New NISO Member: Readmore, Inc.

NISO is pleased to welcome a new voting member: Readmore, Inc. Sandra Gurshman is the voting representative; Dan Tonkery is the alternate.

Standards Development Committee

NISO's Standards Development Committee (SDC) finished revising the NISO Technical Plan during its meeting December 3, 1990. The plan was approved by the NISO Board of Directors on December 11.

Each item in the short-term action agenda for each key study area has now been assigned to a member of the SDC, to the Board or to Pat Harris to carry out by a specified target date during 1991. These tasks represent not only an increase in the amount of NISO standards activity, but a more organized and focused approach. The final version of the Plan will be distributed to the NISO membership in January 1991.

In other business, the SDC set in motion work to respond to the use of ASC X12 by the publishing constituency, analyzing the data elements needed for library materials acquisition and fulfillment. This work will build on data elements in existing NISO standards, as well as those being proposed by BISAC and SISAC (see SISAC article elsewhere in this issue).

I am pleased to note that two new members have agreed to serve on SDC. Lorrin Carson (American Chemical Society) will manage the key study area of electronic publishing. Jessica Milstead (The Jelem Company) will
manage the key study area of indexing and abstracting.

As always, a large portion of the SDC meeting was devoted to reviewing NISO standards activities, determining action necessary to move these activities along, and deciding which standards work occurring in other organizations warrants response from NISO. After a year on the SDC, I continue to be surprised by the sheer volume of work going on in areas of concern to NISO; it is both exhilarating and exhausting to contemplate.—Kathleen Bales, chair

Mark Your Calendar!
NISO 1991 Annual Meeting


More details will appear in future issues of Information Standards Quarterly.

Permanence of Paper:
Proposed Revision Ready for Ballot

Betsy L. Humphreys

The revised Z39.48, now being balloted, takes some significant departures from the original standard and previous drafts. The following cover memo and paper discuss those changes. SCII, which prepared this version, is chaired by Betsy Humphreys (National Library of Medicine) and includes Joseph E. Brown (Rochester Institute of Technology), Lewis H. Brown, Guy Dresser (Allen Press, Inc.), Joseph H. Dunton (Mudge Paper Company), Susan Lee-Bechtold (National Archives and Records Administration), Anthony Liberatore (Glatfelter Paper Company), John Mancia (Elsevier Science Publications) and Merrily A. Smith (Library of Congress).

Revised Z39.48 Ballot:
Cover Memo

NISO Standards Committee II reviewed and carefully considered the comments received in response to the discussion draft of ANSI Z39.48-199x which was circulated in late 1989. As a result of these comments, the Committee ordered additional paper testing and made several substantive changes to the proposed revision of the Standard. The major differences between the revision now being balloted and the previous discussion draft are as follows:

- A maximum pH of 10 has been added.
- The cold extraction test has been removed as the method for determining the pH of uncoated paper. Commenters on the previous draft pointed out that papers that are technically "uncoated" may have light but highly alkaline surface coatings that can skew the results of the cold extraction test. The method of verification of the pH of uncoated paper has therefore been changed to match that specified for coated paper.
- The maximum allowable percentage of lignin has been increased to 7.5%. Commenters pointed out that there was no evidence to indicate that lignin was deleterious to permanence in papers with a pH in the 7.5-10 range and an alkaline reserve of 2% or more. The results of additional testing...
commissioned by the Committee and performed for other organizations revealed that papers with up to 7.5% lignin content exhibited retention of properties comparable to papers with less than 1% lignin.

In addition to these major changes, a fuller explanation of the tear index has been included, and tables showing the equivalence between the tear index and tear resistance values for common weights of paper have been added.

Several commenters recommended the inclusion of a requirement for performance tests after accelerated aging. All data available to the committee indicate that adherence to the criteria specified in the revised standard is a sure predictor of acceptable retention of durability after accelerated aging. For this reason, the Committee has elected not to incorporate accelerated aging in the proposed revision.

Some commenters were disturbed by the elimination of the folding endurance criterion but the majority favored it.

A summary of all major issues examined by the Committee is included in the accompanying paper “Issues Related to the Revision of ANSI Z39.48."

SCI1 appreciates the time and effort taken by all those who commented on the discussion draft and believes that the revision has benefited substantially from the constructive suggestions received.

Issues Related to the Revision of ANSI Z39.48 (Permanence of Paper)

The following summarizes the various data, issues, and opinions discussed and considered by SCI1 in preparing the draft revision of ANSI Z39.48.

General Approach

When applied to paper, the term “durability” refers to the paper’s ability to withstand physical wear and tear. “Permanence” refers to the paper’s chemical stability and its ability to retain its initial properties over time. “Durable” paper is not necessarily “permanent” (e.g., an acidic text book paper might be very durable during the five years it was heavily used, only to become yellow and brittle within a lifetime). Conversely, “permanent” paper is not necessarily “durable” (e.g., alkaline paper with low initial durability could be very permanent if stored and not used). Durability tests, however, have been a critical part of all research to determine what makes paper permanent. It was by measuring the difference in the amount of durability (e.g., folding endurance, tear resistance) retained by papers after natural or artificial aging that Barrow and other researchers determined that alkalinity is an important contributor to the permanence of paper.

Given the relationship of durability tests to the determination of the relative permanence of paper, the following different approaches to establishing a standard for permanent paper are possible:

- Specify certain key characteristics of the makeup of the finished paper that have been identified as contributing to permanence by prior research;
- Specify a certain level of performance on a variety of physical tests applied after artificial aging of the paper;
- Use some combination of these approaches.

The current ANSI Z39.48 takes the first approach. Requirements for pH, alkaline reserve, and freedom from groundwood are included, based on previous research that identified these factors as significant to the permanence of paper. Requirements for initial (unaged) folding endurance and tear resistance are also included, although footnoted in a way that implies that they are guidelines rather than firm requirements. (See Footnotes 3 and 4 in the current standard). The rationale for the inclusion of initial folding endurance and tear resistance requirements is not that they are indicators of permanence per se. They are included to ensure a reasonable initial level of durability, from which the slower deterioration guaranteed by the standard’s requirements for pH and alkaline reserve will proceed.

Criticisms and comments on the provisions of the current standard have centered on the requirements for folding endurance and tear resistance. Several different, and, in some cases, contradictory arguments have been communicated to SCI1. The main arguments can be summarized as follows:

- Footnotes 3 and 4 make it unclear whether folding endurance and tear resistance are really part of the official standard. This should be clarified.
- Paper manufacturers do not routinely conduct these physical tests (particularly the folding endurance test) and therefore cannot certify that their papers meet these requirements. While paper makers can easily attest to pH, alkaline...
reserve and freedom from groundwood in papers they produce, determination of folding endurance and tear resistance requires repeated tests. Results vary within the same papermaking run. The folding endurance test itself has tremendous inherent variability. These factors make physical testing expensive and time consuming and also make some manufacturers reluctant to label papers as adhering to the standard.

- The concept of a minimum acceptable level of initial durability is suspect since there is no research that relates specific folding endurance or tear resistance values to the ability to withstand "normal" library use.
- Requirements for the initial durability of any paper depend on its intended use. It may be more appropriate to have several separate durability standards based on intended use rather than incorporating durability requirements in a standard for permanence. The durability requirements in the National Association of State Textbook Administrators' paper standard are an illustration of this approach. In fact, the ability to run the paper through a printing press without damage may be proof enough that the paper has adequate initial durability.
- The requirements for folding endurance and tear resistance should be modified to include both minimum pre-aging values and a minimum percentage retention of those properties after artificial aging. This approach would provide an objective measure of the permanence of the paper. In the event that there are factors in the makeup of the paper other than acidity or groundwood that have a deleterious effect on permanence (e.g., certain metals, recycled pulp), durability tests after artificial aging will discover them. This argument essentially advocates changing Z39.48 from a standard that specifies characteristics in the makeup of finished paper to one that combines this approach with specifying a certain level of performance on physical tests conducted after artificial aging. Some people have also advocated switching entirely to performance-based testing, eliminating all mention of other measurable attributes of finished paper.

