



RELIABILITY GROUP NEWSLETTER

October 1970 vol. xv issue 4

Editor: PAUL GOTTFRIED
Booz, Allen Applied Research
Bethesda, Md. 20014

"Material for the January issue must be in the editor's hands by November 25."

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EDITOR'S NOTES...

This issue contains a roster of G-R members, arranged geographically. The roster is as current as the computer-maintained file at IEEE Headquarters, which is updated as change-of-address notices are received; in other words, it is very current indeed.

The issue also contains a roster of Chapter Chairmen. This roster is as current as the Editor-maintained file, which is updated from available sources including copies of IEEE congratulatory letters to new Chairmen. In other words, it is as current as the Chapter officers themselves allow it to be -- unfortunately, this often means it is not current at all.

Write if you get word.

Chapter News...

Binghamton

The Binghamton Chapter, in cooperation with ASQC, will sponsor another in a series of QC and Reliability conferences. This conference, entitled "New Horizons in Quality and Reliability," will be held October 24, 1970, at the State University of New York, Binghamton. For information, contact P. G. Schneider, Link Division/Singer, Binghamton, New York, 13902.

Philadelphia

Officers for 1970-71 are:

Chairman	Thomas L. Fagan, General Electric Co., Box 8661, Philadelphia, Pa., 19101, (215) 962-4243
Vice Chairman	Ed J. Westcott, RCA Building 13-5-1, Camden, N. J., 08102, (609) 963-8000 PC2186
Secretary/ Treasurer	Irv Hyams, Fischer & Porter, County Line Rd., Warminster, Pa., 18974, (215) OS5-6000, ex. 616
Membership & Awards	Norm Kutner, Burroughs Corp., Bldg. CVL-2, Paoli, Pa., 19301, (215) NI4-4400
Publicity	Sam Canale, RCA, 27 Suburban Blvd., Delran, N. J., (609) 963-8000 PM4519 or PC5979
Program	Nick Salatino, RCA, Camden, N. J., 08102, (609) 963-8000 PC3687

The schedule for the first half of the season includes the following meetings:

October 20	"Optimization of System Design by Spare or Repair Decision Through Dynamic Programming:" John B. Todaro, Frankford Arsenal
November 18	"Reliability Program and Objectives of AMC:" Seymour Lorber, Army Materiel Command

CHAPTER NEWS Continued...

February 22 "Development and Contents of MIL-H-217B:"
M. T. Walters, U. S. Navy

All meetings will be held at the Presidential Apartments, Philadelphia. Additional information may be obtained from Miss Helen Yonan, (215) 594-8106 or -8134.

The second-half program includes meetings March 11 and April 21 and the annual All-Day Seminar on May 20.

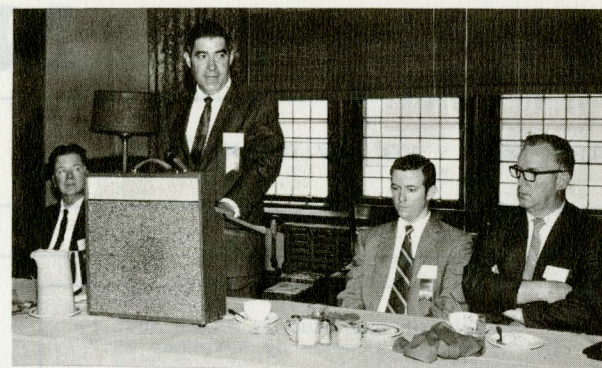
Twin Cities

A six-speaker session on "Reliability of Components and Systems" was scheduled for September 9. Noon meetings at Jax's Cafe have been planned for November 19, January 21, March 25, and May 20 (Annual Meeting).

Washington

The Washington Chapter, with the Washington Section of ASQC, will participate in the ASQC/NASA Space Reliability Program Seminar to be held October 12 at the Sonesta Hotel (See the Seminar announcement elsewhere in this Newsletter).

