THE IEEE

# STANDARDS BEARER

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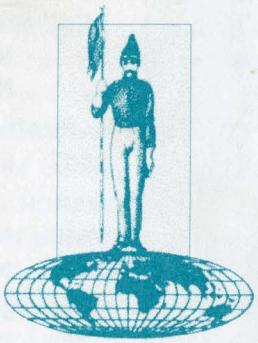
# US Manufacturers and EC '92

## *A Prescription for Continued Exports*

BY MORRIS BROOKE

The European Community (EC) is continuing to create new, EC-wide standards, called EuroNorms, applicable to products sold in the European market. Many manufacturers in the United States are understandably concerned that EuroNorms may have the effect of excluding their products from the European market. The question they are asking is: How can we promote the development of standards that will facilitate the sale of our products in Europe and around the world?



The critical ingredient for any standard seeking to serve as a vehicle for the sale of products is that it have the broadest possible marketplace acceptance.

The best way to achieve marketplace acceptance — and the way generally accepted in the US — is to include purchasers, specifiers, regulators, and other potential users of the products in the process of developing the standard (a process we call "consensus"). When this broadly defined group participates in this development of a standard and agrees with its content, that community's acceptance and use of the standard is "built in." Those participants will use it because they agree with it. In essence, they have already said they will accept the product it represents.

The US is ahead of every other country in the development of consensus standards that truly reflect the needs and wants of the marketplace — purchasers, specifiers, regulators, and other potential users. But for some unexplained reason, the US has totally lost sight of this fact and of the value of the consensus standardization process to US manufacturers in connection with the development of "international" standards that will facilitate the export of US products.

The US consensus standardization process is capable of developing international consensus standards. By factoring into the process the documentary requirements of other markets (e.g., European directives), and including in the process market participants (purchasers, specifiers, regulators, and other potential users) from other markets, the consensus process can be used to develop such standards.

When US manufacturers want to reach markets outside the US with their products, their objectives should be to develop international consensus standards. Using the consensus process, they have the opportunity to develop standards with the "built-in" acceptance of any market — national, continental, hemispherical, or international — that they want their products to reach. The market for the product should define the scope of the "consensus" for the standard.

By developing a body of the highest quality consensus standards relating to their products, and building in acceptance of these standards by markets they seek to reach, US manufacturers can have their standards serve as vehicles of trade in their own right. They can also maximize the chances of having these standards adopted by other standards organizations (international, national, transnational, and regional) outside of the US. Such standards will serve as the best possible vehicles for the export of US products to Europe and elsewhere.

*Morris Brooke is Special Assistant to the President, and General Counsel of the American Society for Testing and Materials (ASTM).*

## A Message from Andrew G. Salem

I would like to welcome all our readers back to the *IEEE Standards Bearer*. I think that you will find this much anticipated issue, which is dedicated to transnational standards development, highly informative.

We are often asked to define "transnational." The IEEE as an Institute believes "transnational" means "non-national," that is, technology should not be restricted by national interests. In the IEEE Standards program, we have enhanced this definition to include a focus on developing standards across borders, or what most people would refer to as developing "international" standards.

I am sure that many of you will have your own ideas about what "transnational" and "international" mean. But as long as information is being exchanged freely and without restraint, the goals of transnational standards development have been met.

**— Andrew G. Salem**
*Staff Director, IEEE Standards Department*

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### SPECIAL THANKS

TRANSNATIONAL STANDARDS BEARER LOGO DEVELOPMENT
J. Essel, P. Arnold, J. Dudar

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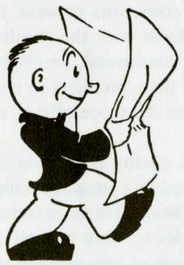


## ANSI C2-1990, National Electrical Safety Code (NESC) Announcement

A document containing the following items, which are applicable to the 1990 NESC, is available free of charge from the IEEE:

- **Tentative Interim Amendment No. 90-2**
- **Correction to Table 232-1, Metric**

**Write to:** Iris Ringel, IEEE Standards, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331

# CALENDAR OF EVENTS

**NOVEMBER**

**5-7** **Atlanta, GA: IEEE Nuclear Power Engineering Seminars**
5 Large Storage Batteries for Stationary Use
6-7 Electric Power Supply Systems, Modifications, and Upgrades for Nuclear Power Generating Stations
Human Factors Engineering at Nuclear Power Generating Stations

**12-13** **Washington , DC:** NESC Technical Subcommittee 3; NESC Technical Subcommittee 7

**13-14** **Washington, DC:** NESC Technical Subcommittee 5

**14** **Washington, DC:** NESC Technical Subcommittee 6

**14-15** **Washington, DC:** NESC Technical Subcommittee 1

**17-22** **Toulouse, France:** SCC 20 (ATLAS) Meeting

**20-22** **Orlando, FL: IEEE Electric Power Engineering Seminars**
Planning, Design, Protection, Operation, and Maintenance of Industrial and Commercial Power Systems

**DECEMBER**

**3-4** **New York, NY:** IEEE Standards Board Committee Meetings

**5** **New York, NY:** IEEE Standards Board Meeting

**JANUARY 1992**

**13-17** **Irvine, CA:** P1003 (POSIX) Meetings

**MARCH 1992**

**17-18** **New York, NY:** IEEE Standards Board Committee Meetings

**19** **New York, NY:** IEEE Standards Board Meeting

**APRIL 1992**

**6-10** **Dallas, TX:** P1003 (POSIX) Meetings

## Call for Working Group Membership

The System Specification Standards Working Group (IEEE Project 1233), which is sponsored by the IEEE Computer Society's Software Engineering Standards Subcommittee (SESS), would like to invite interested individuals to participate in drafting the Guide to Developing System Requirements Specifications. The working group has completed an outline and is developing the first draft of the guide.

The working group would like to encourage anyone who is interested in participating in the development of this draft, either by commenting on mailed drafts or by attending our meetings, to please contact Louis Miller, Eaton Corporation, 313-354-5097.

### Transnational Quotes— "Why Are International Standards Necessary?"

"The marketplace is global, and competition is global. National standards will be viewed as barriers to trade, while international standards will enable free trade."

***—Jim Isaak, IEEE POSIX Standards Subcommittee Chair and Convenor of the ISO POSIX Working Group***



# THE CHAIR'S COLUMN

## Take the Volunteer Challenge!

During the past two years, I have used this column as a communications vehicle for the various support programs instituted by the IEEE Standards Department. Most of these programs were developed to solve specific standards-related problems (e.g., to speed up the publishing process, to reduce development time [by providing project editors and balloting services]). To that end, the IEEE Standards Department has supported standards developers through its annual sponsorship of Standards Week and by updating the *IEEE Standards Style Manual* and the *IEEE Standards Manual,* by providing a Standards Development Kit, and by producing a video about standards development.

Despite all of these high-level tools and resources, I still think that it is taking an extremely long time to develop standards. The time from Project Authorization Request (PAR) approval to draft approval by the IEEE Standards Board is excessive. I hear the same complaint from the industry leaders that I meet: "The time it takes to develop a standard is too long!"

In order to bring this vital issue to the attention of IEEE Standards Board members, I scheduled it as a topic of discussion at the informal forum that was held prior to this past June's Board meeting. Not surprisingly, most Board members agreed that this is a major action item for the IEEE Standards Program.

