we will turn the *Framework* into a community-maintained resource, so that anyone with expertise can suggest new links, add annotations, and participate in discussions about the content."

The *Framework* was initially developed in 2000 (first edition) and revised in 2004 (second edition).

For more information, visit the Working Group's webpage: <http://www.niso.org/framework/>

NISO AVIAC Group Revitalized at ALA Conference

NISO's Automation Vendors Information Advisory Committee (AVIAC) had been a very active group for a number of years, however, the group had become somewhat inactive more recently. To reenergize the group, a meeting was held at the ALA Annual Conference in June to discuss the committee, its history and goals, and its future role in NISO.

From NISO's perspective, AVIAC is a valuable vehicle for gathering feedback from and providing updates to the systems vendor community. There was a consensus from the meeting attendees that AVIAC was also valuable to the members as a common ground to come together, to share and work on collective issues, to learn about NISO initiatives, and as an avenue for providing input to pertinent NISO standards work. The ongoing purpose and role of AVIAC were defined as follows:

- To give vendors a voice
- To find out about hot topics
- To aid in the development of standards
- To be aware of work in the NISO Topic Committees and to join voting pools
- To identify and avoid duplicate or competing standards
- To inform on activities in related areas of interest to vendors and NISO
- To provide the impetus for development

In the past, AVIAC members were mostly from ILS vendors, with some independent consultants and representation from LC, OCLC, and RLG. The group agreed that it would be useful to have better representation from book and serial systems vendors, to engage distributors and agents, and to coordinate with BISG, BIC, and EDItEUR on standards activities. AVIAC has served a role as the NISO voice to the MARBI committee and it was agreed that role should continue.

The group heard a presentation by Diane Hillman on the RDA initiative and possible roles for NISO in the ongoing

work. A number of issues for further discussion by the AVIAC group were identified including: document delivery, link resolvers and the serials supply chain, protocols for ERM systems, and standards for e-books. The group plans to hold regular meetings at both the ALA midwinter and annual conferences and to reactivate their listserv for work between meetings.

Dublin Core Revision Approved

A 2007 revision of *The Dublin Core Metadata Element Set* (ANSI/NISO Z39.85-2007) has been approved by NISO voting members and the American National Standards Institute. This maintenance revision was prepared by the Dublin Core Metadata Initiative (DCMI), the maintenance agency of the standard, to address minor updates, corrections, and editorial clarifications based on comments received since the standard was first issued in 2001.

The standard defines fifteen metadata elements for resource description in a cross-disciplinary information environment. Dublin Core is in widespread use across numerous disciplines, often as a baseline from which community specific applications are built with a more expanded set of elements—just as the original developers envisioned.

Download a free copy of the Dublin Core standard from:
http://www.niso.org/standards/standard_detail.cfm?std_id=725

Fast-Tracked Shared E-Resource Understanding Draft Available for Pilot Use

Only nine months after the Shared E-Resource Understanding (SERU) Working Group was first formed, NISO has issued a Draft for Trial Use of the recommended practice, *SERU: A Shared Electronic Resource Understanding* (SERU version 0.9). The SERU pilot runs from June 20, 2007 through December 20, 2007.

The document presents a shared set of understandings to which publishers and libraries can point when negotiating the sale of electronic content. It consists of a framework and set of statements that express frequently adopted expectations among academic and other non-profit libraries and scholarly publishers. Libraries and publishers who choose to use SERU should reference or link to these common understandings. The framework offers publishers and libraries a solution to the often burdensome process of bilateral negotiation of a formal license agreement by allowing the sale of e-resources without licenses if both parties feel their perception of risk has been adequately addressed by current law and developing norms of behavior.

To facilitate trial uses of the statement, SERU 0.9 includes guidelines for implementation and the Working Group's website includes accompanying FAQs to assist users of the statements. During the trial phase, NISO would like to hear from publishers who wish to use SERU with any of their products and librarians who would like to request that SERU apply to some of their products. A registry of libraries, consortia, publishers, and other content providers who wish to announce their interest in using SERU will be maintained on the NISO website.

The Working Group continues to welcome comments on the draft

document and encourages their submission to co-chairs Karla Hahn (karla@arl.org) or Judy Luther (judy.luther@informedstrategies.com).

For more information on SERU, the trial use document, and the registry, visit the WG's website:
<http://www.niso.org/committees/seru/>

NISO/BISG Forum Report

NISO and the Book Industry Study Group, Inc. (BISG) held a half-day pre-ALA conference forum on June 22, *The Changing Standards Landscape: Creative Solutions to Your Information Problems*, to provide a big-picture look at the development and impact of common solutions-based standards for both librarians and publishers.

Michael Healy (BISG) kicked off the forum with a *United Action for Common Problems*. In order to be effective, publishers and librarians need to think collaboratively about standards development. Digital technology is transforming publishing with a proliferation of content, mass digitization, print on demand, multiple formats, and low barrier to entry. It is also presenting new challenges: unambiguous identification of resources, meaningful resource descriptions, unique name identifiers, linking of related publications, and permissions and licenses. The physical publishing supply chain is built on standards for product and location identification, product description, and B2B transactions. It is not clear how current standards will translate to the digital world and if new standards are needed, who will create them.

Todd Carpenter (NISO) followed with *The Importance of Digital Standards* due to the rapid adoption of digital information creation and distribution. Many of the workflows and systems that organizations have developed need to become standards-based in order to become scalable. With institutions dealing with limited resources, formats need to be interoperable with existing workflows, purchasing must be streamlined, access must be simplified, end-users should be able to utilize the content in ways they need to (within the bounds of copyright/license), and management and preservation

need to be trusted, functioning, and reliable. Standardization will help facilitate the creation, management, and distribution of digital content for everyone. Two NISO projects, SUSHI (Standardized Usage Statistics Harvesting Initiative protocol) and SERU (Shared E-Resources Understanding) are examples of removing bottlenecks in the information supply chain.

The availability of multiple formats and delivery options for content is unveiling a variety of new and exciting opportunities for the library community. Standards are needed to control and manage this content. The remaining forum speakers explored six steps to successful content management: identify, describe, discover, retrieve, comply, and use.

Norman Paskin (Tertius Ltd. and The International DOI Foundation) described the key issues of identification: Naming (persistent identifier, resolution, referent), Granularity, Compound Objects, Resolution, Meaning, Representations, and Interoperability and Multiple Services. The practical consequences of implementing persistent identifiers is the ability to make systems work together. The identifier alone is not enough; context is needed. Simple resolution may not be enough because there are rarely monopoly services for content. A common framework is important as well as a method for grouping and ordering results of multiple resolutions. Interoperability must be designed for the future.

Brian Green (International ISBN Agency and EDItEUR) posed the questions: Do we have what we need to manage content in a digital environment? What do we need to identify in a digital environment consisting of multiple formats and fragments of information? He pointed out that no identifier is an island; both vertical and horizontal interoperability are important and metadata will be needed to ensure interoperability for discovery, resource management, and rights/royalties.

