



IEEE

# STANDARDS BEARER



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## IEEE Launches Industry Standards Organization

by Peter Lefkin

**New organization to provide IEEE societies, industry, and the standards development community with an increased level of choice and flexibility**

On 15 November 1998, the IEEE Board of Directors (BoD) approved the establishment of the IEEE Industry Standards and Technology Organization, effective 1 January 1999. This new organization is formed as an independent not-for-profit corporation, tax exempt under Section 501(c)(6) of the U. S. tax code.

The IEEE Industry Standards and Technology Organization will function as a complement to the existing IEEE Standards Association (IEEE-SA). The IEEE-SA (governed by established guiding principles of consensus, due process, and openness) will continue its efforts to facilitate development of internationally recognized standards. IEEE societies and industry can sponsor programs under the IEEE-SA Standards Board, the IEEE Industry Standards and Technology Organization, or both, depending on the methods and resources required to achieve a particular project's goals. With these two organizations, IEEE is positioned to offer its societies and the industries it supports unprecedented choice and flexibility in their development options.

Industry, with the formation of various specification development groups organized

as consortia, alliances, and special interest groups, has clearly signaled the need for alternative standards development processes and services. The IEEE Industry Standards and Technology Organization will enable developers to build a foundation tailored to the technology, the market, the participants, and all of the other factors pertinent to the challenge at hand. This new organization will provide industry and the standards development community with the kind of services the times require, while retaining IEEE's traditional commitment to technical quality and excellence.

"IEEE is uniquely positioned to establish new methodologies and means for producing standards, using its proven technical and organizational assets as a foundation for continued quality and much needed services," according to Richard Holleman, Director of Standards, IBM Corporation, and Chair, IEEE-SA Standards Board. "The formation of the IEEE Industry Standards and Technology Organization demonstrates IEEE's commitment to provide value-added services that will meet the standards development challenges and needs of industry today, and in the future."

The IEEE Industry Standards and Technology Organization provides the infrastructure under which industry-specific programs and related technology development activities (e.g., marketing, accreditation, certification,

specification development, branding, and conformity assessment) can be organized. Participant groups can mobilize and maintain their unique identity without the need to develop their own infrastructure or legal entity.

Participant groups can organize themselves within the IEEE Industry Standards and Technology Organization and benefit from contractual arrangements for services from IEEE's experienced Standards staff. Services for timely development of standards and specifications are in place to ensure quality, provide intellectual property protection, and reduce the heavy costs involved in establishing, staffing, and operating programs. Timeliness and cost-effectiveness are two governing principles in this new organization. Staff will provide comprehensive management and operational services from formation to completion of each project's deliverables.

There are a number of examples where an *continued on page 8*

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## Report by the President of the IEEE Standards Association (IEEE-SA)

by Donald C. Loughry

### Strategic Initiatives Launched

**A**s 1999 unfolds, we set our sights on new horizons and opportunities. What are they?

The three strategic initiatives that are being undertaken within the IEEE-SA [as identified at the January Board of Governors (BoG) meeting] are: a) globalization, b) new revenue sources, and c) improved relationships with IEEE Technical Societies.

The BoG will have the lead for globalization, the staff for new revenue sources, and the IEEE-SA Standards Board for improved

relationships with the societies. These three topics are part of a nine-point strategic thrust for the IEEE-SA in 1999. Watch for more details and further progress reports in subsequent articles; it promises to be a fruitful year!

We welcome Ulrich Hartmann of Siemens in Germany; James Isaak, a consultant from the USA; and Robert deNoble of EDF in France as new BoG members-at-large this year. At the same time, we say thanks to Dennis Bodson, Marco Migliaro, and Ingo Rüscher for their contributions in 1998. I look forward to working with all members of the IEEE-SA in the year ahead.

## Every Active IEEE Standard Is Now on the Web! (And That's Just the Beginning)

by Susan K. Tatiner

**Y**ou may have already heard the news: Every active IEEE Standard is now available for sale electronically via the World Wide Web. Each standard can be purchased as an individual PDF file, and most standards are also available as part of an electronic fully-text-searchable subscription grouped by subject area. We even have an "All-Inclusive" subscription for those who just can't get enough of IEEE Standards.

This achievement is the culmination of an effort, begun in earnest in 1997, to convert all our existing standards (our "legacy") into SGML (standard generalized markup language), the ISO-standardized meta-language that allows publishers to capture the content and structure of their documents, while maintaining publishing flexibility and enhancing search capabilities.

The most obvious benefit of the legacy conversion project is the impressive body of standards ready for electronic delivery; but it is not the only benefit. Three other major benefits come to mind:

1) In the course of the conversion, we created fully indexed SGML that can be used to help build an integrated database of IEEE technical information.

An SGML database allows for highly refined searching, enabling users to hone in on particular data. Also, this database will allow us to enhance our existing electronic delivery as time goes on. For example, we plan to hyperlink references to cited documents (both IEEE and non-IEEE, where possible). Volunteers, members, customers, and staff Institute-wide will feel the impact of this database.

2) IEEE Standards working groups will have electronic files available to them when they take up the work of revision—on any standard. Tables and equations as well as text are fully electronic. Graphics, too, are available as electronic files, though not fully editable files (we had to save something for 1999).

3) During the conversion, our editors and programmers perfected our new Editorial Production System (EPS), which was developed to allow us to create SGML as we edit and publish a standard (no more unconverted legacy!). We found the bugs and got rid of them. We gained invaluable experience working in the system, which should help us with our 1999 goal of publishing standards shortly after approval by the IEEE-SA Standards Board.