The revision of Z39.48 clearly cannot address all of these concerns. The addition of a requirement for tests after artificial aging would further complicate the determination of a paper's adherence to the standard and would certainly lengthen the testing process. Such requirements would probably increase the reluctance of some paper manufacturers to take the trouble to certify that their papers meet the standard. The use of artificial aging and performance-based tests could, however, provide insurance against the possibility that some of the inevitable changes in papermaking technology could lead to the production of short-lived papers that nonetheless meet a standard that addresses selected initial properties.

After reviewing a variety of data, arguments and opinions (many of which are summarized below), SCII decided that the basic approach taken by the drafters of the current Z39.48, which focuses on attributes of finished paper, is both acceptable and more practical than the use of accelerated aging tests.

**Durability Tests**

Because folding endurance falls off rapidly as aging proceeds, the folding endurance test has been widely used in research on permanence of paper. As stated before, however, the test has substantial inherent variability and must be conducted under very carefully controlled conditions. It is tedious to conduct in the research environment and is almost never conducted in the paper production environment. Since other tests are also suitable for determining durability and both proponents and opponents of durability testing particularly dislike the folding endurance test, SCII proposes to remove it from the standard.

Tear resistance is another useful measure of durability that has been typically used in research on permanence of paper. The tear resistance test is easier to conduct, less variable and more likely to be applied in the paper production environment. Because SCII agrees that it is desirable for a permanence standard to specify a minimum initial level of durability, the Committee proposes to retain the tear resistance criterion. Testing of samples of currently made alkaline book papers suggests that most such papers can meet the tear resistance criterion specified in the current standard. The criterion does exclude some papers made with recycled fiber.

**Artificial Aging**

The first question about artificial aging is usually: how does it equate to natural aging? Does one day of aging at a specific temperature and relative humidity equal 10 years of natural aging? or more? or less? There isn't a definitive answer to this question. As a result, it is not possible to conduct tests to determine exactly how long a particular paper will last. We are therefore not in a position to establish a standard for paper that will last a specific amount of time, e.g., at least 500 years. Artificial aging tests can, however, be used to determine the relative permanence of different papers; they
have been used in this way to help to establish conclusively that alkaline paper is more permanent than otherwise comparable acidic paper.

The addition to the standard of a requirement for artificial aging would necessitate decisions about the conditions to be maintained during aging, the length of the aging period, and, of course, the reasonable minimum percentage retention after aging of one or more physical properties. There are two main types of artificial aging currently in use: dry aging and humid aging. In dry aging, the paper is aged in an oven simply supplied with ambient air. Dry aging is cheaper and easier to do, but is considered by many to be less suitable than humid aging as a surrogate for natural aging. Humid aging requires more expensive equipment to maintain desired temperature and humidity levels during aging and careful adjustment of the humidity levels within the paper before the aging period begins. There has been some experimentation with aging paper after enclosing it in stoppered test tubes or encapsulating it. (Dr. Chandru Shahani of the Library of Congress is currently experimenting with encapsulating paper and then aging it in a dry oven.) These methods seal in the paper's moisture, thus allowing relatively rapid "humid" aging in a dry oven.

Experts have differing views on the most suitable temperature and humidity for artificial aging. The International Standards Organization (ISO) has two separate humid aging standards (80°C, 65% RH; 90°C, 25% RH); many U.S. researchers use 90°C and 50% RH. The principal concern in performance-based testing, however, is to subject all papers to the same conditions and note their performance relative to some minimum values. It would therefore be unnecessary to wait for consensus before inserting some set of aging conditions in a standard for permanence of paper.

Comments received by the Committee have not addressed the appropriate artificial aging period to be included in a standard. Research on the permanence of paper has often involved aging periods of up to 24 days, and early guidelines for permanent paper also recommended tests after artificial aging for 24 days. Although such long aging periods reveal sharper differences in the retention of physical properties, they do not seem practical for a standard that will be applied in a commercial production environment. On the other hand, if shorter periods are used (e.g., three days), the degree of difference between acceptable and unacceptable papers may appear uncomfortably small. An artificial aging method and aging conditions that would reveal substantial differences in retention of physical properties in a short period of time would be very desirable. Dr. Shahani reports that the encapsulated aging method should provide useful results after three days of aging. By comparison, substantial differences in the retained folding endurance and tear resistance of the alkaline and acidic coated papers tested for the Committee did not begin to emerge until after 12 days of humid artificial aging.

If the conditions and length of artificial aging appropriate to a standard for permanence of paper can be selected, there remains the difficult task of establishing appropriate minimum percentages for the retention of various physical properties. Early guidelines suggested 50% retained folding endurance and 85% or more retained tear resistance after 24 days of artificial aging. These guidelines were developed without data on the actual retention of physical properties by current, commercially made alkaline fine printing papers, however. Much of the paper testing data available is derived from special handmade test papers. More data on currently made coated and uncoated fine printing papers is probably needed before reasonable minimum values can be set for retention of physical properties after aging.

The strongest argument against the incorporation of accelerated aging in the standard is the absence of any evidence suggesting that some papers that can meet the criteria in this proposed revision do in fact exhibit poor retention of durability after accelerated aging. All data known to the Committee indicate that adherence to the criteria described in the proposed revision is a sure predictor of acceptable retention of durability after accelerated aging.

Given that fact and the number of questions about accelerated aging that remain unanswered, SCII has concluded that there is no need to add a requirement for artificial aging to this revision of Z39.48.

Maximum pH

The current Z39.48 specifies a minimum pH, but no maximum. Because papers with very high alkalinity are subject to increased oxidation, it has been suggested that a maximum pH be added. The first draft of the proposed ISO standard for permanence of paper included a maximum pH of 9.5. Tests done by the Library of Congress indicate, however, that commer-
cial papers with pH levels as high as 10.3 are as permanent as papers in the 7.5 to 9.5 pH range. Based on this information, SCII has incorporated a maximum pH of 10 in the revised standard.

Mechanical Pulps

Since the current standard was developed, the paper industry has begun to use chemi-thermo-mechanical and other new types of mechanical pulps. These pulps do not contain groundwood and therefore meet the paper stock requirement in the current standard. Such pulps do contain significant amounts of residual lignin. Paper tests commissioned by the Committee and conducted by other institutions confirmed that alkaline papers with up to 7.5% residual lignin exhibit retention of durability equivalent to alkaline papers with less than 1% lignin. For this reason, SCII has set maximum lignin percentage of 7.5% in the proposed revision. The specific prohibition against groundwood has been removed. Papers with significant groundwood cannot meet the tear resistance criterion in the standard.

Recycled Pulps

Recycled paper is made with some percentage of pulp derived from previously made paper. Although to date recycled pulp has not played an important part in the production of fine printing papers, its role is likely to increase due to Governmental pressure and environmental concerns. Depending on the type of paper from which recycled pulp is made, the methods used to clean and prepare it, and the amount of new pulp included with it, alkaline papers containing recycled pulp can be suitable for long-term retention in libraries and archives. The concern is that the current Z39.48 is not adequate to distinguish quality alkaline recycled papers from weaker recycled papers that are also alkaline. Testing performed by the Committee indicates that the initial tear resistance criterion in the standard can discriminate among alkaline papers with recycled papers, i.e., some alkaline recycled papers meet the tear resistance requirement and some don’t. The proposed revision will also screen out recycled paper with very high amounts of residual lignin.

Other Deleterious Substances

Many substances used in commercially made papers are potentially deleterious to permanence if included in sufficient amounts. Specific substances brought to the attention of SCII include titanium, copper and aluminum. Given the basic approach of Z39.48 (which SCII proposes to retain), one can argue that a maximum allowable value should be included in the standard for all such substances. To date, however, SCII has not found extensive data either on the presence of dangerous levels of such substances in currently made book papers or on their negative effects on permanence independent of the factors already addressed in Z39.48. In the absence of such data, the Committee has elected not to add such criteria to the standard.

Manufacturing Materials and Methods

SCII received a few comments on the desirability of adding specific prohibitions against the use of certain sizing materials and of specifying that the paper must be made by certain processes. The committee believes that, as much as possible, the standard must specify measurable attributes of finished paper and leave the selection of production methods and materials to paper manufacturers. To do otherwise could penalize the development of innovative ways to make permanent paper and have a negative effect on beneficial advances in paper technology.

