Standardizing Programming Interfaces for Tomorrow's Telecommunications Network

by Weiguo Wang and Jit Biswas

An international research and industry community known as OPENSIG [1] has been formed, driving the concept of open signaling and network programmability. Recently, four core members, including Ericsson (Sweden), NEC (USA), Columbia University (USA), and Kent Ridge Digital Labs (formerly the Institute of Systems Science, Singapore), started a new IEEE standard development project, IEEE P1520 [2].

The project aims

(a) to establish an open architecture between network control and management functions,

(b) to support ease of programmability of diverse kinds of networks and diverse kinds of functional requirements such as service creation, quality of service, renegotiation, etc., and

(c) to support interoperability and integration with legacy systems.

This project envisions tomorrow's telecommunications network as a giant computer—a fully programmable machine—that delivers advanced voice, data, and video services globally. In the present paradigm, the key intelligence of the network, which lies in the signaling network, is built with a few fixed algorithms or programs known as standard signaling protocols and control programs.

Development of richer signaling protocols and control programs has been a slow and arduous process. This is because the signaling standards for the modern telecommunications industry have become very complex due to the ever-increasing sophistication of today's networks and applications.

The vision of this project calls for a paradigm shift—one not too different from the mainframe to PC shift that took place in the last decade. The key is to separate software business from hardware business—this time for telecommunications networks. To make this happen, what is needed is an open software environment on top of the telecommunication network equipment. What needs to be created are the equivalent of Compaq and Dell, for network equipment, and the equivalent of Microsoft and hundreds of thousands of application companies, for network services systems and applications.

The work of this group will enable the users of telecommunications networks to leap forward in the development of their technologies as they integrate easier programmability into existing systems. ◆

[1] http://comet.columbia.edu/opensig
[2] http://www.iss.nus.sg/IEEEPIN
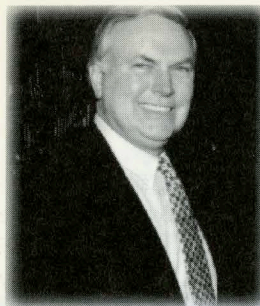
New Managing Director of Standards Activities

Judith Gorman has been named Managing Director of IEEE Standards Activities she is responsible for providing overall staff leadership for IEEE Standards programs, including the new IEEE Standards Association. Gorman has been with the IEEE since 1984, first directing the publishing activity in the Standards Department; in 1995, she began serving as Staff Director. In addition to managing a department of 40+, her responsibilities include providing a program vision for IEEE Standards; working with the volunteer leadership of the Standards Association; serving as spokesperson for IEEE Standards worldwide; negotiating with other organizations on standardization activities; representing IEEE in national regional, and international organizations; providing professional guidance to members and staff on legal matters, programs, processes, and business practices; working across Institute departments and entities to enhance the products, services, and reputation of the IEEE; ensuring that standards and related work are disseminated in a timely and cost-effective manner; and providing fiscal management. ◆

WHAT'S INSIDE.....

FROM THE CHAIR OF THE IEEE-SA STANDARDS BOARD

by Richard Holleman

In the IEEE-SA, and in most standards developing organizations (SDOs), there are well-defined procedures and processes for approving new projects, ensuring due process, achieving consensus, and publishing approved standards. These procedures are the foundation for the work of the SDO. What isn't defined, and what is much more difficult to identify, is the critical and often elusive factor of "standards leadership." Without leadership, procedures become mechanical checklists of do's and don'ts, and the result may be standards that are not timely, usable, or relevant.

I feel this is an especially important consideration for the IEEE-SA Standards Board and the Standards staff this year as we move ahead with plans for the use of continuous approval processes, increased electronic access to IEEE standards, and the possibility of paperless meetings. The ability to achieve real success in each of these endeavors, and others as they are undertaken, will be dependent upon the standards leadership that volunteers and staff contribute at each level of the process, from the use of an electronic PAR form by those actively engaged in standards projects to on-line approval of draft standards by the Standards Board.

