

IEEE



# Reliability Society Newsletter

Editors: Gary Kushner and Mark Snyder

Vol. 34, No. 2, April 1988 (USPS 460-200)

## Chapter News

### Central New England Council

The Fall Lecture series held during October 1987 and November 1987 was a super success. The lecturer was Mr. E. Carrubba, Director of Reliability, for Codex Corporation in Canton, MA. The topic was "Product Assurance Principles." The series of four lectures was attended by fifty five engineers.

Monthly dinner meetings were conducted in December, January, and February. The topics, speakers, and dates were as follows:

December	A. Hevesh	Reliability Education Opportunities
January	R. Forney	Readiness Improvements through System Effectiveness
February	J. Pei	Reliability and Testing of Rotating Devices
March	Joint Meeting with CHMT	Panel Discussion on ESS

These meetings were extremely well attended by the local area engineers as they serve as an excellent interchange of ideas and technical information.

We are going into finalizing plans for our Annual Spring Reliability Seminar. The theme this year is "Risk Control Through Assurance Technologies." It will be held on April 21, 1988 at the Sheraton Tara in Framingham, MA. The presentations are representative of the Reliability emphasis

of this area and includes both commercial and DoD applications. We are quite proud of our Spring Seminar as the presentations are cogent, understandable, and relevant.

We welcome you all to attend.

### Philadelphia Chapter

The Philadelphia Chapter is pleased to report the following activities:

September 22, 1987

- Recognizing the ENIAC as an IEEE Milestone. Dr. John G. Brainerd, Supervisor of the ENIAC Project. Dr. J. Presper Eckert, Co-Inventor of the ENIAC.

Due to the reliability contribution in the success of the ENIAC developed at the University of Pennsylvania, the Reliability Chapter was honored to participate in this historical event at the kick-off meeting for the 1987-88 year.

October 20, 1987

- Tour of the FAA Air Traffic Control Tower at the Philadelphia International Airport

January 19, 1988

- Freedom vs. Organization  
A. L. Lewis, W. L. Gore and Associates, Inc.
- Superconductivity Present and Future  
Dr. Allen Rothwarf, Drexel University

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## RS Newsletter Inputs

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For October Newsletter: by July 15  
For January Newsletter: by Oct. 15  
For April Newsletter: by Jan. 15  
For July Newsletter: by Apr. 15

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### Software Reliability Technical Committee—1987 Activity

*Irv Doshay*

This has been a moderately busy year for software reliability committee associated activity. A key concern is the long awaited IEEE Software Reliability Measurement Standard, P982. As noted in our prior report, that standard and the accompanying guide for its application was approved by ballot. It is expected to be submitted to the Standards Board in February and hopefully will actually be released in March, 1988. In the interim draft copies of the P982 standard and its accompanying guide can be obtained from IEEE, at the standards office, 345 E. 47th Street, New York, NY 10017.

Myron Lipow has again this year taken the lead in working with associated Electronics Industry Association (EIA) government business committees. The principal effort pertained to reviewing and updating government standards and specifications related to software reliability and to initiating, organizing and making workshop presentations.

In January Myron was named the Co-Chairman of the Software Reliability Subcommittee of the G-34 Computer Resources Committee. Working together with Elmer Branyon of General Electric (Philadelphia) Myron prepared a

plan of action. In April a visit was made to the Software Engineering Institute of the Carnegie-Mellon University in Pittsburgh to review their approach to instruction on advanced software design methods.

A mini-seminar was planned for presentation at the next regular G-34 Committee meeting, and in Pentagon City, DC on July 16 it took place. Presentations included S/W Risk Management by Elmer Branyon, Measuring and Managing S/W Reliability by Kazu Okumoto of AT&T Labs, Tailoring the S/W Process to Project Goals and Environments by Dieter Rombach of University of Maryland, S/W Reliability Prediction Models by Amrit Goel of Syracuse University, and IEEE P982 S/W Reliability Measurement Standard and Guide by *Jim Dobbins of Verilog, Washington, DC*. In addition a panel discussion considered the questions "What basic studies are needed to establish S/W reliability methods?" and "What are the directions in which the fastest progress can be made producing reliable software."

On October 6 the G-41 Reliability Committee held a meeting at Hughes in El Segundo, California, at which time Myron presented his G-34 Software Reliability Subcommittee plans. These plans included submitting inputs for update of MIL-STD-785B to cover Software Reliability Requirements. Myron noted that he was planning a



Workshop in Savannah, Georgia in November which would take up the review of the G-41 recommendations as well as provide any additions that were deemed to be required by the G-34 sub-committee.

At the November G-34 meeting in Savannah, Myron presented a set of briefing charts on his opinion of the necessary MIL-STD-785 software reliability requirements. In the workshop effort that followed, line-by-line review and

appropriate comments were generated. Results of that effort were documented in an eight page summary, which covered all appropriate Tasks of the standard. It was also proposed that the Appendix to MIL-STD-785 should be deferred for modification until the Tasks are better defined (guidelines to support implementation of the Tasks are provided in the Appendix).

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## Inter-RAM Conference

**NAME:** 15th International Reliability, Availability, and Maintainability (15th Inter-RAM) Conference for The Electric Power Industry.