Green reviewed two identifiers: the ISBN (International Standard Book Number) and the ISTC (International Standard Text Code). The ISBN allows the assignment of separate ISBNs to different formats and product forms of the same content. Current developments for the ISBN include how to incorporate ISBN into the EAN-13 barcodes system (Bookland) web-enabling ISBNs, and how to use Bookland to create DOIs (Digital Object Identifiers). The ISTC, still awaiting final approval as an ISO standard, was pursued as a method for managing rights and royalties, especially for works in DAM (Digital Asset Management) systems not yet assigned ISBNs.

Another important standard is ONIX, a family of XML formats developed by EDItEUR, for communicating rich metadata about published media. ONIX for Books was designed for trade use, but some libraries want to use this data to make their OPACs more user-friendly and like those of internet booksellers. ONIX for Serials, a collaboration between EDItEUR and NISO, has created a

series of message formats for communicating information about serial products and subscription information between publishers, document delivery, A&I services, and libraries. ONIX for Licensing Terms has developed its first format, ONIX-PL (Publications Licenses) in collaboration with JISC to communicate license terms in a structured form. Green concluded that the identifiers now in place or under development seem adequate for our needs but publishers and libraries need to work together on shared standards more than they have done in the past.

Carolyn Pittis (HarperCollins) described her company's digitization and digital warehouse projects. They focused first on creating a digital warehouse that would serve webpages with information about their books to all current and future online partners such as Google, MSN, and Amazon. All new titles were automatically digitized and the total global title count available online is now over 6,000. Next they used to digital warehouse to market printed books. Widgets are available on all HarperCollins books in the digital warehouse, allowing bloggers, publicists, and authors to easily put information about the book on their own websites while Harpers still controls quality and content of the information in the widget. Pittis stated that publishers should standardize on technology and compete on content. Standards and policy need to be customer-centric and open while respectful of copyright ownership.

Nathan Robertson (University of Maryland School of Law) reviewed projects aimed at encoding e-resource license information for use in computer systems. The Digital Library Federation ERMI project defined terms of use fields and permission encoding. ONIX-PL (Publications Licenses) is defining messaging formats for license information. NISO's License Expression Working Group is working to coordinate the two mapping schemes. And NISO's Shared E-Resource Understanding Working Group is developing guidelines to eliminate the need for a license. His recommendations for making the encoding process easier were to: 1) Decide which terms are relevant to your institution and needs; 2) Decide whether you care about "explicit" vs. "interpreted," and, if not, use "interpreted" for all encoding; and 3) Make a License Interpretation Guidelines document for your institution.

Mark Bide, (Rightscom) discussed the Automated Content Access Protocol (ACAP) initiative, a unique collaboration of publishing interests and search engines to work toward an open standard for compliance that meets the requirement for a more effective communication of publishers' policies without compromising the efficiency of high volume data processing. The goal is to make the rules regarding access and use of networked content accessible and easy to understand—automatically and without human intervention. Publishers recognize the value of search engines and want to allow automated

crawling and indexing of their content, but also want to include automated information on rights and permissions. The goal of the project is to be able to provide consumers with *more* access, *more* content, in *more* places, with *less* content inaccessible behind firewalls. The project aims to provide publishers with new opportunities to deliver more content to consumers online in a way that satisfies their legitimate commercial

View the NISO/BISG forum speaker's slide presentations at: http://www.niso.org/news/events_workshops/NISO-BISG-07-Agenda.html

interests. ACAP is working closely with EDItEUR to guarantee interoperability with their ONIX for Licensing Terms work.

Traversing the Licensing Terrain: Forum Report

The NISO and PALINET June 11th forum, *Traversing the Licensing Terrain: Emerging Issues and Innovative Solutions* was designed to bring together leaders in licensing issues in order to highlight the many new changes that have had an impact on the licensing arena and introduce how standards can help manage the process.

Ivy Anderson (California Digital Library) opened the forum with *Licensing: A State-of-the-Art Review*, highlighting the change from 1991, when ARL's Directory of Journals included seven e-journals, to 2005 when over 20,000 were listed. The imperative now is to massively digitize legacy collections, transform discovery and access, and provide digital stewardship to preserve collections. Implications for licensing are many and there are no clear answers to what business model to use, what terms and conditions to include and how to plan for scalability, sustainability, and archiving. Many areas of standards practice are emerging: the Digital Library Federation ERMI project, ONIX for Licensing Terms, and NISO's License Expression and Shared E-Resources Understanding (SERU) working groups, which were discussed further by other speakers at the forum. While these projects are still underway, new issues are on the horizon: use of DRM (Digital Rights Management), coursepacks and e-reserves, and author rights and the impact of hybrid Open Access repositories.

Kevin Smith (Duke University) followed this overview with *Locating Licenses on the Legal Landscape*, where he addressed four questions: How is a license related to a contract? What elements of contract law are important in evaluating a license in the online environment? What new uses of licensed content are arising in higher education to test our licensing practices? What kind of licenses should higher education use to protect and share locally created data and content? He reviewed types of digital licenses including shrink wrap, click-wrap, and browse-wrap and pointed out that new uses for

manipulating and changing content — mash-ups, image collages, music/video remix — are not well handled by traditional licenses.

Two speakers addressed *Licensing: New Times, New Models*. Kate Duff (University of Chicago Press) stated that as of January 2007, the University of Chicago Press no longer requires the majority of its institutional subscribers to submit a formal signed license in order to access the electronic editions of its journals. Instead, all users of Chicago's website are asked to abide by the Terms and Conditions of Use. This decision followed a decade's experience with more traditional contracts where they learned that license negotiation was time-consuming and costly, no single model worked for all customers, and end users want immediate access and no click-throughs. Today, contractual licenses are done only by request of the customer.

Judy Luther (Informed Strategies) described NISO's Shared E-Resources Understanding (SERU) Working Group of librarians, publishers, subscription agents, and lawyers who are developing guidelines that can be used in lieu of a written agreement if both parties feel their perception of risk has been adequately addressed by current law and developing norms of behavior. The guidelines, currently in draft for trial use through December 2007 (see article on page 15), address subscriptions and subscribers, appropriate and inappropriate use, confidentiality and privacy, online performance and service, and archival access and perpetual rights. The final guidelines are expected in 2008 along with a registry of publishers and libraries who have agreed to use them.

Three speakers discussed *How Formats Impact Licensing*, with a particular focus on e-books. Celeste Feather (Ohio State University) reviewed her university's experience with licensing and e-books, indicating that by comparison licenses and arrangements for electronic databases and serials seem mature and tame. Still needed in the e-book arena are rights for ILL, better ways of acquiring MARC records for e-books, secure archival access for purchased content, and usage data. Even more challenging is a new genre, Major Reference Works, an e-resource made up of content from both e-serials and e-books, with regular updating of content.

Christine Martire (PALINET) pointed out that e-books are especially challenging with respect to licensing because of the variety of types and the many different access models and technologies. Just now being explored is licensing for audiovisual materials. Currently, DRM is often used for these materials and is tied to use on portable devices.