The Administrative Committee (AdCom) of the Standards Board consists of the Board chair, past chair, and the chairs of the committees of the Board. I refer to this group as the Standards Leadership Team (SLT). They are a capable, experienced group of individuals whom I have asked to ensure that in our work we not be satisfied with simply going through the motions, but that, as individuals and as a team, along with the entire Board, our actions demonstrate our commitment to "A Year of Standards Leadership." We need and want your help and cooperation. Give us your comments and suggestions and join the SLT. ◆

Intelligent Transportation Systems Standards Report

by Thomas M. Kurihara

The development of select Intelligent Transportation Systems (ITS) standards is subsidized by the Federal Highway Administration (FHWA) with funding established by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1996. The objective of the subsidies to the IEEE, one of five standards developing organizations (SDOs) operating under a cooperative agreement with the FHWA, is to reduce the time necessary to develop draft standards that can then be used to validate requirements for new ITS applications.

ITS Data Dictionary. The working group review of the draft standard for the ITS Data Dictionary, P1489, has been completed and was posted to the IEEE Standards website in March 1998. Accompanying the proposed draft standard is an extensive guide for developers of other ITS-related data dictionaries. Prior to the sponsor ballot, the document will be circulated for public review. The ITS Data Dictionary standard defines the data element attributes. Check the IEEE standards website for more information on this project.

ITS Data Registry. A proposal for developing an ITS Data Registry (P1488) is based on the research and work done under P1489, the ITS Data Dictionary project. A revised project proposal was submitted to the Department of Transportation Joint Program Office for ITS in March 1998. The IEEE will be the lead SDO, supported by experts identified by the Society of Automotive Engineers (SAE), Institute of Transportation Engineers (ITE), and American Association of State Transportation Officials (AASHTO). Work is expected to begin in May 1998.

ITS Message Set Template. Committee work continues on a draft standard (P1488) that will define the attributes of the data in the ITE-wide message sets. The project uses the P1489 data attributes for the data message set. This standard is applicable to all developers of ITS system components, both software and hardware. Extensive coordination with other organizations developing message set standards indicates the relative importance of the work. Check the SCC32 home page on the IEEE website for more information.

Message Sets for Dedicated Short-Range Communications (DSRC). The DSRC message sets for Electronic Toll and Traffic Management (ETTM) and Commercial Vehicle Operations (CVO) complements similar message set projects undertaken by the American Society for Testing and Materials (ASTM) and the SAE. The P1455 pre-ballot draft standard was released for public review at the DSRC Roundtable in March 1998. The comment period is scheduled to close on 21 April 1998 and the working group will meet 19–20 May 1998 to address the comments.
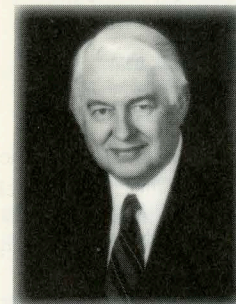
Report by the President of the IEEE Standards Association

by John Rankine

IEEE Standards Activities is enjoying an eventful 1998. The IEEE Standards Association (IEEE-SA) has become a reality, and its Board of Governors (BoG) is highly active on the key policy issues. These involve maintaining IEEE as a world-class leader in meeting globally the needs of industry, government, and the public for standardization in the fields of electrical and information technology.

First, the IEEE-SA BoG had to get its bylaws approved by the IEEE Board of Directors (BoD). This has been achieved and the IEEE BoD also has approved the bylaw changes necessary for the IEEE-SA membership to elect the BoG members. We are also going to the IEEE BoD to empower the IEEE-SA membership-at-large to elect the President of the IEEE-SA. Another approval we have had from the IEEE BoD is that the IEEE-SA can have corporate memberships—a necessary factor in today's rapidly changing world of standardization which presents entirely new challenges for us.

Among the challenges to consider is how to handle changes in distribution and revenue generation engendered by the availability of standards, at little or no charge, on the World Wide Web. Another question is finding the best way to interface and cooperate with the national, regional, and international standardization organizations. We also must address the steps necessary to protect IEEE's intellectual property in light of the rapid developments in information distribution and access. What new standardization services do we have to launch? Very importantly, how are we going to meet the needs of organizations for decisions on product performance specifications that are required now? Are we going to let them form consortia or are we going to them with IEEE solutions? We are already moving on this question. These and many other key questions and issues need to be addressed by the BoG.

Obviously, in all of this, we have to maintain close contact with the IEEE-SA Standards Board and the important work it has done and continues to do in handling the ongoing development of IEEE standards. Again, within the IEEE, the BoG is most concerned about the needs of IEEE's societies with regard to standardization and how to meet those needs in the best way possible. The IEEE Computer, Power Engineering, and Industry Application Societies are key examples.