All this was made possible through a huge effort that included staff from literally every corner of the IEEE Standards Department and a number of freelance partners who worked with us. I am immensely proud of them and the work they have done. They attacked this project with creativity, organization, and commitment to quality. If you purchase a PDF or sign up for a subscription and you like what you see...if you find exactly what you are looking for when you search our database...if you save time and trouble using one of our new electronic files to help with the revision of a standard...you'll know why we're glad we made the effort.

For complete information about IEEE Standards On-Line, visit our Web site at <http://standards.ieee.org/catalog/olis/index.html>.

*Susan K. Tatiner is the Director of Standards Publishing Programs, IEEE Standards Activities.*

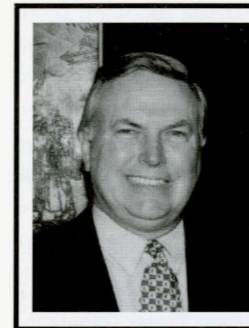
### STANDARDS



BEARER

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## FROM THE CHAIR OF THE IEEE-SA STANDARDS BOARD

by Richard Holleman

### Breaking with Tradition

**T**he traditional kickoff for the year in most organizations is a review of the previous year's accomplishments and a look ahead to the challenges of the new year. I have decided to break with that tradition. It's not that the IEEE-SA Standards Board and its committees didn't have successes in 1998; they did and there were many. In this column and in other IEEE articles throughout the year, our accomplishments and results were cited.

Instead, I start the year with another thought—the strength in our differences. For me, this is noteworthy because it embraces an understanding that everything we have accomplished is because of the strength and determination of the people involved in our standardization activities—both staff and volunteers. Yet each of us brings to the table differing interests, goals, and personal aspirations. A committee's agenda for a meeting may be only one of the few items that are present in the minds of the various participants.

Typically, we don't think alike, act alike, or see the things that happen around us the same exact way. This, as they say, is what makes life—and standards work—interesting. It would be a simple task to continue to list differences, but my point is that we actually derive strength from these differences in ways that allow us to reach consensus, gain agreement, adopt standards, and carry out our standards responsibilities effectively. It is the strength without which the value of our efforts would be substantially reduced to bureaucratic exercises.

I expect the activities of the IEEE-SA Standards Board in 1999 will reflect an even greater need for us to find strength in our differences, as we develop new approaches to standards development, bring new players to the table, and undertake new projects in new areas. Some of the volunteers and staff will be different, but working as a team toward a common goal of excellence in the development of IEEE-SA standards will be the strength of their efforts.

While this isn't the traditional message for the new year, it is one that I will keep in my mind as the year unfolds and our successes and accomplishments begin to appear. With your support, enthusiasm, and dedication, we will be able to look back with pride on 1999.

### Highlights of 4–5 December 1998 IEEE-SA Board of Governors (BoG) Meeting

At the 4–5 December 1998 meeting of the IEEE-SA BoG, the following actions were taken:

- The IEEE-SA BoG reported the appointments of Ronald Petersen to the IEEE Electronic Products Committee, and Donald C. Loughry to the RAB/TAB Transnational Committee.
- An ad hoc staff/volunteer action group was formed to further IEEE Standards global initiatives.

The following motions were approved:

- It will be conveyed to CANENA that IEEE is interested in working with them to further the harmonization of standards; however, IEEE will not seek membership.
- An agreement between the IEEE-SA and European Telecommunications Standards Institute (ETSI) was approved.
- Individual IEEE-SA memberships will be included, based on the fee structure, as a benefit of corporate membership.

- The concept of implementing a discount to encourage corporate membership was endorsed.
- Revisions to the text of the IEEE-SA Operations Manual regarding BoG membership criteria and elections will be made.
- The slate of candidates for the 1999 IEEE-SA Standards Board was approved.
- Richard Holleman was elected as Chair of the IEEE-SA Standards Board.
- The appointment of Geoffrey Thompson as Chair, IEEE-SA Registration Authority Committee, was endorsed.

### Highlights of the 8 December 1998 IEEE-SA Standards Board Meeting

At the 8 December 1998 meeting of the IEEE-SA Standards Board Meeting, the following actions were taken:

- Chair, Richard Holleman, congratulated Donald Loughry on his appointment as the 1999 IEEE-SA President.
- The IEEE-SA Strategic Plan was approved.
- The Standards Review Committee (RevCom) reviewed over 110 new, revised, reaffirmed, or disapproved IEEE standards in 1998. RevCom recommended several changes to the Working Guide and Submittal Form for Proposed Standards, which will be adjusted as the need arises. The accomplishments of RevCom in 1998 include: a) improvement in the efficiency of the approval process—without sacrificing quality or ease of use, b) successful implementation of a consent agenda process, c) establishment of a mentoring program, and d) establishment of tests for electronic submission toward the goal of continuous approval.
- The New Standards Committee (NesCom) reviewed over 300 new, revised, withdrawn, or extended projects in 1998. Approximately 30% were electronic submittals and 70% were paper submittals. Accomplishments include implementation of the electronic Project Authorization Request (PAR) form.
- The Procedures Committee (ProCom) approved many Bylaw and Operations Manual changes. One noteworthy change was the approval of entity balloting. It was agreed that the change to allow entity participation does not eliminate individual standards development participa-

tion and balloting by individuals. Furthermore, initial extension requests for PARs must now include the current level of activity, a project plan that includes current project status, and a predicted development schedule, including dates for draft completion, submittal for sponsor ballot, and target date for submittal of the completed standards project to the IEEE-SA Standards Board. Additional requests for extension will require increased justification of the continued relevance of the project, an update of the current level of activity, the reason for the delay, and the predicted development schedule.

