STANDARDS BEARER

IEEE Networking the World™

IEEE Wireless Networking Standard Wins PC Magazine Technical Excellence Award

The Higher Speed Physical Layer (PHY) Extension in the 2.4 GHz Band development team for IEEE Std 802.11, 1999 Edition, won the prestigious *PC Magazine* Award for Technical Excellence in the category of network standards on 15 November 1999 in Las Vegas, Nevada.

Vic Hayes, Chairman of the IEEE 802.11 Standards Committee, accepted the award on behalf of the group and the IEEE. These awards for technical excellence are designed to recognize those products that have made an outstanding contribution to the computer industry and have set a new standard for technical innovation.

IEEE Std 802.11, 1999 Edition [adopted as International Organization for Standardization and International Electrotechnical Commission (ISO/IEC) 8802-11:1999], provides wireless connectivity to automatic machinery, equipment, and stations that require rapid deployment, which may be portable, hand-held, or mounted on vehicles within a local area. A photo of the award acceptance is on the IEEE 802.11 Web site at:

- **http://grouper.ieee.org/groups/802/11**.

Three Industry Groups Choose IEEE-ISTO in First Year

The IEEE Industry Standards and Technology Organization (IEEE-ISTO) was approved by the IEEE Board of Directors in November 1998 and officially launched its operations on 1 January 1999.

During its first year of operation, the IEEE-ISTO formalized its organizational infrastructure (bylaws, board of directors, articles of incorporation, officer and representative appointments, etc.). In addition, three industry groups organized as programs of the IEEE-ISTO: The Medical Device Communications Industry Group, the Printer Working Group, and the Nexus 5001 Forum™. All three programs have unique ties to either an IEEE standard or Society, supporting and demonstrating the complementary aspects of the IEEE-SA and the IEEE-ISTO.

On 17 December 1999, the IEEE-ISTO and the Nexus 5001 Forum™, a program of the IEEE-ISTO, announced a significant milestone in their respective organizations—the availability of the IEEE-ISTO's first Industry Group Standard. The standard, IEEE-ISTO 5001™-1999, the Nexus 5001 Forum™ Standard for a Global Embedded Processor Debug Interface, is now available on the Forum's Web site at **http://www.ieee-isto.org/Nexus5001/**.

In 1999, the IEEE was recognized for its innovation to forge a symbiotic relationship between two different, yet complementary, approaches to standards development represented in the IEEE-SA and the IEEE-ISTO. In the years ahead, the IEEE-ISTO will serve as a forum to facilitate new activities and provide the IEEE and its Societies with increased recognition and relevance to industry.

For further information regarding the IEEE-ISTO, visit **http://www.ieee-isto.org** or contact Peter Lefkin, IEEE-ISTO secretary, treasurer, and CFO, at:

- **+1 732 562 3802**, or
- via e-mail at **p.lefkin@ieee.org**.

WHAT'S INSIDE...

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

by Donald C. Loughry

Challenge for the New Millennium

New Year's resolutions may be established yearly if you are a believer in recognizing situations and establishing some resolves to address them. Opportunities for "Millennial" reflections occur but once in a lifetime, if at all. Why should *we* look forward to the new millennium with eager anticipation, some level of concern, and new insights and awareness?

Just recently, I listened to a newscast aimed at emerging trends. The CEO of a major IT company observed that industry changes are taking place at an exceptionally rapid pace. Business opportunities are being created at astounding rates and evaporating equally fast. In fact, it is difficult to see very far into the future because of rapid changes such as mega-mergers, exploding e-commerce, and frequent surprises in the business world. In short, much is demanded of us these days in terms of visionary thinking, extensive flexibility, and creative responses to evolutionary and even revolutionary changes.

How does the IEEE-SA fit into the picture? This past year, we began to initiate some aspects of continuous processing of our standards (i.e., not bound by quarterly meetings). The IEEE Industry Standards and Technology Organization (IEEE-ISTO) has been established to meet industry demand for more business-driven and market-oriented standards activities now addressed by consortia and alliances. These examples are just for starters.

We have not yet fully resolved the issue of just how we will evolve to full electronic distribution of our products, rather than depending on the "last millennium" staple of printed hard copy. How many of our standards are rapidly and thoroughly implemented in products? How well do we ferret out new standards initiatives, proactively engage the interested parties, coach them in the ways of productive standards development, and facilitate the completion of standards efforts? Can we hold effective standards meetings via video conferencing and significantly reduce the cost and time to market without reducing the quality of the product?