Erica Lazzaro (OverDrive, Inc.) described the impact that media format has on use models and licensing. Her company provides a DRM clearinghouse and fulfillment service for over 100,000 digital titles with over 6,000

library customers (mainly public). She emphasized that the key to successfully implementing an e-resource download service by libraries is managing user expectations through education. Users need to be made aware of device compatibility issues, the lack of return or resale rights (compared to physical products), and the variance in permission rights by publisher or even title. Lazarro expects that more formats and more volume of content will drive more and better use models, with greater flexibility.

Ted Koppel (Ex Libris) reviewed the current status of several standards efforts for *Mapping License Terms*. EDItEUR is developing ONIX for Licensing Terms, XML formats for expressing and communicating rights and permission for all kinds of intellectual property. The first format created was ONIX-PL (Publications License), directed toward the electronic transfer and machine understanding of the content of licensing terms, especially for use in ERM (Electronic Resource Management) systems. Several publishers' licenses have been mapped to ONIX-PL for testing of the format. A creation tool, OPLE (ONIX for Publications Licenses Editor), is in development to simplify the implementation of creating the license message format. The Digital Library Federation ERMI project also pursued an approach for mapping licensing terms, with a specification issued in 2005 and already in use by some ERM system vendors. NISO's License Expression

Working Group (LEWG) was established in part to marry the two approaches and to participate in pilot testing. To date, LEWG has created a crosswalk between the two sets of data elements and as a result of their efforts, ONIX-PL will support a DLF-ERMI "dialect" that is a simplification and flattening of ONIX-PL for ERM systems. A draft for trial use of the "dialect" is expected in the fourth quarter of 2007.

Jennifer Weintraub (Yale University Library) wrapped up the forum presentations with a case study of *Managing Licenses in Verde*. Yale recently migrated from a homegrown system to the Ex Libris Verde ERM product. The biggest migration issue was the license information, where field mapping was not one-to-one and reading and reinterpretation of the licenses was needed. A major advantage to the new system is the end user display of license permissions in a much clearer and friendlier format. The implementation of Verde and the expanded number of e-resources has resulted in some workflow and staff role changes. With more people involved, due to some decentralization of activities, more staff need to know and understand licensing complexities.

View the Licensing forum speaker's slide presentations at: http://www.niso.org/news/events_workshops/LicenseIssues-07-Agenda.html



NISO STANDARDS IN PRACTICE

NCIP Implementers Group Plans Revision to Standard

by Candy Zemon (Polaris Information Systems), NCIP-IG Chair

NCIP (NISO Circulation Interchange Protocol) offers library systems the ability to use one method to communicate information between their circulation system and other entities (libraries and other automated systems) to accomplish resource sharing and self service application interoperation. In short, the benefit of NCIP is that it offers one central way to communicate information about circulation-related events between automated systems. This lets a self-service machine, for instance, to automatically update a patron's account or a regional borrowing cooperative to automatically authenticate users against their home systems in order to enact circulation in foreign systems.

Though the protocol has been available for a number of years, vendor implementation has not been as rapid or as widespread as had been hoped when the protocol was first released. The NCIP Implementers' Group (NCIP-IG) met in September 2006 to address perceived hurdles to implementation, including perceived complexity of the protocol, confusion around protocol purposes and structures, and a lack of clarity around its benefits.

At that meeting, the NCIP-IG committed to working toward a three-fold goal:

- Simplify the protocol so it is easier to understand and to implement.
- Make technical progress so the protocol meets the needs of those who want to use it (including self service vendors and brokered consortial borrowing solutions).
- Wrap these changes into a new version of the protocol suitable for balloting in 2008.

Central to the promise and the challenges of the NCIP protocol is the fact that the protocol covers three problem areas related only by their differing needs for communicating circulation-system-related information: self-service applications, interlibrary loan, and direct consortial borrowing. In an elegant abstract structure of base protocol, protocol implementation, and specific application profiles, the original framers of NCIP provided the ability to use the rather broad stable of standard services for specific purposes without having to rewrite the base standard. One thing that has been contributing to slow implementation is the rather daunting amount of documentation one must understand in order to grasp that only a subset of services might be required to address the circ-related problem at hand.

The NCIP-IG is concentrating first on technical issues that will affect the protocol itself before addressing the glaring need for a variety of documentation, education, and marketing information.

In subsequent meetings held in April 2007 in Atlanta and June 2007 in Washington, DC directly following ALA Annual, group members, representing ILS and self-service vendors, made considerable progress on its short list of developments essential to a new version of the protocol. This short list includes fifteen points ranging in complexity from development of an extension mechanism to correcting reported defects. The group completed two items from this list of high priority ongoing tasks. It deferred another two as being unnecessary at this point. It made significant decisions and progress on another seven points. The remaining four points continue to be moved forward. There are

Follow the activities of the NCIP-IG at http://ncip.envisionware.com/ncip_ig.html

individuals tasked with all the ongoing tasks. November 13-14 has been set aside for another face-to-face meeting, followed by another meeting in the spring of 2008 (most likely in March). Monthly conference calls will keep the group on track between meetings.

ONIX for Serials User Guides Published

ONIX for Serials, a joint working project between NISO and EDItEUR, has published new User Guides for the *Serials Online Holdings (SOH)*, *Serials Products and Subscriptions (SPS)*, and *Serials Release Notification (SRN)* message formats. ONIX for Serials is a family of XML formats for communicating information about serial products and subscription information.

The *SOH* format is used for communicating library-specific electronic serials holdings details from publication access management systems to libraries. This format, in production release and recently updated, has already been implemented by a number of vendors. The *SOH* message aids in the maintenance of library catalogs and other end-user applications such as link resolvers and A-to-Z lists, where up-to-date and accurate online holdings statements are needed.

The *SPS* format is used for communicating information about serial subscription products, optionally with prices and specific subscription information. *SPS*, still in its pilot phase, can be used for the transmission of price catalogs from publishers to agents, price quotes from publishers or agents to libraries, and a library's subscription list among publishers, agents, and libraries.

The *SRN* message format, also in pilot stage, is used for communicating information about the physical publication or electronic availability of one or more serial

releases. *SRN* notifications serve to advertise the availability of new content, help minimize unnecessary claims, and make possible the automatic maintenance of precise holdings in online catalogs and link resolvers. Currently the *SRN* message announces the release of serial issues and provides issue-level metadata. Two more *SRN* messages are in development containing metadata about content items within the released issues.

Copies of the specifications and user guides can be found at: <http://www.editeur.org/onixserials.html>

MIX Schema Updated to Comply with Z39.87 Standard

The *Metadata for Images in XML Schema (MIX)* has been updated to version 1.0 to incorporate all the data elements of the recently published standard, *Data Dictionary – Technical Metadata for Digital Still Images (ANSI/NISO Z39.87-2006)*.

