NISO Celebrates 50th Anniversary

Nearly a hundred activists in the standards arena gathered September 18, 1989 in the Library of Congress Mumford Room for the NISO Annual Meeting and Program, a celebration of the half-century since NISO's predecessor organization, ASA Committee Z39, was formed.

The morning session began with a keynote address and continued with remarks from several speakers on the history of Z39 and NISO. Following a luncheon featuring tables devoted to specific interests, the program concluded with notes on the future of NISO and standards development and a NISO awards ceremony. A brief annual business meeting followed.

The keynote address by Dr. Irving Louis Horowitz appears elsewhere in this issue. Paul Evan Peters' closing remarks appeared in Information Standards Quarterly volume 1, number 4 as his message from the chair. The notes that follow, which exclude these two talks, give only an inkling of the warm, fascinating commentaries that made up this 50th anniversary celebration.

The Past
Henriette Avram, Moderator

Ms. Avram (Library of Congress) first became involved with Z39 in the mid-1960s, when Jerrold Orne asked her to chair a standards committee to develop a format for bibliographic interchange. She introduced the speakers who followed, beginning with Jerrold Orne, "mentor, severest critic, and friend."

"Henriette Avram was, at the time of this meeting, Assistant Librarian for Processing Services for the Library of Congress. Mrs. Avram has..."
been active in Z39 since the 1960s. It was under her leadership that standards for the automated information environment were envisioned and created. She is now Associate Librarian for Collection Services at LC.

ANSI Z39—Our Roots

Jerrold Orne

It all began in 1939, when the American Standards Association (ASA) was receiving papers from ISO’s TC 46 and needed reviewers. The American Library Association and others proposed an agency to review TC 46 drafts and work on library standards; Z39 was born.

In the early years, Z39 struggled from the lack of perceived common ground among librarians, documentalists (the early term for information scientists) and publishers. The early decades show spotty meetings and results. In the first ten years, Z39 prepared two standards; in the second decade, there were also two Z39 standards—the same two.

Orne regaled the crowd with anecdotes from his years representing Z39 at ISO meetings. Z39 helped to re-establish TC 46 as a strong organization, after it had gone soft during weak years (much as had Z39 itself).

Internal struggles have always been part of Z39, if not always well-reported; Orne mentioned a few such struggles, including the proposal to establish CODEN as a standard. He also noted the importance of Library of Congress people in promoting Z39.

His own method for moving Z39 forward was to give a committee a limited time and to expect results; if results were not forthcoming, he would ask others to take over.


Jerrold Orne was Z39’s chairperson and prime mover from 1965 until 1978. Under his leadership, Z39 began to achieve the recognition and support of its constituent communities.

Z39 in Transition

Robert W. Frase and James L. Wood

Robert Frase opened the first Washington office of the Trade Book Publishers Association and started to work with the Library of Congress and others on mutual concerns. In 1975, he was part of CONTU, the commission studying the effects of new technology on copyright. He had been involved in standards work for some time.

The subsidies for Z39 from the Council on Library Resources and National Science Foundation were coming to an end in the mid-1970s; Frase found himself involved in starting Z39 all over again. A 1978 report called for a $150,000 annual budget, but showed no source of explicit funding.

The National Bureau of Standards saved the day by providing a home for Z39, with an office and support services. In the spring of 1978, the first Z39 election was held, choosing James L. Wood as chairman.

Jim Wood, who was the American Chemical Society’s representative to Z39 and NISO from 1958 to 1985, agreed to run for chair since he knew he had no chance of winning. In 1978, he found an organization with no debt but no money. Z39 had many members and lots of suggestions for possible standards. He worked to develop strategies to make the organization work: a finance...
committee raised money, a bylaws committee established a stable structure and guidelines, a publicity committee increased awareness of Z39. Under Wood’s chairmanship, Frase became the first executive director of the organization, serving from 1978 until 1982.

These years also saw the beginning of the Voice of Z39; increased interest in Z39; and the first honorary memberships, awarded to Daniel Melcher, Jerrold Orne and Anne J. Richter.

Before becoming Z39 Executive Director, Robert Frase was active in standards development activities both nationally and internationally.


Settling Z39 Down
Patricia W. Berger

When Ms. Berger became chair of Z39 in 1981-82, she wanted to assure that the organization continued to serve many different interests; at one point, there was some possibility that computer-oriented concerns would become dominant. She worked to assure the perception of impartiality during her term (1981-83); Sandra K. Paul helped to pick up the slack.

Patricia W. Berger is Chief of the Information Resources and Services Division, National Institute of Standards and Technology (NIST, formerly NBS). She was instrumental in securing a home base at NBS/NIST for Z39’s and, later, NISO’s operations. Ms. Berger is currently serving as President of the American Library Association.

Expanding NISO for the Future
Mary Ellen Jacob and Ted Brandhorst

Ms. Jacob discussed some of the trends she sees for the future of NISO:

- Integration of information: sources, media, graphics, EDI (Electronic Data Interchange) and so on.
- Electronic products: CD-ROM, electronic mail and others.
- Awareness: meetings such as this one, the technical standards curriculum prepared by Toni Carbo Bearman, Information Standards Quarterly and other publications, a move toward corporate support.
- Shorter product life for standards, leading to shorter cycles and more streamlined procedures.

NISO needs to look at the tasks that are required and the kinds of participation that will be most effective. We need detail people, who understand exactly how things work, to develop standards; we need fund-raisers; we need administrators and managers; we need visionaries; and we need members who will vote carefully and responsibly. In short, we need dedicated professionals.

NISO must also use these professionals wisely. Those who are best at developing standards might not be best at running the organiza-
tion; conversely, those with the skills to raise funds and provide overall management should not usually be spending their time writing standards.

Ted Brandhorst became involved with Z39 when Jerry Orne collared him for the Standards Development Committee (then called the Program Committee). His first experience with actual standards committee work came when he proposed a standard to identify the source database for bibliographic records; Jim Wood used the tried-and-true NISO trick of making the recommender the Chair. This particular effort did not bear fruit; it was a “learning experience,” as they say. Brandhorst chaired the Program Committee in the early 1980s and served as Chair of NISO from July 1985 through June 1987.

It’s difficult to say that something “took place” during a given Chair’s term, given the lengthy process of standardization. For example, the CD-ROM standard began life when Brandhorst chaired the Program Committee, was worked on during his and Mary Ellen Jacob’s terms as NISO Chair, and will be published during Paul Peters’ term. Nevertheless, 1985-87 can be seen as the period in which NISO expanded for the future along several lines:

- NISO began to get more and more involved with “high-tech” standards, such as CD-ROM, electronic manuscript preparation and several standards relating to online exchange of data.
- Preservation became “hot,” thanks partly to Carolyn Morrow; several standards have been adopted or are being developed, and there will be many other efforts in the future.
- NISO has incorporated the scope of Z85, a committee which had produced one standard (the catalog card standard); this opens the wide area of library materials and equipment for future NISO efforts.
- The organization has improved, gaining a new set of operating procedures, achieving 501c3 status with the IRS, establishing guidelines for standards maintenance agencies, establishing the NISO Archives at the University of Maryland, and publishing NISO standards outside of ANSI.