Philadelphia Seminar A Continued Success



DR. JOHN E. CONDON ADDRESSES SEMINAR

The Third Annual Failure Analysis Seminar, co-sponsored by the Philadelphia G-R Chapter and the Philadelphia Section of IEEE, drew close to 100 engineers and managers for a full day of technical papers covering the latest methods of analyzing and correcting failures of electronic equipment and component parts.

The luncheon address was delivered by Dr. John E. Condon, NASA Director of Reliability and Quality Assurance. Dr. Condon -- a member of the G-R AdCom and General Chairman of the 1971 Annual Symposium on Reliability -- outlined NASA's plans for the Seventies, called for more effective application of proven techniques to assure success of future space missions, and stressed management responsibility for product performance.

Dr. S. R. Warren, Vice President, Towne School of Engineering, University of Pennsylvania, accepted a slide projector presented by the Philadelphia Chapter in appreciation of the use of University facilities over the last three years. Also recognized were Edgar A. Doyle, RADC, for the best paper presented at the 1969 Seminar, and Miss Helen Yonan, IEEE Philadelphia Section Staff, for her contributions to the success of all three Seminars.

IEEE Seeks Vocabulary Help

In building a Data Base to serve the IEEE membership, it is essential that the words used can be understood by both authors and index users. The IEEE would like selected G-R members to evaluate the words (index headings) now used to describe technical papers in the Data Base and in Transactions indexes, in the area of Project and Production Engineering.

If you are interested in participating in this project, please let the Editor know. Your name will then be forwarded to IEEE Headquarters as a candidate recipient for the evaluation package.

Call For Papers...

CALL FOR PAPERS -- 12TH ANNUAL WEST COAST RELIABILITY SYMPOSIUM

The 12th Annual West Coast Reliability Symposium, to be held at the International Hotel, Los Angeles, on Friday, March 26, 1971, has as its theme "Civil and Commercial Applications of Reliability Technology." Although the due date for abstracts has been announced as September 15, late submittals will be considered for both presentation at the Symposium and publication in the proceedings. The final decision on papers to be presented will be based on the completed papers, which are due December 31.

Papers should illustrate the use and/or potential use of reliability techniques in Civil and Commercial systems; how pollution can be prevented, how waste can be stopped or reduced, how disasters can be prevented using established reliability methods which have been developed for Space or Military systems.

Prospective participants are invited to submit, as soon as possible, 300 - 500 word typed abstracts. Authors should indicate new areas covered, and should submit a brief resume indicating the author's background and experience, particularly as they relate to the subject matter of the paper. Submittals should be addressed to D. K. Lloyd, Building R4, Room 2142, TRW Systems Group, One Space Park, Redondo Beach, Cal., 90278.

The Symposium is sponsored by the Los Angeles Section of ASQC.

1971 Annual Symposium to Feature Innovations

The 1971 Symposium, to be held in Washington, D. C., January 12-14, will include sessions in the areas of Specifications, Assurance Techniques, Mechanical Reliability, Design and Analysis, Management, Transportation, Marine Products, Prediction, Cost, Case Histories, Space Simulation, and Statistical Techniques.

A special highlight of the Symposium will be two sessions called Mini-Forums. These sessions will be divided into several small discussion groups, each of which will consider one of the controversial and important problem areas of today.

As another innovation, a special CARAD Computer Workshop will be held. Attendance will be limited to 28 participants in each of two workshop sessions. The use of a time share computer system will be covered, including instructions for accessing the system and actual hands-on usage of the GE time share computer terminal. The workshop will also include solving circuit problems with the GE time share version of ECAP. Registrations will be accepted AT THE SYMPOSIUM on a first come -- first served basis, and a nominal fee will be charged to cover the cost of manuals and computer time.