Coated Paper

The issues previously discussed apply to both coated and uncoated paper. Another set of questions applies to coated paper only. Coated paper was first introduced for high volume applications in the 1930s, but its technology has undergone tremendous change in the last 50 years. Early coated papers differ so substantially from those produced today that testing of naturally aged specimens is largely irrelevant to the task of establishing specifications for permanence of current coated paper. As the name implies, coated paper contains a base or core paper to which a coating is applied. Because of their coatings and adhesives, coated papers contain more different substances than uncoated papers. As slight differences in the makeup of coatings can affect the quality and cost of finished coated papers, paper manufacturers are naturally reluctant to provide information on the exact formulation of these papers.

The core of a coated paper may be alkaline, neutral or acidic. Most coatings are alkaline at
least at the time they are applied, although some owe their alkalinity to substances that quickly evaporate after the paper is made. If the coating is very alkaline, the extraction pH of the coated paper as a whole is likely to be alkaline even if the core paper is acidic. An initial question addressed by the committee was whether an alkaline coating could, in effect, neutralize acid in the core paper—i.e., was a paper with an alkaline coating "permanent" even if its core paper was acidic? Both the opinions of paper experts and the results of private studies done by paper manufacturers indicated that acid in the core of a coated paper would have a negative effect on permanence. Paper testing commissioned for SCII has corroborated the view that the core of a coated paper must be acid-free to ensure reasonable permanence. Standard tests for determining the pH of the core paper exclusive of its coating are yet to be developed. For this reason, the proposed revision specifies reliance on manufacturer's certification of the pH of the core paper as well as qualitative methods for determining the core pH of coated papers.

Comments received in response to the discussion draft of the revised standard pointed out that paper that is technically "uncoated" may have a very lightweight, but highly alkaline, surface coating sufficient to yield an alkaline cold extraction pH for a paper that is actually acidic. SCII has therefore specified manufacturer's certification of the pH of the paper and qualitative methods for determining the underlying pH of the paper for uncoated papers as well.

Another question was whether a coated paper containing a neutral core and an alkaline coating could be as permanent as a coated paper with an alkaline core. The paper testing done for the committee indicates that this may indeed be the case. Experts consulted agree that it is logical that an alkaline reserve in a coating could protect a neutral core from environmental pollutants. Additional testing related to this question would certainly be desirable, but data currently available supports a minimum required pH of 7 for the core of coated paper and an alkaline reserve for the paper as a whole of 2% or more.

Because a significant part of its weight is coating rather than fiber, the results of physical tests on coated paper differ substantially from the results of the same tests performed on uncoated paper of equal basis weight. In comparing the initial folding endurance and tear resistance of alkaline coated papers with the current standard, the committee found that almost none of the coated papers met the requirements as stated for uncoated paper. For example, a 60 lb. coated paper did not meet the standard for 60 lb. uncoated paper. Approximately 33% of the gross weight of the 60 lb. coated papers tested was coating, however, so the core papers were actually 40 lb. stock. The alkaline 60 lb. coated papers generally did meet the standards for folding endurance and tear resistance for 40 lb. uncoated paper. Since the printing qualities of coated paper are essential for some kinds of publications, it would serve no useful purpose to establish a standard for permanence of coated paper that excludes virtually all available alkaline coated paper. For this reason, SCII is proposing that requirements for initial durability of coated paper be based on the weight of the core of the paper.

Two other issues specifically related to the permanence of coated paper were brought to the committee's attention. These were the potential for unacceptable color changes in the coating over time and the possibility that age will weaken the bond between the coating and the core paper so that the coating will flake off. Professor Joseph Brown, a member of the committee, directed color change and strength of bond tests on the committee's coated paper samples and found no evidence of a need to address either of these properties in the standard.

International Standards—Paper Permanence

Work is progressing rapidly on the development of an international standard for paper permanence. ISO TC 46/Subcommittee 10 Working Group 1, chaired by Olaf Bethge of Sweden, has met three times and will soon be reviewing a fourth working draft. It is anticipated that a first CD (Committee Draft) will be circulated to the members of TC 46/SC 10 in 1991.

Lewis Brown (a paper manufacturing executive now retired from the S.D. Warren Paper Company) represented the U.S. at the meeting of WG 1 held in London November 8-9, 1990. The meeting attendance roster speaks to the high level of interest in the work: twenty-eight persons representing eleven national bodies participated in the latest meeting.

A number of key decisions were made as a result of the discussions. Earlier working drafts of the standard had included accelerated aging tests. As a result of intercalibration studies conducted for the WG, accelerated aging
tests have now been deleted from the draft standard. Agreement has been reached on pH, alkaline reserve, Kappa number and freedom from mechanical pulp. Tentative agreement has also been reached on strength properties.

The WG is next scheduled to meet in May 1990 in Copenhagen. A new work item to develop a standard for archival paper ("Paper for Durable Documents") has been added to their program of work, so it appears unlikely that this group will be able to retire in the near future.

Message from the Chair
Paul Evan Peters
Chairperson, NISO

NISO Dues and Finances

At its most recent meetings on October 9 and December 11, the NISO Board of Directors completed a year-long review of NISO’s program accomplishments, activities and plans in the context of NISO’s financial resources and prospects. As a result of this review the Board approved a program that will significantly enhance the support and management of NISO’s standards development activities per se while providing for NISO to move to new quarters by July 1, 1992. The Board also accepted the recommendation of its Finance Committee, formulated as part of this comprehensive review process, that the dues for NISO Voting Members be increased in general and significantly increased in particular at the lowest end of the Dues Schedule.

The Board believes that the long-term interests of NISO and the communities and constituencies that depend upon NISO’s standards development program are best served by the decisions it made on October 9 and December 11. In the next few issues of ISQ I will identify and discuss the key elements of the Board’s strategies for NISO’s development. In this issue I would like to identify and discuss the key elements of the Board’s financial planning strategy. There are three such elements:

• The dues for NISO Voting Members must be increased to more accurately reflect current economic conditions and program objectives. NISO Voting Member Dues have not changed since 1981. In the almost ten years since 1981 the expenses that NISO incurs in carrying out its program of work have increased as a result of both economic inflation and program expansion. The result is that NISO has had to draw approximately $25,000 from its reserve fund in each of the last two years. The Board is convinced that all cost control measures that can be taken have been taken and that an increase in revenue from Voting Member dues is warranted. Furthermore, the Board has been convinced for some time that an additional senior technical staff member is needed to improve management and representation of the plans and activities of NISO’s greatly expanded program. The Board believes that the time has come to build into NISO’s base operating budget the $50,000 per year that this new position will require.

• The dues for NISO Voting Members must be increased to more accurately reflect the actual costs of present and future operations. Since 1979, NISO has benefited from an arrangement whereby its facilities and many of its support services have been contributed to it by the National Institute of Standards and Technology (NIST). The Board has determined that improved and enlarged facilities are required to manage the process and to house the products (for instance, draft and approved standards, conference and meeting materials and reports and miscellaneous publications) of NISO’s expanded and expanding program. The Board has also concluded that these requirements far outstrip what NIST can be asked to provide. The Board’s Finance Committee has estimated that $75,000 must be added to NISO’s base annual operating budget to cover the market costs of operating in improved and enlarged quarters outside of NIST.

• The dues for NISO Voting Members must be changed to effect a more equitable distribution of costs among NISO Voting Members. A careful and thorough analysis of NISO’s FY90 operations has revealed that two-thirds of NISO’s Voting Members pay dues that are less than the costs incurred by servicing their memberships. This means that dues paid by one-third of the Voting Members partially defray the expense of servicing not only their memberships but of two other Voting Members as well. The Board believes that the participation of a wide variety of concerned and materially interested parties in NISO’s standards development program is an extremely important organizational priority and that it is fitting that this priority be operationalized by cross-subsidies from Voting Members with relatively ample financial resources to Voting Members with relatively modest financial resources. However, the Board is convinced that the degree of cross-subsidy effected by the existing Voting Member Dues Schedule is too high and that it must be lowered to a more equitable level.

In short, the Board has determined that both the viability and vitality of NISO dictate
that NISO's base operating budget be increased by $150,000 per year and has devised a FY91 budget that will lead to a FY92 budget that will accomplish this result. The Board has also set guidelines by which every effort will be made to generate $75,000 (50%) of these new revenues from the dues paid by new as well as existing Voting Members and $75,000 (50%) of these new revenues from other sources of revenue such as the income earned from the sale of publications and from offering conferences and workshops.