**DATE:** June 14-17, 1988

**LOCATION:** Portland, Oregon USA

**THEME:** The theme "RAM for Utility and Component Supplier Optimization" emphasizes practical application of RAM techniques in the design, manufacturing, and support of products and services for the utility industry.

**PROGRAM:** Plenary session, tutorials, presentation of 90 papers, publication of conference proceedings, industrial, technical, and educational exhibits related to RAM in generation, transmission, and distribution of electric power.

**ATTENDANCE:** 500

**HOSTED BY:** Bonneville Power Administration  
Ray Vanderzanden, Inter-RAM Conference Chairman  
P.O. Box 3621 - EMQ2  
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## IEEE Boston Chapter 26th Annual All Day Seminar

Thursday, April 21, 1988

The Sheraton Tara  
Framingham, MA.

Sponsored and conducted by the Boston Reliability Society Chapter

### RISK CONTROL THROUGH ASSURANCE TECHNOLOGIES

The Seminar will feature a keynote address on "R & M and Computer Aided Engineering: The Coming Challenge" by Col. Larry Griffis, Deputy Director for Weapons Support Improvement Group, and include papers on:

**Managing Human Factors and System Safety on an NDI Program** by Kathryn Sklenak, GTE

**Storage Reliability** by John Rooney, Sippican, Inc.

**Transition Policy as it Fulfills DoD-STD-2167 from a Software Quality Evaluation Standpoint: Managing Software Risk as a Component of System Risk** by Ben Scheff, Raytheon.

**Reliability and Availability Modeling of Complex Behavior of Computer Systems Utilizing Markov Models** by M. Elbert and T. Weyant, DEC

**MIL-HDBK-217E Versus British Telcon and Bell Communications Research Methods for Failure Rate Calculation** by Hank Goodman, Honeywell Bull, Inc.

**CODEX Reliability Projects are "Alive and Well"** by Gene Bridges, CODEX

**MIL-HDBK-217D and MIL-HDBK-217E Compared** by Mike Johnson, Reliability Engineering of Lexington

**Software Reliability Metrics for Military Systems** by W. Edward Koss, Advanced Technology

For information concerning the seminar, contact Vivian Thorsen at (617) 440-4169 or Joe Bradley at (617) 271-7915

For registration, complete the following and mail with a check payable to Reliability Chapter, Boston Section IEEE to Mr. Sidney Gorman, Mail Stop 5-1-565A, 528 Boston

Post Road, Sudbury, MA 01776. Registration fees before April 8, 1988 are \$125 for IEEE members and \$150 for non-members.

Late fees are \$25 more.

Fees include refreshments, lunch, and dinner.

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## Conference Calendar

DATE	CONFERENCE	PLACE	CONTACT
<b>1988</b>			
Apr. 11-14	1988 International Reliability Physics Symposium	Monterey, CA	H. C. Jones Westinghouse Corp. Baltimore, MD (301) 765-7387
Jun. 14-17	INTER-RAM	Portland, OR	John Sporysz-EMQ-2 Quality Assurance/Reliability Bonneville Power Admin. P.O. Box 3621 Portland, OR. 97208
July. 13-14	AQUA '88	Chicago, IL	Bruce Brocka AQUA '88 1005 Mississippi Ave. Davenport, IA 52803
Sept. 27-29	1988 VHSIC Qualification Reliability and Logistics Workshop	Scottsdale, AZ	John Recine Analytics, Inc. 766 Shrewsbury Ave. Tinton Falls, NJ 07724 (201)530-5335
Oct. 10-12	Reliability in Power, Transport, and Process Control	Vasteras, Sweden	Dinna Ahlin Vattenfall AED/4 S-162-87 Vallingby, Sweden
<b>1989</b>			
<b>CALL FOR PAPERS</b>			
Jan. 26-28	Annual Reliability and Maintainability Symposium	Atlanta, GA	Richard Sackett RAMS Program Chairman ERC International 1725 Jefferson Davis Hwy. Suite 300 Arlington, VA 22202

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# R&M—Sharpening the Competitive Edge

In today's economic environment, the manufactured product must meet all the customer's expectations if the product's maker and distributor are to retain or increase their share of the market. The need for cost-effective innovations and techniques to assure a high quality product that is reliable and maintainable has never before been so essential. Just meeting the standard engineering and manufacturing requirements will not provide the competitive edge so acutely needed today. The assurance sciences managers and engineers can sharpen the competitive edge by providing concrete, realistic input to their organization's strategic plans and implementation activities, input that has the potential leverage for achieving competitive value and customer satisfaction. Recognition of the need for cost-effective R&M techniques and the need to consider both the customer's and company's viewpoints is the basis for the theme of the 1989 Reliability and Maintainability Symposium: "R&M—Sharpening the Competitive Edge." Papers addressing the theme are requested.