These and many more as yet unknown imperatives will face us sooner rather than later. How we meet the ever-changing demands will test our mettle. We must be responsive, flexible, and creative to serve the present and future needs of society. To do less will challenge our right to be in the standards business. I challenge each of us to be attuned to arising needs and to meet them effectively.

News from the 14–15 February 2000 IEEE-SA Board of Governors Meeting

The following appointments were made for Board of Governors committees, representatives to other IEEE entities, and other key positions:

Marco Migliaro—Chair, Nominations and Appointments

Dennis Bodson—Chair, Awards Committee

Stephen Diamond—Chair, Appeals Committee

Geoffrey Thompson—Chair, Registration Authority Committee

Gerald Peterson—Chair, Corporate Advisory Group

Donald Heirman—Bylaws

Ulrich Hartman—Strategic Planning

James Moore—Representative, IEEE Meetings and Services Committee

Donald Loughry and **John Pope**—Representatives, IEEE Transnational Committee

Susan Tatiner—Staff Representative, IEEE Publications Activities Board

Hans Weinrich—Representative, IEEE Technical Activities Board

John Pope—Representative, IEEE Branding Committee

Ben Johnson—Representative, IEEE Industry Advisory Committee (to be formed)

Dennis Bodson—Representative, IEEE-ISTO

Richard Holleman—Representative, IEEE Finance Committee

James Beall—Liaison, IEEE-USA

Donald Fleckenstein—Globalization Consultant

IEEE-SA Standards Bearer Moving to Electronic Format

Starting in 2001, IEEE Standards will take advantage of its new Web site format to provide the *IEEE-SA Standards Bearer* listings and articles in a more timely manner. IEEE-SA Standards Board Actions will be posted quarterly, shortly after each Board meeting, and news articles will be posted as they become available, at:

- **http://standards.ieee.org/reading/ieee/SB/index.html**

In the near future, we will update our *IEEE-SA Standards Bearer* mailing list in preparation for electronic delivery of this body of information. More details will follow in the next issue.
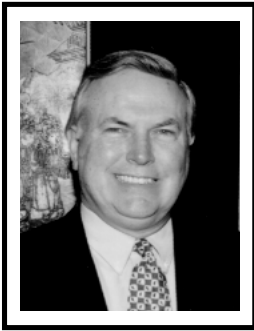
FROM THE CHAIR OF THE IEEE-SA STANDARDS BOARD

by Richard J. Holleman

The final meeting of the 1999 IEEE-SA Standards Board took place as planned, in Singapore, in January 2000, and in conjunction with the IEEE Power Engineering Society (IEEE PES) winter meeting. It was noteworthy for a number of reasons.

It was the first time the board and its committees have met in a IEEE Region 10 location, and there is no doubt about the keen interest that exists in that part of the world for the application of IEEE-SA standards to meet the market needs of industry or academia. The local participants in the IEEE P1520 and IEEE 802 standards seminars, which were held on the day before the board committee meetings started, were evidence of this interest. This was further reinforced by industry meetings at the Productivity and Standards Board of Singapore and CET Technologies, a subsidiary of ST Electronics. Each of these activities, and others that occurred in Singapore, were indicative of the opportunities for further implementation of the IEEE-SA globalization initiative.

On the IEEE PES front, the interaction of the IEEE-SA Standards Board members and staff with the PES leadership and staff is also worthy of comment. We attended meetings of the PES Technical Council and the Board of Governors, and had a joint meeting attended by board members from the IEEE PES and the IEEE-SA. The agenda for the joint meeting included topics of mutual interest and resulted in an agreement to continue a dialogue between both groups. The IEEE-SA plans to use a similar approach with other societies to promote increased interaction and cooperation.

The last item of note is a personal one. I have now concluded my term as IEEE-SA Standards Board Chairman. I wish to thank the many volunteers and staff who, over the past two years, have always been willing to step forward to work on behalf of the board or its committees. Our successes have not come easy, and while there will always be more to do, I am glad I had the opportunity to chair the board in the first two years of the new IEEE-SA organization. I know the year 2000 will be the best ever for the Standards Board under the leadership of the new Chair, Don Heirman, the returning IEEE-SA President, Don Loughry, and the staff's Managing Director, Judy Gorman.

Highlights of the January 2000
IEEE-SA Standards Board Meeting Series

The IEEE Standards Association (IEEE-SA) Standards Board meeting series was held in Singapore, 24–31 January 2000, in conjunction with the IEEE Power Engineering Society (IEEE PES) winter meeting.