The standard defines a set of metadata elements for raster digital images to enable users to develop, exchange, and interpret digital image files. The dictionary has been designed to facilitate interoperability between systems, services, and software as well as to support the long-term management of and continuing access to digital image collections.

The *MIX* schema provides a format for interchange and/or storage of the specified data, expressed using the XML schema language of the World Wide Web Consortium. *MIX* is maintained by the Network Development and MARC Standards Office of the Library of Congress.

The *MIX* schema can be found at: <http://www.loc.gov/standards/mix/>

Standards Australia to Adopt NISO Standards

NISO has signed an agreement with Standards Australia and SAI Global, Ltd. to republish three NISO standards as Australian national standards. Standards Australia is the premiere standards development body in Australia, roughly comparable to ANSI in the United States. It develops Australian Standards® of public benefit and national interest and supports Australian design and innovation. SAI Global is the publisher and distributor of Australian Standards®.

The three standards to be adopted by Standard Australia's committee IT-019, Computer Applications – Information and Documentation, are: Z39.83, *NISO Circulation Interchange Protocol (NCIP)*, Z39.86, *Specifications for Talking Books*, and Z39.88, *The OpenURL Framework for Context-Sensitive Services*.

EnvisionWare Appointed as New Maintenance Agency for NCIP

EnvisionWare, Inc. has taken over responsibility as the Maintenance Agency (MA) for the *NISO Circulation Interchange Protocol* (NCIP) standard (ANSI/NISO Z39.83).

As a third-party products provider of self-service applications in the library industry, EnvisionWare is developing an NCIP interface for communicating with Integrated Library Systems (ILS). Rob Walsh, President and CEO of the company, became involved with the NCIP Implementers Group a few years ago and found it an excellent learning experience to better understand the internal procedures of libraries, particularly in handling circulation-related issues. When the previous MA, Colorado State Library opted to step down, Rob volunteered his company as the new MA as a way of contributing more actively to the group.

"We want to ensure that information relative to NCIP and the proceedings of the Implementers Group are available and accessible to any who are interested in this information," explains Walsh. "One of the first things we did when we accepted the position was to migrate the existing NCIP website from the Colorado State Library. We continue to maintain that site by posting the minutes from the Implementers Group conference calls and meetings, and we add content and links relevant to NCIP. In addition, since with NCIP the Maintenance

Agency fills the role of "recording secretary," we want to ensure minutes and other records are thorough and accurate so

that they become a resource for future discussions." For more on the NCIP Implementers Group, see the story on page 18.

Innovative Uses of the DOI System

The International DOI Foundation (IDF) June 21 meeting in Washington, DC featured the theme of *Innovative uses of the DOI System*.

Gregory L. Heileman (University of New Mexico) gave the keynote speech on Content Management in the Next Generation Internet where he described how digital rights management (DRM) has been impacted by the Internet and how the goal of providing accessible content where usage and rights are still managed can be achieved. He defined design principles for an effective Rights Expression Language and the associated DRM services provided several rights-related scenarios in a content management setting.

Following this keynote, several speakers presented examples of their innovative uses of the Digital Object Identifier (DOI) system. Chuck Koscher (CrossRef) illustrated DOIs used in RSS feeds, wikis, blogs, XML tools, and advanced bookmarking. Dan Cohen (Zotero) illustrated how to use his company's Firefox extension to help collect, manage, and cite research sources, including capture of the source's DOI. Jan Brase (German National Library of Science and Technology) reviewed his organization's role as a DOI Registration Authority for scientific datasets. Over 400,000 datasets have been assigned DOIs, offering a convenient way to connect an article to its underlying data. Norman Paskin (IDF) wrapped up the presentations with a summary of other innovations in use or consideration such as DOIs for entities other than traditional creations (e.g., authors, institutions, or licenses), incorporating existing identifiers into DOIs and vice versa (e.g., ISBN, ISMN, or an MPEG-21 Digital Item Identifier), using a DOI to express relationships (e.g., for OpenURL uses), DOI use in non-traditional entities (e.g., biological nomenclature or clinical trials), using DOIs for new traditional entities (e.g., book fragments, or interactive books), DOIs for multiple resolution (e.g., resolve to multiple entities such as several available formats or languages), adding context in resolution, and incorporating DOIs into existing tools (e.g., as an Acrobat plug-in to link to recorded DOI metadata or as part of a Firefox Handle extension).

Immediately following the IDF meeting was a related workshop on the Corporation for National Research Initiatives (CNRI) Handle System. The DOI System is an application of the Handle System (a resolution system) for intellectual property. Two presentations at that workshop were about the DOI. P. Attanasio and four colleagues (mEDRA) discussed *A Semeiotic View of DOI Applications*, which basically means how signs or codes can be given implied meaning or connotations. Specific applications they discussed were the Bookland DOI (aka Actionable ISBN), which would use syntax combining the DOI and ISBN, and multiple resolutions. The topic of multiple resolutions was further expanded on by Chuck Koscher in his presentation on *Multiple Resolution @ CrossRef*. In the CrossRef application of multiple DOI resolution, a main DOI can have additional "resources" associated with it. An interim resolution page offers users a selection of resolutions, which could be the same item from different hosts, or the same item in different formats, languages, etc.

The IDF meeting presentation slides can be downloaded from:
<http://www.doi.org/>



ISO TC46 Holds Plenary Meetings in Spain

Thank you to Sally H. McCallum (Library of Congress), the head of the U.S. delegation, for her substantial contributions to this report.

The annual plenary meetings for the International Organization for Standardization (ISO), Technical Committee 46 (TC46), *Information and documentation*, were held in Santiago de Compostela, Spain, May 7-11, 2007, gathering together more than 150 attendees from 25 countries. These meetings are largely reporting sessions about progress on the various standards under development. TC46 covers a number of standards areas for the information community, including technical interoperability, identifiers for and description of information objects, statistics, and records management. NISO is the U.S. Technical Advisory Group to TC46 and submits the U.S. vote on all ballots. Highlights of the meeting are discussed below.

Country Codes

The three-part standard, ISO 3166, *Codes for the representation of names of countries and their subdivisions*, is undergoing revision. Part 1: *Country codes* was revised last November. Part 2: *Country subdivision codes*, is in its final ballot stage and is expected to be published later this year. The Working Group is reviewing several new work item requests: codes for the representation of names of oceans and seas, based on a list of items established by the International Hydrographic Organisation; a code for the representation of names of historical countries based on a French experimental standard; a code for the representation of names of international organisations; and internationalized (non-ASCII script) code for the representation of names of countries.

Data Formats

WARC: A new draft of *The WARC File Format* (ISO/CD 28500), a standard for wrapping website components for archiving purposes, was presented by the French standards organization, AFNOR, who is leading this effort. The primary goals for the standard are to enable storage of both the payload content and control information from mainstream Internet application layer protocols, such as HTTP, DNS, and FTP; storage of all control information from the harvesting protocol; and support for recording events associated with the files such as data transformations, compression, etc. The participants determined that the draft was ready for wider review as a Committee Draft and the Subcommittee 4 Secretariat in New Zealand has recently issued it.

