



IEEE STANDARDS BEARER



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Complimentary Newsletter

July 1993

Standards: Key to a Flourishing Global Economy

Dr. John S. Mayo, President of AT&T Bell Laboratories, recently presented the keynote address at the Plenary Session of the American National Standards Institute (ANSI) Annual Public Conference (March 1993). Mayo explored the major role that standards have come to play in today's markets, particularly in information technologies and telecommunications. His expressed views are identical with those of IEEE Standards, and we are therefore very pleased to have the opportunity to summarize the speech in this article, and to offer a copy of the original presentation to those interested (*see below for contact information*).

The rapid advances of technology, and its impact on society, have resulted in the creation of a global economy and marketplace along with related competitive pressures. Standards and the standards process play a significant role in this environment.

Standards, and particularly internationally accepted standards, are key to the successful flourishing of a global economy. The growth of information as well as other technologies has changed the size of the world and, of course, altered the shape of its markets such that businesses must recognize global standards in their strategies. All sides of the marketplace stand to benefit, buyers and sellers alike.

The voluntary, consensus standards-setting process is the one that provides the best opportunities for a broad industrial base and the customers it serves. In

the interest of maintaining and also improving this process, it is important to keep in mind some key fundamentals about standards. They must:

- Be easy to use and access
- Encourage innovation and not discourage investment in research

Good timing in the standards process is critical to a well-balanced competitive market. Delays are caused by a number of factors, including the broadening of the consensus base, and the mechanical processes, both of which slow down a given effort.

Given the increasing importance of standards to the marketplace, and considering the variety of stakeholders in the standards process, it is most important to prioritize issues and classify needs according to user requirements. The most necessary standards are those that will service a global economy.

A well-managed voluntary standards program in the US will help strengthen our position in this new economy. In order to achieve this, we must meet the challenges of providing funds for the standards process; developing a well-founded partnership between industry and government; and meeting user needs on a global basis. ♦

To obtain the full text, please write to the IEEE Standards Bearer, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, USA. For copies of the complete proceedings of the ANSI Public Conference (hard copy or videotape), contact the ANSI Sales Department, 11 West 42nd Street, New York, NY 10036, USA.

IEEE Standards Board Meets in Montreal

by Judith Gorman

Thanks to several key members of the Canadian electrotechnical and communications industries, the IEEE Standards Board and its standing committees were graciously hosted at their quarterly meeting, which took place at the Queen Elizabeth Hotel (La Reine Elizabeth) in Montreal, Canada. These contributors were ABB Inc., GE Canada, Northern Telecom, Bell Canada, and Hydro-Québec. IEEE Standards gratefully acknowledges the contributions of these companies and recognizes that its work is made possible by the continuing support of the industries it serves.

As a rule—and this series of meetings proved no exception—IEEE Standards Board meetings are intensive, long work sessions taking place over the course of three days. Making the meetings more

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Letter from the editor's desk

Dear Readers,

Andy Salem's column in our last issue, called "Standards Users—Are We Listening to Them?", provoked some responses from readers. Olin R. Compton, an IEEE Life Fellow, writes: "For some time I have advocated the need to get input from the expected users of our standards.... Some of my colleagues in the Transformers Committee of the Power Engineering Society see me as a divisive force because I have advocated the need to determine what the potential users want....Others on the committee feel, because we are the transformer loading experts, we are wiser than the potential users and, therefore, we 'know what they need.'...You have been a fresh spring breeze in our whole standards effort. Perhaps others will see the wisdom of your position."

Baldwin Bridger, Jr., President of the Industry Applications Society, writes that a better definition of "users" is needed. He goes on to add: "I part company with Mr. Salem when he downgrades the importance of the 'general interest' category of working group members....In my experience, this 'general interest' category normally consists of two groups. The first of these is consulting engineers. In this day of downsizing of large corporations, I find that even the biggest of companies are reducing their in-house engineering staffs and depending on consulting engineers....Since these consulting engineers put their professional reputations and licenses on the line every time they specify a product, to say that they have little financial interest or public responsibility for the standards they use (and help to create) is ridiculous. The second group...is usually retired engineers....While these elder statesmen of our profession may no longer have a direct financial interest in the standards, most of them feel a strong sense of public responsibility to contribute their expertise to the creation and revision of standards. If they didn't, they would be off fishing instead of spending their own money to attend dull IEEE working group meetings."

We'd like to hear your reactions to topics discussed in our newsletter. This issue highlights IEEE Standards and international issues, from John Mayo's thoughts on the role of standards in a global economy (front cover) to John Estey's column on the IEEE Power Engineering Society's "Vision for the Future" (page 4). Indeed, international issues have become a part of everyday activity in standards, and thus it is fitting that this issue of the *IEEE Standards Bearer* focuses on the increasing visibility and participation of IEEE Standards in the international arena. Although it may not be obvious, even our feature article, "Grounded in Reality: Leading Women Talk Standards" (page 6), continues the international theme, since Anne O'Neill talked to European as well as American IEEE standards developers to get a broader perspective on the issues. We hope you'll find all the points of view expressed in this issue as interesting and relevant as we do.

Kristin Dittmann

Kristin Dittmann
Editor-in-Chief

STANDARDS  BEARER

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THE CHAIR'S COLUMN

Those of you who have had the privilege to read about or observe firsthand the mysteries of the oceans will know that its many moods are not always reflected in its surface. Oblivious to the ebb and flow of the tides, unconcerned about the temperamental climatic changes that toss and churn the waters above, there is a life deeper down that quietly perpetuates itself and is neither ruffled nor distracted by short-lived disturbances.

That steady, pervasive, indestructible force reminds me of the underpinnings of the IEEE Standards process. It has the resiliency to ride out the raging tempests that surround turf battles. It can control the subtle but deadly undercurrents that attack the very basis of consensus work. Yet it can respond to a deep-seated cry for important, constructive change and lead it with a strength that ensures the change is timely, progressive, and enduring.

Today, a shrinking world presents industry with a challenge unlike anything it has seen before. New market opportunities brought closer by the advancements in information and communication technologies that our own profession has pioneered, have forced us to examine the

way we do business and have pressed us for change. And change we are getting.

Those of us operating in the standards arena are not immune to what is taking place around us. The global marketplace can no longer be ignored by those concerned about the standards-writing process any more than it can by those who buy and sell there. Our participation in worldwide efforts to streamline the system is imperative. It would be shameful and harmful if we did not bring to the table the strengths of the IEEE Standards team and its processes.

The IEEE has set as one of its primary goals "to increase the worldwide use of IEEE Standards." Short and to the point, for sure.