We should have moved past the years of struggling to keep up with organizational and paperwork tasks, so that officers can spend more time on planning. Brandhorst particularly hopes that the NISO endowment will become strong enough to insulate NISO from economic downturns, assuring support for the Executive Director. A coordinating central office is an absolute necessity if the work of the many volunteers is to be realized.

Mary Ellen Jacob served as NISO chairperson 1987-1989 and has represented both ASIS and OCLC, Inc. as a voting representative to NISO.

W. Theodore Brandhorst, Director, ERIC Processing and Reference Facility, was NISO Chairperson from 1985 to 1987.

The Future
Ben H. Weil and James Michael

Ben Weil began this section with a sparkling and somewhat controversial talk, followed by Jim Michael’s look at the future of standards development.

NISO is now a grown-up organization; it has established itself with solid achievements in the past and must now face challenges for the future.

“Standard” is a confused and confusing term; we need to be explicit as to its meaning and importance. NISO must lead the way for standards education, informing vendors and the marketplace. At the same time, NISO needs input from vendors and the marketplace on the new technologies.

There will be more demands on librarians because of scholar’s workstations and the increased level of networking; increasingly, librarians and libraries will be interdependent.

We will see more open systems, systems portable across vendors although not necessarily OSI-based.

NISO needs more support; we should work toward an endowment that will provide a solid basis for the future.

Ben H. Weil was vice-chair of Z39 from 1975 to 1977 and a member of the NISO Board of Directors from 1985-1988. He is now retired from Exxon Research. Throughout his professional career, Weil was a proponent of standards development and implementation. He continues to be an active contributor to NISO as a technical expert on standards matters and as Chair of the NISO Bylaws Committee.

James J. Michael is Vice President, Market Development for Data Research Associates. He is a member of the NISO Standards Development Committee and the ALA LITA (Library and Information Technology Association) Technical Standards for Library Automation Committee (TESLA).
Videotape Available

An edited videotape of the 50th Anniversary program is available for rent or purchase from the NISO office. The tape is ½ inch VHS format, two videocassettes (color, SP speed), approximately 3½ hours of viewing pleasure! Rental is $20; purchase is $65 for the two-tape package. Contact Robin in the NISO Office to arrange a rental or purchase.

NISO Fellows Honored at NISO 50th Anniversary Celebration

Paul Evan Peters presided as three leaders in NISO's development became the first NISO Fellows. This new award replaces the NISO Honorary Membership.

Henriette Avram

James Wood presented the first award to Henriette Avram, noting that her involvement with Z39 began when she chaired the standards committee that developed Z39.2, one of the most widely-used and most important standards in NISO's history. It went on to form the basis for the ISO equivalent. Ms. Avram has worked tirelessly on the national and international scenes to improve library interconnection.

She has also made it possible for many others to work on standardization; she has provided wise counsel when people needed it most; she displays deep, broad knowledge of standards and the challenges that libraries face in a computerized age.

In accepting the award, Henriette Avram called her more than two decades at LC (and in standards work) exciting and unbelievable. She has always said she's not a librarian—but she really is. She's a brain-washed librarian, and she wouldn't have it any other way.

Patricia Berger

Ben Weil began this presentation by noting that Ms. Berger is a lifelong resident of Virginia, born in Washington, D.C. She has been at the National Bureau of Standards (now National Institute of Standards and Technology) since 1976, after serving in other positions at Johns Hopkins University, the American University, the government and elsewhere.

She is best-known to NISO for her term as chair, but also as the benevolent landlady of NISO. She is a true information citizen, and is now serving as President of the American Library Association—a most unusual accomplishment for a special or government librarian.

Ms. Berger has been a high achiever in all she does; she is a dedicated information professional, a perceptive participant in important information endeavors, a leader and a voice to be heard—and a warm friend. NISO is fortunate that it is one of her key group of activities.

In accepting the award, Pat Berger noted that she had informed the ALA Executive Council that this honor was second only to winning the ALA election. She's passionate about standards and standardization; she is incensed by librarians who confuse wish lists with standards; and she's grateful for the existence of NISO, which brings measured, scientific reality to the sometimes unreal library field.

Sandra K. Paul

Toni Carbo Bearman presented this award. She has known Sandy for some 15 years. She noted particularly the transition within Z39 in 1977-78, a difficult six months. Ben Weil called her in the summer of 1977 to say he was stepping down as vice-chair; would she take over for a mere six months? She didn't know at the time that this was also the six months in which Jerrold Orne was retiring—which effectively left her as acting chair. Much needed to be done; several standards committees had been languishing. A committee consisting of Ben Weil, Ted Brandhorst and Sandy Paul cleaned up the standards, and six were approved that year.

Toni's work with Sandy during that period came to a head when Toni was preparing for the first Z39 election. On April 10, 1978, the ballots were ready; in came a letter from a voluntary candidate who really needed to be on the ballot. Toni found herself with the phone in one hand trying to reach John Corrigan to approve the new ballot, while she was timing labor contractions with the other hand, being 9½ months pregnant at the time. Sandy called and helped pull it all together. At 6:30 on April 10, they managed to get the ballots out; on April 11, Toni Bearman's daughter was born.
Since then, Sandy has chaired NISO, written a brilliant future planning document, planned this 50th anniversary meeting, and done much more. She’s also given up smoking, but not dancing.

Sandy Paul, in accepting the award, noted that there was nothing more exciting than receiving the award at the same time as Henriette Avram and Pat Berger. Standards work frequently goes unappreciated; as she noted in the foreword to Technical Standards: An Introduction for Librarians, “Standards aren’t sexy.” But sometimes, there are rewards.

Other Awards
Four of the six recipients of NISO and Z39 Honorary Memberships were present, and became NISO Fellows to supplant the earlier awards. Paul Evan Peters presented plaques to Jerrold Orne, Robert W. Frase, Ben H. Weil and James Wood.

A special award went to the National Institute of Standards and Technology for its generous support in hosting NISO. Pat Berger, accepting the award, noted that she works for an incredibly generous organization and that the remarkable relationship between NIST and NISO has profited both organizations.

Finally, Paul Evan Peters recognized Mary Ellen Jacob as past chair. She has consistently showed energy and devotion, with the devotion leading to dedication. She is a prime example of the adage “When you want something done, ask a busy person.” She is also one of the best strategic planners Paul Peters has ever met; he has found the last two years to be an intensive tutorial in thinking in strategic terms.

ISSB Coordinating Efforts
ISSB seeks to coordinate the efforts of its standards developers in three basic ways. First and foremost, the ISSB reviews new and changed “scope statements” submitted by the standards developers in its community. These scope statements are expected to be general in nature, in order to define an area of the industry or technology activity in which the standards work of each developer is expected to take place. The definitive scope statement cites the history of the standards developer in question, but there are situations in which a developer wants to address a new or evolving area and can offer only a representation of intent rather than an affirmation of past practices.

ISSB does not look at these scope statements as exclusive rights or licenses by which to deny one developer access to an area of standardization in favor of another developer. Although additional clarification or details may be requested from a developer, ISSB, as a fundamental precept, assumes that developers do not intend to act in conflict or to be redundant to one another’s work.

ISSB does call upon developers to communicate and coordinate whenever it judges that their statements of scope appear to overlap or to be parallel or even intrusive. It is important to note, however, that ISSB uses these scope statements to identify, categorize, coordinate, and harmonize rather than to arbitrate or adjudicate standards development activities.