The following meetings were held and attended by key PES and Standards staff and volunteers over the course of the week:

- On 25 January, Judy Gorman and Mary Lynne Nielsen held a meeting with local standards developers regarding the IEEE globalization initiative. It was decided that Standards staff will increase educational efforts in Singapore with regard to focused IEEE Standards efforts.

- On 26 January, the IEEE PES Governing Board, chaired by Donald Volzka, held its meeting.

- On 26 January, Standards staff held a joint business meeting with the IEEE PES, where the following items were discussed:

  → The value that the IEEE-SA has added to the standards activities of IEEE.

  → The role of the IEEE PES in the globalization efforts of the IEEE-SA.

  → The purpose of Standards Coordinating Committees (SCCs) and their relationship with the technical societies; the process to authorize a new SCC or change its scope; guidelines for determining when to dissolve an SCC.

  → The purpose and benefit of entity voting and mixed voting.

  → Update on IEEE-SA Standards Board activities to improve the project management of the standards development process; requirement for Sponsor to submit a work plan with PAR submittal; monitoring during the course of the project, etc.

  → Present and future IEEE PES standards activities.

- On 28–29 January, Standards staff and Committees were hosted by Kent Ridge Digital Labs (KRDL). Several meetings were conducted including the Procedures, Audit, Patent, New Standards, and Review committees.

Other noteworthy events from this meeting series include the following:

Two seminars were presented on 26 January. These included a LAN/MAN Seminar conducted by the IEEE 802 Committee Chair, Jim Carlo, and a seminar on *IEEE P1520, Standard Programming Interfaces for Networks: Service/signalling control and switch control and programming interfaces*, presented by Jit Biswas, Aurel Lazar, and Weiguo Wang.

IEEE PES involvement with the IEEE-SA Standards Board continues to grow with the addition of Donald Volzka and Peter Lips to the roster of the 2000 IEEE-SA Standards Board.

The Procedures Committee approved an addition to the IEEE-SA Standards Board Operations Manual, Par. 5.1.2, Duties of the Sponsor—to submit annually to the IEEE Standards Department an electronic roster of individuals participating in standards projects.

The New Standards Committee has approved a new Target Extension Request Form. This form will be made available on the IEEE Standards Web site by 15 March 2000 (**http://standards.ieee.org/ guides/ par/extension.html**). It will be required for use at the June 2000 meeting. For further information, contact Jodi Haasz at:

- **+1 732 562 6367** or
- **j.haasz@ieee.org**.

IEEE-SA STANDARDS BOARD
ACTIONS

APPROVED PARS FOR NEW STANDARDS

P400.2 (PE/IC) Guide for Field Testing of Shielded Power Cable Systems Using Very Low Frequency (VLF)

P400.3 (PE/IC) Partial Discharge Testing of Shielded Power Cable System in a Field Environment

P802.3ae (C/LM) Standard for Information Technology—LAN/MAN—Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications—Media Access Control Parameters, Physical Layers, and Management Parameters for 10 Gb/s Operation

P802.3af (C/LM) Standard for Information Technology—Telecommunications and Information Exchange Between Systems—LAN/MAN Specific Requirements—Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications—Data Terminal Equipment (DTE) Power Via Media Dependent Interface (MDI)

P802.11b-1999/Cor 1-200x (C/LM) Corrigenda to IEEE Std 802.11b-1999, Information Technology—Telecommunications and Information Exchange Between Systems—LAN/MAN Specific Requirements—Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Higher Speed Physical Layer (PHY) Extension in the 2.4 GHz Band

P802.15.2 (C/LM) Recommended Practice for Telecommunications and Information Exchange Between Systems—LAN/MAN Specific Requirements—Part 15: Recommended Practice for Wireless Personal Area Networks Operating in Unlicensed Frequency Bands

P1234 (PE/IC) Guide for Fault Locating on Shielded Power Cable Systems

P1394.3 (C/MM) High Performance Serial Bus Peer to Peer Data Transfer Protocol

P1484.20 (C/LT) Standard for Information Technology—Learning Technology—Competency Definitions

P1520.2 (COM) Standard for Application Programming Interfaces for ATM Networks: Service/Signaling Control and Switch Control and Programming Interfaces

P1520.3 (COM) Standard for Application Programming Interfaces for Internet Protocol Network Elements