The Board is confident that its analysis of NISO's current situation and promising future has been thorough and that its forecasting of NISO's financial requirements has been conscientious. I hope that the above discussion of the key elements of the Board's financial planning strategy and how it intends to implement that strategy in NISO's FY91 and FY92 budgets has served to inform your understanding and to garner your support for the Board's deliberations and decisions. I will provide similar discussions of the key elements of the Board's strategies for NISO's standards development activities per se and for NISO's facilities in upcoming issues of ISQ. Both Pat Harris and I would like to hear from you about these matters, if you have any questions or observations you would like us to address.

From the NISO Executive Director
Pat Harris

Recharging Our Batteries

As we begin the new year and take our first big step into the nineties, it is an appropriate time to recharge our batteries and look ahead. On all fronts, NISO's leaders are laying the groundwork for new directions.

First, the NISO Board of Directors has laid out an ambitious plan for building NISO's support base. Part of this plan involves an increase in member fees, discussed by Paul Peters in his Message from the Chair.

Another part of the plan involves increasing NISO's visibility and influence through some well-placed ads and a bit of marketing.

On the standards side, the NISO Standards Development Committee has completed the Technical Plan, which outlines NISO's standards development goals and strategies for the next three years. This is the first time in anyone's memory that NISO's vision has been documented and agreed-on and the puzzle pieces are linked together into a coherent statement. This is an important achievement for any organization and a monumental watershed for a standards developer! If you would like to review the NISO Technical Plan it is available from the NISO office on request.

In a recent issue of Library Journal, John Swan reminds us that our role as information managers is to "bring the information revolution in line with human needs." If that human dimension is to be served then intelligent workable standards that promote efficiency and economy must be the linchpin of our information systems. This is what NISO was organized to provide. With your involvement and commitment it can happen and NISO can carry out that mission with excellence!

Electronic Scholarly Journals
Margaret Morrison

Remember the one-liner "To err is human; to really foul things up you need a computer?" It might have occurred to you had you attended the first meeting of the "Association of Electronic Scholarly Journals," so christened in Raleigh, NC on October 8, 1990. The meeting, hosted by Ann Okerson of the Office of Scientific and Academic Publishing, ARL, and Susan K. Nutter, Director of Libraries at North Carolina State University, gathered librarians, publishers, and representatives of most of the dozen or so refereed electronic journals in existence or in planning. Along with librarians from North Carolina State, those in attendance included:

- John Unsworth, Elaine Orr and Eyal Amiram, of North Carolina State, representing Postmodern Culture (January, 1990- ), a three-times-yearly electronic journal devoted to an investigation of twentieth cultural trends;
- Linda Newell, of the Kellogg Project, Syracuse University, representing New Horizons in Adult Education (1987- ), a semi-annual electronic journal aimed at adult education professionals throughout the world;
- Edward Jennings, of SUNY, Albany, representing the planned Ejournal, which will study the influence of networks on academia;
Lon Savage and Mahmood Kahn, of Virginia Tech University, representing the Journal of the International Academy of Hospitality Research (September, 1990-);

Lynn Kellar, of OCLC, representing a planned electronic medical journal to be published with the American Association for the Advancement of Science;

Charles Bailey, Jr., of the University of Houston Libraries, representing PACS-L and PACS-L Review (both 1990-), an electronic newsletter and an electronic journal on issues relating to online public access catalogs in libraries;

Michael O'Donnell, of the University of Chicago, representing a planned electronic journal on computer science;

Robert Sherrill, of the University of Chicago Press, chosen to voice some of the concerns of university and other non-profit publishers;

Margaret Morrison, representing ISO TC 46/SC 9, WI117, Citations to Electronic Documents.

The meeting opened with brief but lively discussions of the procedures each publication uses in producing, reviewing, and distributing the electronic journals. It was immediately clear that while the technology used to produce these journals is quite sophisticated, the publishing process itself is relatively artless. Most use BITnet or one of its subnetworks as a distribution mechanism, and most distribute entire "issues" rather than single articles or tables of contents.

Few of these journals are cataloged on OCLC or RLIN, only one has ISSN identification, and only one, New Horizons in Adult Education, is indexed by any service (in this case, by ERIC). Despite their electronic form, all of these projects maintain traditional journal conventions, that is, they are put out in issues, usually with some thematic unity, carry clear author and title information, and are fixed and unmodifiable once published.

Each of these projects also maintains its own archive of articles and will produce paper or microfiche copy upon request. Because these publishers are greatly concerned with the wide availability of their journals, subscription fees are rare. Only two of the projects, the Journal of the International Academy of Hospitality Research and the proposed AAAS/OCLC medical journal, charge fees; the others absorb all costs to the users.

The publishers of these disparate journals expressed remarkably similar concerns. First was copyright protection, which seems fuzzy in the area of electronic dissemination and was handled differently (if at all) by each publication. Volatility of the data and permanent archival storage were also of concern; since these projects are relatively new, no one has experienced any problems, although all could imagine major difficulties. Pagination, a format detail not easily handled on computer screens, evoked a wide-ranging discussion of the logical and typographical structures of print and non-print documents. Finally, all the publishers wanted their products to have academic weight and value equal to that of print publications but were afraid that they did not have such importance because of their existence in computerized form.

As part of the concern for academic respectability, the publishers expressed great interest in how their products were to be cited. A very general discussion of the elements included in the current N70 draft of the International Standards Organization's Work Item 117: Citations to Electronic Documents elicited great response and a recognition by the publishers of the complexities involved in citing electronic journals. The publishers themselves had few suggestions about citation formats, and several voiced a hope that the "codex culture," as print products were called, not be extended to the electronic milieu. However, as the discussion focused on the value of citations in documenting the growth of knowledge, all agreed that the issue was of importance to their disciplines.

An important result of these conversations was an understanding on the part of the publishers of the kind of editorial information that will be needed by researchers using electronic journals. Perhaps a more interesting consequence came out during informal talks over coffee and lunch. Publishers generally expressed surprise and respect for the sophistication that the librarians brought to the thorny problems of automated distribution of and access to information. In particular, that the standards-making community was already discussing citation formats seemed "perspicacious," to quote one participant. So much fun was had by all that the meeting ended with plans to arrange another meeting in the near future.—Peggy Morrison is the Council on Library Resources Intern at the University of Chicago, Regenstein Library.

Art Information Task Force

The Getty Art History Information Program (AHIP) and the College Art Association have
announced the formation of an Art Information Task Force (AITF).

This new Task Force results from the workshop Developing a Format for Cataloguing Art Objects and Their Visual Surrogates, sponsored by AHIP in the summer of 1989. The workshop was organized in response to several professional art organizations that had independently formed committees to investigate the feasibility of developing common standards for describing works of art and their images, and a format for the electronic exchange of such information. The workshop participants conceived of a task force to consist of representatives from the art-historical, museum, visual resources, archival and art library communities to work together toward common standards and practices for describing art objects and for sharing that information.

Beginning in late 1990 and continuing over the next three years, AITF will identify the fields of information required to describe art objects, examine and evaluate the descriptive standards presently being used to record information on art objects and images of them, review existing terminologies and other available standards, and investigate options for the interchange of information between and among computer systems. The AITF will publish its recommendations for standards, descriptive practices, and appropriate electronic exchange formats.

The task force is directed by Eleanor E. Fink, Program Manager, Information Standards and Services, AHIP, and managed by Patricia J. Barnett, Director of the Clearinghouse on Art Documentation and Computerization, The Metropolitan Museum of Art. Participating organizations include the Visual Resources Association (VRA), the Art Libraries Society of North America (ARLIS/NA) and the Museum Computer Network (MCN).

In establishing the AITF, the art community joins earlier initiatives by historians (Common Agenda for History Museums) and archivists (National Information Systems Task Force) to articulate the information requirements of their particular disciplines. Together these undertakings have the potential to greatly improve resources for scholarship in the humanities and to open new paths of cross-disciplinary inquiry.