The second way in which ISSB coordinates the efforts of its standards developers is by distributing information about specific standards development projects. The Project Information Notification System (PINS) is a relatively recent innovation; currently, it depends exclusively on distribution (by U.S. Mail) of a standard set of information about each new project approved by any of the developers in ISSB’s community. Two improvements for PINS that are currently being
discussed are distributing information on proposed as well as approved projects, and providing online access to the information, something that NISO members tend to take for granted.

The third, and final, basic way in which ISSB coordinates the efforts of its standards developers is through members making reports to each other; receiving reports from related organizations, interest groups and materially affected parties as well as from other ANSI boards; and discussing information and problems of common interest and concern. To mention just two examples: at the November 30 meeting, I was asked to report upon last May’s ISO TC 46 meetings (with NISO as host); representatives of Technical Committee V1 of Accredited Standards Committee X3 (Information Processing Systems) and the Society for PostScript Standards reported on their respective efforts regarding standard languages for page description.

Duplication of Effort

At the November 30 meeting, the ISSB also had a rather lengthy discussion of the painful duplication of effort that still occurs within the U.S. information technology standards community, despite ISSB’s best efforts. I commented that the lack of effective coordination of national and international efforts had complicated and delayed NISO’s development of the CD-ROM volume and file format standard (ISO 9660); this lack continues to complicate and delay NISO’s work on character set standards (East Asian in particular).

John Klensin, the ISSB representative from the Association for Computing Machinery, then made the excellent point that duplication of effort can occur not only when two or more developers work on the same thing at the same time (the parallel case), but when they work on the same thing at two different points in time (the serial case).

ISSB formed an ad hoc committee (for which I volunteered) to take a fresh, comprehensive look at this troublesome issue, which has worried ISSB members and information technology standards developers for almost ten years. I plan use my membership on this new ad hoc committee to focus particularly on the serial case of duplication of effort, because I believe that NISO’s constituencies often identify the need for standards that will facilitate the application of information technology before the producers of that basic information technology recognize that such a need exists. I also believe that, when producers of basic information technology finally recognize the need for a given standard, they typically set out to develop one without paying any serious attention to previous work done by NISO and other standards developers who apply rather than produce information technology.

I think that this new ad hoc committee and ISSB in general provides NISO with an excellent opportunity to improve its standing in, and linkages with, the community of information technology standards developers. I think it is very important for NISO to participate in these types of forums for information and coordination, and to manage its relationships with other standards developers actively and carefully. The need of NISO’s constituencies for robust and timely information technology standards far exceeds the capacity and expertise of NISO to develop standards, so NISO must try to understand and influence the programs of work of the other standards developers who make up the ISSB community.

Let me know if you have any views on the ISSB, its new ad hoc committee, or NISO’s relationships with other standards developers. I would love to keep your views in mind as I develop this aspect of NISO’s program.

From the NISO Executive Director
Pat Harris

1990: What’s Ahead for NISO

Before 1989 came to a close, I had one of those all too rare but truly invigorating mountain-top experiences. I had the good fortune (and pleasure) of speaking to the fall meeting of the Kentucky chapter of the Special Libraries Association. My audience was appreciative and receptive and I returned home a bit guilty, feeling that despite all the good standards facts and figures I had shared, it was I who had gotten the most from the day. From their questions and from the other presentations, I was given a refreshed perspective on what this standards business is about: information sharing, information access. With any activity it is important, as the saying goes, to “keep your eye on the doughnut, not the hole.” In standards, a focused attitude is a necessary defense...
against the adminis-trivia. The year ahead will demand this focus more than ever.

NISO begins this new decade with a full agenda. The NISO Board of Directors met in December 1989 to give its final review and approval to the 1990 operating budget. The 1990 budget will see NISO supporting the work of ten Standards Committees developing new or revised domestic standards. To complement this work, in 1990 NISO is committed to actively participating in the international standards arena through our international counterpart ISO TC 46. The budget also supports the costs of planning and sponsoring the annual program and business meetings, promotional activities to increase membership and subscriptions, and six NISO administrative committees. To keep the operations running smoothly, the budget supports salaries and benefits for two full-time and one part-time staff.

1989 was in many ways a landmark year for NISO—major endowment funding was received, membership was significantly strengthened, the organization marked its 50th anniversary and NISO hosted the first North American plenary meeting of TC 46. However, 1990 won't see NISO resting on its laurels. On the calendar for ballot or review in 1990 are:

- Revised standards to be reviewed include Z39.1, Periodicals: Format and Arrangement; Z39.7, Library Statistics; Z39.9, ISSN; Z39.19, Thesaurus Structure, Construction and Use; Z39.32, Information on Microfiche Headings; Z39.41, Book Spine Formats; Z39.20, Price Indexes; and Z39.29, Bibliographic References.

- New standards to be reviewed or balloted will include Z39.56-199x, Serial Article and Issue Identifier, and a first draft of the NISO extension to ISO 9660, being developed by NISO Standards Committee TT.

- Finally, NISO will begin its regular five-year review of: Z39.2, Bibliographic Information Interchange (which sets out the communication format for the MARC record); Z39.5, Abbreviation of Titles of Publications; Z39.16, Scientific Papers for Written or Oral Presentation; Z39.47, Extended Latin Coded Character Set (aka ANSEL or the ALA Character Set); and Z39.49, Computerized Book Ordering.

Details on this work will be provided regularly in ISQ. Be assured that I will be doing my best to keep all of NISO's energies focused on the doughnut, and not the hole!

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**The Forms of Democracy: The Place of Scientific Standards in Advanced Societies**

*Irving Louis Horowitz*

The purpose of these remarks is to discuss the multiplication of standards in advanced societies. I should say at the outset that this is not intended so much as a celebration, but more as a contribution to the social theory of advanced societies. As such, my aim is to situate standards between the two ends of modern industrial life: the democratic and the bureaucratic. For in truth, and as Max Weber long ago pointed out, the rationalization of norms that has become so commonplace in our lives is made possible by the extraordinary advances in the complexity of the formal modes and operations that drive an industrial-technological order. But Weber, and others since him, have also warned that this same set of formalization procedures carries the risk of a collapse and corruption of the industrial-technological system by inhibiting innovation and frustrating experimentation. In other words, the place of standards is subject to constant review, revision, and when necessary, termination.

In effect, the conduct of advanced civilization has a formal element and a content element. It is commonplace to consider that content comes first. That is to say, machinery, artifacts and goods of all sorts come into existence, and then, rules and regulations for the conduct of relationships in the production and consumption process follow. But while this may be the case in an earlier epoch, it would appear that content and form are far more intertwined as we approach the twenty-first century. For as Weber long ago anticipated, the very ability to manage, manipulate and master new processes, coupled with shorter life-spans for existing products, involves a settlement of forms; or, more precisely, an integration of standards into the life cycle of goods and services.(1)

In its most rudimentary form, standards are driven by economic considerations. Specifically, they are a function of the social need to appeal to an established body of thought or conventions that can serve as a rule of measurement for quality, quantity, weight or change. One recent article has placed the subject of standards within the broad framework of information economics; by
which is meant "the establishment of standards [that have] greatest significance when economic agents cannot assimilate without substantial costs all the relevant information about the commodities that may be exchanged with other agents, and the processes by means of which those goods and services can be produced."(2)

To give a simple illustration: many systems can drive a videocassette. There is the Beta format and the VHS format; there are three types of running time; there are multiple modes of reproduction; there are various hardware compatibilities; there is equipment available to translate one format into another and drive the system as a whole. And I beg to remind you that we are describing procedures and standards that by now are second nature to millions of people in the Western world. In this situation, the question of standards is not something which sits and awaits the implementation process. Rather, standards are intertwined with content and context from the onset of wide utilization. Corporate decisions on formats, say between Sony and RCA in the case of videocassettes, rest precisely on limits and advantages of one system over another—and standards are integral to such decision-making.