For a number of years, the staff of the IEEE Standards Department has been gradually upgrading our standards process to make it more user-friendly and responsive to the fast-paced, changing requirements of our customers. By applying new techniques, we have increased productivity levels and cut the time it takes to get these documents into users' hands. In so doing, we believe we have not compromised the reputation we hold for having an open, fair, and timely process that respects the basic tenets of

consensus standards work.

But is this enough for the new world order? We believe not. Our international role will require something more. We are being asked to devise a system that will produce standards, acceptable for use worldwide, without sacrificing delivery times. Clearly the old ways won't work. Uncoordinated production of national standards followed by years of negotiation to reconcile differences is unacceptable. A parallel process with global participation is needed, and this will require a much greater degree of automation than we have today. The good news is that it is achievable and the IEEE is ready to take this next step forward. Only then can we meet our goal.

The nature of this new venture is unique in that it has potential far beyond the Standards Department in its application. It will be a big change for the standards-development process, but a very necessary one, one that will benefit the global economy.

W. S. Read

Wallace S. Read
Vice President, IEEE Standards Activities

Volunteers Sought for Language-Independent POSIX Interfaces

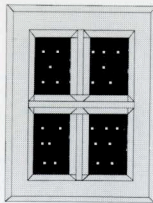
PASC, the Portable Applications Standards Subcommittee, has been responsible for the completion of a number of POSIX (Portable Operating System Interface) standards, which have been invaluable in progressing the creation of portable application computer environments.

To date, PASC has focused on standardizing Application Programming Interfaces (APIs) using common language bindings such as C, Fortran, and Ada. However, the International Organization for Standardization (ISO) has determined a need to progress the POSIX work (existing and new POSIX standards) using programming language-independent techniques.

After investigating alternate approaches, the IEEE developed general guidelines for the development of POSIX language-independent specifications (LIS), and these were reviewed and approved by ISO. Drafts of a revision of

ISO/IEC 9945-1:1990 (ANSI/IEEE Std 1003.1-1990) in language-independent form have been developed and circulated for review and comment. Language-independent standards can be used as a valuable base from which to progress any number of language-bound standards as needed by the user community.

The IEEE is looking for volunteers who would be willing to work on such language-independent POSIX standards. If you are interested in this work, please contact Bob Pritchard, (908) 562-3811. For information on the current state of the POSIX language-independent work, the most complete draft of a POSIX specification in language-independent form [draft 3 of IEEE P1003.1(LIS)] is available from IEEE, (800) 678-IEEE. The technical editor, Paul Rabin, can be reached via the Internet at rabin@osf.org.



Windows to ... IEEE POWER ENGINEERING SOCIETY'S VISION FOR THE FUTURE: A GLOBAL ROLE FOR IEEE/PES

by John Estey

For many years, US national standards were preeminent in their leadership and acceptance in the world electric power industry. Today, however, as the US adjusts to an increasingly global world market, it is clear that to be successful, products must meet with broad acceptance around the world. As manufacturers seek ways to open market opportunities for goods and services worldwide, international standards are taking precedence over national standards.

In response to this trend, the IEEE Power Engineering Society (PES), which traditionally has been perceived as a developer of US national standards, created a Task Force to determine the society's future role in the development of standards. The group's analysis focused on the international standards arena, and also addressed coordinating efforts with other societies in IEEE, the IEEE Standards Board, and the IEEE Standards Department. Some of the Task Force's findings are summarized below.

The PES already has capabilities and resources (along with those of other IEEE societies) that render it well qualified to make significant contributions to the international standards arena. Some of these resources include

- *The growing number of IEEE international members.* Already 25% of PES members reside outside the US, and like the rest of IEEE, this group is the fastest growing membership segment.

As a result, qualified and informed grass-roots input is available from IEEE and PES experts around the world.

- *IEEE's strength in technical publishing.* IEEE continues to be the leader in the world's literature in electrotechnology.
- *Increasingly sophisticated communication techniques.* IEEE is dedicated to implementing new ways to facilitate the development of standards quickly and economically.

Because the International Electrotechnical Commission (IEC) is recognized as the main force in international standards, the Task Force concluded that anything IEEE or PES does in international standards should be complementary to IEC's effort. PES will work with IEEE to achieve full recognition as an outstanding independent, international technical society, providing an excellent source for standards information in the field of electrotechnology. A dedication of IEEE resources to support the international standardization program could contribute to an acceleration of the development of international standards. IEC is receptive to such assistance as it recognizes that its resources are limited.

For IEEE and PES standards to be accepted and sought after on a global basis, they must be of high quality, developed quickly, and maintained regularly so they are current. Furthermore, they must have broad-based input from experts

around the world, particularly from users. To encourage increasing worldwide member participation to the standards-setting process, the following benefits should be emphasized:

- IEEE members outside the US can contribute to standards directly without going through other organizations.
- IEEE offers new modes of communication to develop standards, such as electronic mail, the Standards Process Automation system (SPAsystem™) (see article, page 12), and teleconferencing, which facilitates global participation while minimizing the need for extensive, expensive, and time-consuming travel.

In conclusion, the Task Force recommended that the PES work with IEEE societies to establish a standards program that is recognized worldwide as a critical resource to the electric power industry for standards, related technical information, training, and editorial assistance to the standards-development process. The PES and IEEE, through this vision for the future, intend to continue developing standards that are sought after by organizations around the world.

For a complete copy of this PES Task Force report, please contact the IEEE Standards Bearer, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, USA. ♦

John Estey is Chair of the PES Executive Board Task Force on Standards—Vision for the Future.

Financial Advantage Program for IEEE Members

IEEE is launching a Financial Advantage Program for new and existing members. This program, which begins on September 1, will allow members to participate in a number of financial benefits. These benefits include the ability to invest in a variety of high-quality mutual funds with no sales fee, and tax-deferred annuities with specially

designed provisions. Enhancements to the credit card and insurance programs are also being developed. Numerous other benefits, such as specially priced home mortgages, auto financing, educational loans, and purchase power programs, are underway. Any questions or inquiries can be directed to Michael Sosa, (908) 562-5324.

New Standards Committee on Interactive Simulation Seeks Members

The IEEE Computer Society Standards Activities Board (SAB) is forming a new Standards Committee on Interactive Simulation (SCIS). This committee is expected to be formally ratified at the September 1993 SAB meeting.