All that we do in our long-range thinking needs to be factored into the IEEE Standards Association 1998–2003 Strategic and Operational Plan, which, in turn, has to dovetail with the overall Strategic and Operational Plan of the Institute. Those handling the latter have been most cooperative with us in ensuring that this happens. Furthermore, IEEE President Joseph Bordogna, IEEE President-Elect Kenneth Laker, and the IEEE BoD and Executive Committee, in both of which I participate, are very cognizant of the role and contribution of IEEE Standards, not only to the Institute, but also to the world at large.

In conclusion, I would like comment on the high caliber, talent, and dedication of so many within the IEEE Standards operation. Here, I am talking not just of the volunteers, but also the staff who work so closely and so well with the volunteers. It is an impressive, vital, and powerful partnership. ◆

New IEEE/EIA Standard for Software Life Cycle Processes Complete

by Karen McCabe

The Institute of Electrical and Electronics Engineers, Inc. (IEEE) and the Electronics Industries Association (EIA) have completed work on a new, and much awaited, standard addressing software life cycle processes: *IEEE/EIA Std 12207.0-1996, Industry Implementation of International Standard ISO/IEC 12207: 1995: Information Technology—Software Life Cycle Processes.*

IEEE/IEC Std 12207.0-1996 provides clarifications, additions, and changes to the international standard developed by the Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). The IEEE Computer Society Software Engineering Standards Committee and EIA collaborated on the project to adopt and adapt the international standard to the needs of industry. IEEE/EIA 12207.0-1996 contains concepts and guidelines to foster better understanding and application of the international standard. It provides a basis for organization-wide adoption of software processes suitable for commercial and defense projects that serve both domestic and international customers.

Approved as an international standard in 1995, ISO/IEC 12207 provides a framework of processes that span the entire life cycle of software from conception of the software system through its retirement. ISO/IEC 12207 focuses on contracts for projects for the development, operation, and maintenance of software. The U.S. adaptation, IEEE/EIA 12207.0, shifts the focus toward compliance at the organizational level, rather than at the level of the individual project. The preferred usage is that an organization would develop its own set of processes and procedures compliant with the requirements of IEEE/EIA 12207.0. An individual project conducted by the organization would select the appropriate processes and procedures and apply them to the application of the individual project.

IEEE/EIA 12207.0 offers some important advantages over existing software life cycle process standards. It provides a flexible approach to recording process and product data via computer-aided software engineering tools as opposed to more traditional reliance on paper documents. It is compatible with the ISO 9000 approach to quality systems, quality management, and quality assurance. And it is fully compliant with the international version of the standard, allowing U.S. companies to develop a single set of organizational processes applicable to both global and domestic business.

IEEE/EIA 12207.0 is supplemented with two parts providing additional information. IEEE/EIA 12207.1 provides recommendations that expand on the data objectives of Part 0. IEEE/EIA12207.2 provides recommendations on the implementation of the IEEE/EIA 12207 processes in the context of U.S. best practices. ◆

IEEE STANDARDS BOARD
ACTIONS

APPROVED PARS FOR NEW STANDARDS

P802.14a (C/LM) Standard for a High Capacity PHYsical Layer for IEEE 802.14 Upstream Transport

P1226.12 (SCC20) Standard for Formal Representation and Exchange of Test Requirements

P1226.13 (SCC20) Standard for Parametric Data Log Format

P1451.2a (IM/MS) Standard for a Smart Transducer Interface for Sensors and Actuators—Connection Schemes

P1474.1 (VT) Standard for Communications-Based Train Control Performance and Functional Requirements

P1484.3 (C/LT) Standard for Information Technology—Learning Technology—Glossary

P1484.11 (C/LT) Standard for Information Technology—Learning Technology—Computer Managed Instruction (CMI)

P1484.12 (C/LT) Standard for Information Technology—Learning Technology—Learning Objects Metadata

P1522 (SCC20) Standard for Testability and Diagnosability Characteristics and Metrics

P1523 (DEI) Guide for the Application, Maintenance, and Evaluation of Room Temperature Vulcanizing (RTV) Silicone Rubber Coatings for Outdoor Ceramic Insulators

P1525 (PE/SUB) Standard for Substation Integrated Protection, Control, and Data Acquisition Communications

P1526 (SCC21) Recommended Practice for Testing the Performance of Stand-Alone Photovoltaic Systems