One reason why it has been so difficult to instill a broad consensus about the meaning of standards is that only in their absence are they perceived as critical. This is especially the case in a free market system, where innovations historically have been weakly, often indirectly, regulated. One analyst of information processing systems has put this issue succinctly:

There is currently no easy way to send electronic mail from one commercial network to another. MCI and CompuServe electronic mail networks, for example, are not interconnected. One has to subscribe separately to each system, with different system interfaces for each. Thus, almost unwares, we are moving in some areas back to the turn of the century, with its separate telephone systems. Ideally, there should be standards so that personal computers, fax machines, high quality printers, telexes, electronic mail services, and telephones could interconnect with one another. Major economic efficiencies could thus be attained.(3)

This fusion of utility and innovation in a brief time span is important if we are to understand the place of standardization in our post-industrial and multinational age. For an essential difference between the pre-industrial and post-industrial is precisely the rationalization of systems, the integration of form and content as a single unit—one that is disaggregated for the purpose of analysis, but linked in real time to global circumstances, that is, to the market processes of producing and consuming goods.

But standards of operations are different than norms of conduct as such. Norms are built into the social fabric over extended or long time waves. Standards are mandated artifacts, legislated steps and procedures that do not always take on the force of custom, but do have the force of law. For example, many standards are neither publicly known, or if known, are not necessarily abided by. The provisions of the 1976 copyright legislation are an unfortunately good example of this distinction between custom and law. When these sociological elements are added to the economic costs and benefits of standards to selective groups, one can readily appreciate why so many standards are bitterly fought over. For what may seem to be an idiosyncrasy of the moment, or the clash of personalities involved, is in fact a reflection of very real social and economic forces at work in determining the character and conduct of human affairs.

Again, to take an illustration of the fiscal character of a standard: the struggle in the standard governing rules and regulations for professional indexing. The infusion of standards for machine readable programs carries with it the implication that non-human processes may substitute for human labor. Artificial intelligence systems may, nonetheless, not sit well with a society of indexers. Similarly, questions of copyright procedures are matters of deep concern to publishers, librarians, authors and editors. Not all of these sub-classes may share the same value framework or agree on what the law says. And hence, the struggle over standards is but one part of the struggle for control of substance and events. Not only how things are to be done, but who is to do them and what is to be permitted.

The development of standards is joined to that of the struggle over democracy and bureaucracy. For standards reflect either a series of "bottom-up" or "top-down" considerations. There are limits to either bottom-up or top-down—in the sense that the standards of professional groups are not readily subject to a popular referendum. Indeed, standards are often not subject to a membership vote of relevant groups either. What does have a leavening effect is the integrity of the various elites that do come together in the formation of standards and, no less, the carefully stitched con-
American trade deficit. In this, the singular and illustrate this by reference to the current conduct of advanced societies. I would like to have, serious negative consequences on the economic circulation of capital as such. For as-target, the absence of standards has, or would assuredly, if the above sort of analysis is on standards takes place to a breakdown in the economic mind of a consumer.

Because it is that industry with which I am ing). I draw these examples from publishing minimum levels of product acceptability (the quality and nature of paper, binding and printing). I illustrate these examples from publishing because it is that industry with which I am most familiar. But in truth, standards must exist in every field for product reliability to exist—in the work of a producer and in the mind of a consumer.

I want then to turn to what happens when a breakdown in the production of standards takes place to a breakdown in the economic circulation of capital as such. For assuredly, if the above sort of analysis is on target, the absence of standards has, or would have, serious negative consequences on the conduct of advanced societies. I would like to illustrate this by reference to the current American trade deficit. In this, the singular and unique work of John R. Hayes deserves special accommodation. The case study that follows is in considerable measure drawn from his field efforts.

In 1988, Westinghouse, General Electric, Clorox found their products locked up and embargoed at the Saudi port of Dammann. There was nothing defective with their parts, only that product standards were not met. And why should this have been the case? Because the United States, as a result of a Commerce Department ruling on costs, decided not to dispatch a team or a person to Riyadh for the purpose of developing appropriate professional standards for Saudi Arabia, and hence were outmaneuvered by equivalent teams from Japan, the United Kingdom, Germany and France who did advise the Saudi Arabian Standards Organization (SASO).

There are 42,000 standards for Saudi Arabia—covering everything from the shelf-life of lamb to the color of ground wires used in air conditioners. The failure to become involved is also consequential. United States trade with Saudi Arabia has slipped from 21 per cent in 1982 to 15 per cent in 1989. And since the entire Middle East uses the Saudi standards, at risk are $1.5 billion of U.S. exports.

The same condition prevails elsewhere: in Brazil, which accounts for $17 billion worth of imported goods, the Germans have provided their Brazilian counterparts with a seventy foot shelf of German product standards—in Portuguese. The United States countered feebly by reintroducing aged standards (five to twenty years old) of assorted trade association publications. A similar situation obtains in India, where equipment laboratories are being re-established using European standards. The thinking is that transponders, satellites and computers can thus be plugged into European rather than American electronic standards.

The Japanese are going even further. MITI (Ministry of International Trade and Industry) currently has technical experts working overseas on five nations’ standards programs, and it has also brought personnel from twenty-eight developing nations back to Japan. The need in the United States for private support of standards development or better, the lack of public support, has led to a huge gap in funding standards proposals, with a consequent loss of business. Clearly the slogan that if it is good enough for the U.S. it is good enough to export, has gone the way of “my country right or wrong.” In point of fact, while Japan and Germany, according to International
Monetary Fund reports, have unusually high trade surpluses, the United States has dangerously high trade deficits.\(^{(6)}\)

All of this indicates that if industrialization brought about rationalization, post-industrialization has brought about globalization. And hence, the magnitude of a standards gap is not simply a shortcoming in American industrial policy, but a risky situation in a highly competitive environment. In a sense, the "top-down" approach as represented by the assumption that American products are the norm or the standard as such, has given way to a "bottom-up" approach in which the needs of a host country must be taken into account by more advanced sectors.

What we have then in this brief overview of standards is the movement from a specific industry, to national and now international standards. But the magnitude of this evolution should not obscure the closing of the gap between the content of discovery, the context of usage, and standards for measuring size, materials and performance.