Holdings: A new ISO work item for an XML format for holdings data was approved in 2006: ISO/CD 20775, *XML Holdings Schema*. The work builds on a holdings

model and XML schema that had been developed for ISO 23950, *Information Retrieval (Z39.50) Application Service Definition and Protocol Specification*. The new work is maintaining compatibility with the earlier work (which had trial implementations) and with MARC 21 holdings, which are widely implemented. The first draft of the new standard was distributed for Committee Draft (CD) ballot in April 2007. The primary focus of the standard is for holdings information that needs to be included in responses to queries, such as those coming via the search protocols Z39.50 or SRU. It thus treats both stable (items held, loan policies) and dynamic (availability status) information. It is not intended for harvesting data or reporting holdings to central catalogs nor does it carry detail that would support serial issue predication or claim.

MARC Structures: Two other format standards were also reported on at the meeting. ISO 2709, *Format for Information Exchange*, is the structure standard for the various MARC formats, including MARC 21. It corresponds to ANSI/NISO Z39.2, *Information Interchange Format*. A revision of ISO 2709 to accommodate use of Unicode (ISO/IEC 10646) had been made and balloted earlier as a Draft International Standard (DIS). It was reported that the one negative vote had been resolved and the standard was in the process of being issued as an FDIS, the final balloting step.

Coincidentally, the XML analog of ISO 2709—ISO 25577, *MarcXchange*—was also reported as complete at the meeting. This work item, which was introduced by Danish Standards in 2004, provides XML syntax for the ISO 2709 format structure, following the syntax solution employed by MARC 21, thus assuring that MARC 21's XML version, MARCXML, is conforming. ISO 25577 is in the ISO publication process at this time.

Radio Frequency Identifier (RFID)

The Danish delegation that leads the development of a standard for the use of RFID in libraries reported on the early stage of the work on a data model. A draft set of statements, as a basis for the standard, are being developed for further discussion at a meeting of the Working Group in June 2007 in Copenhagen. The U.S. is very interested in this work as there is also a NISO initiative that will provide U.S. input to the ISO group. (See the NISO RFID Working Group website, http://www.niso.org/committees/RFID/RFID_comm.html, for more information).

Data Elements, Models, and Registries

Bibliographic data elements: The work to consolidate the five ISO data element standards (ISO 8459, *Bibliographic Data Element Directory*) for interloan, acquisitions, information retrieval, circulation applications, and exchange of cataloguing data and metadata. A draft was

completed in 2006 but issues with ISO procedures prevented the distribution of the DIS ballot, which is now expected to be issued later in 2007. This consolidation brings together data elements from several important interchange protocols standards used in libraries and information agencies, such as the ISO ILL protocol, Z39.50, SRU, NCIP, OpenURL, and OAI. The standard will support a common understanding of data elements that are used in the different protocols.

Registry service model: Likewise, the new initiative for a framework for registry services (ISO/CD 2146, *Registry Services for Libraries and Related Organisations*) was delayed by ISO procedures, so the Committee Draft that was to be circulated in 2006 will be issued in 2007. ISO 2146 is a modeling standard adaptable to different types of registry objects such as persons, activities, or services. There was a call for more explicit use cases for the models, so a non-normative appendix will be created with use cases, indicating the standard's relationship to system interchange standards.

Cultural heritage reference model: With the completion of ISO 21127, *A Reference Ontology for the Interchange of Cultural Heritage Information*, the Working Group for that item was officially disbanded in Spain. The work on this reference model was initiated in the late 1990s by CIDOC (International Council of Museums Committee for Documentation) and was completed through many meetings worldwide involving a host of experts in the area. Its intended purpose is to offer a conceptual basis for the mediation of information among cultural heritage organizations such as museums, libraries, and archives, thus providing a common reference point against which incompatible information can be compared and ultimately harmonized.

Identifiers

A large area of activity in ISO/TC46 involves the development of identifiers. Last year after the TC46 Plenary there was a report that the different identifier maintenance agencies were investigating interoperability among the different identifiers, especially since the identifiers were continuing to increase in number. Already developed, some for a number of years, are the "stock" numbers assigned to "manifestations" of an item such as the ISBN (books), ISSN (serials), ISMN (notated music), and ISRC (audio or video recordings). Newer identifiers are being assigned to "works" where they support rights activities that are of special concern to publishers. These include the ISWC (musical works) and ISAN (audiovisual works).

One recent activity reported for these established identifiers was the advancement of the revised ISMN (ISO 10957) to the DIS ballot stage. This enhancement of the ISMN increases its length to 13 digits, thus keeping it aligned with the ISBN (ISO 2108) that went to 13 digits in 2007. The ISSN standard (ISO 3297) has also recently

undergone a revision and was reported as being readied for publication. (Note: The standard was published in August 2007.) The revision establishes a form of the ISSN that is media independent and would be used to link the various ISSNs that are assigned for each different media version of a serial.

Under development are two additional identifiers related to rights management: the ISTC (for textual works) and the ISNI (International Standard Name Identifier, formerly called the International Standard Party Identifier). The ISTC work (ISO/DIS 21047) was delayed for a number of reasons and an extension of the timeline for completing the standard is being requested. IFFRO (International Federation of Reproduction Rights Organizations) will join the consortia comprising R.R. Bowker, CISAC (International Confederation of Societies of Authors and Composers), and Nielsen Book Services as the Registration Authority for the ISTC. Work is continuing on the ISNI project (ISO/NP 27729) to further refine the scope of the standard. The ISNI is an identifier for names associated with the "creation, production, and distribution of media content." Further work on the business model for this standard will be undertaken to justify changes in the scope.

Another new identifier under consideration is the *International Standard Collection Identifier* (ISCI) (ISO/NP 27730). It was introduced by Finland based on work that took place under the NISO Metasearch Initiative's Collections and Descriptions subgroup. This item is currently out for ballot as a new work item proposal. The description of the work item targets the use of the identifier for both archival-type analog collections and for digital collections.

A standard for the *Digital Object Identifier* (DOI) system (ISO/WD 26324) is also being developed, led by the International DOI Foundation. The major focus of the current work is on the scope of the standard and the relationship of the DOI to other identifiers. This standard covers the entire DOI "system," unlike the NISO standard (ANSI/NISO Z39.84), which addresses only the syntax for creating a DOI.

Description

Two standards under the "description" part of the ISO TC46 scope were also reported on at the meeting in Spain. The *Bibliographic References* standard (ISO 690) is under revision and will be renamed with the subtitle, *Citing and referencing published resources*, to make clear its use in the electronic publication and web resource era. In addition, there is a new work item being proposed that will combine the two current standards for guidelines for establishment and development of monolingual thesauri (ISO 2788) and for multilingual thesauri (ISO 5964) into one standard, with the initiative led by the British Standards Institute.

Statistics and Quality Measures

The *International Library Statistics* standard, ISO 2789, although just revised in 2006, is already being looked at for future expansions to include new data and definitions about global library statistics.