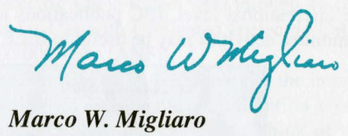
After discussing the many ramifications of this problem at the forum, I have come to the unfortunate conclusion that the problem and its solution lie with the volunteers who are developing standards. The following reasons were cited at the forum:

- Lack of understanding of the standards development process
- Too rigid an interpretation of the rules
- Over-extension of the rules (e.g., incorrectly thinking that consensus means unanimity)
- Lack of corporate support for volunteers
- Lack of training for working group chairs
- Lack of project management skills on the part of working group chairs

At the June meeting, the IEEE Standards Board voted to establish a task force to address these issues; however, regardless of how many votes the Standards Board takes, it cannot solve this problem alone. Volunteers must make an effort to resolve these problems themselves.

In the years ahead, any standards developers that cannot satisfy the demand for timely standards by industry will perish. The IEEE is one of the world's foremost standards development organizations, and I know that all of you would like it to remain the influential organization that it has become.

I urge each of you to take my volunteer challenge so that we can ensure that the IEEE is an industry leader in standards development. It is up to each and every one of you to decide, through your actions, if the IEEE Standards Program is a "dinosaur waiting to die" or "an awakening giant." The choice is yours!



***Marco W. Migliaro***
***Chair, IEEE Standards Board***

## New Numbering System for 802 Conformance Test Standards

In June 1991, the IEEE Standards Board approved 802.3g, a conformance test standard for CSMA/CD. The number has been changed to 802.3 to reflect a new numbering system, which the IEEE Standards Department has worked out with the sponsor and the working group, that more accurately represents the relationship of the conformance test standard to other standards in the 802 family. The published standard is designated and titled IEEE Std 802.3-1991, Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications. This document currently contains the AUI cable test methodology. Additional conformance tests for 802.3 will be published as supplements to 802.3.

802.x will be used for conformance test standards for 802 standards. (At the same time, a similar number will be set aside by ISO for ISO/IEC publications, with 11802 being used for conformance test standards for 8802 standards.) Each dot extension of the 1802 series will map to the appropriate 802 standard of the same dot extension.

| Organization | Base Standard | Conformance Test Standard |
|---|---|---|
| IEEE | 802 | 1802 |
| IEEE | 802.3 | 1802.3 |
| ISO/IEC | 8802-3 | 11802-3 |

This new system was set up for the following reasons:

1) Conformance test standards should be viewed not as supplements to a standard but as extensions, in a very loose sense.
2) There will be an increased demand for conformance test standards, particularly by the European Community in their drive for unified standards to overcome trade barriers.
3) Conformance test standards can be quite lengthy.
4) Many experts believe they belong in a publication separate from the standard to which they are testing conformance because they may be used by different audiences.

All current conformance test standards projects will be renumbered according to this new system.

# Moving an IEEE Standard Through the IEC

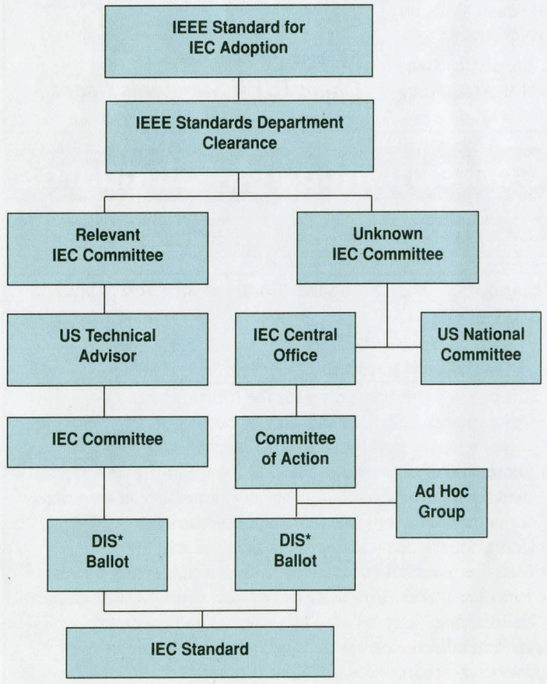
BY DONALD FLECKENSTEIN

As the IEEE representative to the US National Committee/International Electrotechnical Commission (USNC/IEC), I am often asked, "How would IEEE or other standards developing organizations based in the US get their standards approved by the IEC?" Because this edition of the *IEEE Standards Bearer* is dedicated to examining transnational standards development issues, I decided to write this article to explain the IEC process in more detail.

The International Electrotechnical Commission/International Organization of Standardization (IEC/ISO) Directives include procedures for the review and consideration of standards prepared by other standardizing bodies. Specifically, Annex G of the Directives details the steps and criteria for moving a non-IEC standard through the IEC process.

Such standards may be viewed as contributing to the program of an existing technical committee or subcommittee or, without an established committee, as expanding IEC coverage of standards in the electrotechnical field.

IEEE standards developing committees should become familiar with the scopes and work programs of the IEC committees. While the primary purpose for acquiring this knowledge is to identify opportunities for the recognition of IEEE Standards at the international level, IEC publications and information about committee activities may be useful to IEEE committee programs.




*DIS–Draft International Standard

The IEC Yearbook includes committee publications listings, document in circulation for IEC approval, and project subjects under consideration by each committee. The IEC Directory contains committee scopes and includes the names and addresses of US members of the USNC. Information about these publications is available from Anna Kaczmarek at the IEEE Standards Department.

When the decision is made that an IEEE Standard should be submitted for adoption to the IEC, the proposal for adoption should be reviewed by the IEEE Standards Department for any necessary clearances regarding copyright and publication arrangements. After the IEEE Standards Department has cleared the proposal, the submittal may follow one of two routes through the IEC:

(1) When there is an existing IEC committee, the US technical adviser for that committee should be asked to introduce the IEEE Standard into the committee's program. In some cases, IEEE members serve as the US technical adviser to the committee or as members of the US Technical Advisory Group (TAG). The IEEE also supports the Secretariats of some IEC technical committees or subcommittees.

(2) When no appropriate IEC committee exists, the proposal for adoption can be forwarded directly to the IEC Central Office. Inform the USNC that the proposal has been directly submitted to the IEC. The IEC Central Office will then forward the proposal to the committee of action. At the time of submittal for approval, an ad hoc group will be established to handle the subsequent steps in the process.

Using either of the above routes, submittal to the approval stage requires that the following be readily available:

- Copies of the standard
- A statement that explains the background and scope of the standard

The criteria used by the IEC in deciding whether to process a standard of another standardizing body are:

- The standard has been developed with international participation, or already has a significant level of international acceptance.
- The standard presents no significant conflict with an existing international standard.
- There is no evidence that the standard contains unfair provisions.
- There is no evidence of technical inadequacy in the standard.
- There is evidence that unacceptable references to national documents or terms can be avoided.
- The standardizing body is in agreement with the proposal to issue its standard as an international standard.
- Matters relating to copyright are agreed upon in writing.

Following a positive decision on the proposal, the standard will be submitted as a draft international standard for approval by the IEC. In the approval stage, both the English and French texts of the standard are circulated.