We have moved far afield from the special work of the National Information Standards Organization. Thus, before closing, let me return to efforts of this group. Take the issue of acid-free paper as described in a recent issue of ISQ. First, there is the question of where such paper should be used. Second, there is the question of whether one should have a standard of what permanent paper should have in it, versus what should paper should not have in it. Third is the question of which available or proposed system for mass deacidification should be used. Fourth are issues about the chemical bonding, the tensile strength of a sheet of paper. In such a presumably simple and straightforward matter as acid-free paper we have contentious issues involving chemical manufacturers, paper mills, national entities, in this case Canada, the United States, and public and private sector requirements.\(^{(7)}\)

Advanced nations are clearly moving into a global pattern of standards—as societies themselves become intertwined and inter-networked. This will be no easy transition, since the political forces of nationalism and the economic demands for protectionism are also growing stronger. But the United States does have several advantages: (a) a tradition of exact standards of goods and services; (b) scientific methods for estimating and evaluating standards; (c) long experience with manufactured goods and services; and (d) the broad use of English as a lingua franca for international trade and research. Unlike the Germans in Brazil, the United States would not need to render standards in Portuguese, since English is the second language of the educated and commercial sectors of Latin America, the Middle East and many parts of Asia and Africa.

How then does democracy enter into all of this? It does, I submit, in the very give and take between industrial sectors, national entities, technological rivalries. Democracy is not a thing but a process. At its best, standards development is a way of arriving, through non-violent means, at a consensus, a way of doing things by identifying or creating or constructing models of performance to which presumably rational persons can aspire. Again, at its best, standards can also be changed, and frequently are, in the give and take of such competitive encounters.

The National Information Standards Organization fuses public sector interests, university research involvement, librarian and publishing inputs, extensive connections with overseas groups aiming at similar tasks, and works with a myriad of trade associations and organizations. Much of this work is done on a pro bono basis. For all of these reasons, NISO may be considered a model of how standards are developed in rapidly changing technological environments. In short, the consensual creation of standards is part of the long tradition of democracy that moves slowly but inexorably from a world of received wisdom and absolute authority to one of shared experience and exact knowledge. There are deep risks in this process of standardization. There are catastrophes in the failure to run such risks.

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**Irving L. Horowitz** is Hannah Arendt Distinguished Professor of Sociology and Political Science at Rutgers University, The State University of New Jersey. This text was delivered as the opening address for NISO's Fiftieth Anniversary Celebration, September 18th, 1989.

**Notes**


Digital Equipment Corporation Grant to Support Z39.50 Link

At the CAUSE'89 education computing conference in November 1989, Digital Equipment Corporation announced grants to the University of California and to Pennsylvania State University to support the linking of major information retrieval systems at these institutions. Virginia Polytechnic Institute and the California State University System will also participate in the project.

The project will allow users of Penn State and UC library systems to search the holdings of either system while using familiar commands of their own system. The link will use American National Standard Z39.50-1988, Information Retrieval Service Definition and Protocol Specification for Library Applications, which permits separation of the user interfaces from the information servers.

"The vision behind this protocol is to enable users of any information system, regardless of the computer platform and software system, to search the full range of data available nationally, and then to consolidate the results of the search within their local system," said Richard West (Associate Vice President, Information Systems and Administrative Services, University of California, Office of the President).

J. Gary Auguston (Executive Director of Computing and Information Systems, Penn State) said "The ability to search across systems is essential if universities are to take advantage of the investment in regional and national networks and the many databases maintained by research institutions throughout the country. This project will represent a major step forward toward this end."

The online catalogs of UC and Penn State are among the largest and most heavily-used in the country, each handling 200,000-300,000 queries per week. Both systems are open to the public; they serve a combined total of fifty-four campuses. The online catalogs are based on different software systems and different computer platforms: an IBM 3090 at UC and a Digital Equipment VAX 9000 at Penn State (to be installed in 1990).

The project represents the first implementation of Z39.50 in a high-volume public access environment. "The project will provide important information on the linking and support of disparate databases and multivendor computer systems," West said. "We hope to refine and extend the protocol, and pave the way toward its widespread adoption." A related project at Carnegie Mellon University also uses Z39.50; researchers on the two projects will share their findings.

Joan Blair, Digital's Manager for Library Solutions, said "linking information resources, regardless of their physical location, is the challenge for the 1990s. We are pleased to support leading software developers and library experts in a focused effort to make this happen." Project investigators are Clifford Lynch (Director, Division of Library Automation, University of California) and Eric Ferrin (Director of Library Computing Services, Pennsylvania State University).

Should NISO Develop a Standard Product Code?

It was recently suggested that NISO sponsor the development of a Standard Product Code. It was suggested that, for example, such a code could be used in databases to identify, in a uniform and unequivocal manner, how certain chemical or agricultural substances are used.

NISO would welcome the views of members of the NISO community on the need for, and potential use of, a Standard Product Code. Readers should write to Pat Harris at the NISO Office.
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, as NISO enters its second half-century, 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 $200 to $4000 depending on the size of the member organization. A list of Voting Members as of December 1, 1989, 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 obligated to respond to requests for comment. A list of the eleven Information Associates as of December 1, 1989, follows the list of Voting Members.

NISO's publications are also available to Subscribers. Information Standards Quarterly (four issues per year) is available to subscribers for $40 per year. NISO also offers, to libraries only, an Information Subscription for $100 per year which entitles the library to receive Information Standards Quarterly and all of the draft standards issued by NISO. NISO's draft standards and final, approved American National Standards are sold individually.

To become a NISO member or receive any of NISO's publications contact the NISO office: NISO, P.O. Box 1056, Bethesda, MD 20827-Telephone: (301) 975-2814.

NISO Voting Members

The following institutions are Voting Members of the National Information Standards Organization as of December 1, 1989.
American Association of Law Libraries
American Chemical Society
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
Association of Jewish Libraries
The Association for Recorded Sound Collections
Association of Research Libraries
AT&T Bell Laboratories
The Blue Bear Group, Inc.
Book Manufacturers' Institute
CAPCON Library Network
Catholic Library Association
CLSI, Inc.
Colorado Alliance of Research Libraries
Council of Biology Editors
Council of National Library and Information Associations
Data Research Associates, Inc.
Dynix
EBSCONET
Faxon, Inc.
Gaylord Information Systems
Indiana Cooperative Library Services Authority
Editor’s Notebook

Walt Crawford

Making It Fit

I was delighted to see the last Information Standards Quarterly of 1989. Pat Harris changed the printing technique, going to a commercial printer and using 11x17" paper, center-stapled, instead of 8½x11" paper edge-stapled. I think the change makes ISQ look much better, which tends to make it easier to read. Thanks, Pat.

However...when you print a publication on 11x17" paper, center-stapled, it’s important to make sure that the number of pages in the publication is divisible by four, since you’re printing four pages to a sheet. (Actually, for many printers, it’s really most economical to make it a multiple of eight—because they actually print 17x22 sheets and cut them afterwards. I don’t know whether that’s the case for ISQ’s printer; it is for LITA Newsletter.)

When I got the remainder of this issue’s copy (on December 11), I found that the total issue came to twenty-six pages (well, just a little more, but that could be fixed easily). Four into twenty-six doesn’t go. Which is why the two or three people who saw the galley version of this “Editor’s Notebook” may wonder what happened to the one-page discussion of net economic welfare change—and to some other
material. Now you know. This (much briefer) note is what copy-fitting is all about, and is one advantage of having the editor do the whole thing: what easier than to cut your own words?