The revision of *Library Performance Indicators* (ISO 11620) is nearing completion with a final draft of the document expected in October. In addition to combining the original standard, a later amendment, and a supplementary technical report, the new edition includes a number of new indicators for both electronic and traditional library services.

The revision to ISO 9707, *Statistics on the Production and Distribution of Books, Newspapers, Periodicals and Electronic Publications* will be advanced to FDIS ballot, the final stage before publication. The standard's scope has been expanded to cover statistics on the production of electronic publications.

A new project to develop a technical report of *Performance Measures for National Libraries* is underway. This project resulted from comments submitted on ISO 11620 indicating that national libraries have special issues that aren't being addressed, but are not relevant for inclusion in the more general indicators standard.

A new initiative was proposed on *Qualitative Conditions and Basic Statistics for Library Buildings*, sponsored by the German standards organization, DIN.

Archives and Records Management

The second part of the standard on *Records management processes – Metadata for records* (ISO 23081) was reported as in the publication cycle. (ISO 23081-2 was published in July.) Part 3 of the standard regarding recordkeeping metadata is in the early stages of development.

A new Technical Report, *Work Process Analysis for Records* (ISO/CD 26122), received numerous comments when it was balloted as a Committee Draft. The document, based on an Australian standard, identifies three principal approaches to the analysis of work processes: organizational and regulatory (contextual analysis), functional (decomposition), and sequential (flow of work mapping). A new draft will be reviewed at the committee's meeting in South Africa in November.

A new project undertaken jointly between TC46/SC11 and TC171 (Document management applications) is the development of a technical report on *Requirements for Long-Term Preservation of Electronic Records* (ISO/NP 26102). Substantial interest in the project was demonstrated at the Spain meeting. A working draft will be circulated for comments for discussion at the November South Africa meeting. TC171 has lead on the second joint project, *Application Issues – PDF/A*, a report to accompany ISO 19005-1, *Electronic document file format for long-term preservation – Part 1: Use of PDF 1.4 (PDF/A-1)*.

There was agreement to perform preliminary work leading to a proposal for practical guidance on implementing and assessing against *Records management – Part 1: Guidelines* (ISO 15489-1). This standard has widespread use and has been adopted a national standard in many countries. An update to the standard is also under consideration. The same Working Group will develop a Management Statement to be used to position records management in organizations at a strategic level, i.e., senior management. It is recommended that the Statement be used in international and national publications as a marketing tool and for scaled incorporation in the preface of future TC46/SC11 products

The next TC46 plenary meeting is tentatively scheduled for May 12-16, 2008 in Stockholm, Sweden.

DLF Aquifer Receives Mellon Grant to Make Scholarly Collections Interoperable

The Digital Library Federation (DLF) has received an \$816,000 grant from The Andrew W. Mellon Foundation for a project designed to make distributed digital collections easier for scholars to use. The project, *DLF Aquifer Development for Interoperability Across Scholarly Repositories: American Social History Online*, will implement schemas, data models, and technologies to enable scholars to use digital collections as one in a variety of local environments.

The project will address the difficulty that humanities and social science scholars face in finding and using digital materials located in a variety of environments with a bewildering array of interfaces, access protocols, and usage requirements. DLF Aquifer seeks to provide scholars with consistent access to digital library collections pertaining to nineteenth- and twentieth-century U.S. social history across institutional boundaries. The collections are in a variety of formats and include maps and photographs from the Library of Congress historical collections; sheet music from the Sam DeVincent Collection of American Sheet Music at Indiana University; and an array of regional collections, such as Michigan County Histories from the University of Michigan and Tennessee Documentary History from the University of Tennessee, that will facilitate cross-regional studies when combined. "By integrating American Social History Online into a variety of local environments, the project will bring the library to the scholar and make distributed collections available through locally supported tools. The project will take two years to develop and implement, from April 2007 to March 2009.

For more information, visit:
<http://www.diglib.org/aquifer/>

DCMI/RDA Task Group Formed

RDA: Resource Description and Access is the new code in development to replace the Anglo-American Cataloguing Rules (AACR), last updated in 2005. A Joint Steering Committee with representatives from the American Library Association, the Australian Committee on Cataloguing, The British Library, the Canadian Committee on Cataloguing, the Chartered Institute of Library and Information Professionals, and the Library of Congress is responsible for developing the RDA. A meeting was held at The British Library April 30-May 1, 2007 to examine the fit between RDA and models used in other metadata communities. The result of the meeting was an agreement to form a joint task force between the Dublin Core Metadata Initiative (DCMI) and the RDA committee.

One of the criticisms of the current drafts of the RDA is that it continues to build on concepts that were designed for the use of 3x5 catalog cards and that insufficient attention is given to making the data in library catalogs systems easily accessible and manipulable by other systems, especially web applications. The DCMI / RDA initiative is intended to bring library cataloging into the 21st century and be fully interoperable with other Semantic Web applications.

The group is tasked to:

- Define RDA modeling entities as an RDF (Resource Description Framework) vocabulary – Such a vocabulary will put the RDA data into a semantic web standardized structure, allowing the data to be machine-readable and manipulable outside of a traditional library system.
- Deliver a set of controlled vocabularies represented in RDF/SKOS – These vocabularies will explicitly define the terms used in the RDA and put them in a standard format for managing and using controlled vocabularies in a web environment.
- Develop a DC Application Profile for RDA – The application profile will specify “which metadata terms an organization, information provider, or user community uses.” The profile is to be based on FRBR (Functional Requirements for Bibliographic Records) and FRAD (Functional Requirements for Authority Data).

Follow the activities of the DCMI/RDA taskforce at their wiki: <http://dublincore.org/dcmirdataskgroup/>

The expected benefits of this joint effort are a cataloging metadata standard compatible with web architecture, wider uptake of RDA, and ultimately greater access and use of the rich store of information held in library catalog databases.

OASIS Forms Search Web Services Technical Committee

The Organization for the Advancement of Structured Information Standards (OASIS) announced a new Technical Committee (TC) in June: Search Web Services. The TC has been chartered to define a search and retrieval web services specification that includes Search/Retrieve, Query, Sorting, Record Retrieval, and Index Browsing. One or more application profiles will be developed for such communities/applications as bibliographic, e-government, geospatial, and ebXML.

The committee intends to build on a number of current and ongoing web search service activities including: OKI (Open Knowledge Initiative), ZOOM (Z9.50 Object Oriented Model), and SQI (Simple Query Interface). The work will also involve semantic description of search services but will build upon existing work (e.g. NISO Z39.92) rather than define new descriptions.

Follow the TC's work at: http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=search-ws

Unicode and W3C Create Joint Guidelines for Unicode in XML

The Unicode Consortium and the World Wide Web Consortium (W3C) have jointly issued *Unicode in XML and other Markup Languages* (a W3C Working Group Note and Unicode Technical Report #20). The technical report provides guidelines on how to use the Unicode Standard with markup languages such as XML.