P1553 (PE/EM) Standard for Voltage Endurance Testing of Form Wound Coils and Bars for Hydrogenerators

P1556 (SCC32) Standard for Security and Privacy of Vehicle/Roadside Communication Including Smart Card Communication

P1558 (VT) Standard for Software Documentation for Rail Equipment and Systems

P1559 (AES/GA) Standard for Inertial Systems Terminology

P1560 (EMC/SC) Standard for Methods of Measurement of Radio Frequency Interference Filter Suppression Capability in the Range of 100 Hz to 40 GHz

P1561 (SCC21) Guide for Sizing Hybrid Stand-Alone Energy Systems

P1562 (SCC21) Guide for Array and Battery Sizing in Stand-Alone Photovoltaic (PV) Systems

P1563.1 (C/SS) Recommended Practice for Portable Tape Driver Architecture

P1563.2 (C/SS) Standard for Common Tape Driver Semantics

P1563.3 (C/SS) Standard for Common Format for Data on Tape

P1564 (PE/T&D) Recommended Practice for the Establishment of Voltage Sag Indices

P1566 (IA/PCI) Performance Standard for Adjustable Frequency Drives Rated 500 HP and Larger

PC37.74 (PE/SWG) Standard Requirements for Subsurface, Vault, and Padmounted Load-Interrupter Switchgear and Fused Load-Interrupter Switchgear for Alternating Current Systems up to 38 kV

PC37.94 (PE/PSR) Standard for N Times 64 Kilobit Per Second Optical Fiber Interfaces Between Teleprotection and Multiplexer Equipment

PC57.130 (PE/TR) Trial-Use Guide for the Use of Dissolved Gas Analysis During Factory Temperature Rise Tests for the Evaluation of Oil-Immersed Transformers and Reactors

PC62.74 (PE/SPD) Guide for the Application of Surge Protective Devices for Equipment Connected to the 120/240V AC Power System and to Communication Circuits

PC95.1b (SCC28) Amendment to: IEEE Std C95.1-1991 (1999 Edition), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz

REVISED PARS

P323 (PE/NPE) Qualifying Class 1E Equipment for Nuclear Power Generating Stations

P356 (AP/P) Guide for Measurements of Electromagnetic Properties of Earth Media

P802.16.1 (C/LM) Standard for Telecommunications and Information Exchange Between Systems—LAN/MAN Specific Requirements—Air Interface for Fixed Broadband Wireless Access Systems

P1076a (C/DA) Amendment to: Standard for VHDL Language Reference Manual

P1394a (C/MM) Amendment to: High Performance Serial Bus

P1483 (VT) The Verification of Vital Functions in Processor-based Systems Used in Rail Transit Control

P1508 (PE/IC) Standard for Solder-Sweated Split Tinned Copper Connectors

P1536 (VT) Standard for Rail Transit Vehicle Battery Physical Interface

PARS FOR REVISIONS OF STANDARDS

P45 (IA/MT) Recommended Practice for Electric Installations on Shipboard

P269 (COM/TA&OS) Standard Methods for Measuring Transmission Performance of Analog and Digital Telephone Sets, Handsets, and Headsets

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

P521 (AES/RS) Standard Letter Designations for Radar-Frequency Bands

P532 (PE/IC) Guide for Selecting and Testing Jackets for Underground Cables

P602 (IA/PSE) Recommended Practice for Electric Systems in Health Care Facilities

P635 (PE/IC) Guide for Selection and Design of Aluminum Sheaths for Power Cables

P730 (C/SE) Standard for Software Quality Assurance Plans

P979 (PE/SUB) Guide for Substation Fire Protection

P1023 (PE/NPE) Recommended Practice for the Application of Human Factors Engineering to Systems, Equipment, and Facilities of Nuclear Power Generating Stations and Other Nuclear Facilities

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

P1193 (SCC27) Guide for Measurement of Environmental Sensitivities of Standard Frequency Generators

P1802.3 (C/LM) Standard for Conformance Test Methodology for IEEE Standards for LAN/MAN Specific Requirements—Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications

PC37.105 (PE/PSR) Standard for Qualifying Class 1E Protective Relays and Auxiliaries for Nuclear Power Generating Stations

PC37.109 (PE/PSR) Guide for the Protection of Shunt Reactors

WITHDRAWN PARS

P655 (PE/T&D) Guide for the Design of Overhead Power Lines with Respect to Corona