For more information, contact Patricia J. Barnett, Thomas J. Watson Library, The Metropolitan Museum of Art, 1000 Fifth Avenue, New York, NY 10028-0198; (212) 570-3935; fax (212) 570-3879.—from a press release

Defective Copies of ISQ?

Occasionally, a misprinted or otherwise defective copy of Information Standards Quarterly will come off the presses and be sent to a subscriber.

If you should receive a less-than-perfect issue, please contact the NISO office and ask for a replacement copy.

Support NISO and Support Standards

NISO is thriving today because of the support it gets from a diverse group of organizations and individuals that have one thing in common: a strong commitment to standards. You, too, can be a part of the NISO team: as a Voting Member, an Information Associate or a Subscriber.

NISO Voting Members are associations, libraries, government agencies, publishers and information providers that are national in scope and have a direct and material interest in the standards developed and maintained by NISO. NISO’s first Voting Members were the American Library Association, the American Association of Law Libraries, the Medical Library Association and the Special Libraries Association. Today, fifty-one years later, sixty-seven Voting Members support NISO.

NISO’s Voting Members are on the front line of standards development: Voting Members receive all of the U.S. and, on request, international standards circulated for comment or ballot and are required to vote on each proposed standard. Voting Members vote on proposed new standards to be developed by NISO, receive ISQ and all published NISO standards, elect NISO’s officers and Board of Directors and, as members of NISO, guide the organization’s program. Voting Members pay annual membership fees based on the member organization’s annual budgeted expenditures; this fee ranges from $1000 to $4500 depending on the size of the member organization. A list of Voting Members as of December 1, 1990, appears below.

As a NISO Information Associate an organization or individual receives all of the draft standards distributed for ballot or comment but does not vote. Information Associates also receive ISQ. The annual Information Associate fee is $500. Information Associates can track NISO’s interests but do not vote and are not
NISO Voting Members

The following institutions are Voting Members of the National Information Standards Organization as of December 1, 1990.

American Association of Law Libraries
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American Library Association
American Psychological Association
American Society for Information Science
American Society of Indexers
American Theological Library Association
Apple Computer, Inc.
Art Libraries Society of North America
Association of American Publishers
Association of American University Presses
Association of Information and Dissemination Centers
Association for Information and Image Management
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The Association for Recorded Sound Collections
Association of Research Libraries
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The Blue Bear Group, Inc.
Book Manufacturers' Institute
CAPCON Library Network
Catholic Library Association
CLSI, Inc.
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Data Research Associates, Inc.
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IBM Corporation
Indiana Cooperative Library Services Authority
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Medical Library Association
MINITEX
Music Library Association
National Agricultural Library
National Archives and Records Administration
National Institute of Standards and Technology, Research Information Center, Information Resources and Services Division
National Commission on Libraries and Information Science
National Federation of Abstracting and Indexing Services
National Library of Medicine
National Technical Information Service
OCLC, Inc.
OHIONET
Optical Publishing Association
PALINET
Pittsburgh Regional Library Center
Readmore, Inc.
Reference Technology, Inc.
Research Libraries Group, Inc.
Society for Technical Communication
Special Libraries Association
SUNY/OCLC Network
Unisys Corporation
U.S. Department of Commerce, Printing and Publishing Division
U.S. Department of Defense, Army Library Management Office
U.S. Department of Defense, Defense Technical Information Center
U.S. Department of Energy, Office of Scientific & Technical Information
NISO Information Associates

The following institutions are Information Associates of the National Information Standards Organization as of December 1, 1990.

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Data Trek, Inc.
Information Handling Services
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U.S. West Advanced Technologies
University of Missouri, Office of Library Systems
University of Pittsburgh, SLIS
University of Washington
Western Library Network

Editor’s Notebook
Walt Crawford

Keeping Track

The centerpiece article in this issue provides detailed background for the major changes in the new version of Z39.48 now being balloted. Z39.48 is one of NISO’s great success stories and one of its most important standards. The new version applies to coated as well as uncoated paper and should be easier to apply.

Some of the changes in this version may be controversial—but they should not be mys-
erious. Thanks to a series of reports in ISQ, hundreds of people have been able to track the progress of SCII and should understand how this standard has come about. That process is important; standards don’t appear out of thin air, and important standards frequently involve controversy and extended effort. Those who serve on standards committees know that from the inside—but the rest of us aren’t always in a position to recognize the effort and intelligence that go into standards development.

That should not be true for Z39.48 and for some other new or revised standards such as the eventual Z39.19 (Thesaurus Construction) and Z39.69 (Patron Record Format). Those development activities have been carried out in the open, with fairly frequent reports in Information Standards Quarterly; as a result, we will have a widely-available record of the process.

That was my primary personal motive for taking on the editorship of ISQ: I wanted to see a more complete published record of the standards development and approval process, and was willing to put some effort into making that happen. My thanks to the SC chairs who have made that possible. And a plea to other SC chairs now and in the future: let us know in some detail about your efforts. When you produce minutes or a summary of a working meeting, drop me a copy. If it’s not in article form, that’s fine: I can rewrite it. Don’t worry about the quarterly cycle (although, if you know you’ll have something right around the first of March, June, September or December, it’s always better to get it to me by the first)—send in your informal notes, formal reports or think-pieces when they’re ready.

We’re in the information business. Information Standards Quarterly should be the premier publication for discussion of all issues related to NISO’s area of standardization—and it is already the best way to keep track of NISO standards development. With your help, that will become even more true in the future.

Recommended NISO Standard Form

The last two pages of this issue provide a form to be used for recommending new NISO standards and issues to be considered before requesting development of a new standard. Naturally, I hope you’ll photocopy the pages rather than tearing off the back sheet of Information Standards Quarterly.
EC 1992: New Proposals for European Standardization

Bill Moen

The clock is ticking and now less than two years remain for the European Community (EC) to complete the process of establishing a single market, free of internal frontiers and free of tariff and non-tariff barriers. European technical standards will play a decisive role in reaching this goal by December 31, 1992. The EC Commission estimates that over 800 European standards must be adopted in the interim. By comparison, it has taken the standards organizations the past six years to adopt a similar number.

Concern by the Commission over the capacity of current European standardization bodies, and their procedures, to accommodate such a demand for standards has been expressed in a recently released Commission Green Paper. The Development of European Standardization: Action for Faster Technological Integration in Europe provides a basis for discussions among existing European standards organizations, industry and other interested groups, and national governments to generate agreement on the standardization. Some experts believe this latest “Green Paper” is the best articulation of what lies ahead.

Treaties and other agreements since 1951 (the Treaty of Paris that established the European Coal and Steel Community (ECSC)) have paved the way for integrating the national markets while preserving national sovereignty. The 1985 publication of the White Paper Completing the Internal Market by Lord Francis Arthur Cockfield and the subsequent Single European Act in 1986 set Europe on the timeline that will hopefully be fulfilled at the end of 1992. In the standards arena, attempts to develop European-level standards began in the early 1960s. Through the standards process in the European Community (EC) one sees revealed the tension between national needs and interests and European-level imperatives as the single market unfolds.

No doubt “Europe 1992” conjures up multiple images for not a few ISQ readers. To evaluate the recommendations in the Green Paper some preliminary information on the structure for decision-making in the EC and the current arrangement of the standards process is necessary. Looking from the vantage point of the EC Commission at the importance of technical standards for market integration offers an interesting perspective for understanding aspects of the Europe-to-be of 1992.

The European Community

The European Community consists of twelve member nations (Belgium, Denmark, France, Great Britain, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, West Germany). In addition to the Treaty of Paris in 1951, the Treaties of Rome in 1957 created the other two major “communities” in Europe, the well-known European Economic Community (EEC) and the European Atomic Energy Community (Euratom). Another European organization, the European Free Trade Association (Switzerland, Austria, Finland, Sweden, Norway and Iceland), although not part of the EC, plays an important part in standards activities. The three Communities (ECSC, EEC, and Euratom) cooperate through several legislative, consultative and judicial institutions—the European Parliament, Council of Ministers, Commission, Court of Justice and Court of Auditors.