- On 20 November 1998, the agreement between the IEEE and the European Telecommunications Standards Institute (ETSI) was approved by ETSI after receiving input from the IEEE. ETSI Director General, Karl-Heinz Rosenbrock, and Judith Gorman, Managing Director of Standards Activities, will sign the document.
- The IEEE-SA Standards Board acknowledged the formation of the Marine Industry Committee (MIC) by the Industry Applications Society (IAS) to handle the standards development work formerly managed or performed by the Marine Transportation Committee (MTC). The motion was unanimously approved.
- The following individuals were recipients of awards for outstanding achievement in standards in 1998: Dennis Bodson, Charles Proteus Steinmetz Award; Satish Aggarwal and Harold Epstein, Distinguished Service Awards; E. G. "Al" Kiener and Sue Vogel, Standards Medallions.



# IEEE-SA STANDARDS BOARD



New York

## APPROVED PARS FOR NEW STANDARDS

**P802.1r** (C/LM) Supplement to ISO/IEC 15802-3 (802.1D): Information Technology—Telecommunications and Information Exchange Between Systems—Local and Metropolitan Area Networks—Common Specifications—Part 3: Media Access Control (MAC) Bridges—GARP Proprietary Attribute Registration Protocol (GPRP)

**P1073.1.1.1** (EMB) Standard for Medical Device Communications, Medical Device Data Language (MDDL)—Nomenclature

**P1218** (PE/T&D) Guide for Maintenance of Wood Transmission and Distribution Line Structures

**P1320.2a** (C/SE) Standard for Conceptual Modeling Language, Syntax and Semantics for IDEFIX 97 (IDEF object)—Extensions and Examples

**P1484.14** (C/LT) Standard for Information Technology—Semantics and Exchange Bindings

**P1539** (PE/IC) Guide for Testing Transmission Cable Systems with Extruded Insulation, Part 1, 69 kV through 150 kV

**P1540** (C/SE) Standard for Software Life Cycle Processes—Risk Management

**P1541** (SCC14) Standard for Binary Prefixes

**P1542** (PE/T&D) Guide for Installation, Maintenance, and Operation of Irrigation Equipment Located Near or Under Power Lines

**P1543** (SCC32) Standard for Message Sets for Back Office Applications/Roadside (Resource Manager) Communications

**P1544** (VT) Standard for Transit Communications Interface Profiles for Rail Applications

**PC37.10.1** (PE/SWG) Guide for the Selection of Monitoring for Circuit Breakers

**PC62.37.1** (PE/SPD) Guide for the Application of Thyristor Surge Protective Devices

## REVISED PARS

**P287** (IM/Con) Standard for Precision Coaxial Connectors (DC–110 GHz)

**P551** (IA/PSE) Recommended Practice for Calculating Short Circuit Currents in Industrial and Commercial Power Systems

**P802.8** (C/LM) Recommended Practice for Fiber Optic Local and Metropolitan Area Networks

**P802.14** (C/LM) Standard for Local and Metropolitan Networks: Broadband Cable Access Method and Physical Layer Specification

**P1003.1m** (C/PA) Standard for Information Technology—Portable Operating System Interface (POSIX®)—Part 1: System Application Program

Interface (API) Amendment m: Checkpoint/Restart Interface [C Language]

**P1003.1n** (C/PA) Standard for Information Technology—Portable Operating System Interface (POSIX®)—Part 1: System Application Program Interface (API) Amendment n: Technical Corrigenda to Threads Extension [C Language]

**P1031** (PE/SUB) Guide for the Functional Specification of Transmission Static VAR Compensators

**P1388** (PE/TR) Standard for the Electronic Reporting of Transformer Test Data

**P1506** (C/SE) Standard for Software Engineering—Test Coverage Metric—Condition Independence for Control and Logic

## PARS FOR STANDARDS REVISIONS

**P4** (PE/PSIM) Standard for High-Voltage Test Techniques

**P260.1** (SCC14) Standard Letter Symbols for Units of Measurement (SI Units, Customary Inch-Pound Units, and Certain Other Units)

**P421.1** (PE/ED&PG) Standard Definitions for Excitation Systems for Synchronous Machines

**P528** (AES/GA) Standard for Inertial Sensor Terminology

**P802.5** (C/LM) Standard for Information Technology—Telecommunications and Information Exchange Between Systems—Local and Metropolitan Area Networks—Part 5: Token Ring Access Method and Physical Layer Specifications

**P833** (PE/NPE) Recommended Practice for the Protection of Electric Equipment in Nuclear Power Generating Stations from Water Hazards

**P1184** (SCC29) Guide for Batteries for Uninterruptible Power Supply Systems

**P1284** (C/MM) Standard Signaling Method for a Bidirectional Parallel Peripheral Interface for Personal Computers

**PC37.97** (PE/PSR) Guide for Protective Relay Applications to Power System Buses

**PC37.110** (PE/PSR) Guide for the Application of Current Transformers Used for Protective Relaying Purposes

**PC57.12.25** (PE/TR) Standard for Pad-Mounted, Compartmental-Type, Self-Cooled, Single-Phase Distribution Transformers with Separable Insulated High-Voltage Connectors; High Voltage, 34 500 GrdY/19 920 Volts and Below, Low Voltage, 240/120 Volts; 167 kVA and Smaller—Requirements