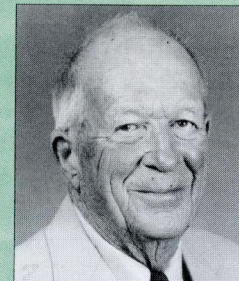
The purpose of SCIS is to establish a common user sys-

tem and environment for interactive simulations and simulators/models/prototypes, to be seamlessly integrated with real-world entities and environments, such as vehicles, aircraft, ships, etc.

For more information, or to become a member, contact Al Kerecman, (908) 532-3608.

Awards Spotlight

Ivan Easton was the unanimous first choice for the 1993 Charles Proteus Steinmetz field award for technical and administrative leadership in the development of the IEEE Standards program and the US National Committee (USNC) of the International Electrotechnical Commission (IEC).



Easton served in several leading positions at General Radio Corp. (now GenRad, Inc.) from 1936 to his retirement in 1972. He founded the Easton Committee, which in 1968 played a major role in the development of the organizational structure of the Standards Board.

In 1976, Easton came out of retirement to serve as consulting staff director of IEEE Standards, which he did until 1980.

During this period, he was responsible for developing the initial interest in standardization within the Computer Society as a leading edge of technology.

Easton served as President of the USNC of the IEC between 1980 and 1984. Noted for his global overview and diplomacy, he used his position to promote international opportunities for the IEEE Standard activities.

Easton has also been President of the IEEE Instrument and Measurement Society (1954), Chair of IEEE Technical Activities Board (TAB) OPCOM (1960), IEEE Standards Office Manager (1976-1977), and Chair of IEC TC66 (1973-1980).

This award will be presented at the 1993 Summer Power Meeting in Vancouver, Canada, July 18-22.

Two IEEE Standards Medallions were awarded in the past quarter. **Paul Wilson** was given the Medallion by the IEEE Computer Society. **Milton D. Robinson** was given the Medallion at the Industrial and Commercial Power Systems Conference in May.

The IEEE Standards Medallion is awarded for outstanding achievement in the development and implementation of standards within the technologies of the IEEE. Recipients are selected solely on the basis of their accomplishments in standards work.

The IEEE Standards Board formally congratulates the Chairs, Vice Chairs, and Co-chairs listed below as well as their working groups on the publication of their standard, collection, or interpretations.



Donald G. Bodnar, Chair: 145-1993 IEEE Standard Definitions of Terms for Antennas

David P. Hartmann and **Ray P. Stratford**, Co-chairs: 519-1992 IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

William P. Lidinsky, Chair, 802.1 Working Group; **Tony Jeffree**, Task Group Chair: 802.1k-1993 Supplement to IEEE Std 802.1B-1992, LAN/MAN Management: Discovery and Dynamic Control of Event Forwarding

Robert Donnan, Chair, 802.5 Working Group; **Kirk Preiss**, Chair, Source-Routing Task Group: 802.5m-1993 Supplement to ISO/IEC 10038:1993 [ANSI/IEEE Std 802.1D, 1993 Edition], Source Routing (published as a part of ISO/IEC 10038:1993)

J. V. Barker, Jr., Chair: 858-1993 IEEE Standard Definitions in Power Operations Terminology

Basil Sherlund, Chair: 1016.1-1993 IEEE Guide to Software Design Descriptions
Sanford Wagner, Chair; **Louis Costrell**, Secretary: 1160-1993 IEEE Standard Test Procedures for High-Purity Germanium Crystals for Radiation Detectors

William Billowitch, Chair: 1164-1993 IEEE Standard Multivalued Logic System for VHDL Model Interoperability (Std_logic_1164)

Sonny Kasturi, Chair Working Group 3.4; **John Taylor**, Task Group Chair: 1205-1993 IEEE Guide for Assessing, Monitoring, and Mitigating Aging Effects on Class 1E Equipment Used in Nuclear Power Generating Stations

Vera Edelstein, Chair: 1219-1993 IEEE Standard for Software Maintenance

Kevin Bevins, Chair: 1264-1993 IEEE Guide for Animal Deterrents for Electric Power Supply Substations

Al Kerecman, Chair; **Bruce McDonald**, Vice-Chair: 1278-1993 IEEE Standard for Information Technology—Protocols for Distributed Interactive Simulation Applications—Entity Information and Interaction

E. F. Veverka, Chair: 1291-1993 IEEE Guide for Partial Discharge Measurement in Power Switchgear

Hans Karlsson, Chair; **Eugene C. Schramm** and **Peter Odell**, Acting Co-chairs: 1301.2-1993 IEEE Recommended Practices for the Implementation of a Metric Equipment Practice (IEEE Std 1301-1991)

Patricia Thaler, Chair 802.3: ISO/IEC 8802-3:1993 Information technology—Local and metropolitan area networks—Carrier sense multiple access with collision detection (CSMA/CD) and Physical Layer Specifications

Roger J. Martin, Chair: 2003.1-1992 IEEE Standard for Information Technology—Test Methods for Measuring Conformance to POSIX—Part 1: System Interfaces

William P. Lidinsky, Chair, 802.1 Working Group; **Mick Seaman**, Chair, Interworking Task Group: ISO/IEC 10038:1993 [ANSI/IEEE Std 802.1D, 1993 Edition] Information technology—Telecommunications and information exchange between systems—Local area networks—Media access control (MAC) bridges

M. M. Flack, Chair; **R. J. Davidson**, Co-chair: C62.42-1992 IEEE Guide for the Application of Gas Tube and Air Gap Arrester Low-Voltage (Equal to or Less than 1000 Vrms or 1200 Vdc) Surge-Protective Devices

François D. Martzloff, Chair: C62.45-1992 IEEE Guide on Surge Testing for Equipment Connected to Low-Voltage AC Power Circuits

Collection

Bal Gupta, Special Contributor: *Electric Machinery* Collection, 1993 Edition

Interpretation

Donald E. Hooper, Chair: *National Electrical Safety Code Interpretations, 1991-1993*, Fourth Interim Collection

GROUNDING IN REALITY: Leading Women Talk Standards

by Anne O'Neill

As more women become involved in product development, research, and technical writing in engineering fields, a small but dedicated number are discovering satisfaction in applying their knowledge and skills to standards development. Women as individuals find that their active participation in standards can enhance their careers, but in most areas, they are still underrepresented. Does the lopsided ratio between women and men in standards development create a unique experience for women?



Lorraine Kevra

We talked to a few of the well-known women involved in IEEE Standards development to gather their impressions of standards work, its demands, and its rewards.