For discussions about this Green Paper, the Commission and Council are key. The Commission, consisting of seventeen members appointed by agreement between the member governments, is concerned with a range of tasks. Its role is to act as guardians of the Treaties, to serve as the executive arm of the Communities, to initiate Community policy, and to defend the Community interest in the Council. The Council consists of representatives of the government from the twelve member states. The representatives are usually ministers in their governments. The Council provides the voice for national interests in Community discussions and decision-making. Both the Council and the Commission have legislative powers and thus share the responsibilities for passing rules, regulations, directives, and other legislative instruments to govern and regulate activities in the Community.

National Standards as Non-tariff Barriers

While agreements at the Community level have effectively removed tariffs as barriers to the flow of goods through the EC, national product and technical standards and other national regulations have served as non-tariff barriers. European-level standards can serve to reduce and eliminate such non-tariff obsta-
cles to the flow of goods. Two organizations exist for the development of European-level standards. Membership in these European standards bodies come from the national standards bodies of the twelve EC members and the six EFTA members. The Comité Européen de Normalisation (CEN, which parallels the work of ISO) and the Comité Européen de Normalisation Electrotechnique (CENELEC, which parallels the work of IEC) were established in the early 1960s. They ensure effective implementation of international standards by European national standards bodies and, in the cases where there are no existing standards, will prepare them. These committees are associations of national standards bodies. As such, they have the responsibility for the harmonization of divergent national standards to agreed community standards.

While there are European-level standards, in that the elements of the standards apply throughout the EC, these standards cannot be used until they are adopted as national standards. Recognizing that telecommunications standards are fundamental to the establishment of a single market, the Commission proposed the European Telecommunications Standards Institute (ETSI) as a means to accelerate the development of harmonized specifications. The ETSI was established in 1988 as the first truly European standards development body that provided for direct participation of interested parties at the European-level on telecommunications standards (its work complements that of the CCITT). This is in contrast with CEN and CENELEC whose representatives come from national delegations headed by national standards bodies. ETSI has 212 members and 31 observers and cooperates with both CEN and CENELEC.

A New Approach to Standards Development

The process used to promote standardization in the EC has changed in the past six years. Before 1985, the Council attempted to legislate differences between the various national standards. The pace at which European standards were being developed under this procedure was slow. Since 1985 a “New Approach to technical harmonization and standardization” has been used in which the Council through its Directives provides the “essential requirements” for certain products in the areas of safety, health and the environment. The standardization bodies develop the specifications to conform to the essential requirements. Different technical specifications can produce conformance to the essential requirements, and as a result, this approach has not necessarily encouraged inter-operability. For example, on a practical level, an essential requirement for a domestic electrical appliance calls for the presence of a third wire as a ground, yet the specifications of separate countries’ national standards may provide for the third pole on the plug to be round or square.

A second element of the New Approach was “mutual recognition.” Products conforming to established specifications that meet the essential requirements can be traded through all the EC countries. Each country recognizes other countries’ national standards (and thus, the products) that comply with the essential requirements. The New Approach has enabled the European standardization bodies to adopt over 800 standards in the last six years, which is three times as many as adopted in the previous twenty years. While production of standards has increased dramatically, the process is not producing the number of standards needed quickly enough, according to the Green Paper. Given the EC Commission’s overall concern with the health and well-being of the European Community, it is strongly committed to the promotion of European standardization. A single internal market and integration of economies are the goals, and regional standardization is a fundamental to reaching these goals. The Commission’s Green Paper presents three categories of issues for European standardization in the 1990s. The first two are outlined below. (The third category, the role of public authorities, concerns legislation and financing.)

The Role of European Industry and Other Interested Parties

The Commission recommends that companies and other interests intending to benefit from the single market must give more attention to standards development than they currently do. The arrangement existing in CEN and CENELEC does not offer or encourage direct participation by all interested parties. The Commission is recommending changes to accommodate more participation by industry and other interested parties. Direct financial contributions are needed to support standardization activities, and industry should accommodate the need for their technical experts to assist in the preparation and drafting of European standards. Euro-

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pean industry, large and small, is faced with a choice: accept the present structure and level of involvement in European standardization that will produce many of the needed standards, albeit slowly, or make the commitment of more support and wider involvement to increase production of European standards.

The Organization of European Standardization

The Commission's second issue involves a set of related concerns. To improve the capacity of European standardization organizations to deliver harmonized standards for the single market, some concerns must be addressed immediately. These priority issues are: 1) efficiency; 2) coordination and structure; and 3) membership and international cooperation.

Efficiency

From the Commission's point-of-view, efficiency in the production of European standards is the highest priority. Delays in the production of European standards will have a tangible economic cost for the Community. Several actions are recommended to European standardization bodies for their consideration. New methods for establishing common working documents using more technical experts from industry on project teams or drafting secretariats should be implemented. Industry-based associations working as Associated Standards Bodies should be encouraged (which would also improve the availability of technical experts). More Associated Standards Bodies would improve direct industry involvement, decentralize the standards development process, and reduce the financial and administrative burdens on CEN and CENELEC. New technology should be used to distribute working documents and final drafts as well as enabling new channels for communication, discussion and decision-making.

Other procedural changes recommended by the Commission include the use of majority voting on proposed draft standards when consensus is difficult to achieve and the incorporation of shorter and more flexible public inquiry periods. Finally, national adoption of standards agreed to at the European-level should no longer be a pre-condition for their use as a European standard. The Commission believes that the adoption of some, or all, of these recommendations will increase the speed of delivery of European standards.

Coordination and Structure

The Commission proposes a new European Standardization System as its primary recommendation to improve the coordination and structure in standards development. The structure of a European Standardization System outlined by the Commission consists of a European Standardization Council (setting overall policy of European standardization), a European Standardization Board (acting as the executive body of the Council), the European standardization bodies (bodies organized at European-level and recognized by the Council as responsible for standardization in particular fields), and the national standardization bodies (bodies organized at national level).

The system envisaged by the Commission would include more sectorally-based standardization at the European-level and assure coordination, transparency and legitimacy of European standardization by applying common rules to all standardization bodies in the System. The Commission believes that the framework for the European Standardization System can be established by the end of 1991.

Membership and International Cooperation

The Commission does not recommend an expansion of membership in the three existing European standardization organizations; however, associate membership status (participation without the right to vote) could be offered to interested non-member European countries. This could be of particular importance given the changes taking place in Eastern Europe. The Commission leaves it up to the standardization bodies to decide whether to offer limited opportunity for input into their work by non-European countries. Interestingly, in May 1989, following U.S. Commerce Secretary Robert Mosbacher's trip to Brussels, an agreement between the EC and the U.S. expressed a commitment to openness in the standardization process.

The Commission is concerned that involvement by non-European countries in European standardization bodies, while providing improved transparency, may produce delays and encourage discussions that are more appropriate within international standardization bodies. International standards can and should be sources for the development of European standards, and the Commission encourages coordination, dialogue and cooperation between European stan-
standards organization and their international counterparts. The European organizations may need to reassure the international standards community, however, that the focus and development of European standards are a substitute for national, not global, standardization.

Other important issues also need attention—financing the standardization bodies, adequate information about standardization activity, testing and certification, intellectual property rights and patents, etc. While less urgent than the priority concerns above, the Commission quickly points out that lack of progress on these might also reduce standards development as an effective force in the European economy.

Europe 1992?

The Commission understands that the main motive for promoting standardization efforts is economic. The European Community is fully committed to European standardization because of its economic importance. The recommendations and proposals presented in the Green Paper, if acted upon and adopted, will change the standardization process in Europe. As a result, it is likely that the production of standards will accelerate. Yet it remains to be seen whether all non-tariff barriers, based in national technical standards and regulations, can be eliminated by January 1, 1993, to complete the internal market.

Copies of the Green Paper can be obtained from the NISO office.

SISAC Restructures to Prepare Electronic Communications Standards for Journals

After a September 1990 meeting with individuals from NISO, the Serials Industry Systems Advisory Committee (SISAC) agreed to develop electronic data interchange (EDI) standards for journal orders, order acknowledgments, claims, cancellations and invoices. Earlier in the year, Paul Evan Peters, NISO chair, described to SISAC NISO's approach to the EDI formats developed by ASC X12. With the understanding that the Book Industry Systems Advisory Committee (BISAC) is also doing so, SISAC organized to determine X12 data elements appropriate for transaction sets for serials publishers, buyers and sellers.