P1527 (PE/SUB) Recommended Practice for the Design of Flexible Buswork Located in Seismically Active Areas

P1528 (SCC34) Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques

P1529 (SCC34) Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Computational Techniques

P1530 (EMC) Recommended Practice for the Design and Construction of Calibration Artifacts for Cable and Connector Shielding Test Fixtures for Frequencies from 1Hz to 10 GHz

P1531 (PE/T&D) Guide for the Application and Specification of Harmonic Filters

REVISED PARS

P902 (IA/PSE) Guide for Maintenance, Operation, and Safety of Industrial and Commercial Power Systems

P1003.2b (C/PA) Standard for Information Technology—Portable Operating System Interface (POSIX®)—Part 2: Shell and Utilities—Amendment

P1076a (C/DA) Standard VHDL Language Reference Manual

P1101.11 (C/BA) Standard for Mechanical Rear Plug-in Units Specifications for Microcomputers Using the IEEE 1101.1 and the IEEE 1101.10 Equipment Practice

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

P1174 (IM/AI) Standard Serial Interface for Programmable Instrumentation

P1235 (PE/IC) Guide for the Properties of Identifiable Jackets for Underground Power Cables and Ducts

P1255 (PE/EM) Guide for the Evaluation of Torque Pulsations During Starting of Synchronous Motors

P1332 (R) Standard Reliability Program for the Development and Production of Electronic Systems and Equipment

P1361 (SCC21) Guide for the Selection, Test, and Evaluation of Lead-Acid Batteries for Stand-Alone Photovoltaic (PV) Systems

P1375 (SCC29) Guide for Protection of Stationary Battery Systems

P1386 (C/BA) Standard for a Common Mezzanine Card Family: CMC

P1386.1 (C/BA) Standard Physical and Environmental Layers for PCI Mezzanine Cards: PMC

P2000.1 (C/PA) Standard for Information Technology—Standard for Year 2000 Terminology

PC57.12.01 (PE/TR) Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid Cast and/or Resin Encapsulated Windings

PARS FOR STANDARDS REVISIONS

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

P828 (C/SE) Standard for Software Configuration Management Plans

P841 (IA/CPI) Standard for Petroleum and Chemical Industry—Severe Duty Totally Enclosed Fan-Cooled (TEACH) Squirrel Cage Induction Motors—Up to and Including 500 hp

P937 (SCC21) Recommended Practice for the Maintenance of Lead-Acid Batteries for Photovoltaic (PV) Systems

P1013 (SCC21) Recommended Practice for Sizing Lead-Acid Batteries for Photovoltaic (PV) Systems

P1063 (C/SE) Standard for Software User Documentation

P1145 (SCC21) Recommended Practice for the Installation and Maintenance of Nickel-Cadmium Batteries for Photovoltaic (PV) Systems

P1155 (IM/AI) Standard for VMEbus Extensions for Instrumentation: VXIbus

P1377 (SCC31) Standard for Utility Industry End Device Tables—Revision 1

PC62.45 (PE/SPD) Guide on Surge Testing for Equipment Connected to Low-Voltage AC Power Circuits

WITHDRAWN PARS

P177 (UFFC) Standard Definitions and Methods of Measurement for Piezoelectric Vibrators

P388 (PEL/ET) Standard for Transformers and Inductors in Electronic Power Conversion Equipment

P802.3w (C/LM) Supplement to Carrier Sense Multiple Access With Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications—Standard for Enhanced Media Access Control Algorithm

P837 (PE/SUB) Standard for Qualifying Permanent Connections Used in Electrical Power Substation Grounding

P1003.1e (C/PA) Standard for Information Technology—Portable Operating System Interface (POSIX®)—Part 1: System Application Program Interface (API)—Amendment n: Protection, Audit, and Control Interfaces [C Language]

P1003.2c (C/PA) Standard for Information Technology—Portable Operating Systems Interface (POSIX®) Part 2: Shell and Utilities—Amendment n: Protection and Control Utilities

P1003.22 (C/PA) Guide to the POSIX® Open Systems Environment—Security Framework

P1157.1 (EMB) Standard for Healthcare Data Interchange—Information Model Methods

P1157.1.1 (EMB) Standard for Healthcare Data Interchange—Common Healthcare Objects

P1157.1.2 (EMB) Standard for Healthcare Data Interchange—Registration Admission/Discharge/Transfer