CALL FOR PAPERS: FAULT-TOLERANT COMPUTING

The First International Symposium on Fault-Tolerant Computing, co-sponsored by the IEEE Computer Group and the Jet Propulsion Laboratory, will be held March 1-3, 1971, in Pasadena, California. Sessions are presently planned for Architecture and Design, using protective redundancy for fault masking and automatic repair; Fault Location and Diagnosis; Hardware and Software Techniques for Recovery from Errors; and Estimation of the Reliability, Availability, and Related Parameters of Fault-Tolerant Systems. Papers on all aspects of fault-tolerant computing will be considered for inclusion, and appropriate sessions may be added.

Letters signifying intent to submit a paper should be sent to Dr. W. C. Carter, IBM T. J. Watson Research Center, P. O. Box 218, Yorktown Heights, N. Y., 10598, as soon as possible. Complete papers are due by November 1, and selections will be completed by December 1.

Space Reliability Program Seminar

The first in-depth seminar on NASA Handbook 5300.4(1A), sponsored by the Education and Training Institute of ASQC with the cooperation of NASA and participation by the Washington Chapter of G-R and Washington Section of ASQC, will be held October 12 at the Sonesta Hotel (Formerly Hotel America), Washington, D. C.

To provide insight and a better understanding of NASA Reliability requirements for the aerospace industry, the Seminar will cover the subjects of:

- Systems Engineering and Project Management Interface
- Reliability Program Management
- Parts, Services, and Materials
- Reliability Role in Project Decision Events
- Failure Reporting and Correction
- Reliability Assurance Through Test

IEEE members will be able to register at the ASQC member fee of \$25.

CARAD Questionnaire Results

The CARAD questionnaire published in the April Newsletter drew a response of 22, approximately 1 percent of the membership. Fifteen of the respondents said they use a computer to solve reliability problems; 17 use circuit analysis programs. Thirteen (including eight using time share computers) employ ECAP, four use CIRCUS, two use NET-1, and seven employ SCEPTRE.

CARAD Committee Chairman Clint Purdue also provides the following information, extracted from material furnished by John Dumanian, Editor of the now-defunct CADAR News: There are 83 scientists and engineers using CAD programs in European countries -- Belgium (5), Czechoslovakia (10), Denmark (7), Finland (3), France (1), Germany DDR (6), Germany DBR (7), Great Britain (6), Hungary (4), Italy (11), Norway (11), Poland (2), Romania (2), Sweden (5), Switzerland (1), U.S.S.R. (2), and Yugoslavia (1).

Questions about the European mailing list may be directed to Erik Lindberg, Laboratory of Circuit Theory, 343 Technical University of Denmark, DK2800 Lyngby, Denmark.

The Reliability Group Newsletter is published quarterly by the Reliability Group of the Institute of Electrical and Electronics Engineers, Inc. Headquarters address: 345 East 47th Street, New York, N. Y. 10017. Sent automatically and without additional cost to each member of the Reliability Group.

Second class postage is paid at New York, N. Y.

Reliability Physics Symposium

The 1970 IEEE Reliability Physics Symposium, co-sponsored by G-R and G-ED, attracted a record attendance of nearly 500 at Las Vegas, April 7-10. By arrangement with NASA, the first U. S. public showing of the Apollo 12 lunar samples accompanied the Symposium as a special event. The first Annual Award for Excellence in Reliability was presented to Dr. Wernher von Braun at the conclusion of the Symposium.

Session Topics included Silicon Interfaces; Degradation in III-V Compound Electroluminescent Diodes; Reliability of Plastic Encapsulated Devices; Electromigration and Step Coverage; Metallization and Bonding; Reliability Testing; Failure Analysis; and Radiation Effects. An Informal Discussion Exchange session, and a session of Late News Papers, also were held.