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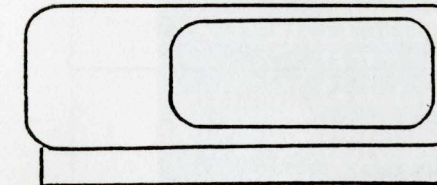
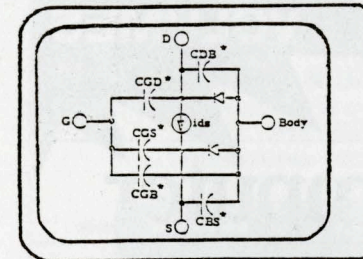
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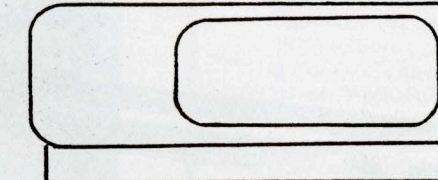
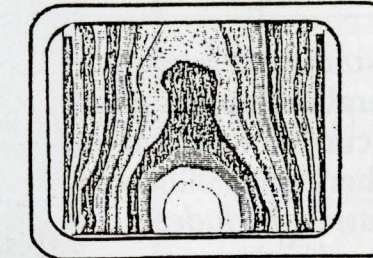
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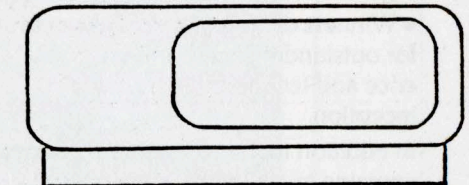


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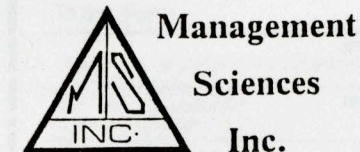
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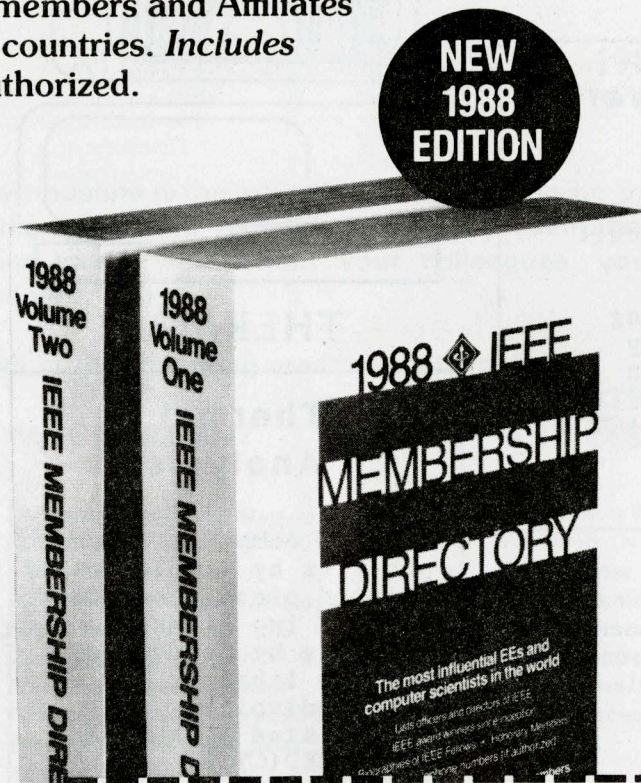
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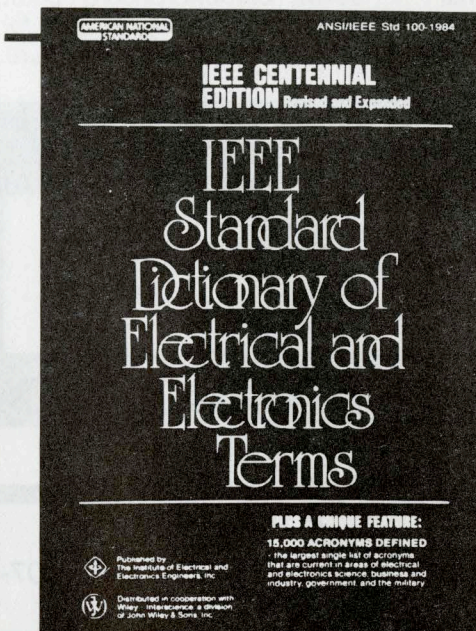
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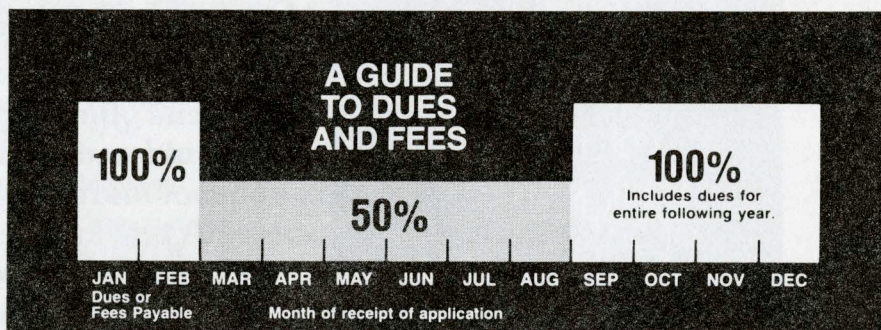
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