P1148 (PE/ED&PG) Cathodic Protection of Power Plant Equipment and Structures

P1437 (PE/ED&PG) Standard for the Integration of Plant Condition Monitoring Elements in Hydroelectric Facilities

PARS ADMINISTRATIVELY WITHDRAWN

P85 (PE/EM) Test Procedure for Airborne Noise Measurements on Rotating Electric Machinery

P97 (SCC04) Standard for Specifying Service Conditions in Electrical Standards

P287 (IM) Standard for Precision Coaxial Connectors (DC-110 GHz)

P539 (PE/T&D) Standard Definitions of Terms Relating to Corona and Field Effects of Overhead Power Lines

P583a (NPS) Supplement to Standard Modular Instrumentation and Digital Interface System (CAMAC)

P896 (C/BA) Standard for Futurebus+®—Logical and Physical Layers

P905 (VT) Rail Transit Intra System EML

P1003.1p (C/PA) Standard for Information Technology—Portable Operating System Interface (POSIX®)—Part 1: System Application Program Interface (API) Amendment p: Resource Limit Interfaces [C Language]

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

P1073.1.3.1 (EMB/MIB) Standard for Medical Device Communications—Medical Device Data Language (MDDL)—Virtual Medical Device, Specialized—Infusion Device

P1073.1.3.2 (EMB/MIB) Standard for Medical Device Communications—Medical Device Data Language (MDDL)—Virtual Medical Device, Specialized—Vital Signs Monitor

P1073.1.3.3 (EMB/MIB) Standard for Medical Device Communications—Medical Device Data Language (MDDL)—Virtual Medical Device, Specialized—Ventilator

P1073.2.2 (EMB/MIB) Standard for Medical Device Communications—Application Profile-Basic Capabilities

P1073.5 (EMB/MIB) Standard for Medical Device Communications—Internetworking

P1126 (PE/T&D) Guide for the Control and Protection of HVDC Transmission Systems

P1149.2 (C/TT) Standard for Shared Input/Output Scan Test Architecture

P1151 (C/MM) Standard for Modular II A Modular High Level Programming Language

P1157 (EMB) Standard for Healthcare Data Interchange—Overview and Framework

P1226.9 (SCC20) Standard for Software Interface for Resource Classes for a Broad Based Environment for Test (ABBET™)

P1226.10 (SCC20) Standard for Software Interface for Tuntime Services for a Broad Based Environment for Test (ABBET™)

P1251 (PE/ED&PG) Guide for Collection of Data on Personal Injuries in Generating Stations and Substations

P1275a (C/BA) Supplement to IEEE Std 1275-1994, IEEE Standard for Boot (Initialization Configuration) Firmware: Core Requirements and Practices—Errata, Clarifications, and Corrections

P1305 (C/SCC) Recommended Practice for the Definition of Terms for Artificial Neural Networks

P1331 (PE/PSR) Standard for Low-Energy Analog Signal Inputs to Protective Relays

P1373 (SCC21) Recommended Practice for Field Test Methods and Procedures for Grid-Connected Photovoltaic Systems

P1429 (IA/PSE) Recommended Practice for Electrical Systems in Cleanrooms

P1431 (AES/GA) Standard Specifications Format Guide and Test Procedure for Coriolis Vibratory Gyros

P1443 (MTT) Standard for Microwave Network Parameters

P1596.7 (C/MM) Standard for a High-Speed Memory Interface (SyncLink)

PC37.010f (PE/SWG) Circuit Breakers for GIS Applications

PC37.30f (PE/SWG) Switching Impulse Test; Definitions

PC37.39 (PE/SWG) Standard for Interrupter Switches for Alternating Current, Rated Above 1000 V

PC37.40c (PE/SWG) Standard Definitions for Full Range Current Limiting Fuse

PC37.41h (PE/SWG) Standard Design Tests for Full Range Current Limiting Fuse

PC37.48b (PE/SWG) External Capacitor Fuses

PC37.48d (PE/SWG) Standard Application, Operations and Maintenance Guidelines for Full Range Current Limiting Fuse

PC37.70 (PE/SWG) Auto Switch Operating Mechanisms

PC57.119 (PE/TR) Recommended Practice for Performing Temperature Rise Tests on Oil-Immersed Power Transformers at Loads Beyond Nameplate Rating

CONDITIONS MET

802.5t (C/LM) Standard for Information Technology—Telecommunications and Information Exchange Between Systems—LAN/MAN—Part 5: Token Ring Access Method and Physical Layer Specifications—100 Mbit/s Dedicated Token Ring Operation