Waldenbooks and B. Dalton are currently testing ASC X12 book orders and invoices with Simon & Schuster. They plan to expand those tests as BISAC finalizes and approves X12 transaction sets for books. In a pilot project, The Faxon Company is testing the transmission of X12 changes of address, cancellations and claims to—and receiving claim responses from—publishers including Wiley, Royal Society of Chemistry, National Research Council of Canada, Pergamon, Plenum and Kluwer. According to Fritz Schwartz, Faxon's Manager of EDI, "this is a whole new way of thinking. We are excited about being part of this national and international interest in taking advantage of the technology to eliminate unnecessary effort on the part of our customers and our suppliers."

"EBSCO Subscription Services Division has been transmitting and receiving business data in standard EDI formats developed by ASC X12 for over a year," said John Krontiras, Vice President, EBSCO Information System. "This puts us in a position to use X12 formats at EBSCO, with the experience we have gained in installing and running EDI," he added. EBSCO and Faxon are members of the International Working Party on Magnetic Media Transfer, a group of international journal publishers and subscription agents working toward the transmission of messages containing dispatch information.

In SISAC's restructuring, the following individuals have agreed to chair ASC X12 Format Development Subcommittees: Orders, Betty Landesman, Gelman Library, George Washington University; Order Acknowledgments and Responses, Sandy Gurshman, Readmore; Claims and Responses, Judith Brugger, Cornell University Library; Cancellations and Responses, Minna Saxe, City University of New York Library; Invoices, Fritz Schwartz, Faxon.

Sandra Paul, Managing Agent for SISAC's parent organization the Book Industry Study Group, is coordinating the efforts across subcommittees and with BISAC. BISG joined X12 last year. Paul acknowledged the growing use of X12 formats for national and international EDI. She noted that "although SISAC's library constituency has traditionally used data communications formats based on ANSI/NISO Z39.2, Bibliographic Data Interchange, NISO's agreements to migrate its [business-related] standards to ASC X12 allows us to proceed with our work. If SISAC gets as much enthusiastic support as we've had in BISAC's work, I expect it will take a full year to
finalise the ASC X12 formats for serial transactions," she added.

For more information on SISAC, contact the Book Industry Study Group, 160 Fifth Ave., N.Y., NY 10010; (212) 929-1393; fax (212) 989-7542. For information on ASC X12, contact the Data Interchange Standards Association, Suite 355, 1800 Diagonal Road, Alexandria, VA 22314; (703) 548-7005.—from a SISAC press release.

Accredited Standards Committee X12 October 1990 Meeting

Joe Santosuosso

ANSI chartered ASC X12 in 1979 to develop standards for electronic data interchange (EDI) of business transactions such as orders, receipts, invoices and payments. ASC X12 convenes three times a year to develop and maintain X12 standards. The October and February meetings are very much working meetings, in contrast to the April meeting, where an exhibit area competes for interest with subcommittee work.

At the October and February meetings the corridors of the meeting room areas are set aside for vendor-sponsored tabletop literature displays, which are minimally staffed. Companies represented at tabletop literature displays range from the largest international corporations to one- and two-person companies. In addition to committee work and tabletop literature displays, ASC X12 meetings include a program of well-attended, informative educational seminars.

This report provides a sampling from the October 1990 ASC X12 meeting.

X12 Committees and Membership

ASC X12 now has 427 dues-paying members. Members vote on every issue that comes before X12, very much analogous to the process through which NISO members approve standards. X12 subcommittees and task groups may meet outside of the thrice-yearly meeting schedule, but much of the work takes place at these formal meetings. For example, Subcommittee X12H, the Materials Management subcommittee, is involved in the development of standards for exchanging information that enables companies to manage inventory.

Subcommittee work in X12 is very much like Standards Committee work in NISO—members are volunteers who enjoy the nitty-gritty detail work of developing standards. Subcommittee members' companies subsidize members' involvement.

DISA Annual Meeting

The Data Interchange Standards Association (DISA) is the secretariat for ASC X12. Its responsibilities include managing the X12 meetings, publications and standards balloting. Kenneth Hutcheson (E.I. du Pont de Nemours & Co.), ASC X12 chair, reported on the state of X12. Much of his report consisted of explaining DISA's attempts to cope with growing pains brought about by ASC X12's success.

In the last year DISA and ASC X12 have expended considerable effort in streamlining the ASC X12 organization and in formalizing procedures. There has been an attempt to clarify the relationship between X12 and DISA. At the meeting, DISA distributed its first annual report. The need to streamline operations is evident when you consider that DISA processed approximately 32,000 ballots last summer alone. Given the ever-growing interest in X12, it appears likely that organizational issues will occupy ASC X12 and DISA for some time.

Educational Seminars

The titles of some of the educational seminars suggest the range of topics: EDI Justification, X12 Subcommittee Functions, Explanation of EDI Implementation Reference Manual, Introduction to EDIFACT, DISA Forms and Procedures, Training, Third Party Networks, Financial EDI Tutorial, Advanced X.400, UN/EDIFACT Syntax. In addition, two "corporate experience" sessions were offered, in which representatives of companies that had implemented X12 related their experiences.

In general, the education sessions are informative enough to be competitive with educational offerings of companies set up specifically for EDI training. The EDI Justification session was a bit like preaching to the converted, but provided some very interesting statistics. For example, IBM estimates that it could save $60 million by implementing X12 with its top 2,000 suppliers. Some other interesting statements from that session: 17% of all companies are doing EDI today; within two
Standards Status: December 1, 1990

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<td>20</td>
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<td>Z39.69-199x Record Format for Patron Records</td>
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<td>21</td>
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<td>Z85.1-1980 Permanent and Durable Library Catalog Cards</td>
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<td>Development</td>
<td>SC MM Environmental Conditions for the Exhibition of Library and Archival Materials</td>
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<td>Development</td>
<td>SC QQ Physical Preparation of Theses and Dissertations in Printed Form for Long-term Retention by Libraries and Archives</td>
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<td>Formation</td>
<td>SC RR Adhesives used to Affix Labels to Library Materials</td>
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<td>Formation</td>
<td>SC SS Information to be Included in Ads [etc. ] for Products Used for the Storage, Binding or Repair of Library Materials</td>
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<td>Formation</td>
<td>SC XX Abbreviations of Captions for Holdings Statements</td>
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years, 34% of all other companies plan to do EDI.

1990-91 Balloting and Review Calendar

This calendar replaces the calendar published in ISQ v. 2, no. 4. In each case, balloting begins in the month stated. Copies of these drafts may be ordered, for $30 each (purchase order or prepaid, in U.S. funds), from NISO.

December 1990
Z39.34: Synoptics. Ballot to withdraw the standard.

January 1991

February 1991

March 1991

ISO TC46 U.S. Comments
The following dates represent the deadlines for comments to NISO.

January 31, 1991
DIS 10160: Information and documentation—Open systems interconnection—Interlibrary loan application service definition.
DIS 10161: Information and documentation—Open systems interconnection—Interlibrary loan application protocol specification.
U.S. experts will meet on February 8, 1991, at the Library of Congress to finalize U.S. comments on DIS 10160 and 10161 and to discuss comments on Search and Retrieve, DIS 10162 and DIS 10163. Contact the NISO office for details.

Standards Activity
These notes summarize standards activity between September 1 and December 1, 1990.

Standards Being Balloted
- Z39.34: Synoptics. The ballot to withdraw this standard began in December 1990.
Partial Results as of December 1, 1990:
   9  Yes
   3  Abstain (AIIM, BMI, Information Workstation)

Work Item Being Balloted
Partial Results as of December 1, 1990:
   14  Yes
   2  Yes with comments (NLM, LBI)
   1  No (Information Workstation)
   1  Abstain (Gaylord)

Standards Recently Balloted
- Z39.1: Periodicals: Format & Arrangement. This revised standard was balloted July 15-October 15, 1990.
Final Vote:
   28  Yes
   7  Yes with comment (ASI, AAP, LC, Music LA, NLM, NFAIS, OCLC)
   3  No (AJL, Information Workstation, RLG)
   2  Abstain (AIIM, BMI)
   7  Comments from interested parties

Standards Circulated for Comment
- Z39.7: Library Statistics. As of December 1, five comments have been received; the comment period ends December 17, 1990.
Standard Withdrawn

- Z39.27-1984: Structure for the Representation of Names of Countries... The single vote against withdrawal has been resolved. Z39.27 has been withdrawn. ISO 3166 serves the same functions as Z39.27 and takes its place.