P1157.1.3 (EMB) Standard for Healthcare Data Interchange—Laboratory

P1157.1.4 (EMB) Standard for Healthcare Data Interchange—Radiology

P1157.2 (EMB) Standard for Healthcare Data Interchange—Format Methods

P1157.2.1 (EMB) Standard for Healthcare Data Interchange—EDI/EDIFACT Interchange Formats

P1157.2.2 (EMB) Standard for Healthcare Data Interchange—ODA/ODIF/SGML Interchange Formats

P1157.2.3 (EMB) Standard for Healthcare Data Interchange—CMIS/CMIP Interchange Formats

P1157.3 (EMB) Standard for Healthcare Data Interchange—Communication Profile Methods

P1157.4 (EMB) Standard for Healthcare Data Interchange—Semantics and Knowledge Representation of the Medical Record

P1157.5 (EMB) Recommendation for Healthcare Data Interchange—User Needs

P1207 (PE/ED&PG) Guide for the Application of Turbine Governing Systems for Hydroelectric Generating Stations

P1226.4 (SCC20) Standard for Software Interface for Instrument Drivers for a Broad-Based Environment for Test (ABBET)

P1226.5 (SCC20) Standard for Software Interface for Communication Buses for a Broad-Based Environment for Test (ABBET)

P1226.7 (SCC20) Standard Product Description Interface for a Broad-Based Environment for Test (ABBET)

P1226.8 (SCC20) Standard Test Strategy and Requirements Interface for a Broad-Based Environment for Test (ABBET)

P1386.2 (C/BA) Standard Physical and Environmental Layers for Sbus Mezzanine Cards: SMC

P1389 (SCC20) Standard for Management of Test and Maintenance Information

P1484.9 (C/SAB) Standard for Information Technology—Learning Systems—Task Ontology

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

CONDITIONS MET

802.10c (C/LM) New Standard for Interoperable LAN/MAN Security—Clause 3, Key Management

1128 (EMC/SC) Revision Recommended Practice for RF Absorber Performance Evaluation in the Range 30 MHz to 5 GHz

1291-1993 (PE/SWG) Reaffirmation Guide for Partial Discharge Measurement in Power Switchgear

NEW STANDARDS

The draft standards highlighted below are available for sale while in production. You may order them through IEEE Customer Service at 1.800.678.IEEE (in the US and Canada) or 1.732.981.0060.

1003.13 (C/PA) Standard for Information Technology—Standardized Application Environment Profile—POSIX® Realtime Application Support [AD212-NAT] • $55.00 • IEEE Mbr: $44.00

1278.1a (C/SI) Standard for Distributed Interactive Simulation—Application Protocols [AD216-NAT] • $62.00 • IEEE Mbr: $50.00

1289 (PE/NPE) Guide for the Application of Human Factors Engineering in the Design of Computer-Based Monitoring and Control Displays for Nuclear Power Generating [AD217-NAT] • $45.00 • IEEE Mbr: $36.00

1362 (C/SE) Guide for Information Technology—System Definition—Concept of Operation Document [AD218-NAT] • $43.00 • IEEE Mbr: $34.00

1375 (SCC29) Guide for Protection of Stationary Battery Systems [AD219-NYF] • $47.00 • IEEE Mbr: $38.00

1462 (C/SE) Adoption of ISO/IEC 14102 International Standard Information Technology—Guidelines for Evaluation and Selection of CASE Tools [AD225-NAT] • $45.00 • IEEE Mbr: $36.00

C57.18.10 (PE/TR) Standard Practices and Requirements for Semiconductor Power Rectifier Transformers [AD221-NAT] • $46.00 • IEEE Mbr: $37.00

C57.138 (PE/TR) Recommended Practice for Routine Impulse Test for Distribution Transformers [AD222-NAT] • $45.00 • IEEE Mbr: $36.00

C135.20 (PE/T&D) Standard for Zinc-Coated Ferrous Insulator Clevises for Overhead Line Construction [AD223-NAT] • $41.00 • IEEE Mbr: $33.00

C135.63 (PE/T&D) Standard for Shoulder Live Line Extension Links for Overhead Line Construction [AD224-NAT] • $41.00 • IEEE Mbr: $33.00

REVISED STANDARDS

771 (SCC20) Guide to the Use of the ATLAS Specification [AD211-NAT] • $67.00 • IEEE Mbr: $54.00