Some key women participants in standards development see that their gender gives them a certain edge, while others dismiss that view. Ingrid Fromm, a former IEEE Standards Board member and decade-long active participant in the development of Local Area Network and Metropolitan Area Network (LAN/MAN) standards, believes that a woman's visibility in standards development can actually be an advantage. "It's easier for a woman to become known quickly. If you make a good presentation and do good work, you are remembered and recognized," Fromm said. She finds that it is easier to build support for her stand on particular standards issues. "Of course," she added with a laugh, "your mistakes are easily remembered, too."

Karen Schaeffer, Chair of the Supercomputing working group of the Computer

Society's Portable Applications Standards Committee (PASC), admitted, "I do have problems with the very hierarchical structure of our sponsor executive committee." Schaeffer explained that this structure tends to assign more weight to rule-making and directives rather than "listening, explaining, and having small groups build consensus off line." She views this style as being "characteristic of male-dominated groups," in contrast to the organizational style of other professional groups that have an equitable gender ratio in which she has held leadership posts.

Not everyone agreed that gender matters in the standards-development experience. "I'm skeptical about gender communication differences," said Pat Thaler, LAN/MAN Standards Committee (LMSC) Working Group 802.3 Chair. Thaler, who has lately been involved in a controversial study group effort for higher-speed networking, noted that "while it's probably true that more men are aggressive communicators, it's also true that there are many men who can't always handle confrontational style." According to Thaler, each individual's corporate culture is an important factor in determining how successful he or she will be in handling the often intense conflicts that arise in the standards-development process. "In Hewlett-Packard, our design review process trains you to be thick-skinned. You have to change or stand up for your ideas."

The standards leaders cited compromise, persistence, and active listening as common tactics for motivating discussion and implementing the development of standards. "Knowing the art of compromise is the most beneficial behavior style for standards work," said Lorraine Kevra, Vice Chair of PASC and a current IEEE Standards Board and Standards Review Committee (RevCom) member. "You have to listen and be able to understand the other

person, especially if their position is directly opposed to yours. For example, if you're a vendor, you have to be able to put yourself in the shoes of the user."

Jane Radatz, active participant and former Chair of the IEEE 610 series of computer glossary standards, emphasized that standards work requires people to set aside

their egos. "While standards work may seem well suited to those who like to impose their will on others, this trait doesn't seem to work well in reality." Catherine Ozenfont, Chair of the Common ATLAS Committee, cautioned, "In standards, the short term is considered more of a constraint than an advantage. Open your mind to the long term." Thaler

advised persistence: "The consensus process takes time, so roll with the punches."

At face value, it appears that participation in the standards process mainly requires expertise in the technology under development; however, all the leaders said they also relied heavily on interpersonal and other skills to guide them through a process that is often as well-known for its political battles as for the standards products that result. "Standards work requires a little psychology and openness to talk and to compromise," said Fromm. "I thought it was all technical at first." Kevra mentioned public speaking in the general education curriculum as an aid to her in preparation for standards work.

Eleanor Adair, a biology research scientist who actively participates in the work of Standards Coordinating Committee 28 (SCC28) on Non-ionizing Radiation, said she utilizes skills from her teaching and administrative background to contribute in meetings. In addition, she brings to her standards work general technical expertise, knowledge of literature in the field, and a conservative view of testing techniques and the scientific method. "I end up being a critic of literature that is about to be applied to the standards setting.... You



Karen Schaeffer

RECENT IEEE STANDARDS PUBLICATIONS

Antennas and Propagation

145-1993 IEEE Standard Definitions of Terms for Antennas (ISBN 1-55937-317-2) [SH16279-NUW] \$44.50

Computer

802.1k-1993, Supplement to IEEE Std 802.1B-1992, LAN/MAN Management: Discovery and Dynamic Control of Event Forwarding (ISBN 1-55937-335-0) [SH16444-NUW] \$30.00

802.5m-1993, Supplement to ISO/IEC 10038:1993 [ANSI/IEEE Std 802.1D, 1993 Edition], Source Routing (*published as a part of ISO/IEC 10038:1993*)

1016.1-1993 IEEE Guide to Software Design Descriptions (ISBN 1-55937-297-4) [SH16071-NUW] \$40.00

1164-1993 IEEE Standard Multivalued Logic System for VHDL Model Interoperability (Std_logic_1164) (ISBN 1-55937-299-0) [SH16097-NUW] \$40.50

1219-1993 IEEE Standard for Software Maintenance (ISBN 1-55937-279-6) [SH15867-NUW] \$45.50

1278-1993 IEEE Standard for Information Technology—Protocols for Distributed Interactive Simulation Applications—Entity Information and Interaction (ISBN 1-55937-305-9) [SH16154-NUW] \$46.00

2003.1-1992 IEEE Standard for Information Technology—Test Methods for Measuring Conformance to POSIX—Part 1: System Interfaces (ISBN 1-55937-275-3) [SH15826-NUW] \$80.00

ISO/IEC 8802-3:1993 [ANSI/IEEE Std 802.3, 1993 Edition] Information technology—Local and metropolitan area networks—Carrier sense multiple access with collision detection (CSMA/CD) and Physical Layer Specifications (ISBN 1-55937-324-5) [SH16337-NUW] \$95.00

ISO/IEC 10038:1993 [ANSI/IEEE Std 802.1D, 1993 Edition] Information technology—Telecommunications and information exchange between systems—Local area networks—Media access control (MAC) bridges (ISBN 1-55937-325-3) [SH16345-NUW] \$75.00

Industry Applications

519-1992 IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems (ISBN 1-55937-239-7) [SH15453-NUW] \$45.00

Nuclear Power

1160-1993 IEEE Standard Test Procedures for High-Purity Germanium Crystals for Radiation Detectors (ISBN 1-55937-298-2) [SH16089-NUW] \$45.50

Power Engineering

858-1993 IEEE Standard Definitions in Power Operations Terminology (ISBN 1-55937-294-X) [SH16048-NUW] \$35.00

1205-1993 IEEE Guide for Assessing, Monitoring, and Mitigating Aging Effects on Class 1E Equipment Used in Nuclear Power Generating Stations (ISBN 1-55937-300-8) [SH16105-NUW] \$44.50

1264-1993 IEEE Guide for Animal Deterrents for Electric Power Supply Substations (ISBN 1-55937-304-0) [SH16147-NUW] \$39.00

1291-1993 IEEE Guide for Partial Discharge Measurement in Power Switchgear (ISBN 1-55937-306-7) [SH16162-NUW] \$42.50

C62.42-1992 IEEE Guide for the Application of Gas Tube and Air Gap Arresters Low-Voltage (Equal to or Less than 1000 V_{rms} or 1200 Vdc) Surge-Protective Devices (ISBN 1-55937-286-9) [SH15933-NUW] \$46.50

C62.45-1992 IEEE Guide on Surge Testing for Equipment Connected to Low-Voltage AC Power Circuits (ISBN 1-55937-287-7) [SH15941-NUW] \$54.00

Collections

Electric Machinery Collection (ISBN 1-55937-331-8) [SH16402-NUW] \$95.00

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NESC Interpretations Collection, 1943-1990 (ISBN 1-55937-011-4) [SH12641-NUW] \$185.00

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have to use good science to make the standard believable."