**PC62.22** (PE/SPD) Guide for the Application of Metal-Oxide Surge Arresters for Alternating-Current Systems

8 December 1998

## WITHDRAWN PARS

**P176** (UFFC) Standard on Piezoelectricity

**P308** (PE/NPE) Standard Criteria for Class 1E Power Systems for Nuclear Power Generating Stations

**P421.1** (PE/ED&PG) Standard Definitions for Excitation Systems for Synchronous Machines

**P475** (EMC/SC) Standard Measurement Procedures for Field-Disturbance Sensors

**P610.1** (C/SCC) Standard for Glossary of Mathematics of Computing Terminology

**P610.8** (C/SCC) Glossary of Artificial Intelligence and Robotics Applications

**P610.9** (C/SCC) Glossary of Computer Security and Privacy Terminology

**P610.11** (C/SCC) Standard for Glossary of Theory of Computation Terminology

**P751** (PE/T&D) Guide for Wood Transmission Structures

**P802.12a** (C/LM) Standard for Information Technology—Local and Metropolitan Area Networks—Part 12: Demand-Priority Access Method, Physical Layer And Repeater Specifications: Supplement for Operation at Greater than 100 Mb/s

**P896.11** (C/BA) Standard for IEEE 1355 Links on Future+ Backplane Connector

**P896.12** (C/BA) Standard for Fault Tolerance Classification of Computer-Based Systems

**P958** (PE/ED&PG) Guide for Application of AC Adjustable Speed Drives for Electric Power Generating Stations

**P996.1** (C/MM) Standard for Compact Embedded PC Modules

**P1002** (C/SE) Standard Taxonomy for Software Engineering Standards

**P1073.2** (EMB) Standard for Medical Device Communications, Application Profiles, Framework, and Overview

**P1100** (IA/PSE) Recommended Practice for Powering and Grounding Electronic Equipment

**P1156.3** (C/MM) Standard for Power Supply Specifications for Computer Systems

**P1202.1** (IA/PSE) Standard for Measuring the Release Rates of Smoke and Heat of Wire and Cable for Use in Industrial and Commercial Occupancies

**P1234** (PE/IC) Guide for Fault Locating on Shielded Power Cables

**P1275.6** (C/BA) Standard for Boot (Initialization Configuration) Firmware, 64-Bit Extensions

**P1304** (PE/PSIM) Standard for Current Measuring Systems Which Use Optical Techniques for Power Systems Applications

**P1358** (C/SE) Standard for Information Technology—Signal Processing Applications Processor Graph Method Software Design Methodology

**P1391** (C/MM) Standard for Software Interfaces for Knowledge-Based System Interoperability in Sensor-Based Processing Applications

**P1397** (SCC31) Standard Reference and Topology Model for Automatic Metering and Related Systems

**P1398** (SCC31) Standard Method of Data Communication Between a Utility and a Customer End-Device Using a Radio Frequency (RF) Networks Medium

**P1399** (SCC31) Standard Method of Data Communication Between a Utility and a Customer End-Device Using a Power Line (PL) Carrier Network Medium

**P1403** (PE/SUB) Guide for Gas Insulated Substations vs. Air Insulated Substations Comparisons

**P1405** (PE/SWG) Guide for Testing Metal-Enclosed Switchgear for Internal Arcing Faults

**P1596.1** (C/MM) Standard for SCI to VME (IEEE Std 1596 to IEEE Std 1014) Bridge Architecture

**PC37.91** (PE/PSR) Guide for Protective Relay Application to Power Transformers

## CONDITIONS MET

**902** (IA/PSE) Guide for Maintenance, Operation, and Safety of Industrial and Commercial Power Systems (Yellow Book)

**1016** (C/SE) Recommended Practice for Software Design Descriptions

**1101.1** (C/BA) Standard for Mechanical Core Specifications for Microcomputers Using IEC 603-2 Connectors

**1129** (PE/EM) Recommended Practice for Monitoring and Instrumentation of Turbine Generators

**1293** (AES/GA) Standard Specification Format Guide and Test Procedures for Linear, Single-Axis, Non-Gyroscopic Accelerometers

**1407** (PE/IC) Guide for Accelerated Aging Tests for Medium-Voltage Extruded Electric Power Cables Using Water-Filled Tank

**1416** (PE/SUB) Recommended Practice for the Interface of New Gas Insulated Equipment in Existing Gas Insulated Substations

**1477** (VT) Standard for Passenger Information System for Rail Transit Vehicles

## NEW STANDARDS

**802.1Q** (C/LM) Standard for Virtual Bridged Local Area Networks

**1003.5c** (C/PA) Standard for Information Technology—POSIX Ada Language Interfaces—Part 1: Binding for System Application Program Interface (API) Amendment 2: Protocol Independent Interfaces

**1003.23** (C/PA) Guide for Developing User Open System Environment (OSE) Profiles

**1062a** (C/SE) Recommended Practice for Software Acquisition

**1233a** (C/SE) Guide for Developing System Requirements Specifications (approval on 25 June 1998 was rescinded and the document was re-approved as a new document at this meeting)