I’d like to call your attention to the last two pages of this issue, which will appear annually from now on. These pages provide a form for you to submit a recommendation for a new NISO standard, together with a list of issues to be considered before submitting such a recommendation. Standards development can arise in NISO by more than one route—but there’s always room for a new recommendation, particularly since you may be aware of a need that the NISO leadership simply hadn’t considered. If so, make use of the form (and, of course, additional pages as needed). Tear out the last sheet if you must; naturally, I’d prefer that you photocopy it, so you don’t disrupt the integrity of the issue.

NISO + BISAC + SISAC + Z39 + X12 = Chaos?

Preconference on Standards for Acquisitions

On June 22, 1990, immediately before the American Library Association Annual Conference, the Book Industry Study Group and NISO will cosponsor a one-day program on standards for the acquisition of library materials.

The program will describe existing and emerging standards in the NISO, MARC, BISAC, SISAC, X12, EDI and OSI environments and will review the state of the art in bar coding technology.

If you are involved in acquiring library materials or developing automated library systems, plan to attend. The meeting will be held at the Chicago Marriott Hotel, 540 North Michigan Avenue. Registration fee is $100. For registration information and details on the agenda contact: NISO/Acquisitions Preconference, P.O. Box 1056, Bethesda, MD 20827; telephone (301) 975-2814; fax (301) 469-0823. Program brochures will be available in February. Be there!

Standards Development Committee Report

The Standards Development Committee (SDC) met September 19 in Washington, D.C. The Committee reviewed the status of all standards being updated or developed and began to discuss the Master Technical Plan. This plan will be presented to the membership at the September 1990 meeting and is to chart the course of NISO standards work for the following years.

SDC is also monitoring the effect on NISO standards of X12 work on Electronic Data Interchange; NISO and BISAC will cosponsor a preconference prior to the American Library Association’s (ALA) 1990 Annual Conference to explore this topic.

Howard White (director of ALA’s Library Technology Program) has joined the SDC to manage NISO’s standards development program for library equipment and supplies.

The December 11 SDC meeting focuses on furthering work on the Master Technical Plan and on completing staffing of the portfolios (the areas of standardization effort to be covered). It is vital to the future health of NISO to determine which areas need new standards work and which existing standards have outlived their usefulness.—Kathleen Bales, Chair, SDC

RLG’s Interest in Standards

Wayne Davison

Importance of Standards

Standards are one of The Research Libraries Group, Inc.’s (RLG) major concerns because they are so important in the pursuit of RLG’s mission to make the world’s body of information available to scholars. RLG needs standards to facilitate the creation, management, and sharing of information in a diverse, international community. As a result, RLG continually invests considerable resources in developing, implementing, and promoting standards.

RLG exists in the multifaceted environment of research and higher education. As an organization composed of libraries and related scholarly institutions, RLG serves a wide variety of constituencies. Individualism, originality, uniqueness and even eccentricity are accorded great worth in this environment.
This pluralism is the source of some of the great strengths in furthering knowledge and human understanding. But, paradoxically, aspects of this pluralism can become barriers to the free and effective exchange of information. The wide variety of communications procedures and data representations makes the exchange of information difficult at best, and in some cases impossible. Therefore reliance on sound, respected standards based on the broadest possible consensus is of great importance in accomplishing RLG’s mission.

In some cases problems arise from the lack of standards; in response to this RLG actively participates in national standards bodies such as NISO and X3, and, through them, in international standards bodies such as ISO TC 46 and ISO/IEC JTC 1. In some cases problems arise from the multiplicity of standards; in response to this RLG participates in forums such as EDUCOM to bridge various communities of interest and to find mutually acceptable solutions. In other cases the problem is lack of adherence to standards; RLG works with users, vendors and other implementers to promote their acceptance and use of standards.

The Use of Standards

In its Research Libraries Information Network (RLIN) system RLG relies heavily on standards for interactions both with human users and with other computer systems. In its recent enhancements for personal searching of the database, RLG has made use of the Common Command Language standard Z39.58. The style of this command language is close to the style RLIN has always used, and RLG is using Z39.58 as a basis for future modifications to RLIN.

The Common Command Language is an example of the problem of multiple standards. The version put forward for adoption as the American National Standard Z39.58, Common Command Language for Online Interactive Information Retrieval, and the version put forward as an International Standard ISO 8777, Commands for Interactive Text Searching, are significantly different. It continues to be a long and difficult process to harmonize these into a consistent language. The days are gone when a country could develop a national standard and expect it to be adopted internationally without question.

In its new data communication network, RLG is using the CCITT X.25 packet switching standard. And in its development of capabilities to link with other computer systems, RLG is making use of standards for Open Systems Interconnection (OSI), including both general information processing standards, such as the Transport (ISO 8073), Session (ISO 8327), Presentation (ISO 8823), and Association Control (ISO 8650) protocols, and also specific application protocols such as Z39.50.

Interconnection standards are an example of the problems of multiple standards, and also of lack of adherence to standards. While the international telecommunications and information processing industries are moving forward to the adoption of OSI standards, much of the technical research community in the United States continues to pursue the DARPA protocol suite in the developing Internet. And while RLG, LC and OCLC are promoting use of the OSI protocols through the Linked Systems Project (LSP), many of the vendors of local systems for libraries continue to be unable to move beyond the development of ad hoc solutions based on various terminal-to-host protocols.

In its Multiscript Workstation (MSW) RLG is both using existing character set standards and working to establish standards where they are lacking. The East Asian Character Code (Z39.64) is a prime example.

Character Set standards are an extreme example of the problem of multiple standards. This is due to the fact that several different communities have been developing such standards without adequate coordination. The results are character sets for the business community that are not comprehensive enough to represent material from earlier centuries that is important to scholars, and character sets developed in the international community that are different from the national standards of countries where the native language is written in that character set. In other cases, coalitions of vendors of electronic publishing systems develop standards that blur important distinctions between character sets and fonts.

And, of course, RLG makes a great deal of use of the MARC format for information exchange.

Participation in the Development of Standards

RLG has found that if standards are important to you, it is essential to be actively involved in the development, maintenance and promotion of those standards. The risk of not being involved is that needed standards will not be
developed, will not be developed in a timely fashion and/or will not be adequate and acceptable. Of course, being involved only lowers the risk, it does not eliminate it.

Libraries and related scholarly institutions do not represent a large share of any of the many technical markets in which they participate. The commercial office place, manufacturing, and the U.S. government are all examples of large customer bases that can exert influence on the development of standards because of their purchasing power. Major vendors can exert influence because of their market share. Fortunately, the development of standards can also be influenced by the active participation of individuals and relatively small organizations bringing special competence and expertise. The bulk of participants in development of information processing standards comes from commercial vendors; user participation is small. Being a user and a neutral party in vendor competition has sometimes provided RLG with a unique and influential voice.

To develop and review draft standards and to attend standards meetings, RLG uses central staff and calls upon and coordinates with staff of member institutions. This combination constitutes an impressive collection of expertise and competence. RLG staff also meet with OCLC staff several times each year to discuss standards activities of mutual interest.