Barbara Beckwith, Chair of the Power Systems Relay Working Group, utilizes her background as a technical writer for instruction manuals for products of her family's company. Radatz appreciates the precise expression and logic that she gained from her mathematics education and her early career in software development and software verification and validation. Ozenfont brings an extensive background in patent work for the French Ministry of Defense.

Standards work requires many varied skills, and no active participant claims the work is easy. But it produces some tangible rewards for the effort. "The skills you develop in standards work are useful back

at the home office," said Fromm. "Given the choice, a standards meeting is always more important than a conference. A conference by its nature of prepared presentations, will never have as much useful information as the open discussion of a standards meeting." There is a potential downside to involvement in standards, however. Radatz warned that too much of a broad perspective may involve some danger of becoming too distant from the field being standardized.

She advised that "the best standards are grounded in reality," so experience in real projects is always an asset to standards work. Kevra agreed, noting that some standards developers worry about losing their technical edge. But overall, she said, "you develop a broad view of your technology

and get to know the perspective of other builders of that technology as well as users." Some emphasized the importance of the standard itself, and not the professional or personal gains. "The work is hardly rewarding, but it is truly necessary," said Adair. Beckwith believes that the contacts at standards meetings have been good for her employer. Among other benefits, she said, "we keep good relations with our competitors because we work with them so regularly." Radatz believes there is a personal benefit as well. "The people I've met in standards work are the best part of all—bright, sincere people, really interested in doing a good job and making things better. I consider these friends and colleagues one of the best benefits of standards work." ♦



Patricia Thaler

IEEE STANDARDS BOARD ACTIONS

APPROVED PARs FOR NEW STANDARDS

- P896.3a** (C/BA) Recommended Practices for the Electrical Environment Within Backplane Transceiver Logic (BTL) Futurebus+ Systems
- P1076.1** (C/DA) Standard VHDL Language Reference Manual—Analog Extensions
- P1076.2** (C/DA) Standard VHDL Language Math Package
- P1076.3** (C/DA) Standard VHDL Language Synthesis Package
- P1076.4** (C/DA) Standard VHDL Language Timing Methodology
- P1076.5** (C/DA) Standard VHDL Language Utility Library
- P1101.5** (C/BA) Standard Mechanical Interface for a Military Module, Air-Flow-Through Cooled, Format E Form Factor
- P1101.6** (C/BA) Standard Mechanical Interface for a 10SU Module, Air-Flow-Through Cooled
- P1244.5** (C/MSS) Standard for Storage System Management Interfaces and Managed Object Definitions (SSS.MGT)
- P1275.1** (C/BA) Standard for Boot (Initialization Configuration) Firmware—IEEE Std 1754-1992, ISA
- P1275.2** (C/BA) Standard for Boot (Initialization Configuration) Firmware—IEEE Std 1496-1993, (SBus) Bus
- P1275.3** (C/BA) Standard for Boot (Initialization Configuration) Firmware—IEEE P1014, (VME) Bus
- P1275.4** (C/BA) Standard for Boot (Initialization Configuration) Firmware—IEEE Std 896-1993, (Futurebus+) Bus
- P1332** (R) Standard Reliability Program for the Development and Production of Electronic Systems and Equipment
- P1343** (PE/IC) Guide for Testing the Insulation of Shielded Power Cable in the Field
- P1344** (PE/PSR) Standard for Synchrophasors for Power Systems
- P1351** (C/OS) Standard for Information Technology—OSI Application Program Interfaces—ACSE and Presentation Layer Application Program Interface (Language-Independent Specification)
- P1352** (C/OS) Standard for Information Technology—OSI Application Program Interfaces—Test Methods for ACSE and Presentation Layer Application Program Interface (Language-Independent Specification)
- P1353** (C/OS) Standard for Information Technology—OSI Application Program Interfaces—ACSE and Presentation Layer Application Program Interface (C Language Binding)
- P1354** (C/OS) Standard for Information Technology—OSI Application Program Interfaces—Test Methods for ACSE and Presentation Layer Application Program Interface (C Language Binding)

- P1358** (C/SE) Standard for Information Technology—Signal Processing Applications—Processor Graph Method Software Design Methodology
- P1359** (PE/NPE) Guide for Maintenance and Related Practices for Class 1E Equipment Used in Nuclear Power Generating Stations
- P1361** (SCC21) Recommended Practice for Determining Performance Characteristics and Suitability of Batteries in Photovoltaic (PV) Systems
- P1362** (C/SE) Guide for Information Technology—System Definition—Concept of Operation Document
- P1363** (C/MM) Standard for Rivest Shamir Adelman (RSA) Diffie-Hellman and Related Public-Key Cryptography
- P1364** (C/DA) Standard Hardware Description Language Based on the Verilog Hardware Description Language
- P1365** (IA/P&CI) Recommended Practice for Design and Installation of Electrical Systems for Floating Offshore Production Facilities

REVISED PARs

- P532** (PE/IC) Guide for Selecting and Testing Jackets for Underground Cables
- P841** (IA/P&CI) Standard for the Petroleum & Chemical Industry—Severe Duty Totally Enclosed Fan-Cooled (TEFC) Squirrel Cage Induction Motors—Up to and Including 500 Horsepower
- P1252** (C/MM) Standard for a Frame-based Knowledge Representation
- P1496** (C/BA) Standard for a Chip and Module Interconnect Bus: SBus

APPROVED PARs FOR STANDARDS REVISIONS

- P252** (PE/EMC&IMS) Standard for Test Procedures for Polyphase Induction Motors Having Liquid in the Magnetic Gap
- P260.2** (SCC14) Standard Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering
- P304** (PE/EM) Standard for Evaluation and Classification of Insulation Systems for Direct-Current Machines
- P334** (PE/NPE) Standard for Qualifying Continuous Duty Class 1E Motors for Nuclear Power Generating Stations
- P515** (IA/P&CI) Standard for the Testing, Design, Installation and Maintenance of Electrical Resistance Heat Tracing for Industrial Applications
- P644** (PE/T&D) Standard Procedures for Measurement of Power Frequency Electric and Magnetic Fields From AC Power Lines
- P960** (NPS/NI&D) Standards for FASTBUS Modular High-Speed Data Acquisition and Control System
- P1177** (NPS/NI&D) FASTBUS Standard Routines