1012 (C/SE) Standard for Software Verification and Validation [AD213-NAT] • $46.00 • IEEE Mbr: $37.00

1122 (PE/PSIM) Standard for Digital Recorders for Measurements in High Voltage Impulse Tests [AD214-NAT] • $42.00 • IEEE Mbr: $34.00

C57.12.60 (PE/TR) Guide for Test Procedures for Thermal Evaluation of Insulation Systems for Solid Cast and Resin-Encapsulated Power and Distribution Transformers [AD220-NAT] • $42.00 • IEEE Mbr: $34.00

REAFFIRMED STANDARDS

384-1992 (PE/NPE) Standard Criteria for Independence of Class 1E Equipment and Circuits

661-1979 (R1992) (COM/TA&O)Standard Method for Determining Objective Loudness Ratings of Telephone Connectors

776-1992 (PE/PSC) Recommended Practice for Inductive Coordination of Electric Supply and Communications Lines

1137-1991 (PE/PSC) Guide for the Implementation of Inductive Coordination Mitigation Techniques and Applications

C37.20.1-1991 (PE/SWG) Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear

C37.82-1992 (PE/SWG) Standard for the Qualification of Switchgear Assemblies for Class 1E Applications in Nuclear Power Generating Stations

C62.31-1987 (R1993) (PE/SPD) Standard Test Specification for Gas-Tube Surge Protective Devices

WITHDRAWN STANDARDS

The Standards Board approved the administrative withdrawal of the following standards via a 30-day ballot, which closed 1 March 1998.

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

449-1990 (PEL/ET) Standard for Ferroresonant Voltage Regulators

896.1-1991 (C/BA) Standard for Futurebus+®—Logical Protocol Specification

896.2-1991 (C/BA) Standard Backplane Bus Specification for Multiprocessor Architectures: Futurebus+®

990-1987 (R1992) (C/SE) Recommended Practice for Ada As a Program Design Language

1003.3-1991 (C/PA) Standard for Information Technology—Test Methods for Measuring Conformance to POSIX®

1017-1991 (IA/PCI) Recommended Practice for Field Testing Electric Submersible Pump Cable

1018-1991 (IA/PCI) Recommended Practice for Specifying Electric Submersible Pump Cable—Ethylene-Propylene Rubber Insulation

1019-1991 (IA/PCI) Recommended Practice for Specifying Electric Submersible Pump Cable—Polypropylene Insulation

1096-1988 (C/MM) Standard for a Multiplexed High-Performance Bus Structure: VSB

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

C57.13.2-1991 (PE/TR) Standard Conformance Test Procedures for Instrument Transformers

C57.106-1991 (PE/TR) Guide for Acceptance and Maintenance of Insulating Oil in Equipment

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

C57.125-1991 (PE/TR) Guide for Failure Investigation, Documentation, and Analysis for Power Transformers and Shunt Reactors

Highlights of the 15–16 March IEEE-SA Board of Governors Meeting

—A five-year Strategic Plan was developed in conjunction with the Institute's five-year strategic plan (ISF98). Objectives were written, and projects to meet these objectives will be identified, involving both volunteers and staff.

—The Nominations and Appointments Committee of the Board of Governors outlined the procedures for the first IEEE Standards Association elections. Candidates for BoG members-at-large will be solicited over the next several months.

—Fees were approved for government participation in the SA.

—Approval was given to allow observers to participate in IEEE-SA ballots for a fee.

—Bylaws changes will be submitted to allow two-year staggered terms for the BoG.

—The following liaison appointments to other IEEE entities were made:

Board of Directors Strategic Planning Committee—*Donald Fleckenstein*

Board of Directors Finance Committee—*Richard Holleman*

Awards Board—*Dennis Bodson*

Board of Directors Strategic Planning Committee Evolutionary Task Force—*Donald Loughry*

Technical Activities Board/President's Forum—*Richard Holleman*

Regional Activities Board—*Wallace Read*

Publication Activities Board—*Donald Loughry*

Educational Activities Board—*No assignment at this time*

IEEE-USA—*Dennis Bodson*

Board of Directors Meeting and Services Committee—*Donald Loughry* ◆

Intelligent Transportation *(continued from page 2)*

The draft standard is expected to be ready for ballot in June 1998. Check the IEEE Standards website and look for the MS/IM page to obtain more information and a copy of the draft.