RLG participates in a number of standards bodies of different kinds. Within the library community, RLG staff are strong and consistent participants in groups such as MARBI and LSP. RLG has long been a voting member of NISO, and RLG staff are participants in both NISO standards committees and NISO management committees such as the Standards Development Committee and the International Relations Committee. Through NISO, RLG supports participation of staff in the development of international standards in ISO TC 46. This use of staff resources benefits RLG both through the impact on standards and the staff development resulting from the participation.

In the information processing community at large, RLG is a member of the American National Standards Institute (ANSI) and RLG staff serve on several X3 committees, including X3L2 (character sets), and X3T5 (OSI upper layers). Through these committees RLG supports participation of staff in the development of related international standards within ISO/IEC JTC 1.

Participation in the development of standards is costly. Travel is expensive and time consuming. To work successfully in standards committees, an organization must be willing to commit able and experienced staff members; and there are always lots of conflicting demands on the time of these staff members.

Importance of Continued Participation in Standards Development

RLG's experience has shown that organizations such as ours can have a significant positive influence in the development of standards in areas where we are concerned and competent. While it is impossible to attend to all the relevant standards being developed in all the forums of interest, it is possible to foster the interests of our constituents. It is particularly important to make our voices heard in the information processing standards bodies and in the international arena. RLG is most gratified to view and participate in the growth of NISO as a respected organization that is doing much to represent the interests of our community in the national and international standards process.

In his position as Associate Director of RLG's Development Division, Mr. Davison is responsible for coordinating all of RLG's standards activities, as well as representing RLG in several national and international standards activities. Other RLG staff actively involved in standards work currently include Kathleen Bales (chair of the NISO Standards Development Committee), Ed Glazier, Susan Oros, Lennie Stovel and Karen Smith-Yoshimura.

Standards Activity

These notes summarize standards activity since Information Standards Quarterly 1, no. 4.

Standards Being Balloted

- **Z39.62-199x: Eye-Legible Information in Microfilm Leaders, etc.** The balloting period for this standard is December 1, 1989-March 31, 1990.
Standards Recently Balloted

Z39.10-1971 (R1977): Directories of Libraries and Information Centers. The balloting period was June 1-August 31, 1989. Results of the balloting will be reviewed by the Standards Development Committee at their December 1989 meeting.

**Final Vote:**

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Z39.23-199x: Standard Technical Report Number (STRN). The balloting period for this revised standard was September 1-November 30, 1989. Ballots and comments will be referred back to the SC for review and resolution.

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Z39.55-199x: Computerized Serials Orders, Claims, Cancellations and Acknowledgements. The balloting period for this new standard was October 15-December 15, 1989. Ballots and comments will be referred back to the SC for review and resolution.

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Z39.66-199x: Durable Hard-Cover Binding for Books. The balloting period for this new standard was September 1-November 30, 1989. Ballots and comments will be referred back to the SC for review and resolution.

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Z39.67-198x: Computer Software Description. The balloting period for this new standard was September 1-November 30, 1989.

**Ballots and comments will be referred back to the SC for review and resolution.**

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Standards Approved and Awaiting Publication

Z39.22-1989: Proof Corrections. This standard is awaiting publication.

Z39.57-1989: Non-Serials Holdings Statement. This standard is awaiting publication.

Standards Being Revised


Z39.19: Thesaurus Structure, Construction and Use. See page 20 for notes on this revision.


Z39.29: Bibliographic References. See page 20 for notes on this effort.

Z39.56: Serial Item Identifier. See page 21 for notes on this development effort.

Z39.58: Common Command Language. SC G met in Chicago, IL on December 11-12, 1989, to review comments submitted in the last balloting period and to align the U.S. standard with the proposed international standard DIS 8777.

Correction on Withdrawal

Z39.60-198x: Volume and File Structure of CD-ROM. Rather than withdrawing the proposed standard, ANSI recommended that NISO substitute the (substantially similar) text of ISO 9660 and process that standard as an American National Standard. The standard, once approved, will be known as ANSI/NISO/ISO 9660.
## Standards Status: December 1, 1989

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<td>Z39.66-198x Durable Hard Cover Binding for Books</td>
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<td>18</td>
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<td>Z39.67-198x Computer Software Description</td>
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<td>18</td>
<td>Revision</td>
<td>Z85.1-1980 Permanent and Durable Library Catalog Cards</td>
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<td>Development</td>
<td>SC R Environmental Conditions for Storage of Paper-based Library and Archival Materials</td>
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<td>Development</td>
<td>SC LL Exchange of Circulation Systems Data</td>
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<td>Formation</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>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>Development</td>
<td>SC TT Related standards for CD-ROM</td>
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The chair of the subcommittee, Dr. Bella Hass Weinberg, is editing and proofing the word-processed draft, which will then be sent to members of the committee for final review. It is hoped that the complete text will be sent to NISO by the end of 1989. Allowing one month for processing, the draft is expected to go out for comment to NISO voting representatives and observers by February 1990. After a four-month review period, SC PP is expected to meet in the Spring of 1990 to review the comments and prepare a revised edition for ballot ing.

Dr. Weinberg presented a paper entitled “Progress in the Revision of the NISO Thesaurus Standard” on October 30, 1989 at the ASIS Annual Meeting in Washington, DC. A large crowd was in attendance, and some two dozen information scientists signed up to review the draft standard.—Bella Hass Weinberg

Bibliographic References

A meeting of the Z39.29 committee was held October 30, 1989 at the National Library of Medicine. M.E. Brennan, Ellis Mount, Karen Patrias and Victor Rosenberg were present. The committee is continuing its efforts to revise Z39.29.

Discussion at the meeting included how to make the standard easy to understand and easy to use. Karen Patrias presented a model for our review which, we all agreed, had merit. The model incorporates examples of citations into the body of the standard, eliminating the need for an extensive appendix. We believe this format would provide greater ease of use. Committee members will send Karen comments, corrections or enhancements by the end of November. Karen will be working on the matrix of bibliographic elements.

We also spent time discussing a citation format for data files, as well as efforts we could take to encourage use of Z39.29 by as broad a base as possible. No date was set for the next committee meeting.—M.E. Brennan

Permanence of Paper

A draft revision of the revised Z39.48, Permanence of Paper for Publications and Documents in Libraries and Archives, has been circulated for comment to NISO Voting Members and other interested parties. Comments are due back to NISO by January 16, 1990.

According to Betsy Humphreys (National Library of Medicine), chair of Standards Committee II (which prepared the draft revision), Z39.48-199X “expands the scope of the existing standard and alters significantly some of its key provisions.”

The proposed revision establishes criteria for coated and uncoated paper that will last several hundred years under normal conditions of library and archival circulation and storage, without significant deterioration. It identifies specific properties of such papers and specifies tests required to demonstrate those properties.

Previous issues of ISQ (volume 1, numbers 3 and 4) have included notes on the testing carried out in support of this revision and some of its key provisions. Although the testing done to date provides useful data related to paper permanence, many important and interesting questions remain to be investigated. The results of additional needed research should be considered during the next revision cycle.

SC II has attempted to prepare a valid, usable standard based on a reasonable interpretation of currently available information. The Committee believes that the library, archives, publishing and paper manufacturing communities will all benefit from relatively rapid publication of a new standard that encompasses coated paper (the existing standard provides specifications for uncoated paper only) and that also addresses some of the difficulties encountered with provisions of the existing standard. An extensive introductory document accompanying the draft standard raises some of the issues in the revision process and how they were resolved.