1073.4.1a (EMB) Standard for Medical Device Communications—Physical Layer Interface—Cable Connected, Amendment 1: Corrections and Clarifications

C37.20.2 (PE/SWG) Standard for Metal-Clad Switchgear

NEW STANDARDS

1003.1g (C/PA) Standard for Information Technology—Portable Operating Systems Interface (POSIX®)—Part g: Protocol Independent Interfaces (PII)

1003.1j (C/PA) Standard for Information Technology—Portable Operating Systems Interface (POSIX®)—Part 1: System Application Program Interface (API)—Amendment j: Advanced Realtime Extensions [C Language]

1073.3.2 (EMB) Standard for Medical Device Communications—Transport Profile—IrDA Based—Cable Connected

1076a (C/DA) Amendment to: Standard for VHDL Language Reference Manual

1174 (IM/AI) Standard Serial Interface for Programmable Instrumentation

1363 (C/MM) Standard Specifications for Public Key Cryptography

1402 (PE/SUB) Guide for Electric Power Substations Physical and Electronic Security

1459 (PE/PSIM) Trial-Use Standard Definitions for the Measurement of Electric Power Quantities Under Sinusoidal, Nonsinusoidal, Balanced, or Unbalanced Conditions

14143.1 (C/SE) Adoption of ISO/IEC 14143-1: 1998 Information Technology—Software Measurement—Functional Size Measurement—Part 1: Definition of Concepts

C57.134 (PE/TR) Guide for Determination of Hottest Spot Temperature in Dry Type Transformers

REVISED STANDARDS

11 (PE/EM) Standard for Rotating Machinery for Rail and Road Vehicles

80 (PE/SUB) Guide for Safety in AC Substation Grounding

929 (SCC21) Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

1031 (PE/SUB) Guide for the Functional Specification of Transmission Static VAR Compensators

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

C37.99 (PE/PSR) Guide for the Protection of Shunt Capacitor Banks

C57.19.01 (PE/TR) Standard Performance Characteristics and Dimensions for Outdoor Apparatus Bushings

REAFFIRMATION

292-1969 (R1992) (AES/GA) Specification Format for Single-Degree-of-Freedom Spring-Restrained Rate Gyros

293-1969 (R1992) (AES/GA) Test Procedure for Single-Degree-of-Freedom Spring-Restrained Rate Gyros

295-1969 (R1993) (PEL/ET) Standard for Electronics Power Transformers

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

517-1974 (R1994) (AES/GA) Standard Specification Format Guide and Test Procedure for Single-Degree-of-Freedom Rate-Integrating Gyros

529-1980 (R1994) (AES/GA) Supplement for Strapdown Applications to Standard Specification Format Guide and Test Procedure for Single-Degree-of-Freedom Rate-Integrating Gyros

622B-1988 (R1994) (PE/ED&PG) Recommended Practice for Testing and Startup Procedures for Electric Heat Tracing Systems for Power Generating Stations

656-1992 (PE/T&D) Standard for the Measurement of Audible Noise from Overhead Transmission Lines

803.1-1992 (PE/ED&PG) Recommended Practice for Unique Identification in Power Plants and Related Facilities—Component Function Identifiers

804-1983 (R1989) (PE/ED&PG) Recommended Practice for Implementation of Unique Identification System in Power Plants and Related Facilities

805-1984 (R1992) (PE/ED&PG) Recommended Practice System Identification in Nuclear Power Plants and Related Facilities

813-1988 (R1993) (AES/GA) Specification Format Guide and Test Procedure for Two-Degree-of-Freedom Dynamically Tuned Gyros

1290-1996 (PE/NPE) Guide for Motor Operated Valve (MOV) Motor Application, Protection, Control, and Testing in Nuclear Power Generating Stations

C37.101-1993 (PE/PSR) Guide for Generator Ground Protection

C57.120-1991 (PE/TR) Loss Evaluation Guide for Power Transformers and Reactors

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

C62.92.3-1993 (PE/SPD) Guide for the Application of Neutral Grounding in Electrical Utility Systems—Part III: Generator Auxiliary Systems