**1413** (R) Standard Methodology for Reliability Predictions and Assessment for Electronic Systems Equipment

**1445** (SCC20) Standard for Digital Test Interchange Format (DTIF)

## REVISED STANDARDS

**449** (PEL/ET) Standard for Ferroresonant Voltage Regulators

**1058** (C/SE) Standard for Software Project Management Plans

**1061** (C/SE) Standard for a Software Quality Metrics Methodology

**1220** (C/SE) Standard for Application and Management of the Systems Engineering Process

**1226** (SCC20) Trial-Use Standard for a Broad-Based Environment for Test (ABBET™), Overview and Architecture

## REAFFIRMED STANDARDS

**388-1992** (PEL/ET) Standard for Transformers and Inductors in Electronic Power Conversion Equipment

**393-1991** (PEL) Standard for Test Procedures for Magnetic Cores

**436-1991** (PEL/ET) Guide for Making Corona (Partial Discharge) Measurements on Electronics Transformers

**502-1983** (PE/ED&PG) Guide for Protection, Interlocking, and Control of Fossil-Fueled Unit-Connected Steam Stations

**650-1990** (PE/NPE) Standard for Qualification of Class 1E Static Battery Chargers and Inverters for Nuclear Power Generating Stations

**1150-1991** (PE/ED&PG) Recommended Practice for Integrating Power Plant Computer-Aided Engineering (CAE) Applications

## EXTENSION GRANTED UNTIL DECEMBER 1999

**80-1986** (R1991) (PE/SUB) Guide for Safety in AC Substation Grounding

**352-1987** (R1993) (PE/NPE) Guide for General Principles of Reliability Analysis of Nuclear Power Generating Station Safety Systems

**525-1992** (PE/SUB) Guide for the Design and Installation of Cable Systems in Substations

**946-1992** (PE/ED&PG) Recommended Practice for the Design of DC Auxiliary Power Systems for Generating Stations

**1008-1987** (R1993) (C/SE) Standard for Software Unit Testing

**1016.1-1993** (C/SE) Guide to Software Design Descriptions

**1042-1987** (R1993) (C/SE) Guide to Software Configuration Management

**1044-1993** (C/SE) Standard Classification for Software Anomalies

**1045-1992** (C/SE) Standard for Software Productivity Metrics

**1059-1993** (C/SE) Guide for Software Verification and Validation Plans

**1062-1993** (C/SE) Recommended Practice for Software Acquisition

**C37.20.2-1993** (PE/SWG) Standard for Metal-Clad and Station-Type Cubicle Switchgear

**C57.12.26-1992** (PE/TR) Standard for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers for Use with Separable Insulated High-Voltage Connectors (34 500 GrdY/19 920 Volts and Below, 2500 kVA and Smaller)

**C57.98-1993** (PE/TR) Guide for Transformer Impulse Tests

**C57.109-1993** (PE/TR) Guide for Transformers Through-Fault-Current Duration

**C62.35-1987** (R1993) (PE/SPD) Standard Test Specifications for Avalanche Junction Semiconductor Surge Protective Devices

**C62.42-1992** (PE/SPD) Guide for the Application of Gas Tube and Air Gap Arrester Low-Voltage (Equal to or Less than 1000 V rms or 1200 V dc) Surge Protective Devices

## EXTENSION GRANTED UNTIL DECEMBER 2000

**11-1980** (R1992) (PE/EM) Standard for Rotating Electric Machinery for Rail and Road Vehicles

**95-1977** (R1991) (PE/EM) Recommended Practice for Insulation Testing of Large AC Rotating Machinery with High Direct Voltage

**291-1991** (AP/P) Standard Methods for Measuring Electromagnetic Field Strength of Sinusoidal Continuous Waves, 30 Hz to 30 GHz

**338-1987** (R1993) (PE/NPE) Standard Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems

**937-1987** (R1993) (SCC21) Recommended Practice for Installation and Maintenance of Lead-Acid Batteries for Photovoltaic (PV) Systems

**1013-1990** (SCC21) Recommended Practice for Sizing Lead-Acid Batteries for Photovoltaic (PV) Systems

**1063-1987** (R1993) (C/SE) Standard for Software User Documentation

**1145-1990** (SCC21) Recommended Practice for Installation and Maintenance of Nickel-Cadmium Batteries for Photovoltaic (PV) Systems

**C37.14-1992** (PE/SWG) Standard for Low-Voltage DC Power Circuit Breakers Used in Enclosures

*continued on page 8*



## Painless Approval of Standards, Part 2

by Harry Epstein

This is the second in a series of articles designed to assist IEEE SA members with the approval and publication of IEEE standards.

Draft standards submitted to the IEEE Standards Association Standards Board (SASB) are referred to the Standards Review Committee (RevCom). RevCom serves in an advisory capacity to the SASB. One of RevCom's responsibilities is to provide recommendations concerning the acceptability of submittals to the SASB regarding new, revised, and reaffirmed IEEE standards.

RevCom has adopted several conventions to provide assistance to its committee members in determining the proper course of action to take concerning submittals of IEEE standards to the SASB. The conventions adopted by RevCom are published on the Web page <http://standards.ieee.org/board/rev/revconventions.html>.

This past year, there have been a number of sponsor requests to make changes to an approved IEEE standard before the document's publication. In this article, I will discuss the convention called "Changes to Approved IEEE Standards Subsequent to SASB Approval and Prior to Their Publication."