Standards Being Revised

- Z39.2: Bibliographic Information Interchange. Sally McCallum (Library of Congress, Network Development and MARC Standards Office) is serving as technical editor to resolve the negative votes and revise the standard. A revised standard should be balloted in 1991.
- Z39.5: Abbreviations of Titles of Publications. See page 21 for notes on this revision effort.
- Z39.47: Extended Latin Character Alphabet for Bibliographic use (ANSEL). Sally McCallum is serving as technical editor to resolve the negative votes and revise the standard. A revised standard should be balloted in 1991.

Standards Awaiting Revision

- Z39.43: Identification Code for the Book Industry (SAN). NISO is seeking a technical expert to review the comments and revise the standard.
- Z85.1: Permanent and Durable Library Catalog Cards. Because this standard references Z39.48, the revision of Z85.1 has been postponed pending the completion of the revision of Z39.48.

Standards Development

- SC MM: Environmental Conditions for Exhibition of Library and Archival Materials. See page 21 for notes on this SC’s first meeting.

Abbreviation of Titles of Publications

A committee to revise Z39.5, Abbreviation of Titles of Publications, was appointed in October 1990. The July ballot for reaffirmation of this standard brought 5 votes to revise and 5 votes to reaffirm with comments.

The committee members, Julia Blixrud (National Serials Data Program, Library of Congress), Robert Tannehill (Chemical Abstracts Service) and chair Sally Sinn (National Library of Medicine), will meet soon to begin the revision process and consider the comments. Comments received covered a range of issues including: the scope and application of the standard; provisions for abbreviation of names of persons, corporate bodies and places; the use of punctuation and special characters; and comments addressing the overall arrangement of the standard and the use of examples.

The committee has been asked to complete a first draft for ballot by January 1992.—Sally Sinn

Patron Records

Draft standard Z39.69, now out for balloting, defines a format for the representation and communication of library patron information in machine-readable form. It provides for all the data elements that might be contained in any patron file and includes elements to protect patron privacy. In an appendix to the proposed standard, patron records now being used by ten automated circulation systems are mapped to the standard format.

Using this standard, libraries will be able to exchange patron records with other libraries and to migrate patron records from one automated circulation system to another in a more efficient and economical way.

The SC that developed this draft was chaired by Deborah K. Conrad (Southeastern Automated Libraries, Inc.) and included Gene Damon (Northeastern University), Jean Hamrick (University of Texas at Austin), Katharina Klemperer (Dartmouth College), Joseph Matthews (Geac, Inc.), Richard Shurman (Cooperative Computer Service), Jimmy Thomas (Unisys Corporation), Susan Olson (OCLC, Inc.) and Linda Sue Scott (Southham BICG).

Environmental Conditions for Exhibition of Library and Archival Materials

SC MM met for the first time November 29-30, 1990, in Austin, Texas, at the Harry Ransom...
Humanities Research Center of The University of Texas at Austin. The committee produced an outline of issues it wants to cover in developing the standard.

Committee members have accepted assignments and anticipate having detailed outlines and bibliographies compiled by mid-May 1991. The committee plans to meet next in Albuquerque, New Mexico, in conjunction with the annual meeting of the American Institution for the Conservation of Historic and Artistic Works (AIC).—Cathy Henderson, Chair

News and Events
Notes on meetings, non-NISO standards and other items that may be of interest to ISQ readers.

ANSI 1991 Annual Conference
ANSI will hold its 1991 Annual Conference April 9-11, 1991, at the Hyatt Regency Reson (Reston, VA: five minutes from Dulles Airport). The theme is “Strategic Standardization Issues of this Decade—A Focused Response to Global Developments.”

The first day will feature an international seminar on “Environmental Problems—Standards Solutions” hosted by ANSI and sponsored by ISO and IEC. The second day, ANSI’s public conference will address “Standardization’s Role in Maintaining Open Markets.” On the third day, an ANSI workshop will demonstrate ways of “Using New Technologies to Speed the Standards Development Process.”

More details will appear in the ANSI Reporter.—adapted from ANSI mailing

AIIM Library Ad Hoc Group
The Association of Information and Image Management held a special meeting of librarians in conjunction with its recent standards week. Twenty-four participants met to provide AIIM with a better understanding of the needs of preservation librarians for standards and guidelines within AIIM’s areas of expertise. Carolyn Morrow attended the meeting on NISO’s behalf.

The conclusion was that AIIM should take a stronger position regarding preservation microfilming. Preservation librarians would like to cooperate in developing AIIM standards, and requested training and standards implementation workshops for users and vendors. One major issue regards the appropriate format for preservation microfilming; AIIM may be able to provide assistance. On the other hand, some bibliographic concerns raised are most appropriate to NISO and would not be addressed by AIIM—adapted from advance copy, standards column, fyu/tn

Information Processing: ASC X3
Two items from X3’s long list of new activities:

- ASC X3 has begun a study to ensure the viability of OSI network and transport protocols in the very high-speed networking environment. The study project will (1) examine the requirements placed on network and transport layer protocols in support of very high-speed networking, (2) analyze existing OSI network and transport protocols with respect to the requirements found in (1). The results of the study will be one or more proposals for modifications to existing OSI standards or new OSI protocols for the support of upper layers. Contact: Lynn Barra, X3 Secretariat, 311 First St. NW-Suite 500, Washington, D.C. 20001; (202) 626-5738.

- Technical Committee X3T2, Data Interchange, has begun a project to develop a set of Packed Encoding Rules—a “plug-compatible” and relatively straightforward development of ISO 8825 (ASN.1 Basic Encoding Rules for OSI) to improve the performance of systems employing it as a transfer syntax. The design will reduce redundancy and possibly use fixed-length encodings to improve the efficiency of encoders and decoders. Contact Mr. Richard G. Foote (X3T2 chair), GTE Government Systems Corp., 1 Research Drive, Westborough, MA 01581; (508) 870-4520.
## Recommended NISO Standard

**Recommended By**

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**NAME of recommended standard:**

**PURPOSE of recommended standard:**

**SCOPE of recommended standard:**

**APPLICABILITY of recommended standard:**

**USERS/BENEFICIARIES of recommended standard:**

**Potential Funding Source(s):**

**Suggested Committee Members:**

Return this form to: NATIONAL INFORMATION STANDARDS ORGANIZATION

NIST, Admin. 101, RIC E-106
Gaithersburg, MD 20899

Telephone: (301) 975-2814
Fax: (301) 975-2128
Issues to be Considered Before Requesting Development of a New Standard

Scope and Coverage

1. Is the requested standard sufficiently "substantive" to warrant a separate, independent effort?
2. Could the requested standard be considered a change to, or enhancement of, an existing standard?
3. Could the requested standard be considered an aspect of a new standard of greater, more encompassing scope? (As a general rule, standards should be as broad as practical, thereby obviating the need for a proliferation of very narrowly scoped standards.)
4. Is it possible to describe alternative ways of achieving the ends of the requested standard? Can the objective be made to happen without a standard?
5. Are there existing standards that will be impacted by this proposed standard?

Effects of the Standard on Users

6. What groups will be affected by the requested standards (e.g., public libraries, networks, publishers, manufacturers, patrons, government agencies)? What proportion of their current activities will be affected?
7. What groups will incur costs if the requested standard is implemented?
8. What groups will benefit from the requested standard, and to what extent? Is the benefit quantifiable?
9. Does the requested standard have retrospective implications? Must existing methods be changed? Must existing materials or files be reprocessed?
10. What types and levels of staff will be involved in implementing the standard?
11. Could the standard have an adverse affect on groups that failed to adopt it?

Costs Associated with the Standard

12. What kinds of development or implementation costs are associated with the requested standard? Are these one-time or recurring costs?
13. Does a cost-effectiveness study of the requested standard exist, or can one be developed? If there are any data of this type, do they argue for or against the standard? Would a cost-effectiveness study be of use to groups potentially affected by the requested standard? Is it advisable that one be done before work on the standard proceeds? Who should do such a study?