Members of SC II during the revision process include Joseph Brown (Rochester Institute of Technology), Lewis Brown, Guy Dresser (Allen Press, Inc.), Joseph Dunton (Mudge Paper Company), Susan Lee-Bechtold (National Archives and Records Administration), Anthony Libertore (P.H. Glatfelter Co.), John Mancia (Elsevier Science Publishing Co.) and Merrily Smith (Library of Congress).
Serial Issue and Article Identifiers

At a meeting held October 30, 1989 in Westwood, Mass., participants agreed to work toward final balloting and formal adoption of Z39.56-199X, Serial Issue and Article Identifiers, within 180 days. While acknowledging the challenging and ambitious nature of the task, the group nevertheless agreed it was a reasonable and achievable goal, particularly in light of the firm foundation on which the renewed effort is based.

Charged in 1983 “to begin work on a serials identifier standard that would positively identify serial issues and items published within serials,” by 1985 SC CC had developed a well-conceived, internationally compatible standard that prescribed “a scheme for coding data necessary to uniquely identify serial issues and the articles published in them.” By March 1986 a much-reviewed draft standard was officially circulated for comment. After further revision, a fifth draft was circulated for balloting from September-November 1987.

In the foreword to the balloted proposal, SC CC emphasized the overriding lessons gleaned from previous failed attempts to establish such a standard—specifically, the needs:

- to limit the standard to a code for unique identification of serial issues and articles;
- to cover the broadest possible range of serials, and of articles within serials;
- to allow the extemporaneous creation of the identifier, whether or not the serial is currently being published, and regardless of whether the publisher has printed the identifier on the serial;
- to provide the briefest possible code consistent with unique serial issue and article identification.

The challenge to the committee was to create a unique identifier, not a more extensive bibliographic citation. Yet the standard incorporates traditional information used to identify serials and parts of serials: ISSN, chronology (date), enumeration, page number and article title; it provides a systematic way to code that information in a condensed form.

How could more than eighteen months pass without significant further progress on a standard so nearly completed? Committee members readily acknowledge a loss of momentum after the untimely death of Ms. Mary Ellen Clapper, the group’s tireless champion and driving force. Her boundless spirit, coupled with the generous donation of hundreds of hours of her time, proved to have been even more central to the group’s previous success than most would have imagined.

The October meeting was designed to reinvigorate the standards implementation effort by bringing together parties committed to the advancement of this standard. Called by NISO and chaired by Ron Gardner (OCLC), the meeting was hosted by Fritz Schwartz (Faxon). Eight other individuals attended, representing publishers, library and other users, library systems vendors and consultants.

In what the group considered one of the most important developments of the day, John Tagler (Elsevier Science Publishing) reiterated that his company was anxious to implement the standard, pending final approval. The company plans to print the SISAC bar code representation of the NISO standard on the covers of Elsevier’s 600-odd journals (representing up to 6,000 issues per year) within six months of ratification.

Another Dutch publisher, Kluwer Academic Publishers, has led the way in using the proposed standard and its bar code symbol equivalent. While Kluwer currently uses bar code film master experts in the United States and United Kingdom to meet its requirements, it expects to procure precision symbol masters within the Netherlands next year. Programming needed to provide SISAC bar code symbols based on Z39.56 is in place at more than twenty film master suppliers worldwide.

Fritz Schwartz pointed out that Faxon’s MicroLinx and SC-10 serials checkin systems are already equipped to handle the code. A recent survey of library systems vendors shows that many others are prepared to incorporate the needed changes once the standard is approved.

Inspired by the serious desire expressed by all segments of the library journal community to bring this project to a successful conclusion, and with a determination reminiscent of earlier endeavors, meeting participants addressed the remaining challenges: reviewing the comments and negative votes from the balloting; formulating satisfactory responses; and revising the code to incorporate worthwhile recommendations received. Possible revisions were identified; individual members immediately set about discussing potential approaches to incorporate the most desirable of these into the code.
The group expects to complete a final draft of the standard by February 1990; balloting can be expected to begin in March.—George Write, IV; this article will appear in slightly different form in the SISAC Newsletter.

International Notes

The TC 46/SC 9 working group to develop an International Standard Music Number will meet in January, 1990, in Ottawa, Canada. U.S. representatives to the meeting will be Lenore Coral (the Music Library Association's voting representative to NISO) and Arnold Broido (president of the U.S. Music Publishers Association).

The U.S. vote on draft proposal (dp) 8459 Part 3, Bibliographic Data Elements Directory—Information Retrieval, balloted July-September 1989, was to approve with comments.

The U.S. voted to disapprove DIS 832, Abbreviation of Typical Words.

Second draft proposals 10160-10163, developed by TC 46 SC 4/WG 4, were balloted during October-December 1989. The working group, which is developing OSI-compatible protocol standards for bibliographic information interchange, will meet January 30-February 1, 1990, in London to discuss the results of the ballot. The U.S. delegation to the meeting will include Sally McCallum, Wayne Davison, Ray Denenberg and Clifford Lynch.

U.S. Participation in International Standards-Related Activities

The National Institute of Standards and Technology (NIST) will hold a public hearing at 9:30 a.m. on Tuesday, April 3, 1990, to gather information, insights and comments related to improving U.S. participation in international standards-related activities and to possible Government actions.

The central purpose of the hearing is to assess the current situation and to seek suggestions for improvement, especially regarding mechanisms for coordinating U.S. participation in international standards activities. Views are solicited with regard to currently experienced effectiveness and the likely improvements from possible changes in procedure or areas of responsibility.

The hearing will be held in the Auditorium at the U.S. Department of Commerce, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230. Persons who wish to participate must submit a written request to Dr. Stanley L. Warshaw, Director, Office of Standards Services, National Institute of Standards and Technology, Administrative Building, Room A-603, Gaithersburg, MD 20899. Requests should include the person's name, address, telephone and fax numbers, and affiliations; number of participants; reason for attending; and a list of points to be discussed. Written comments may also be submitted to Dr. Warshaw at NIST by March 22, which is also the deadline for requests to speak. Contact Dr. Warshaw for further information.—Abstracted from the Federal Register 54, no. 226 (November 27, 1989).

News and Events

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

Standards for Archival Description

Following up on a report in ISQ volume 1, number 4, the final report of the Working Group on Standards for Archival Description will be published in a special issue of The American Archivist, the journal of the Society of American Archivists. The Fall 1989 issue of The American Archivist (volume 52, number 4) will be devoted entirely to archival description standards and the work of the Working Group.

The issue will include the full text of the final report; seventeen specific recommendations to the archival community relating to standards development, review and education; the text of twelve background papers prepared for use by the Working Group; a checklist of existing technical standards, conventions and guidelines applicable to archival description; and a select bibliography of articles and books discussing the practice of archival description, the application of standards and related issues.

Those who are not SAA members may purchase this special issue of The American Archivist for $15.00 plus postage; contact Teresa M. Brinati, Managing Editor, Society of American Archivists, 600 South Federal, Suite 504, Chicago, IL 60605.
## Recommended NISO Standard

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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

Telephone: (301) 975-2814

Gaithersburg, MD 20899

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?