A draft international standard is adopted if:

*(Continued on page 5)*



# TransCom—Leading the Way to Transnational Standards Development and Adoption

BY IRVING KOLODNY

In previous issues of the *IEEE Standards Bearer,* much has been written on the IEEE Standards Board's goal to transnationalize IEEE Standards. To help facilitate this process, the Board created a Transnational Committee (TransCom) to better focus attention on this vital effort.

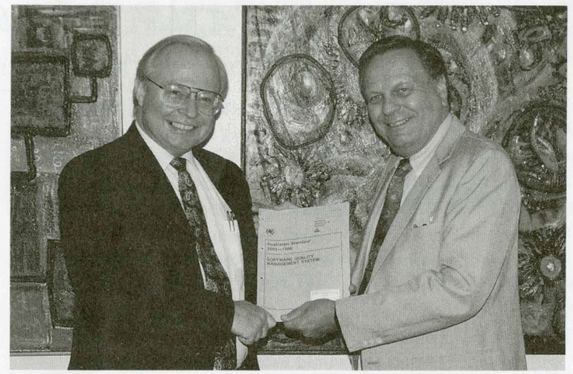
The mission of TransCom is to coordinate IEEE Standards activities with non-IEEE standards developing organizations. TransCom will assist international standards organizations in the adoption of IEEE Standards, as well as assist IEEE societies and committees that want to adopt standards that were developed outside of the IEEE.

In today's global environment, standards development everywhere should be more efficient and less time-consuming. The usual standards development timeframes may no longer be acceptable in emerging technologies, where timely information is essential for both decision-making strategies and technical implementation.

If a recognized national or international organization has developed a suitable standard that may be of value to other organizations or countries, the IEEE should adopt the existing standard and not expend the time and effort to develop essentially the same standard independently. Using the same reasoning, the IEEE is also encouraging non-IEEE organizations to adopt standards that have already been developed by the IEEE.

TransCom has developed operating procedures to process requests by IEEE Working Groups that want to adopt standards that were developed by non-IEEE organizations. These procedures are virtually the same as those that are already in use by the IEEE Standards Board's New Standards Committee (NesCom) and Standards Review Committee (RevCom). Procedures have also been developed to assist non-IEEE organizations that want to adopt IEEE Standards. IEEE Standards Department staff will be available for support during this entire process.

Several adoption projects are already underway. The IEEE Computer Society's Technical Committee on Software Engineering/Software Engineering Standards Subcommittee has requested the adoption of the Standards Association of Australia standard AS 3563, Software Quality Management. Coincidentally, the



*Irving Kolodny presents John Hortch with a copy of Australian Standard 3563, for which a transnational PAR has been approved by the IEEE Standards Board.*

Standards Association of Australia has submitted a request to adopt several IEEE 802 Standards. TransCom has also approved a request from the Canadian Standards Association (CSA) to adopt IEEE Std 404-1986, IEEE Standard for Cable Joints for Use with Extruded Dielectric Cable Rated 5000 through 46 000 Volts, and Cable Joints for Use with Laminated Dielectric Cable Rated 2500 through 500 000 Volts (ANSI).

As you read the other articles in this issue, consider the impact that transnational standards development and adoption could have on your own standards development work. Think of the time and effort that could be saved if a standard that has already been developed by another organization could be adopted by the IEEE. And how many IEEE Standards could be adopted by these same organizations.

I hope you share in my excitement, and that you are as eager as I am to make this program a reality. If you would like more information, please contact Terry deCourcelle at the IEEE Standards Department in Piscataway.

In the months ahead, we will need your support and cooperation to make our transnational efforts a success.

*Irving Kolodny is the Chair of TransCom and NesCom.*

## Moving an IEEE Standard Through the IEC

*(Continued from preceding page)*

(1) A two-thirds majority of the P-members on the technical committee or subcommittee is in favor of adoption. (P-membership on a committee is held by members who have indicated an intent to participate actively in the work, with an obligation to vote on draft international standards and, whenever possible, to participate in meetings.)

(2) Not more than one-quarter of the total number of votes cast are negative.

Abstentions are excluded when the votes are counted.

If the proposal is handled by the committee of action, the requirement for approval is only that not more than one-quarter of the total number of votes cast are negative.

As you can see, the process is not as difficult nor as mysterious as it may seem. It should be the goal of most IEEE standards development groups to have their standards adopted nationally and internationally. I hope that my explanation of the process has helped to shed light on this vital area of transnational standards development and adoption.

*Donald Fleckenstein is a former Chair of the IEEE Standards Board and is the immediate Past President of the USNC.*

# "Whither Thou Goest?"

## A Short Fable About Transnational Standardization

BY GARY S. ROBINSON, AS TOLD TO CARL CARGILL

Once upon a time, there was a large, but insignificant, kingdom called EIEIO. While the kingdom had many wise scholars and savants, they all spoke different languages in different dialects (they tended to babble), and each sought to keep his or her knowledge private. Parading about in the town square, these scholars and savants would tout the breadth and depth of their knowledge, but because they refused to share what they knew with anyone else, no one would listen to them.

One wise man in the realm realized that this behavior could bring disaster upon the kingdom. He prevailed upon the king to grant him an audience and told the king of his fears for the future.

The king (who, truth be known, disliked the noise and rabble that was created by all the sages) listened attentively.

Finally, the king spoke. "Oh, wise seer, how would you make my kingdom greater? You cannot come before me with only vague fears for the future. Tell me what I must do to quiet your fears. Should you fail to find me a solution, I shall chop the ears from your head."

The wise man stuttered, "Make every scholar and savant speak the same language. Have them all use standard terms and theories and ideas and build upon these things to create new and more powerful concepts. Only then will we become a great and mighty nation!"

After the wise man spoke, the king did not say a word. Finally, with his brow wrinkled from much thought, he exclaimed: "So it shall be done! Stop off at my treasure room and grab a few handfuls of gold on your way out."

Just as the wise man had predicted, the kingdom began to grow in power and in stature. Many other kingdoms, principalities, and dukedoms sent their scholars to seek out these new and wondrous solutions that were being developed in the kingdom of EIEIO. And EIEIO was proud to show them their products, touting them as the absolute best in all the world.

After speaking among themselves, the visiting scholars decided to ask the king to let them share in the development of knowledge in EIEIO. They solicited his help in preparing standards that they could use in their own kingdoms, principalities, and dukedoms (hereafter referred to as "KPD"). The king and the standardizers of the great kingdom of EIEIO, who had become rich and powerful from all of their acquired knowledge, laughed at the visitors and told them to use the standards of EIEIO without change of any kind.

The visiting scholars departed the kingdom of EIEIO in a quandary (a small horse-drawn wagon of that time). They wanted to duplicate EIEIO's successes in their own KPDs. As they jostled along, they realized that if each K, P, and D contributed standardized knowledge for a common good—and then shared these standards with each other—they could attain and maybe even surpass the successes of the kingdom of EIEIO.

But they knew that they would need special rules to make sure that the various needs of all the KPDs were taken into account. Although they were scholars, they were also men of practical nature, and so they decided to form an organization with two vowels and one consonant for this very purpose. And thus was born ASO (All Standardization Organization), and all of the KPDs began to contribute what they knew—except, of course, EIEIO, which kept telling anyone who asked for standardized information to use EIEIO's standards and no one else's.

When ASO was first created, it was seen as merely a challenger to the EIEIO way of doing things (thus making it easy for EIEIO to dismiss its advances). Soon, however, ASO became its equal.