ABBREVIATIONS

AES/GA	Aerospace and Electronic Systems/Gyro Accelerometer Panel
AES/RS	AES/Radar Systems
AP/P	Antennas & Propagation/ Propagation
C/BA	Computer/Bus Architecture
C/DA	C/Design Automation
C/LM	C/LAN MAN
C/LT	C/Learning Technology
C/MM	C/Microprocessors & Microcomputers
C/PA	C/Portable Applications
C/SE	C/Software Engineering
C/SCC	C/Standards Coordinating Committee
C/SS	C/Storage Systems
C/TT	C/Test Technology
COM	Communications
COM/TA&OS	COM/Transmission and Access Systems
EMB	Engineering in Medicine and Biology
EMB/MIB	EMB/Medical Information Bus
EMC	Electromagnetic Compatibility
IA/IPC	Industrial Applications/Industrial Power Conversion
IA/PCI	IA/Petroleum & Chemical
IA/PSE	IA/Power Systems Engineering
IA/MT	IA/Marine Transportation
IM	Instrumentation and Measurement
IM/AI	IM/TC8—Automated Instrumentation
MTT	Microwave Theory & Techniques
NPS	Nuclear and Plasma Sciences
NPS/NI&D	NPS/Nuclear Instruments and Detectors
PE/ED&PG	Power Engineering/Energy Development and Power Generation
PE/EM	PE/Electric Machinery
PE/IC	PE/Insulated Conductors
PE/NPE	PE/Nuclear Power Engineering
PE/PSIM	PE/Power System Instrumentation and Measurements
PE/PSR	PE/Power System Relaying
PE/SPD	PE/Surge Protective Devices
PE/SUB	PE/Substations
PE/SWG	PE/Switchgear
PE/T&D	PE/Transmission & Distribution
PE/TR	PE/Transformers
PEL/ET	Power Electronics/Electronic Transformers
SCC04	Electrical Insulation
SCC20	Abbreviated Test Language for All Systems
SCC21	Photovoltaics
SCC27	Time and Frequency
SCC28	Non-Ionizing Radiation
SCC29	Stationary Batteries
SCC31	Automatic Meter Reading and Energy Management
SCC32	Intelligent Transportation Systems
VT	Vehicular Technology

The IEEE 802.11 Handbook: A Designer's Companion

The IEEE 802.11 Handbook: A Designer's Companion, by Bob O'Hara and Al Petrick, familiarizes system network architects, hardware engineers, and software engineers with the basic concepts, terminology, and key specifications of IEEE Std 802.11.

This book takes the reader from a basic understanding of Wireless Local Area Networks (WLANs) through the details of the Physical (PHY) Layer and Medium Access Control (MAC) layer of the standard—serving as an indispensable primer. The authors articulate a clear picture of the standard to both first-time and experienced designers of wireless products. New market entrants or existing original equipment manufacturers (OEM) of proprietary WLAN solutions, and developers of IEEE Std 802.11-based products for the RF or Infrared WLAN market, will find this book to be essential reading.

The IEEE 802.11 Handbook: A Designer's Companion provides:

- A solid working definition of a wireless LAN
- A discussion of the evolution of the 802.11 standard
- A survey of various market segment applications, from manufacturing to enterprise wireless communication

The IEEE 802.11 Handbook: A Designer's Companion, details:

- General network topologies of an ad hoc and distributed network for an IEEE 802.11 wireless medium
- Key specifications and attributes of the five physical layers specified in the standard
- Basics of the protocol, relative to the ad hoc and distributed network configuration, including the MAC layer—the most difficult entity in the standard

168 pages
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IEEE Forms First National Standards Committee

In December 1999, the Executive Committee of the Board of IEEE Region 7 (IEEE Canada) approved, in principle, the formation of the IEEE Canada Standards Committee. The purpose of this national standards committee is to promote the positions of the IEEE Standards Association (IEEE-SA) at the Canadian national level with such organizations as the Canadian National Committee of the International Electrotechnical Commission (CNC/IEC), the Standards Council of Canada, and the Canadian Electrical Association. It also will serve in Canada as a source of information for IEEE-SA deliberations.

The committee will be composed of representatives from Canadian technical standards interests and activities, including, but not restricted to, industry, standards-developing organizations, national-level trade associations, and government participants. The charter for this committee includes the following activities:

- Committee participation from key industry sectors.
- Positioning statements.
- Contact with, and possible membership in, the CNC/IEC.
- Acceptance of IEEE standards by Canadian regulators.
- IEEE standards to be submitted to the IEC through the CNC.

- Strengthened Canadian participation in IEEE standards development through membership in IEEE working groups and balloting groups.
- Strengthened IEEE participation in Canadian standards development.
- A Web group for disseminating information on the IEEE Canada Web site.