Following the approval of an IEEE standard submitted to the SASB, there is a final editorial review by the IEEE Standards staff. Sometimes, during this editorial review, a sponsor may wish to make what the sponsor considers to be minor revisions to the document before its publication. The IEEE staff editor will review the sponsor requested changes to the document and may question whether or not the changes are technical in nature. If there is a question, the verbiage of the requested changes is usually referred

to a member of RevCom to determine if the changes are technical or editorial. If the changes are considered technical, they cannot be incorporated into the approved standard without further action by the sponsor. Once the document has been approved by the SASB, only changes considered to be editorial can be made to the standard before its publication. If technical changes to the standard are requested by the sponsor prior to its publication, these changes can only be made by submitting a revision of the standard to the SASB after:

1. A PAR for revision of the document has been submitted and approved by the SASB and,
2. The revision to the standard has been balloted by the sponsor's balloting group in accordance with the requirements of the SASB Operations Manual.

This convention has been developed to ensure the integrity of the IEEE consensus standards process—that all technical changes made to an IEEE Standard are reviewed and balloted by the consensus balloting group in accordance with the Operations Manual.

IEEE SA members who are associated with standards development activities are encouraged to review these conventions prior to submitting an IEEE standard for SASB approval. These conventions may be of assistance in identifying common areas that may delay the approval and publication of the standard.

If you have any questions concerning these conventions, either I or any member of RevCom will be pleased to assist you.

*Harold E. Epstein is the Chair of the IEEE-SA Standards Board Review Committee.*

### New IEEE Software Engineering Standards Edition

A new four-volume Software Engineering Standards Edition that contains a selection of IEEE Software Engineering standards will be available in March 1999. These standards, nearly half of which were revised in 1998, reflect the state-of-the-art practices in software development and maintenance, incorporating consideration of international standards and guidelines. Based on its survey of software engineering standards users, the Software Engineering Standards Committee (SESC) of the IEEE Computer Society determined that the standards would be more useful if assembled into a four-volume edition organized by user needs. In addition to the standards themselves, the set provides an overview of the IEEE and the SESC, an introduction to the organizing framework of the four-volume edition, and an explanation of the principles behind that framework.

#### IEC Lord Kelvin Award

Professor Ralph Showers was named as a co-recipient of the Lord Kelvin Award on 21 October 1998 at the 62nd General Meeting of the International Electrotechnical Commission (IEC) in Houston, Texas.

Dr. Showers is a life member of the IEEE and a former recipient of the IEEE Fellow Award, the IEEE Standards Medallion, and the IEEE Charles Proteus Steinmetz Award.

The inscribed gold medal was presented to

Dr. Showers for his leadership; for his outstanding contribution to the growth, development, and promotion of IEC systems and standards; for his role in an IEC activity that has a significant impact on industry and/or commerce; for his contribution to promotion of the Commission's image in the business world; and for his outstanding service rendered to the IEC over a significant period of time (at least five years).

#### IEEE Std 802.3z Recognized by PC Magazine

IEEE Std 802.3z-1998, IEEE Supplement to Carrier Sense Multiple Access with Collision

Detection (CSMA/CD) Access Method and Physical Layer Specifications—Media Access Control (MAC) Parameters, Physical Layer, Repeater and Management Parameters for 1000 Mb/s Operation (Gigabit Ethernet), was nominated for the 15th Annual *PC Magazine* Awards for Technical Excellence. The awards for technical excellence are designed to recognize those products that have not only made an outstanding contribution to the computer industry, but have also set a new standard for technical innovation. This is the first time in the history of the *PC Magazine* award that a standard was nominated.

## AWARDS SPOTLIGHT

The IEEE-SA Standards Board formally congratulates the officers, as well as their working groups, on the publication of the following standards:

**Geoffrey O. Thompson, Ian Crayford, and Rich Seifert**, IEEE Std 802.3ac-1998

**Victoria Poncini**, IEEE Std 802.11c-1998

**Leonard Tripp**, IEEE Stds 829-1998; 1062, 1998 Edition; 1233, 1998 Edition; 1362, 1998 Edition; 1465-1998; 1490-1998

**Erling Hesla**, IEEE Std 902-1998

**James P. Hanna**, IEEE Std 1029.1-1998

**Richard E. Fairley**, IEEE Std 1058-1998

**Norman F. Schneidewind**, IEEE Std 1061-1998

**David J. Schultz**, IEEE Std 1074-1997

**Eike Waltz**, IEEE Std 1101.1-1998

**Richard Schmidt**, IEEE Std 1220-1998

**Leslie A. Orlidge, John W. Sheppard, Tim Bearnse, and Tim Wilmering**, IEEE Std 1232.2-1998

**Thomas A. Bruce, Carol Gann, Robert G. Brown, and Keri Anderson Healy**, IEEE Std 1320.2-1998

**Michael Pecht**, IEEE Std 1332-1998

**Richard H. Thayer and Richard Fairley**, IEEE Std 1362, 1998 Edition

**Jean-Marie Delcoustal**, IEEE Std 1416-1998

**Anthony J. Jonnatti**, IEEE Std C57.12.01-1998

**Richard P. Marek**, IEEE Std C57.110-1998

**C. Patrick McShane**, IEEE Std C57.121-1998

## New IEEE Standards Products

IEEE Member Price applies only to the first copy of each standard ordered.