And then, to the great consternation of EIEIO, its superior!

The king of EIEIO was outraged! He had started the whole standardization process, and now his influence upon it was seriously eroding. The king called upon the wise man again, who was now a court-appointed magician of the 16th grade, to find a solution to this perplexing problem.

"What shall we do?," lamented the king.

"Join ASO, of course!" replied the magician.

"We'll lose all of our accumulated power and prestige," complained the king.

The magician smiled and said, "Possibly quite true. But if you don't join, the same thing will almost certainly come true. And then you won't ever be able to recover the glory that has made EIEIO strong and . . . " He suddenly stopped, aware that the king was staring intently at his ears. He asked to be excused and then fled the kingdom, taking his gold and his ears with him.

Many years later, another wise man, on a tour of the world, came upon a large, but insignificant, kingdom called EIEIO, which was peopled with many scholars who spoke an ancient and arcane language that only they could understand . . .

### The moral of our little fable:

The IEEE has done a good job of standardizing within its areas of expertise in the United States. However, the majority of countries in the global marketplace look for direction to the international standards that are published by ISO and IEC before formulating their future plans.

Unlike the king of EIEIO, the IEEE is willing to share its standards development work with the rest of the world. And we are sure that the IEEE will avoid the ignominious fate of the great, but insignificant, kingdom of EIEIO.

*Gary S. Robinson is a member of the IEEE Standards Board.*



# CONGRATULATIONS!

***The IEEE Standards Board congratulates the Chairs, Vice-Chairs, Technical Editors, Special Contributors, and Submitters listed below on the publication of their new or revised standards publications.***

**Thomas R. Smith, *Chair:* 91a-1991** Supplement to IEEE Standard Graphic Symbols for Logic Functions *[SCC 11.9 Working Group on Graphic Symbols/ Graphic Symbols and Designations SCC11]*

**Thomas E. Sparling, *Chair:* 241-1990** IEEE Recommended Practice for Electric Power Systems in Commercial Buildings (IEEE Gray Book) *[Power Systems Engineering Committee/ IEEE Industry Applications Society]*

**Dr. Motohiso Kanda, *Chair:* 291-1991** IEEE Standard Methods for Measuring Electromagnetic Field Strength of Sinusoidal Continuous Waves, 30 Hz to 30 GHz *[Wave Propagation Standards Committee/IEEE Antennas and Propagation Society]*

**Eugene D. Knowles, *Chair;* Richard B. Schulz, *Past Chair:* 299-1991** IEEE Standard for Measuring the Effectiveness of Electromagnetic Shielding Enclosures *[299 Working Group: Standards Committee/IEEE Electromagnetic Compatibility Society]*

**Charles F. von Herrmann, Jr., *Chair:* 400-1991** IEEE Guide for Making High-Direct-Voltage Tests on Power Cable Systems in the Field *[Insulated Conductors Committee/IEEE Power Engineering Society]*

**Rolf A. Frantz, *Chair:* 436-1991** IEEE Guide for Making Corona (Partial Discharge) Measurements on Electronics Transformers *[Insulation Systems Subcommittee of the Electronics Transformer Technical Committee/ IEEE Power Electronics Society]*

**C. R. Heising, *Chair:* 493-1990** IEEE Recommended Practice for the Design of Reliable Industrial and Commercial Power Systems (IEEE Gold Book) *[Power Systems Reliability Subcommittee: Power Systems Engineering Committee/IEEE Industry Applications Society]*

**David J. Griffith, *Chair:* 625-1990** IEEE Recommended Practice to Improve Electrical Maintenance and Safety in the Cement Industry *[Working Group: Maintenance and Safety: Cement Industry Committee/IEEE Industry Applications Society]*

**Chris Seyer III, *Chair:* 650-1990** IEEE Standard for Qualification of Class 1E Static Battery Chargers and Inverters for Nuclear Power Generating Stations *[Nuclear Power Engineering Committee/IEEE Power Engineering Society]*

**Robert A. Donnan, *Working Group Chair;* Harry Gold, *Rapporteur, Reconfiguration Task Group:* 802.5c-1991** IEEE Supplement to Token Ring Access Method and Physical Layer Specifications: Recommended Practice for Dual Ring Operation with Wrapback Reconfiguration *[Technical Committee on Computer Communications/IEEE Computer Society]*

**James F. Mollenauer, *Chair;* Peter Evans, Sayeed Ghani, *Technical Editors:* 802.6-1990** IEEE Standards for Local and Metropolitan Area Networks: Distributed Queue Dual Bus (DQDB) Subnetwork of a Metropolitan Area Network (MAN) *[Technical Committee on Computer Communications/IEEE Computer Society]*

**C. J. Erickson, *Chair:* 844-1991** IEEE Recommended Practice for Electrical Impedance, Induction, and Skin Effect Heating of Pipelines and Vessels *[Petroleum & Chemical Industry Committee/IEEE Industry Applications Society]*

**Thomas E. Rodgers, Jr., *Chair:* 977-1991** IEEE Guide to Installation of Foundations for Transmission Line Structures *[Task Force of the Working Group on Construction Lines/Transmission and Distribution Committee/IEEE Power Engineering Society]*

**Richard L. Wiker, *Chair:* 1005-1991** IEEE Standard Definitions and Characteristics of Floating Gate Arrays *[Standards Technical Committee/IEEE Electron Device Society]*

**R. O. Bylin, *Chair:* 1069-1991** IEEE Recommended Practice for Precipitator and Baghouse Hopper Heating Systems *[Energy Development and Power Generation Committee/IEEE Power Engineering Society]*

**Douglas C. Dawson, *Chair:* 1094-1991** IEEE Recommended Practice for the Electrical Design and Operation of Windfarm Generating Stations *[Standards Coordinating Committee on Dispersed Storage and Generation]*

**Paul Dandeno, *Chair:* 1110-1991** IEEE Guide for Synchronous Generator Modeling Practices in Stability Analyses *[Joint Working Group on Determination & Application of Synchronous Machine Models for Stability: Power Systems Engineering & Electric Machinery Committees/IEEE Power Engineering Society]*

**Ron Anderson and Donald Ware, *Co-Chairs:* 1118-1990** IEEE Standard Microcontroller System Serial Control Bus *[Technical Committee 8/IEEE Instrumentation & Measurement Society]*

**John A. Starkweather, *Chair:* 1154-1991** IEEE Standard for Programmed Inquiry, Learning, or Teaching (PILOT) *[Working Group PILOT 1154: Microprocessor and Microcomputer Standards Subcommittee/IEEE Computer Society]*

**Christopher T. Haynes, *Chair:* 1178-1990** IEEE Standard for the Scheme Programming Language *[Scheme Working Group: Microprocessor & Microcomputer Standards Subcommittee/ IEEE Computer Society]*

**Rick Henderson, *Chair:* 1194-1991** IEEE Standard for Backplane Electrical Performance *[Microprocessor & Microcomputer Standards Subcommittee/IEEE Computer Society]*

**Rick Henderson, *Chair:* 1194.1-1991** IEEE Standard for Electrical Characteristics of Backplane Transceiver Logic (BTL) Interface Circuits *[1194 Working Group: Microprocessor and Microcomputer Standards Subcommittee/IEEE Computer Society]*

**James M. Daly, *Chair:* 1202-1991** IEEE Standard for Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies *[1194.1 Working Group: Power Systems Engineering Committee/IEEE Industry Applications Society]*