Proceedings of the Symposium, listed as IEEE Catalog No. 70 C 59-PHY, are to be published in late October; IEEE member price \$8.00, others \$12.00. Reservations for copies in advance of publication may be made by check payable to "Reliability Physics Symposium;" mail to O. D. Trapp, Fairchild Semiconductor, 313 Fairchild Drive, Mountain View, Cal., 94041.

The 1971 Reliability Physics Symposium is scheduled for March and again will be held in Las Vegas. Papers are solicited, and should be sent to O. D. Trapp at the above address.

Short Courses...

Newsletter policy with respect to short-course announcements, as established by the AdCom, is to provide publication for information only. No endorsement is implied, and no check on course content or instructor qualifications has been accomplished.

The George Washington University

Statistical Methods in Reliability: October 26-30. One week, \$300. Contact: J. E. Mansfield, Director of Continuing Engineering Education, School of Engineering and Applied Science, George Washington University, Washington, D. C., 20006

University of Arizona -- General Electric Co.

8th Annual Reliability Engineering and Management Institute: November 2-11. Eight days, \$300. Contact: Dr. Dimitri Kececioğlu, Aerospace and Mechanical Engineering Department, University of Arizona, Tucson, Ariz., 85721

University of California at Los Angeles

System Effectiveness -- From The Support Point of View: November 30-December 4. One week, \$320. Contact: P. O. Box 24902, Continuing Education in Engineering and Science, University Extension, UCLA, Los Angeles, Cal., 90024

University of Wisconsin

Solid State Parameters and Models: November 10-11. Two days, \$100. Contact: David P. Hartmann, University Extension, Room 725, University of Wisconsin, 432 N. Lake Street, Madison, Wis., 53706

Conferences...

- October 12 ASQC/NASA Space Reliability Program Seminar (ASQC-ETI in cooperation with NASA, with participation by G-R and ASQC local chapters), Sonesta Hotel, Washington, D. C.
- October 21-23 1970 IEEE Ultrasonics Symposium, Jack Tar Hotel, San Francisco, California
- October 24 Eighth Quality and Reliability Conference (G-R and ASQC Binghamton chapters), State University of New York, Binghamton, New York
- October 26-28 EASCON -- 1970 IEEE Electronic and Aerospace Systems Convention, Sheraton Park Hotel, Washington, D. C.
- October 28-30 1970 IEEE International Electron Devices Meeting, Sheraton Park Hotel, Washington, D. C.
- November 9-11 8th Annual Meeting of the Society of Engineering Science, George Washington University, Washington, D. C.
- November 9-12 Holm Seminar on Electric Contact Phenomena (Illinois Institute of Technology, IIT Research Institute), Sherman House, Chicago, Illinois
- November 12-13 1970 (11th) IEEE Symposium on Man-Machine Systems, Winter Park, Florida
- November 15-19 23rd Annual Conference on Engineering in Medicine and Biology (IEEE and the other member societies of the Alliance for Engineering in Medicine and Biology), Washington Hilton Hotel, Washington, D. C.
- November 17-19 Fall Joint Computer Conference (G-C, AFIPS) Astrohall, Houston, Texas
- December 2-4 1970 IEEE Vehicular Technology Conference, Statler-Hilton Hotel, Washington, D. C.
- December 7-9 1970 IEEE Symposium on Adaptive Processes: Decision and Control, University of Texas, Austin, Texas
- December 9-11 1970 Conference on Applications of Simulation (IEEE, ACM, AIE, SHARE, SCI, TIMS), Waldorf-Astoria Hotel, New York City
- December 14-16 1970 IEEE International Symposium on Circuit Theory, Sheraton-Biltmore Hotel, Atlanta, Georgia
- JANUARY 12-14 1971 ANNUAL SYMPOSIUM ON RELIABILITY (G-R, ASQC-ED, IES), SHERATON-PARK HOTEL, WASHINGTON, D. C.
- January 19-21 1971 Mexico International IEEE Conference on Systems, Networks, and Computers, Oaxtepec, Mor., Mexico
- February 17-19 1971 IEEE International Solid State Circuits Conference (IEEE Solid-State Circuits Council, Philadelphia Section, and University of Pennsylvania), University of Pennsylvania and Sheraton Hotel, Philadelphia, Pennsylvania
- April 12-15 NTC71 -- National Telemetry Conference and Exposition, Washington Hilton Hotel, Washington, D. C.