The establishment of the IEEE Canada Standards Committee is an important first step in the globalization initiative of the IEEE-SA. The mission of the initiative is to "proactively solicit recognition from IEEE members and customers and from external organizations of IEEE as an international standards developer." Although the IEEE is headquartered in the U.S, it has membership and technical chapters in over 150 countries, and is a major source for international technical standards. Creating national IEEE standards committees will provide a further mechanism to formally channel IEEE technical input, and will go a long way in promoting the IEEE as an international organization.

For more information, contact Mary Lynne Nielsen, Manager, Process Management and Improvement, at **m.nielsen@ieee.org.**

IEEE and Bluetooth™: Global Standards-Making

by Ian Gifford

The first project of the IEEE 802.15 Working Group for Wireless Personal Area Networks (WPANs) is derived from the Bluetooth™ Special Interest Group (SIG) v1.0 Specification. This project is proving to be a major growth area for IEEE 802 standards.

One of the major goals for IEEE P802.15, as well as for the Bluetooth™ SIG, is global usage. A P802.15 WPAN/Bluetooth™ device will provide travelers with country-to-country usage.

One of the first applications for this wireless standard is coined "the ultimate headset." A cordlessly connected headset will keep hands free at all times. You can connect your headset to a mobile phone or any wire-bound connection to keep your hands free for more important tasks when you're at the office, in your car, or in a train, airplane, or boat.

Because of this, much of the Bluetooth™ technology is focused on a single specification that meets worldwide regulatory requirements in two categories: security and spectrum/power. The radio link will contain private business and personal data/voice; hence, security is a requirement for this. As security is heavily regulated worldwide, the technology has to conform to or work with the various worldwide agents to ensure it meets these requirements. With regard to spectrum/power, the technology needs to travel with the user. These wearable devices must be designed such that a single technology meets the spectrum power requirements of the world.

This first IEEE P802.15 WPAN project effort is fast-tracking a standard derived from the Bluetooth™ Specifications for wireless networking of portable and mobile computing devices, e.g., organizers, laptops, cell phones, etc., allowing these devices to communicate and interoperate with one another. The goal is to create a peer reviewed standard that has broad market applicability and deals effectively with the issues of coexistence with other wireless networking solutions.

For more information contact Bob Heile, Chair of IEEE 802.15, at **bheile@bbn.com** or Ian Gifford, Vice Chair of IEEE 802.15 and Chair of Task Group 1, at **giffordi@ieee.org** or view the Web page at:
- **http://grouper.ieee.org/groups/802/15**.

Ian Gifford is Chair of Task Group 1 and Vice Chair of the IEEE 802.15 Working Group.

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Guide to IEEE Standards Meeting Policies Available

At its September 1999 meeting, the IEEE-SA Standards Board approved a new document called "Guide to IEEE Standards Meeting Policies."

In early 1999, the IEEE Board of Directors approved a new section in the IEEE Policy and Procedures Manual covering standards meetings. Its provisions ensure that the IEEE maintains adequate records and employs appropriate protections to maintain its not-for-profit status. The "Guide to IEEE Standards Meeting Policies" was created by Jim Moore, IEEE-SA Standards Board Review Committee (RevCom) Member, and Mary Lynne Nielsen, Manager, Standards Process Management and Improvement, to explain these new provisions in lay terms to our standards developers.

This document is available on the IEEE Standards Web site at: **http://standards. ieee.org/resources/meetingguide.html**.

If you need official printed copies, please contact Linda Gargiulo at **l.gargiulo@ieee.org** or **+1 732 562 3801**.

Help for Standards Developers

A new section has been added to the IEEE Standards Web site, titled "IEEE Standards Process at a Glance." This new tool is especially designed to guide new working group chairs and other standards developers through the IEEE standards development process. It provides a series of hyperlinks to the official rules and policies, support documents, FAQs, forms, and other materials that can aid volunteers as they develop and maintain IEEE Standards. For ease of use, this new section has been organized according to the chronology of the standards process: Getting Started, Writing the Draft, Balloting, and the Approval Process. IEEE Standards hopes you will find this a welcome and useful tool. You can view IEEE Standards Process at a Glance at: **http://standards.ieee.org/resources/ glance.html**.

Should you have questions or comments concerning this material, please contact your IEEE Standards Staff Liaison at: (**http://standards.ieee.org/people/liaisons .html**).