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### Design Automation

**1029.1-1998** IEEE Standard for VHDL Waveform and Vector Exchange (WAVES) to Support Design and Test Verification

**Print:** • 192 pages • [0-7381-1445-6]  
[SH94689-NBS] • \$77.00 • IEEE Mbr: \$62.00  
**PDF:** • [0-7381-1446-4]  
[SS94689-NBS] • \$116.00 • IEEE Mbr: \$93.00

### Information Technology

**802.3ac-1998** IEEE Standard for Information Technology—Telecommunications and Information Exchange Between Systems—Local and Metropolitan Area Networks—Specific Requirements—Supplement to Carrier Sense Multiple Access With Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications—Frame Extensions to Virtual Bridged Local Area Network (VLAN) Tagging on 802.3 Networks

**Print:** • 20 pages • [0-7381-1421-9]  
[SH94675-NBS] • \$62.00 • IEEE Mbr: \$50.00  
**PDF:** • [0-7381-1422-7]  
[SS94675-NBS] • \$93.00 • IEEE Mbr: \$74.00

**829-1998** IEEE Standard for Software Test Documentation

**Print:** • 64 pages • [0-7381-1443-X]  
[SH94687-NBS] • \$65.00 • IEEE Mbr: \$52.00  
**PDF:** • [0-7381-1444-8]  
[SS94687-NBS] • \$98.00 • IEEE Mbr: \$78.00

**1016-1998** IEEE Recommended Practice for Software Design Descriptions

**Print:** • 24 pages • [0-7381-1455-3]  
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**PDF:** • [0-7381-1456-1]  
[SS94688-NBS] • \$96.00 • IEEE Mbr: \$77.00

**1058-1998** IEEE Standard for Software Project Management Plans

**Print:** • 32 pages • [0-7381-1447-2]  
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[SS94690-NBS] • \$96.00 • IEEE Mbr: \$77.00

**1061-1998** IEEE Standard for a Software Quality Metrics Methodology

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**1062, 1998 Edition** IEEE Recommended Practice for Software Acquisition

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**1101.1-1998** IEEE Standard for Mechanical Core Specifications for Microcomputers Using IEC 60603.2 Connectors

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[SS94678-NBS] • \$114.00 • IEEE Mbr: \$91.00

**1233, 1998 Edition** IEEE Guide for Developing System Requirements Specifications

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[SH94659-NBS] • \$63.00 • IEEE Mbr: \$50.00  
**PDF:** • [0-7381-1409-X]  
[SS94659-NBS] • \$95.00 • IEEE Mbr: \$76.00

**1320.2-1998** IEEE Standard for Conceptual Modeling Language—Syntax and Semantics for IDEF1X97 (IDEFObject)

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**2000.1-1998** IEEE Standard for Year 2000 Terminology

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[SS94667-NBS] • \$93.00 • IEEE Mbr: \$74.00

**12119: 1998** (ISO/IEC) [IEEE Std 1465, 1998 Edition] Information technology—Software Packages—Quality Requirements and Testing

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**PDF:** • [0-7381-1408-1]  
[SS94665-NBS] • \$134.00 • IEEE Mbr: \$107.00

**15802-3: 1998** (ISO/IEC\*) [ANSI\*/IEEE Std 802.1D, 1998 Edition] Information Technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Common specifications—Media access control (MAC) bridges

(This edition replaces ISO/IEC 10038: 1993, and incorporates IEEE supplements P802.1p, 802.1j, 802.6k, and P802.12e.)

**Print:** • 384 pages • [0-7381-0329-2]  
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**PDF:** • [0-7381-1416-2]  
[SS94651-NBS] • \$179.00 • IEEE Mbr: \$143.00

\* (ANSI and ISO/IEC approval expected by March 1999)

### Power and Energy

**902-1998** IEEE Guide for Maintenance, Operation and Safety of Industrial and Commercial Power Systems (IEEE Yellow Book)

**Print:** • 144 pages • [0-7381-1423-5]  
[SH94676-NBS] • \$60.00 • IEEE Mbr: \$48.00  
**PDF:** • [0-7381-1424-3]  
[SS94676-NBS] • \$90.00 • IEEE Mbr: \$72.00

**1416-1998** IEEE Recommended Practice for the Interface of New Gas Insulated Equipment in Existing Gas Insulated Substations

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**PDF:** • [0-7381-1436-7]  
[SS94682-NBS] • \$96.00 • IEEE Mbr: \$77.00

**C57.12.01-1998** IEEE Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid Cast and/or Resin Encapsulated Windings

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[SH94681-NBS] • \$70.00 • IEEE Mbr: \$56.00  
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[SS94681-NBS] • \$105.00 • IEEE Mbr: \$84.00

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**Reliability**

**1413-1998** IEEE Standard Methodology for Reliability Prediction and Assessment for Electronic Systems Equipment

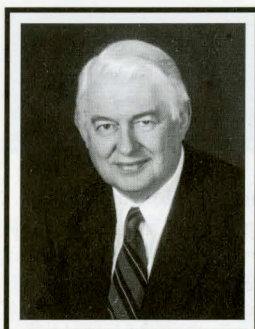
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[SS94683-NBS] • \$92.00 • IEEE Mbr: \$74.00





## Report by the Past President of the IEEE Standards Association (IEEE-SA)

by John Rankine

### To Members of the IEEE Standards Association Board of Governors

Dear Colleagues,  
I want to thank you for your hard work, dedication, and leadership in being an IEEE-SA Board of Governors member for the year 1998.