Unicode is an international standard character encoding system for “all the writing systems of the world, modern and ancient.” Use of Unicode allows computer systems to process, store, and interchange text data in virtually any language.

Markup languages such as HTML and XML provide some similar features to Unicode format characters and Unicode also contains some characters that can create some problems with marked-up text. The guideline defines both those Unicode characters which are suitable for use with markup languages and those which are not.

Additional discussions address such issues as overlap of control code and markup semantics, markup and styling, extensibility of markup, and characters with compatibility mappings.

View the Unicode in XML guidelines at: <http://www.w3.org/TR/unicode-xml/>

CLIR Publishes Census of Institutional Repositories

The Council on Library and Information Resources (CLIR) has published *Census of Institutional Repositories in the United States: MIRACLE Project Research Findings*, the first phase of the MIRACLE Project, an IMLS-funded research program based at the University of Michigan that is “investigating the implementation of institutional repositories in colleges and universities in order to identify models and best practices in the administration, technical infrastructure, and access to repository collections.”

Of the responding institutions, only 10.8% had an operational institutional repository (IR); 36.3% were in various stages of planning and pilot testing, and the remaining 52.9% have no plans for an IR at this time. The most utilized software for those who have implemented or are testing systems was DSpace. Among the other popular systems used were Bepress, Fedora, and ContentDM. Some findings identified as unique to this study were: “the shrinking-violet role that archivists play in the IR effort; the voracious appetites that census respondents have for information especially about successful IR implementations at institutions similar to their own; the ability of the IR to forge new relationships for libraries; and the need for improved preservation functionality in IRS” (*Census*, page 5).

When asked about IR-system features, supported file formats and adherence to open-access standards ranked one and two most important, respectively. However open-access standards were not defined or listed in the report or the original survey instrument, so it is not clear that all respondents meant the same thing for this item. Of the various file types in use, very few respondents were willing to say that the file types would be “guaranteed in perpetuity.” Only PDF files were “guaranteed” by more than half of the respondents (56.3%). Image file formats – JPEG (37.5%), TIFF (37.5%), and GIF (29.2%) – were the next highest. Multimedia formats such as MPEG-4 and QuickTime, received low scores on willingness or ability to preserve long-term. One respondent pointed out that “no IR software that I know of (nor any digital content management software for that matter) provides off-the-shelf digital preservation capabilities” (*Census*, page 51).

The report concludes with a listing of long-term issues – such as the effect of IRs on the current publishing model – that will continue beyond the MIRACLE project tenure and require extended experience with using IRs to assess or quantify.

View the full report from:
<http://www.clir.org/pubs/abstract/pub140abst.html>

W3C Launches POWDER Working Group for Retrieving Metadata

The World Wide Web Consortium (W3C) launched a new *Protocol for Web Description Resources (POWDER)* Working Group as part of its Semantic Web Activity. The group is chartered to develop a way for structured metadata (Description Resources) to be authenticated, applied to groups of web resources, and retrieved independently of the resources they describe.

The principle deliverables will be three closely linked Recommendations for: normative encoding of description resources, methods of defining groups of resources, and HTTP-based mechanisms for locating and accessing description resources associated with a particular web resource.

For more information on POWDER, visit:
<http://www.w3.org/2007/powder/>

The group is scheduled to run for 14 months to March 2008.

DCC and DPE Release Digital Repository Self-Audit Kit

The Digital Curation Centre (DCC) and Digital Preservation Europe (DPE) have developed DRAMBORA, the *Digital Repository Audit Method Based on Risk Assessment*. The toolkit and supporting tutorials are designed to facilitate an internal audit by providing repository administrators with a means to assess their capabilities, identify their weaknesses, and recognize their strengths from a risk management perspective. DRAMBORA can be utilized by a broad range of digital repositories, including the majority of current instances whose mandates do not yet include responsibility for long-term digital preservation.

The audit encompasses six stages:

- Stage 1: Identify organisational context
- Stage 2: Document policy and regulatory framework
- Stage 3: Identify activities, assets and their owners
- Stage 4: Identify risks
- Stage 5: Assess risks
- Stage 6: Manage risks

Several stages place emphasis on identifying relevant standards, codes of practice, and legislation. Examples of these have a UK and European perspective, however they can serve to remind users to look for equivalent regulations and standards in their own countries. International ISO standards are also cited in many cases. An appendix of references includes citations to many relevant international standards. While some standards

will be familiar, such as ISO 15489, *Records management*, others may be new discoveries that a repository manager will want to investigate, such as ISO 27001, *Security techniques – Information security management systems – Requirements*.

The toolkit is available for free download (after registration) in PDF format, which contains the accompanying tutorial information. The audit forms are also available in Word or Excel formats.

Access DRAMBORA
from: [http://
www.repositoryaudit.eu/](http://www.repositoryaudit.eu/)

ALA Issues Principles for Digitized Content

The American Library Association (ALA) Task Force on Digitization has issued *Principles for Digitized Content*, a framework intended to address the accelerating digitization of collections in library and cultural heritage institutions. The project was initiated following an ALA Digitization Policy workshop in April 2006, where a gap analysis showed that ALA policy was not effectively addressing many of the areas of concern expressed by workshop attendees. Other existing ALA policies will be reviewed against the new principles and revised as needed to comply with the principles.

The 22 principles cover the areas of Values, Intellectual Property Rights, Sustainable Collections, Collaboration, Advocacy, International Scope, Continuous Learning, Preservation, and the Importance of Standards. The three principles specifically related to standards are:

1. Digital collections must be built upon standards and best practices that maximize their usefulness.
2. Such standards and best practices must serve the broadest community of users, including those with disabilities, support sustainable access and use over time, and provide user functionality that promotes the core library values.
3. Preference should be given to open standards and non-proprietary technologies that support long-term sustainability.

Several of the other principles that refer to issues of sustainability, interoperability, and preservation will undoubtedly require the use of standards to fulfill the vision.

View the ALA Principles at:
[http://www.ala.org/ala/
washoff/contactwo/oitp/
digtask.cfm](http://www.ala.org/ala/washoff/contactwo/oitp/digtask.cfm)



MAKING THE MOST OF STANDARDS

ANSI Relaunches StandardsLearn.org

The American National Standards Institute (ANSI) has relaunched www.StandardsLearn.org, their online source for standards and conformity assessment education.

In line with the *United States Standards Strategy* (USSS) (<http://www.ansi.org/uss/>) initiative to establish standards education as a high priority in the United States, ANSI's redesign of the e-learning portal aims to raise the profile of standardization among the general public and within the academic community in particular.

Now fully administered by ANSI as an in-house resource, www.StandardsLearn.org contains courses, reference materials such as the Acronyms Database, and links to current national and international standards-setting activities and organizations. The educational tools offered on the site provide an engaging online learning experience for both newcomers to the standards arena, as well as long-time participants who want to develop new skills.