WITHDRAWN PARs

- P57** (DEI) Thermal Stability of Enameled Wire in Air
- P567** (PE/NPE) IEEE Trial-Use Standard Criteria for the Design of the Control Room Complex for a Nuclear Power Generating Station
- P1003.11** (C/OS) POSIX based Transaction Processing Applications Environment Profile

APPROVAL OF NEW STANDARDS

- 775** (DEI/RE) Guide for Designing Multistress Aging Tests of Electrical Insulation in a Radiation Environment
- 817** (PE/IC) Standard Test Procedure for Flame-Retardant Coatings Applied to Insulated Cables in Cable Trays
- *802.1F** (C/CC) Standard for Common Definitions and Procedures for IEEE 802 Management Information
- *896.3** (C/BA) Recommended Practices for Futurebus+
- 896.5** (C/BA) Standard for Futurebus+, Profile M (Military)
- 1101.3** (C/BA) Mechanical Standard for 10SU Conduction and Air Cooled Modules
- 1101.4** (C/BA) Standard for Military Modules, Format E Form Factor
- *1156.1** (C/MM) Standard for Microcomputer Environmental Specifications for Computer Modules
- 1212.1** (C/MM) Standard for Communicating Among Processors and Peripherals Using Shared Memory (DMA—Direct Memory Access)
- *1226** (SCC20) Trial Use Standard for a Broad Based Environment for Test (ABBET)
- *1226.1** (SCC20) Trial Use Standard for Common Ada Packages for a Broad Based Environment for Test (ABBET)
- 1496** (C/BA) Standard for a Chip and Module Interconnect Bus: SBus
- 1596.5** (C/MM) Standard for Shared Data Formats Optimized for Scalable Coherent Interface Processors

APPROVAL OF REVISED STANDARDS

- **141** (IA/PSE) Recommended Practice for Electric Power Distribution for Industrial Plants
- 260.1** (SCC14) Standard Letter Symbols for Units of Measurement
- 532** (PE/IC) Guide for Selecting and Testing Jackets for Underground Cables
- 738** (PE/T&D) Standard for Calculating the Current-Temperature Relationship of Bare Overhead Conductors
- 802.1k** (C/CC) LAN/MAN (Local Area Network/Metropolitan Area Network) Management: Standard for Discovery and Dynamic Control of Event Forwarding (supplement to 802.1B)

***802.1m** (C/CC) Standard for System Load Protocol Supplement: Managed Object Definitions and Protocol Implementation Conformance Statement (PICS) Proforma (supplement to 802.1E)

802.3p (C/CC) Standard for Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method: Layer Management for 10 Mb/s Baseband Medium Attachment Units (MAUs)

802.3q (C/CC) Standard for Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method: Guidelines for the Development of Managed Objects (GDMO) (ISO 10164-4) Format for Layer Managed Objects

***802.6c** (C/CC) Standard for DS1 Physical Layer Convergence Procedures for 802.6 MAN

***802.6d** (C/CC) Standard for SONET (SDH) Based Physical Layer Convergence Procedures for 802.6 MAN

***802.6f** (C/CC) Standard for Conformance Statement for the 802.6 Base Standard

1149.1a (C/TT) Supplement to Standard Test Access Port and Boundary-Scan Architecture (1149.1)

***C37.101** (PE/PSR) Guide for Generator Ground Protection

C57.12.00 (PE/TR) Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers

C57.13 (PE/TR) Standard Requirements for Instrument Transformers

REAFFIRMED STANDARDS

1119 (PE/SUB) Guide for Fence Safety Clearances in Electric-Supply Stations

C57.12.56 (PE/TR) Standard Test Procedure for Thermal Evaluation of Insulation Systems for Ventilated Dry-Type Power and Distribution Transformers

C62.92 (PE/SPD) Guide for the Application of Neutral Grounding in Electrical Utility Systems, Part I—Introduction

EXTENDED STANDARDS

C37.41 (PE/SWG) Standard Design Tests for High Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories

WITHDRAWN STANDARDS

172 (AES) Standard Definitions of Navigation Aid Terms

173 (AES) Navigation Aids: Direction Finder Measurements

208 (BT) Standard on Video Techniques: Measurement of Resolution of Camera Systems

567 (PE/NPE) Trial Use Standard Criteria for the Design of the Control Room Complex for a Nuclear Power Generating Station

* Final Approval date subject to all Standards Board Conditions being met.

** Approval was given to the 12 chapters submitted.

CHANGES TO PAR NUMBERS

Please note that the following PE/T&D PARs approved at the December 1992 Standards Board meeting (see January 1993 IEEE Standards Bearer) have had their numbers changed. P1335 is now PC135.63, P1336 is now PC135.7, P1337 is now PC135.14, P1338 is now PC135.2, P1339 is now PC135.1, and P1340 is now PC135.3.

ACRONYMS

AES/GAP	Aerospace & Electronic Systems/ Gyro & Accelerometer Panel
BT	Broadcast Technology
C/BA	Computer/Bus Architecture
C/CC	Computer/802 LAN/MAN
C/DA	Computer/Design Automation
C/MM	Computer/Microprocessor & Microcomputer
C/MSS	Computer/Mass Storage Systems
C/OS	Computer/Operating Systems and Application Environments
C/SE	Computer/Software Engineering
C/TT	Computer/Test Technology
DEI/RE	Dielectrics and Electrical Insulation/Radiation Effects
IA/P&CI	Industry Applications/Petroleum & Chemical Industry
IA/PSE	Industry Applications/Power Systems Engineering
NPS/NI&D	Nuclear & Plasma Sciences/ Nuclear Instruments & Detectors
PAR	Project Authorization Request
PE/EM	Power Engineering/Electric Machinery
PE/IC	Power Engineering/Insulated Conductors
PE/NPE	Power Engineering/Nuclear Power Engineering
PE/PSR	Power Engineering/Power System Relaying
PE/SUB	Power Engineering/Substations
PE/SWG	Power Engineering/Switchgear
PE/T&D	Power Engineering/Transmission and Distribution
PE/TR	Power Engineering/Transformers
R	Reliability
SCC14	Standards Coordinating Committee 14 (Quantities, Units & Letter Symbols)
SCC20	Standards Coordinating Committee 20 (ATLAS)
SCC21	Standards Coordinating Committee 21 (Photovoltaics)

Montreal (Continued from page 1)

interesting were the contributions of guest speakers from AT&T, addressing research on Intelligent Vehicle Highway technology, and Symbol Technologies, Inc., proposing a new IEEE standards activity in the area of high-density bar coding technology. Panelists in an international forum included Larry Moore from the Standards Council of Canada; Brian McEwen from the Canadian Standards Association; Donald Fleckenstein, IEEE Standards Board Member; and Judith Gorman, Associate Staff Director, IEEE Standards.