**Sanjay Dhawan, *Chair, Conformance Testing Task Force;* Patricia Thaler, *Chair, 802.3 Working Group;* 1802.3-1991** Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physi-

*(Continued on page 10)*

# Standards Actions of the IEEE Standards Board, September 26, 1991

## ■ Approved New Project Authorization Requests (PARs)

## ■ Approved New Standards

## ■ Approved Standards Revisions, Reaffirmations, and Withdrawals

### ■ APPROVED PARs FOR NEW STANDARDS

**P1003.19** (C/OS) Standard for Information Technology - POSIX Ada Language Interfaces - Part 1: Binding for Realtime Extensions
**P1029.3** (SCC20 & C/DASS) Standard for the Representation of Unit Under Test (UUT) Design Data for Test Generation
**P1073** (EMB/MIB) Standard for Medical Device Communications - Overview and Framework
**P1073.1** (EMB/MIB) Standard for Medical Device Communications - Medical Device Data Language (MDDL) - Overview and Framework
**P1073.1.1** (EMB/MIB) Standard for Medical Device Communications - Medical Device Data Language (MDDL) - Common Definitions
**P1073.1.2** (EMB/MIB) Standard for Medical Device Communications - Medical Device Data Language (MDDL) - VIRTUAL Medical Device, Generalized
**P1073.1.3** (EMB/MIB) Standard for Medical Device Communications - Medical Device Data Language (MDDL) - Virtual Medical Device, Specialized
**P1073.2.1** (EMB/MIB) Standard for Medical Device Communications - Applications Profile - Connection Mode
**P1073.3.1** (EMB/MIB) Standard for Medical Device Communications - Transport Profile - Connection Mode
**P1073.4.1** (EMB/MIB) Standard for Medical Device Communications - Physical Layer Interface - Cable-Connected
**P1266** (PE/SUB) Trial-Use Guide for Evaluation and Development of Substation Life Extension Programs
**P1268** (PE/SUB) Guide for the Safe Installation of Mobile Substation Equipment
**P1269** (C/BA) Standard for an Interconnect Between Futurebus+ Systems
**P1270** (C/BA) Standard for Small Computer Expandability Module for Futurebus+ Systems, Profile D (Desktop)
**P1271** (C/BA) Standard for Small Computer Expandability Module, Mechanical Specification
**P1272** (C/BA) Standard for Small Computer Expandability Module, Electrical Specification
**P1273** (C/BA) Standard for Futurebus+ Telecommunications Profile T (Telecommunications)
**P1274** (C/BA) Standard for Futurebus+ Profile M (Military)
**P1275** (C/BA) Standard for Boot (Initialization Configuration) Firmware

### ACRONYMS USED ON THESE PAGES

**AES/GAP**—Aerospace & Electronics Systems/Gyro & Accelerometer Panel
**C/BA**—Computer/Bus Architectures
**C/CC**—Computer/Computer Communications
**C/DASS**—Computer/Design Automation Standards Subcommittee
**C/MM**—Computer/Microprocessor & Microcomputers
**C/OS**—Computer/Operating Systems
**C/SE**—Computer/Software Engineering
**C/TCCC**—Computer/Technical Committee on Computer Communications
**COM/TRANSSYSCOM**—Communications/Transmission Systems Committee
**DEI/VETC**—Dielectrics & Electrical Insulation/Voltage Endurance Technical Committee
**EMB/MIB**—Engineering in Medicine & Biology/Medical Information Bus
**EMC/SC**—Electromagnetic Compatibility/Standards Committee
**IA/MT**—Industry Applications/Marine Transportation
**IA/PCI**—Industry Applications/Petroleum and Chemical Industry
**PE/ED&PG**—Power Engineering/Energy Development & Power Generation
**PE/EM**—Power Engineering/Electric Machinery
**PE/IC**—Power Engineering/Insulated Conductors
**PE/NPE**—Power Engineering/Nuclear Power Engineering
**PE/PSE**—Power Engineering/Power Systems Engineering
**PE/PSR**—Power Engineering/Power Systems Relaying
**PE/SPD**—Power Engineering/Surge Protective Devices
**PE/SUB**—Power Engineering/Substations
**PE/SWG**—Power Engineering/Switchgear
**PE/TR**—Power Engineering/Transformers
**SCC**—Standards Coordinating Committee

**P1276** (PE/TR) Trial-Use General Requirements for Liquid-Filled Distribution and Power Transformers Utilizing High Temperature Solid Insulating Materials
**P1277** (PE/TR) Trial-Use General Requirements and Test Code for Oil-Immersed and Dry Type HVDC Smoothing Reactors
**P1596.5** (C/MM) Standard for Shared-Data Formats Optimized for Scalable Coherent Interface Processors
**PC37.20.4** (PE/SWG) Standard for Indoor AC Medium-Voltage Switches for Use in Metal-Enclosed Switching
**PC37.41c** (PE/SWG) Test Standard for Expulsion Fuses in Enclosures
**PC37.48c** (PE/SWG) Guide for Application of Expulsion Fuses in Enclosures
**PC37.59** (PE/SWG) Requirements for Conversions of Power Switchgear Equipment
**PC57.13.2** (PE/TR) Standard Conformance Test Procedures for Instrument Transformers

### ■ APPROVED PARs FOR STANDARDS REVISIONS

**P45** (IA/MT) Recommended Practice for Electric Installations on Shipboard
**P48** (PE/IC) Standard Test Procedures and Requirements for Alternating-Current Cable Terminations 2.5 KV through 765 KV
**P267** (SCC11) Recommended Practice for the Preparation and Use of Symbols
**P525** (PE/SUB) Guide for the Design and Installation of Cable Systems in Substations
**P802.2d** (C/TCCC) Supplement to 802.2, Information Processing Systems - Local Area Networks - Part 2: Logical Link Control
**P802.2e** (C/TCCC) Supplement to 802.2, Information Processing Systems - Local Area Networks - Part 2: Logical Link Control -Bit Referencing
**P802.2g** (C/TCCC) Supplement to 802.2, Information Processing Systems - Local Area Networks - Logical Link Control (LLC) Type 4 (High Speed, High-Performance) Operation
**P853** (DEI/VETC) Recommended Practice for Voltage Endurance Testing of Enameled Wire
**P1007** (COM/TRANSYSCOM) Standard for Methods and Equipment for Measuring the Transmission Characteristics of Digital Telecommunications Circuits and Systems
**PC37.102** (PE/PSR) Guide for AC Generator Protection
**PC37.122a** (PE/SUB) Supplement to C37.122, Standard Gas-Insulated Substations
**PC57.98** (PE/TR) Guide for Performing Routine Lighting Impulse Tests on Distribution Transformers
**PC57.113** (PE/TR) Guide for Partial Discharge Measurement in Liquid-Filled Power Transformers and Shunt Reactors
**PC62.45** (PE/SPD) Guide on Surge Testing for Equipment Connected to Low-Voltage AC Power Circuits

### ■ REVISED PARs

**P1802.3** (C/CC) Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications-Currently Contains AUI Cable
**P1802.3a** (C/CC) Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications-Media Access Control (MAC)
**P1802.3b** (C/CC) Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications-PLS Type 10
**P1802.3c** (C/CC) Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications-MAU, Type 10BASE5
**P1802.3d** (C/CC) Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications-MAU, Type 10BASE-T
**P802.3m** (C/CC) Supplement to Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications (second maintenance ballot)

## Bylaw Change

The IEEE Board of Directors has approved changes in the bylaws of the IEEE that elevates the status of the IEEE Standards Board Chair from Director to Vice President.