Message Sets for Incident Management (IM). A proposed draft standard (P1512) covering message sets for incident management addresses the ITS National Architecture data flows for Emergency Management Systems (EMS) to the Traffic Management Centers (TMC) and for EMS to Emergency Telephone Systems or 911 Centers. The P1455 pre-ballot draft standard was released for public review at the MS/IM Workshop in March 1998.

Survey of Telecommunications Technologies. The final report was completed and submitted for review and publication in December 1997. The results of the survey and analysis provide a snapshot of the standardization efforts that bear on the ITS standardization projects for both wireline and wireless communication as determined in mid-year 1997. It is scheduled to be published in the second quarter of 1998.

Information regarding all Intelligent Transportation Systems activi-

Highlights of the 19 March IEEE-SA Standards Board Meeting

—Donald Heirman was elected Vice-Chair of the IEEE-SA Standards Board.

—The Project Authorization Request (PAR) form is now available on the IEEE-SA Standards web site in both HTML and ASCII versions. The site is located at http://standards.ieee.org/guides/par/

—The IEEE is working closely with the European Telecommunications Standards Institute to develop plans for an IEEE-SA Standards Board meeting in Nice, France, in September 1998.

—The 1998 IEEE-SA Standards Board Bylaws, as approved by the SA Board of Governors, were recognized as the governing Bylaws under which the Standards Board operates.

—The IEEE-SA Standards Board approved the IEEE-SA Operations Manual on 17 March, as amended by the Standards Board Procedures Committee.

—The following officers to Standards Coordinating Committee 29 (Stationary Batteries) were appointed by the IEEE-SA Standards Board:

James A. McDowall, Chair
Jose A. Marrero, Vice-Chair
John K. Coyle, Secretary

Because IEEE-SA membership is now required for all new ballot activities, the five following actions were approved by the IEEE-SA Standards Board:

1. New PARs for the revisions of standards submitted to the IEEE-SA Standards Board for approval after 1 June 1998 will require that the proposed sponsor and working group chairs be IEEE-SA members and IEEE members of any grade or IEEE society affiliates.

2. Revised PARs and requests for PAR extensions submitted to the IEEE-SA Standards Board for approval after 1 June 1998 will require that sponsors and working group chairs be IEEE-SA members only if a change to the working group chair or sponsor is part of the revision or extension to the PAR.

3. Working group chair changes submitted to the IEEE-SA Standards Board for approval after 1 June 1998 will require that working group chairs be IEEE-SA members and IEEE members of any grade or IEEE society affiliates.

4. Ballot groups formed prior to 1 June 1998 will not be considered invalid due to lack of SA membership provided the initial ballot is begun by 31 December 1998.

5. PARs submitted to the IEEE-SA Standards Board for approval prior to 1 June 1998 will not be considered invalid if the proposed sponsor and/or working group chairs are not IEEE-SA members. ◆

ties is available at the IEEE Standards Coordination Committee (SCC) 32 home page on the IEEE Standards website at:

http://grouper.ieee.org/groups/scc32/index.html. ◆

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"BEST SOFTWARE PRACTICES FOR THE INTERNET AGE"
Curitiba, Brazil, 17–22 May 1999

If you manage, build, operate, maintain, or research software-rich technology, products, or services, you need to submit a paper or an event proposal to ISESS '99.

You need to come to ISESS '99 to evangelize, to share experiences, to make sure that Internet-age software practices and standards will evolve the way you need them.

The symposium will focus on achieving the best software practices and user satisfaction. User experiences with existing software standards/methods/processes (or lack thereof) will be explored. The symposium will also analyze how to meet industry needs, through the effective choice of tools, to solve technical and managerial software challenges in the Internet-related as well as more traditional IT, computing and communications settings.

As the premier forum for distilling and influencing best practices on a worldwide basis, ISESS Symposia facilitate interaction among business and industrial managers and practitioners, government users, software engineering researchers, educators, and standards/regulatory organizations.

Your contribution can take the form of a paper, poster, panel session proposal, tutorial proposal, or workshop proposal. It can focus, for example, on the software or system process specifics of your industry/sector. We particularly encourage submissions which explore novel experiences with the Internet and intranets.

Submission deadline: 15 July 1998
Acceptance notification: 15 September 1998
Camera-ready copy: 15 December 1998
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