An evening of festivity, organized by Wally Read, Vice President of Standards, gave the Board a brief respite from its efforts. Everyone was invited to spend the evening at the Le Festin du Gouverneur, a restaurant in a medieval setting, with typical troubadour-like entertainment.

The Standards Board meeting was the culminating event of the three days. Members arrived early to hear staff members Mary Lynne Nielsen and Anne O'Neill present the pros and cons of an IEEE Standards Conformity Assessment program. The Board responded with a motion to encourage a business plan for a pilot program on the IEEE VHDL standard (IEEE Std 1076-1987), in cooperation with VHDL International. Some of the challenging action items that resulted from the meeting were: 1) to further study the language of the appeals procedures so that it is clear that technical issues should be resolved in the committee and that justification for denial of an appeal is explained carefully and thoughtfully to the appellant; 2) to create an industry advisory board to support the implementation of the Standards Process Automation system (SPAsystem™); and 3) to accept in principle a proposed motion on metrication.

This meeting was the second occasion of the IEEE Standards Board to meet outside the geographic borders of the USA. This is an expression of the growing trend to respond to IEEE's growing global membership and the need to consider successful standards activities in terms of their international acceptability and usefulness. ♦
Judith Gorman is Associate Staff Director of the IEEE Standards Department.

IEEE on the International Scene...

IEEE AGREEMENT WITH CENELEC TO ADOPT EUROPEAN NORMS

The IEEE and the Comité Européen de Normalisation Electrotechnique (CENELEC) established an agreement that permits the Switchgear Committee of the IEEE Power Engineering Society to adopt four European Norms (ENs).

Through this agreement, IEEE will be able to adopt the following CENELEC standards: *EN 50 052: 1990, plus Amendment A1: 1990*, Standard for Cast Aluminum Alloy Enclosures for Gas-Filled High-Voltage Switchgear and Controlgear; *EN 50 064: 1989*, Standard for Wrought Aluminum and Aluminum Enclosures for Gas-Filled High-Voltage Switchgear and Controlgear; *EN 50 068: 1991*, Standard for Wrought Steel Enclosures for Gas-Filled High-Voltage Switchgear and Controlgear; and *EN 50 069: 1991*, Standard for Welded Composite Enclosures of Cast and Wrought Aluminum Alloys for Gas-Filled High-Voltage Switchgear and Controlgear. IEEE will also submit the four standards for recognition as American National Standards.

CENELEC will retain copyright ownership of the four standard documents, but grants IEEE the nonexclusive right to sell these standards within and outside of the United States.

In keeping with IEEE's initiative to facilitate global standardization, this agreement marks three milestones for the IEEE Standards Program and international standardization. It reduces the duplication of standards development and advances the ultimate goal of having one global standard for any given practice. Further, it strengthens access to and participation in the global standardization process, meeting the needs of the growing international standards community.

CENELEC is a not-for-profit technical organization set up under Belgian law that is composed of the National Electrotechnical Committees of 18 countries. CENELEC's main objective is to prepare a

coherent set of voluntary electrotechnical standards to be used as a basis for the creation of the Single European Market/European Economic Space.

For more information, contact Karen McCabe, (908) 562-3824. ♦

USING AN IEC STANDARD AS A BASE FOR AN IEEE STANDARD

With the recent trend toward harmonizing IEEE standards with International Electrotechnical Commission (IEC) standards, it is important for working groups to be aware of the procedures involved in using an IEC standard as a base for an IEEE standard. The IEEE has been communicating with the IEC to obtain permission to copy IEC standards for the purpose of developing harmonized standards. If a working group identifies an IEC standard that may be either adopted in full or used as a base for an IEEE standard, the working group may copy and distribute the IEC standard to its members for review purposes. The copies that are distributed must include the following statement:

This copy of an extract or total IEC publication is to be used solely for the purposes of further development of International Standards. It may not be offered for further reproduction or for sale. The copyright rests with the International Electrotechnical Commission.

In addition to the above statement, the United States National Committee (USNC) of the IEC must be notified whenever IEC documents are copied. The USNC will authorize the reproduction if the request is based on an authorized standards project. Working Group Chairs should notify their Staff Liaisons at the IEEE Standards Department who will, in turn, advise the USNC of the particular IEC standard being reviewed. The IEC wishes to limit the number of copies to a strict minimum, clearly marked, and then destroyed. Credit to the IEC will be given in the front matter of the approved IEEE

standard, noting what was extracted and from which IEC document(s). Contact Luigi Napoli at (908) 562-3812 for more information. ♦

STANDARDS SEMINAR ON COLOR BOOKS GIVEN IN VENEZUELA

The IEEE Standards Department seminar entitled "Planning, Design, Protection, Maintenance, and Operation of Industrial and Commercial Power Systems," also known as the "Color Book" seminar, was presented to a group of over 30 petrochemical industry electrical engineers in Maracay, Venezuela in February. The in-house presentation of the seminar was arranged by the Center of Formation and Training for Venezuelan Petroleum and Their Affiliates (CEPET). Each attendee received a complete set of the IEEE Color Books.

The seminar covers power system planning and design; power system analysis and protection; short-circuit calculations and interrupter application; energy conservation and management; emergency and stand-by power; and safety, testing, and maintenance for both industrial and commercial facilities. The emphasis is on practical information and methods that can be immediately used in the workplace.

Now an international event, the Color Book seminar has been presented to over 1000 engineers nationally in a little more than 10 years. It is continually revised to stay abreast of the material in the latest editions of the IEEE Color Books.

The seminar instructors are M. Shan Griffith, Carl E. Becker, and Dan L. Goldberg, all of whom are contributing authors to the IEEE Color Book series. They were graciously hosted in Venezuela by Salvador Romano, CEPET Operations, and were also cordially received by Rafael Sanchez, Treasurer for the IEEE Venezuelan Section, and by all the attendees.