On January 1, 1992, the IEEE Standards Board Chair will become a Vice President, a member of the Executive Committee, and a Corporate Officer of the IEEE.



**P802.3n** (C/CC) Supplement to Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications (third maintenance ballot)
**P802.2I** Supplement to Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications: MAU, Type 10BASE-T PICS Proforma
**P841** (IA/PCI) Recommended Practice for Specifying Petroleum and Chemical Industry Severe Duty TEFC Squirrel Cage Induction Motors - 500 HP and Below
**P1140** (EMC/SC) Standard Test Procedures for the Measurement of Electric and Magnetic Fields from Video Display Terminals (VDTs) from 5 Hz to 400 kHz
**PC57.12.20** (PE/TR) Standard for Transformers - Overhead-Type Distribution Transformers: High Voltage (34 500 V and Below) and Low Voltage (7970/13 800 Y V and Below, 500 kVA and Smaller)
**PC57.12.21** (PE/TR) Standard for Transformers - Pad-Mounted, Compartmental-Type, Self-Cooled, Single-Phase Distribution Transformers With High-Voltage Bushings: High Voltage (34 500 GrdY/19 920 V and Below) and Low Voltage (240/120 V, 167 kVA and Smaller)
**PC57.12.22** (PE/TR) Standard for Transformers - Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers With High-Voltage Bushings: High Voltage (34 500 GrdY/19 920 V and Below) and Low Voltage (480 V and Below, 2500 kVA and Smaller)
**PC57.12.23** (PE/TR) Standard for Transformers - Underground-Type, Self-Cooled, Single-Phase Distribution Transformers With Separable Insulated, High-Voltage Connectors: High Voltage (24 940 GrdY/14 400 V and Below) and Low Voltage (240/120 V, 167 kVA and Smaller)
**PC57.12.24** (PE/TR) Standard for Transformers - Underground-Type, Three-Phase Distribution Transformers: High Voltage, 34 500 GrdY/19 920 V and Below) and Low Voltage (480 V and Below, 2500 kVA and Smaller)
**PC57.12.25** (PE/TR) Standard for Transformers - Pad-Mounted, Compartmental-Type, Self-Cooled, Single-Phase Distribution Transformers With Separable, Insulated, High-Voltage Connectors: High Voltage (34 500 GrdY/19 920 V and Below) and Low Voltage (240/120 V, 167 kVA and Smaller)
**PC57.12.26** (PE/TR) Standard for Transformers - Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers for Use With Separable, Insulated, High-Voltage Connectors
**PC57.12.27** (PE/TR) Standard for Transformers - Liquid-Filled Distribution Transformers Used in Pad-Mounted Installations, Including Unit Substations
**PC37.23** (PE/SWG) Standard for Metal-Enclosed Bus and Guide for Calculating Losses in Isolated-Phase Bus
**PC57.129** (PE/TR) Standard General Requirements and Test Code for Oil-Immersed HVDC Converter Transformers
**PC62.38** (PE/SPD) Guide on Electrostatic Discharge: ESD Withstand Capability Evaluation Methods (for Electronic Equipment Subassemblies)
**PC62.47** (PE/SPD) Guide on Electrostatic Discharge: Characterization of the ESD Environment

### ■ WITHDRAWN PARs

**P761** (AES/GAP) Guide to the Characteristics and Application of Inertial Sensors

### ■ APPROVAL OF NEW STANDARDS

**836** (AES/GAP) Recommended Practice for Precision Centrifuge Testing of Linear Accelerometers
**896.2** (C/MM) Standard Backplane Bus Specification for Multiprocessor Architectures: Futurebus+ - Physical Layer and Profiles
**1046** (PE/ED&PG) Guide for Distributed Digital Control and Monitoring for Power Plants
**1074** (C/SE) Standard for Developing Software Life Cycle Processes
**1101.1** (C/MM) Standard for Mechanical Core Specifications for Microcomputers Using IEC 603-2 Connectors
**1137** (COM/TRANSYSCOM) Guide for the Implementation of Inductive Coordination Mitigation Techniques

### Transnational Quotes—"Why Are International Standards Necessary?"

"Why limit your market when the whole world is waiting for your product? Developing and then conforming to international standards just makes good business sense."
*— Andrew G. Salem, Staff Director of the IEEE Standards Department and Secretary of the IEEE Standards Board*

**1150** (PE/ED&PG) Trial-Use Recommended Practice for Integrating Power Plant Computer-Aided Engineering Applications
**1158** (PE/SUB) Recommended Practice for Determination of Power Losses in HVDC Converter Stations
**C37.41c** (PE/SWG) Test Standard for Expulsion Fuses in Enclosures
**C37.48c** (PE/SWG) Guide for Application for Expulsion Fuses in Enclosures

### ■ APPROVAL OF REVISED STANDARDS

**94** (PE/PSE) Recommended Practice for Definitions of Terms for Automatic Generation Control on Electric Power Systems
**649** (PE/NPE) Standard for Qualifying Class 1E Motor Control Centers for Nuclear Power Generating Stations
**896.1** (C/MM) Standard Backplane Bus Specification for Multiprocessor Architectures: Futurebus+ - Logical Layer Specification
**C57.19.00** (PE/TR) General Requirements and Test Procedure for Outdoor Power Apparatus Bushings
**C57.19.01** (PE/TR) Standard Performance Characteristics and Dimensions for Outdoor Apparatus Bushings
**C95.1** (SCC28) Standard Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
**C95.3** (SCC28) Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave

### ■ REAFFIRMED STANDARDS

**43** (PE/EM) Recommended Practice for Insulation Testing of Large AC Rotating Machinery with High Direct Voltage
**56** (PE/EM) Guide for Insulation Maintenance of Large Alternating-Current Rotating Machinery (10,000 kVA and Larger)
**95** (PE/EM) Recommended Practice for Testing Insulation Resistance of Rotating Machinery
**117** (PE/EM) Standard Test Procedure for Evaluation of Systems of Insulating Materials for Random-Wound AC Electric Machinery
**260** (SCC14) Standard Letter Symbols for Units of Measurement (SI Units, Customary Inch-Pound Units, and Certain Other Units)
**280** (SCC14) Standard Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering
**304** (PE/EM) Standard Test Procedure for Evaluation Classification of Insulation Systems for Direct Current Machines
**377** (EMC/SC) Recommended Practice for Measurement of Spurious Emission from Land-Mobile Communication Transmitters
**433** (PE/EM) Recommended Practice for Insulation Testing of Large AC Rotating Machinery with High Voltage at Very Low Frequency
**434** (PE/EM) Guide for Functional Evaluation of Insulation Systems for Large High-Voltage Machines
**473** (EMC/SC) Recommended Practice for an Electromagnetic Site Survey (10 kHz to 10 GHz)
**500** (PE/NPE) Guide to the Collection and Presentation of Electrical, Electronic, Sensing Component and Mechanical Equipment Reliability Data for Nuclear Power Generating Stations
**505** (PE/NPE) Standard Nomenclature for Generating Station Electric Power Systems
**671** (AES/GAP) Standard Specification Format Guide and Test Procedure for Nongyroscopic Inertial Angular Sensors: Jerk, Acceleration, Velocity, and Displacement

## Awards Spotlight

- Peter Szabados was the recipient of the 1991 Nuclear Power Engineering Committee's Outstanding Service Award "in recognition of his distinguished service to the committee during the past 16 years and his contribution in the development of nuclear standards."
- Jack E. Bridges, Harold E. Taggart, Leonard W. Thomas, Sr., and Dr. Ralph M. Showers were awarded Standards Medallions for their many years of dedicated service to electromagnetic compatibility standards work at the 1991 IEEE International Symposium on Electromagnetic Compatibility.