ANSI provides its e-learning courses free of charge. The asynchronous (self-paced) educational model allows students to learn at their own speed and convenience. Currently, the website contains two long-form courses

that provide a basic introduction to the U.S. standards development process and the role of standards in everyday life. Two short courses examine the ways in which standards have evolved over time and legal issues in standards-setting today. An additional course on standardization in the international arena will be available soon.

In addition to the e-learning programs, www.StandardsLearn.org also contains the Standards Education Database (<http://www.standardslearn.org/trainingcourse.aspx>), a resource for education and distance-learning programs provided by ANSI-accredited standards developers, ANSI members and academic institutions. The database includes information on programs spanning a wide array of industries, including health and safety, construction, architecture, wireless communication, testing and accreditation, and more.

Find these and other ANSI
resources at:
<http://www.ansi.org/>



STANDARDS STATUS: JULY 1, 2007

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, *Newsline*, and *Information Standards Quarterly* for updates on the working group activities.

DSFTU stands for Draft Standard for Trial Use.

WORKING GROUP	STATUS
Digital Identifiers Chair: R. P. Channing Rodgers	Pre-standards research
Digital Rights Expression Chair: Denise Troll Covey	Pre-standards research
Exchange of Serial Subscription Information <i>Joint Working Project with EDItEUR</i> Co-Chairs: Priscilla Caplan, Richard Gedye	Field testing: Serial Release Notification (SRN) , v. 0.91 Serials Products and Subscriptions (SPS) , v. 0.91
Framework of Guidance for Building Good Digital Collections Chair: Priscilla Caplan	3 rd edition in development
License Expression <i>Joint project with DLF, EDItEUR, and PLS</i> Co-Chairs: Nathan Robertson, Alicia Wise	Working with DLF ERMI and ONIX for Licensing Terms groups.
Metasearch Initiative TG2, Collection and Service Descriptions Chair: Juha Hakala	Z39.91-200X, Collection Description Specification Z39.92-200X, Information Retrieval Service Description Specification Issued as DSFTU – trial ended; under review for next steps
NCIP Implementers Group Chair: Candy Zemon	Z39.83, NISO Circulation Interchange Protocol (NCIP) Being revised.
RFID for Library Applications Chair: Vinod Chachra	In development
Simplified E-Resources Understanding (SERU) Co-Chairs: Karla Hahn, Judy Luther	Recommended Practice, SERU: A Shared Electronic Resource Understanding Issued as draft for Trial Use through December 20, 2007
Standardized Usage Statistics Harvesting Initiative Co-Chairs: Adam Chandler, Oliver Pesch	Z39.93-200X, The Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol Ballot for final approval ends September 1, 2007
Versions of Journal Articles <i>Joint project with ALPSP</i> Chair: Cliff Morgan	In development

CALENDAR

September 2007

Sept. 24-25 E-Resource Management Forum
Denver, CO

November 2007

Nov. 1-2 Understanding the Data Around Us:
Gathering and Analyzing Usage Data
Dallas, TX

Nov. 2 NISO Annual Meeting
12 noon to 1:00 p.m.
Dallas, TX

December 2007

Dec. 3 Getting the Most Out of Your Institutional
Repository: Gathering Content and
Building Use
National Agricultural Library
Beltsville, MD

2008 Programs

Educational programs for 2008 will be posted to the NISO website shortly.

LEARNING LINKS

A Dozen Primers on Important Information Standards

Computers in Libraries, 27(4), April 2007, pp 11-23.

One page primers for a dozen standards: Atom, COinS, MADS, MARC 21 / MARCXML, MIX, MXG, OpenSearch, PREMIS, RESTful HTTP, unAPI, XMPP (aka Jabber), and ZeeRex.

<http://www.infotoday.com/cilmag/apr07/index.shtml>

Creating the Next Generation of Archival Finding Aids

by Elizabeth Yakel, et al. *D-Lib Magazine*, 13(5/6), May/June 2007.

Describes a pilot archival access system that "combines existing archival practice (EAD) with "Web 2.0" features, namely involving user input through social software and collaborative filtering."

<http://www.dlib.org/dlib/may07/yakel/05yakel.html>

Digital Imaging - How Far Have We Come and What Still Needs to be Done?

by Steve Puglia and Erin Rhodes. *RLG DigiNews*, 11(1), April 15 2007.

Overview of the influences on digital imaging in cultural institutions during the last decade. Includes a table of imaging specifications and guidelines.

http://www.rlg.org/en/page.php?Page_ID=21033#article2

Metadata for All: Descriptive Standards and Metadata Sharing across Libraries, Archives, and Museums

by Mary W. Elings and Günter Waibel. *First Monday*, 12(3), March 2007.

Explains key concepts for understanding metadata standards and categorizes major metadata standards by standard content, organization function, and material use.

http://www.firstmonday.org/issues/issue12_3/elings/

PREMIS Report on Implementing the PREMIS Data Dictionary

by Deborah Woodyard-Robinson. *Woodyard-Robinson Holdings Ltd for the PREMIS Maintenance Activity*, June 4, 2007.

Study exploring how 16 institutions have implemented the PREMIS semantic units in applying metadata for their repository materials.

<http://www.loc.gov/standards/premis/implementation-report-woodyard.pdf>

Structure and Form of Folksonomy Tags: The Road to the Public Library Catalogue

by Louise F. Spiteri. *Webology*, 4(2), June, 2007.

Evaluates a sampling of user generated folksonomy tags against NISO Controlled Vocabulary guidelines to determine their suitability for use with library catalogs.

<http://www.webology.ir/2007/v4n2/a41.html>

SUSHI: What It Is and Why You Should Care

by Oliver Pesch. *Computers in Libraries*, 27(4), April 2007, pp. 6-8, 47-48.

NISO Board member and SUSHI co-chair, Oliver Pesch, explains the SUSHI protocol, which was developed to automate the retrieval of COUNTER usage statistics reports.

<http://www.infotoday.com/cilmag/apr07/index.shtml>

The W3C Technical Architecture Group

by Henry S. Thompson. *Ariadne*, Issue 51, April 2007

Background and overview of the group that is defining the architecture of the World Wide Web. Lists several current issues the group is addressing such as versioning and new naming schemes.

<http://www.ariadne.ac.uk/issue51/thompson/>

W3C Semantic Web Frequently Asked Questions

Recently developed FAQ explaining the Semantic Web in layman's terms including its goals, building blocks, possible applications, and its relationship to other information and web technologies.

<http://www.w3.org/2001/sw/SW-FAQ>

What is Web 2.0? Ideas, Technologies and Implications for Education

by Paul Anderson. *JISC Technology & Standards Watch Report*, February 2007.

Report commissioned to "investigate the substance behind the hyperbole surrounding 'Web 2.0'. It reports on the implications this may have for the UK Higher and Further Education sector, with a special focus on collection and preservation activities within libraries."

<http://www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf>

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NISO has moved to a new location in downtown Baltimore. The new offices include meeting space and room for NISO to grow. We are looking forward to growing with you and invite you to come visit!

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