For information on hosting an on-site seminar, contact Cathy Downer, IEEE Standards Department, (908) 562-3825. ♦

CALENDAR OF EVENTS

August

6 *Deadline for draft and PAR submission for September Standards Board meeting*

9-13 **C63 and Subcommittee meetings**

Dallas, TX
contact—Luigi Napoli
(908) 562-3812

9-13 **EMC Symposium**

Dallas TX
contact—Joe Stanfield
(214) 690-9881

16-17 **C63.4 Radio-Noise Emissions Seminar (EMC Symposium)**

Dallas, TX
contact—Cathy Downer
(908) 562-3825

16-17 **US TAG for ISO/IEC JTC 1/SC7 meeting**

Seattle, WA
contact—Leonard Tripp, Boeing,
MS 6Y-07, P.O. Box 3707,
Seattle, WA 98124
(204) 477-3326

Note: These dates represent a change from the last calendar.

30- **Software Engineering Sept 3 Standards Symposium**

Brighton, England
Registration deadline: August 6
contact—IEEE Computer Society
(202) 371-1013 for information

September

9-11 **Power Systems seminar (in conjunction with Petroleum and Cement Industry Conference)**

St. Louis, MO
contact—Cathy Downer
(908) 562-3825

13 **Microprocessor and Microcomputer Standards Committee (MMSC) meeting (Computer Society)**

San Francisco, CA
contact—Fritz Whittington,
phone (214) 995-0397
fax (214) 995-6194

13-14 **AESS Gyro Accelerometer**

Panel meeting (Aerospace & Electronic Systems Society)
Boston, MA
contact—Jay Murphy
(617) 258-1705

13-14 **IEEE Standards Board Committee meetings**

Piscataway, NJ
contact—Terry deCourcelle
(908) 562-3807

13-15 **Petroleum and Cement Industry Conference**

St. Louis, MO
contact—Sherri Kovar
(908) 562-3995

13-17 **Standards Committee on Interactive Simulation (SCIS)**

(Computer Society)
Orlando FL
contact—Al Kerecman
(908) 532-3608

15 **IEEE Standards Board meeting**

Piscataway, NJ
contact—Terry deCourcelle
(908) 562-3807

20-24 **Surge-Protective Devices Committee meeting (Power Engineering Society)**

Coeur d'Alene, ID
contact—S. G. Whisenant
(704) 373-6608

24-25 **Nuclear Power Engineering Committee meeting (Power Engineering Society)**

Philadelphia, PA
contact—J. E. Thomas
(704) 373-4612

29- **Standards Coordinating Committee 31, Automatic Meter Reading & Energy Management meeting**

Ontario, Canada
contact—Bill Rush
(312) 567-5749

October

3-8 **Industry Applications Society (IAS) meeting**

Toronto, Ontario, Canada
contact—Ajit Bapat
(416) 752-8020

11-14 **Switchgear Committee meeting (Power Engineering Society)**

New Orleans, LA
contact—J. H. Brunke
(503) 230-4435

17, 21 **US TAG for ISO/IEC JTC 1/ & 22 SCC22/WG15 meeting**

Bethesda, MD
contact—Lorraine Kevra, AT&T,
5A-210, Routes 202/206N,
Bedminster, NJ 07921
(908) 234-6423

18-22 **Portable Operating Systems Committee (PASC) (POSIX) meeting (Computer Society)**

Bethesda, MD
contact—Judy Williams
(415) 591-8995

18-22 **Bus Architecture Standards Committee (BASC) meeting (Computer Society)**

Danvers, MA
contact—Harrison Beasley
(214) 997-3431

22 *Deadline for draft and PAR submission for December Standards Board meeting*

30- **Transformers Committee Nov 3 meeting (Power Engineering Society)**

St. Petersburg Beach, FL
contact—J. D. Borst
(314) 634-2111

November

1-5 & **National Electrical Safety Code 15-19 (NESC) Subcommittees 1-8 meeting**

to review change proposals to the 1996 NESC
Washington, D.C.
contact—Sue Vogel
(908) 562-3817

IEEE Standards Process Automation System (SPAsystem™) Ready for Users

If you have a computer of any type, a modem, and communications software, you can connect to the IEEE Standards Process Automation system. The SPAsystem will ultimately serve as the communications hub for a range of IEEE Standards activities, including the actual creation and distribution of IEEE Standards. Eventually, working groups will run special software residing on the system to create IEEE standards in an electronic format consistent with the information strategy of the IEEE Standards Program. In addition, callers will eventually be able to read and purchase documents so created.



The SPAsystem team: Gassan Salman, programmer; Sharon Holloway, SGML production; Jay Iorio, SPAsystem director; Adam Sicker, SGML development; Robert LaBelle, system administrator

Anyone can call the system, log in as "guest," and have access to a growing collection of public files—everything from the catalog of IEEE Standards publications to electronic-publishing information from a variety of sources. Registered users can access the public file areas plus other areas, depending on the "groups" to which they belong. Members of IEEE Standards committees have separate areas on the system as well as access to electronic mail and other features.

If you participate in the IEEE Standards Program and think this system could help you in your standards work, please get in touch with either Jay Iorio, System Operator, at (908) 562-3837 (j.iorio@ieee.org) or Bob LaBelle, Network Administrator, at (908) 562-3826 (r.labelle@ieee.org). ♦

INTERNATIONAL SYNCHRONIZATION GUIDE AVAILABLE

The IEEE Standards Board International Committee (IntCom) recently approved the first in a series of proposed guides on developing standards in parallel with other standards-developing organizations. The subject of this first guide is parallel development of standards between the IEEE and ISO/IEC JTC1 (the international technical committee chartered to develop information technology standards).

The guide offers concise, general rules to help a working group organize its effort to include international considerations in its standard. The guide includes flowcharts and contacts for member bodies of JTC 1, along with practical steps to follow while developing a standard.

For a free copy of this guide, contact Terry deCourcelle at the IEEE Standards Department, (908) 562-3807.

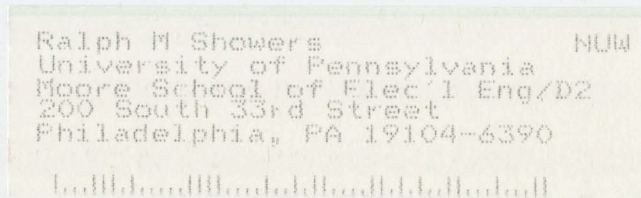
For information on the content of this guide, contact Mary Lynne Nielsen, (908) 562-3827. ♦

Coming in August... Supplement to *Circuit Breakers, Switchgear, Substations, and Fuses (C37) Standards Collection*. Call IEEE Customer Service at 1-800-678-IEEE for ordering information.



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