# RECENTLY PUBLISHED

### ANTENNAS AND PROPAGATION SOCIETY

**291-1991** IEEE Standard Methods for Measuring Electromagnetic Field Strength of Sinusoidal Continuous Waves, 30 Hz to 30 GHz (ANSI) **(ISBN 1-55937-132-3) [SH14423-NSC] $46.50**

### COMPUTER SOCIETY

**802.5c-1991** IEEE Supplement to Token Ring Access Method and Physical Layer Specifications: Recommended Practice for Dual Ring Operation with Wrapback Reconfiguration **(ISBN 1-55937-117-X) [SH14290-NSC] $24.00**

**802.6-1990** IEEE Standards for Local and Metropolitan Area Networks: Distributed Queue Dual Bus (DQDB) Subnetwork of a Metropolitan Area Network (MAN) (ANSI) **(ISBN 1-55937-093-9) [SH13961-NSC] $45.00**

**1154-1991** IEEE Standard for Programmed Inquiry, Learning, or Teaching (PILOT) **(ISBN 1-55937-151-X) [SH14597-NSC] $35.00**

**1178-1990** IEEE Standard for the Scheme Programming Language (ANSI) **(ISBN 1-55937-125-0) [SH14209-NSC] $40.00**

**1194-1991** IEEE Standard for Backplane Electrical Performance (ANSI) **(ISBN 1-55937-127-7) [SH14340-NSC] $42.50**

**1194.1-1991** IEEE Standard for Electrical Characteristics of Backplane Transceiver Logic (BTL) Interface Circuits **(ISBN 1-55937-153-6) [SH14613-NSC] $25.00**

**1802.3-1991** Conformance Test Methodology for IEEE Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications: Methodology and Implementation for AUI Cable Conformance (ANSI) **(ISBN 1-55937-116-1) [SH14282-NSC] $24.00**

### ELECTROMAGNETIC COMPATIBILITY SOCIETY

**299-1991** IEEE Standard for Measuring the Effectiveness of Electromagnetic Shielding Enclosures (ANSI) **(ISBN 1-55937-108-0) [SH14134-NSC] $44.00**

### ELECTRON DEVICES SOCIETY

**1005-1991** IEEE Standard Definitions and Characteristics of Floating Gate Arrays **(ISBN 1-55937-136-6) [SH14464-NSC] $42.00**

### IEEE STANDARDS COORDINATING COMMITTEE 11: GRAPHIC SYMBOLS AND DESIGNATIONS

**91a-1991** Supplement to IEEE Standard Graphic Symbols for Logic Functions [*shipped with* **91-1984** IEEE Standard Graphic Symbols for Logic Functions (ANSI)] **(ISBN 1-55937-135-8) [SH14456-NSC] $55.00**

### IEEE STANDARDS COORDINATING COMMITTEE 23: DISPERSED ENERGY STORAGE AND GENERATION

**1094-1991** IEEE Recommended Practice for the Electrical Design and Operation of Windfarm Generating Stations (ANSI) **(ISBN 1-55937-095-5) [SH13987-NSC] $38.00**

### INDUSTRY APPLICATIONS SOCIETY

**241-1990** IEEE Recommended Practice for Electric Power Systems in Commercial Buildings (ANSI) **(ISBN 1-55937-088-2) [SH13912-NSC] $54.00**

**493-1990** IEEE Recommended Practice for the Design of Reliable Industrial and Commercial Power Systems (ANSI) **(ISBN 1-55937-066-1) [SH13730-NSC] $46.00**

**625-1990** IEEE Recommended Practice to Improve Electrical Maintenance and Safety in the Cement Industry (ANSI) **(ISBN 1-55937-091-2) [SH13946-NSC] $42.00**

➤ *Recently Published listings continued on next page.*

## ✗ Errata ✗

On the Recently Published page in the April 1991 edition of the *IEEE Standards Bearer,* the price for **IEEE Std 592-1990, IEEE Standard for Exposed Semiconducting Shields on High-Voltage Cable Joints and Separable Insulated Connectors,** was incorrect. The price was listed as $35.00; the price should have been **$25.00.**

# CONGRATULATIONS!

*(Continued from page 7)*

cal Layer Specifications Methodology and Implementation for AUI Cable Conformance *[Technical Committee on Computer Communications/IEEE Computer Society]*

**Don Dassman, *Chair:* C12.16-1991** American National Standard for Solid-State Electricity Meters *[Subcommittee 16/Accredited Standards Committee C12]*

**Tom Drew, *Chair:* C12.17-1991** American National Standard for Cartridge-Type Solid-State Pulse Recorders for Electricity Metering *[Subcommittee 14/Accredited Standards Committee C12]*

**Luther W. Kurtz, *Chair:* C37.2-1991** IEEE Standard Electrical Power System Device Function Numbers *[Substations Committee/IEEE Power Engineering Society]*

**Frederick C. Teufel, *Chair:* C37.13-1990** IEEE Standard for Low-Voltage AC Power Circuit Breakers Used in Enclosures *[Low-Voltage Switchgear Devices Subcommittee/IEEE Power Engineering Society]*

**Carey J. Cook, *Chair:* C37.99-1990** IEEE Guide for the Protection of Shunt Capacitor Banks *[IEEE Power System Relaying Committee Capacitor Bank Protection Working Group/IEEE Power Engineering Society]*

**A. A. Leibold, *Working Group Member,* J. J. Dodds, *Original Working Group Chair,* R. Matulic, *Chair:* C37.123-1991** IEEE Guide to Specifications for Gas-Insulated Substation Equipment *[Substations Committee/IEEE Power Engineering Society]*

**Francois Martzloff, *Chair:* C62.41-1991** IEEE Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits *[Surge-Protective Devices Committee/IEEE Power Engineering Society]*

**Stephen D. Bloom, *Chair:* C63.13-1991** American National Standard Guide on the Application and Evaluation of EMI Power-Line Filters for Commercial Use *[C63.13 Working Group: Accredited Standards Committee/Electromagnetic Compatibility, C63]*

**Louis Costrell, *Chair;* R. J. Gehrke, *Project Leader:* N42.14-1991** American National Standard Calibration and Use of Germanium Spectrometers for the Measurement of Gamma-Ray Emission Rate of Radionuclides *[Subcommittee N42.2: Accredited Standards Committee/Radiation Instrumentation]*

**John Zulaski, *Contributor:*** IEEE Guides and Standards for Protective Relaying Systems, Spring 1991 Edition

**Louis Costrell, *Contributor:*** IEEE Nuclear Science Standards Collection, Summer 1991 Edition

**Brad Radimer, *Contributor:*** IEEE Stationary Battery Standards Collection, Summer 1991 Edition

**Vincent Condello, *Secretary NESC:*** National Electrical Safety Code (NESC) 1991-1993 Interpretations, First Interim Collection