Publications...

From Prof. Richard M. Jacobs, Industrial & Management Engineering Department, Newark College of Engineering, 323 High Street, Newark, N. J., 07102:

Transactions of the 1970 Product Liability Prevention Conference, \$10.00.

From the American National Standards Institute, 1430 Broadway, New York, N. Y., 10018:

1970 Catalog of American National Standards (also includes 1700 international recommendations); no charge.

From Reliability Department, Kambea Industries, P. O. Box 414, Manhattan Beach, Cal., 90266:

Charts for demonstration plan risk assessment, applicable to all test types including truncated and sequential tests. Application details are included; \$6.50 per set.

Chapter Chairmen...

The following listing of chapter chairmen reflects "current" information in the Newsletter Editor's hands as of September 1. It is suspected that some elements of the listing are incomplete. The membership is encouraged to bring us up to date.

Baltimore	Mr. Raymond H. Seidl Westinghouse Electric Corp. Underseas Div. M. S. 1323 P. O. Box 1797 Baltimore, Md., 21203	Mohawk Valley	Mr. Jerome Klion 73 Taber Drive New Hartford, N. Y., 13413
Binghamton	Mr. John B. Bird G. E. Avionic Controls Dept. Box 5000 Binghamton, N. Y., 13901	Montreal	Unknown
Boston	Mr. Roland F. Emery 5 McIntosh Road Reading, Mass., 01867	New Jersey Coast	Mr. Bernard J. Meyer Product Assessment Agency U. S. Army Electronic Command Fort Monmouth, New Jersey
Canaveral/Daytona	Mr. J. B. Freeman 515 Park Avenue Satellite Beach, Fla.	New York - Long Island	Unknown
Chicago	Mr. Charles W. N. Thompson 240 Randolph Street Glencoe, Ill., 60022	North Jersey	Mr. George Ebel 11 Moraine Road Morris Plains, N. J., 07950
Connecticut	Mr. Palmer B. Smith 8 Bayberry Lane Darien, Conn., 06820	Philadelphia	Mr. Thomas L. Fagan 334 Davis Circle W. Chester, Pa., 19370
Florida West Coast	Mr. C. J. Gjermundson 11600 Sharon Drive Largo, Florida	San Diego	Unknown
Huntsville	Inactive	San Francisco	Mr. Charles E. Leake 492 Deodara Drive Los Altos, Cal., 94022
Los Angeles	Mr. Cliff Dernham 405 Norway Lane Los Angeles, Cal., 90049	Twin Cities	Mr. Gordon L. Seller 2473 Brenner Street St. Paul, Minn., 55513
		Washington	Mr. Vernon E. Gardner 6624 Kirby Court Falls Church, Va., 22043



RELIABILITY GROUP

MEMBERSHIP APPLICATION

IEEE Headquarters: 345 East 47th Street, New York, N.Y. 10017

Name _____ IEEE Membership No. _____

Company _____

Mailing Address _____

City _____ State or Country _____ Zip Code _____

Field of Interest _____

- I am a _____ member of IEEE and hereby apply for membership in the Reliability Group. I enclose a check for the Group fee* (made payable to IEEE).
- I am not now a member of IEEE but would like to join. Please send information.
- I am interested in becoming a Reliability Group Affiliate. Please send information.

*Group Fee: \$5.00 for IEEE members of all grades except Student.
Student Fee is \$2.00.

Full rate on payments received September 1 through February 28 (payments received September 1 through December 31 applied through December 31 the following year).
One half rate on payments received March 1 through August 31.