Not only have you had to meet the challenge of governing an entirely new organization for the Institute, you have had to give it direction, purpose, and achievement. This you have done with distinction. As a result, IEEE Standards has been given a strategic direction, new class-

es of memberships, and an entirely new organization to meet the present-day needs of industry and ensure the continuing relevancy and leadership of IEEE in world standardization. In all of this, the partnership between volunteers and staff has been outstanding and a model for the Institute.

For my part, it has been a pleasure and an honor to be associated with you. Thank you for all of your hard work and contributions.

I wish you a prosperous and successful 1999.

## IEEE Launches Industry Standards Organization

*continued from page 1*

industry group or trade association has been organized to support the development of a standard or technology within the formal standards development process. These groups often form to advance acceptance of the resulting standard in the marketplace. Industry has recognized that the approval or publication of a standard is only one piece of its strategy to develop market-relevant standards. Both development and post-development activities often require a significant commitment of resources by a motivated industry group.

Many standards developing organizations (SDOs) declare "victory" with the publication of the document. While the publication and approval of a standard certainly represents a milestone event, additional activities are often necessary to support and gain acceptance for the standard in the marketplace. The IEEE Industry Standards and Technology Organi-

zation provides the forum not only to develop specifications, but also to facilitate the activities that support a standard or specification in the marketplace.

Two examples of standards that have sparked organizations to support and promote them are IEEE Std 1394 and Gigabit Ethernet (IEEE Std 802.3). The 1394 Trade Association and the Gigabit Ethernet Alliance have been organized to promote, support, and provide technical resources to the resulting IEEE/Society sponsored standards. These efforts have been organized to gain market acceptance and to facilitate product development based on the standards.

Marketing (e.g., the development of the 1394 Trade Association's theme "1394 is here and it soon will be everywhere!"), certification, conformance testing, demonstrations at trade shows, and developers conferences are among the various activities that often take

place in support of a standard or specification.

Previously, the IEEE has not been able to provide a forum for these types of services because of the category of its not-for-profit tax status. With this new organization, IEEE will be able to support and initiate the full range of development and post-development activities and services that industry and the standards development community require.

The IEEE Industry Standards and Technology Organization is in its start-up phase as of 1 January 1999. Opportunities for participant programs and partnerships are being explored. Requests for additional information or questions regarding this new organization should be directed to Peter Lefkin at [p.lefkin@ieee.org](mailto:p.lefkin@ieee.org) or by telephone at 732.562.3802.

*Peter Lefkin is the Secretary, Treasurer, and CFO of the IEEE Industry Standards and Technology Organization.*

### Standards Board Actions

*continued from page 5*

**C37.71-1984** (R1990) (PE/SWG) Standard for Three-Phase, Manually Operated Subsurface Load Interrupting Switches for Alternating-Current Systems

**C37.122-1993** (PE/SUB) Standard for Gas-Insulated Substations

**C37.122.1-1993** (PE/SUB) Guide for Gas-Insulated Substations

**C57.12.00-1993** (PE/TR) Standard General Requirements for Liquid-Immersed Distribution, Power and Regulating Transformers

**C57.12.90-1993** (PE/TR) Standard Test Code for Liquid-Immersed Distribution, Power and Regulating Transformers and IEEE Guide for Short-Circuit Testing of Distribution and Power Transformers

**C57.113-1991** (PE/TR) Guide for Partial Discharge Measurement in Liquid-Filled Power Transformers and Shunt Reactors

### ABBREVIATIONS

AES/GA	Aerospace & Electronics Systems/Gyro Accelerometer Panel	PE/PSR	Power Engineering/Power System Relaying
AP/P	Antennas & Propagation/Propagation	PE/SPD	PE/Surge-Protective Devices
C/BA	Computer/Bus Architecture	PE/SUB	PE/Substations
C/LM	Computer/LAN MAN	PE/SWG	PE/Switchgear
C/LT	Computer/Learning Technology	PE/T&D	PE/Transmission & Distribution
C/MM	Computer/Microprocessors and Microcomputers	PE/TR	PE/Transformers
C/PA	Computer/Portable Applications	PEL	Power Electronics
C/SCC	Computer/Standards Coordinating Committee	PEL/ET	Power Electronics/Electronic Transformers
C/SE	Computer/Software Engineering	R	Reliability
EMB	Engineering in Medicine & Biology	SCC14	Standards Coordinating Committee 14/Quantities, Units & Letter Symbols
EMC/SC	Electromagnetic Compatibility/Standards Committee	SCC20	Standards Coordinating Committee 20 (Abbreviated Test Language for All Systems [ATLAS])
IA/PSE	Industry Applications/Power Systems Engineering	SCC29	Standards Coordinating Committee 29 (Stationary Batteries)
IM/Con	Instrumentation and Measurement /Connectors	SCC31	Standards Coordinating Committee 31 (Automatic Meter Reading & Energy Management)
PE/ED&PG	Power Engineering/Energy Development & Power Generation	SCC32	Standards Coordinating Committee 32 (Intelligent Transportation Systems)
PE/EM	PE/Electric Machinery	UFFC	Ultrasonics/Ferroelectrics, and Frequency Control
PE/IC	PE/Insulated Conductors	VT	Vehicular Technology
PE/NPE	PE/Nuclear Power Engineering		
PE/PSIM	PE/Power Systems Instrumentation and Measurement		