# IEEE STANDARDS

**844-1991** IEEE Recommended Practice for Electrical Impedance, Induction, and Skin Effect Heating of Pipelines and Vessels (ANSI) **(ISBN 1-55937-118-8) [SH14308-NSC] $41.50**

**1202-1991** IEEE Standard for Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies **(ISBN 1-55937-122-6) [SH14357-NSC] $35.00**

### INSTRUMENTATION AND MEASUREMENT

**1118-1990** IEEE Standard Microcontroller System Serial Control Bus (ANSI) **(ISBN 1-55937-096-3) [SH13995-NSC] $61.00**

### POWER ELECTRONICS SOCIETY

**436-1991** IEEE Guide for Making Corona (Partial Discharge) Measurements on Electronics Transformers (ANSI) **(ISBN 1-55937-126-9) [SH14274-NSC] $35.00**

### POWER ENGINEERING SOCIETY

**400-1991** IEEE Guide for Making High-Direct-Voltage Tests on Power Cable Systems in the Field (ANSI) **(ISBN 1-55937-115-3) [SH14266-NSC] $35.00**

**650-1990** IEEE Standard for Qualification of Class 1E Static Battery Chargers and Inverters for Nuclear Power Generating Stations (ANSI) **(ISBN 1-55937-092-0) [SH13953-NSC] $44.00**

**977-1991** IEEE Guide to Installation of Foundations for Transmission Line Structures (ANSI) **(ISBN 1-55937-119-6) [SH14316-NSC] $45.00**

**1069-1991** IEEE Recommended Practice for Precipitator and Baghouse Hopper Heating Systems (ANSI) **(ISBN 1-55937-122-6) [SH14324-NSC] $39.00**

**1110-1991** IEEE Guide for Synchronous Generator Modeling Practices in Stability Analyses (ANSI) **(ISBN 1-55937-121-8) [SH14332-NSC] $58.50**

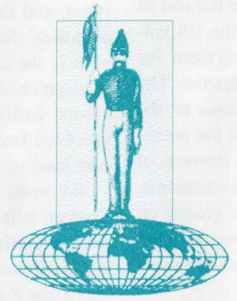
**C37.04f-1990** Supplement to IEEE Standard Rating Structure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis **(ISBN 1-55937-109-9) [SH14175-NSC] FREE**

**C37.04h-1990** Supplement to IEEE C37.04-1979 (ANSI) **(ISBN 1-55937-110-2) [SH14217-NSC] FREE**

**C37.04i-1991** Supplement to IEEE C37.04-1979 **(ISBN 1-55937-111-0) [SH14225-NSC] FREE**

**C37.09g-1991** Supplement to IEEE C37.09-1979 **(ISBN 1-55937-112-9) [SH14233-NSC] FREE**

**C37.2-1991** IEEE Standard Electrical Power System Device Function Numbers **(ISBN 1-55937-124-2) [SH14373-NSC] $38.50**



**C37.13-1990** IEEE Standard for Low-Voltage AC Power Circuit Breakers Used in Enclosures **(ISBN 1-55937-113-7) [SH14241-NSC] $35.00**

**C37.99-1990** IEEE Guide for the Protection of Shunt Capacitor Banks (ANSI) **(ISBN 1-55937-071-8) [SH13771-NSC] $50.00**

**C37.100d-1991** Supplement to IEEE C37.100-1981 **(ISBN 1-55937-114-5) [SH14258-NSC] FREE**

**C37.123-1991** IEEE Guide to Specifications for Gas-Insulated Substation Equipment **(ISBN 1-55937-162-5) [SH14704-NSC] $39.50**

**C57.115-1991** IEEE Guide for Loading Mineral-Oil-Immersed Power Transformers Rated in Excess of 100MVA (65 ˚C Winding Rise) **(ISBN 1-55937-131-5) [SH14415-NSC] $37.50**

**C62.41-1991** IEEE Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits **(ISBN 1-55937-130-7) [SH14407-NSC] $57.50**

### AMERICAN NATIONAL STANDARDS

**C12.16-1991** American National Standard for Solid-State Electricity Meters **(ISBN 1-55937-133-1) [SH14431-NSC] $39.00**

**C12.17-1991** American National Standard for Cartridge-Type Solid-state Pulse Recorders for Electricity Metering **(ISBN 1-55937-123-4) [SH14356-NSC] $35.00**

**C63.13-1991** American National Standard Guide on the Application and Evaluation of EMI Power-Line Filters for Commercial Use **(ISBN 1-55937-138-2) [SH14480-NSC] $35.00**

### COLLECTIONS

* **IEEE Stationary Battery Standards Collection, Summer 1991 Edition (ISBN 1-55937-137-4) [SH14472-NSC] $72.00**
* **IEEE Guides and Standards for Protective Relaying Systems, Spring 1991 Edition (ISBN 1-55937-129-3) [SH14399-NSC] $95.00**
* **IEEE Nuclear Science Standards Collection, Summer 1991 Edition (ISBN 1-55937-074) [SH13813-NSC] $90.00**

### SPECIAL PUBLICATIONS

* **National Electrical Safety Code (NESC) 1991-1993 Interpretations, First Interim Collection (ISBN 1-55937-128-5) [SH14381-NSC] $25.00**

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# US Vision and Leadership in International Standards Development

BY L. JOHN RANKINE

My extensive involvement in international standardization has continually impressed upon me how much the rest of the world looks to the US voluntary standards system for leadership and guidance. The diversity and richness of the US structure gives it the potential to represent the interests of users, producers, governments, and general interest groups on a level that is at least as good as, if not better than, any other existing system.

However, this does not mean that the US voluntary system always works to its fullest potential, because all too often it does not. Rather than point out what goes wrong, I will list what I think are the essential elements that will sustain US leadership in the international arena.

- The individuals and organizations that are involved must demonstrate responsibility to national and international interests as well as to their own.
- US participants need to thoroughly understand the multifaceted issues that face them (not just EC92 issues) and then to strategize intelligently. This will mean gathering the most intelligent and experienced individuals together and closely involving those whose interests will be most directly affected in the international marketplace.
- The public and private sectors must carefully define their spheres of cooperation and then work closely within them.

Simply put, they must decide their respective sides of the street, and then walk in step, especially when they are on other countries' doorsteps.

It is the caliber of the people involved in international standardization that dictates the eventual success or failure of the US effort. Individuals with breadth of vision have to become involved because narrow minds usually reach narrow-minded conclusions.

We need individuals whose acquired world knowledge and wisdom tells them that, in the field of international standardization, patriotism alone is not enough and that parochial solutions are ill-advised.

*L. John Rankine is a member of the IEEE Standards Board, is the current Chairman of ISO/IEC JTC1, and is a former Chairman of the American National Standards Institute (ANSI).*

## WE EXCEEDED OUR FUNDRAISING GOAL!

Thank you to everyone who contributed to the IEEE Ampacity Tables Project. Through your generosity, our fundraising goal of $84 000 was exceeded by $1500.

Your support and encouragement has made the generation of new ampacity tables a reality.

We will continue to keep you informed of the future developments in this worthwhile project.

**— Nancy A. Blair**
*Project Director, Ampacity Tables Standard*

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