

# Reliability Group Newsletter



Editor: Alan Plait

October 1978 - Vol. XXIII - Issue 3

## EDITORIAL

Of the more than fifty reports, newsletters, communications from IEEE Headquarters, letters, and others that cross my desk each Newsletter publishing period, one of the more interesting, recently, has been the IEEE US Member Opinion Survey report. The analysis of results was accomplished by the US Activities Board. The book (UH0133-9) is available to members for five dollars from the IEEE Service Center in Piscataway, NJ. Fifty-three questions were used and answers were related to members' geography, primary technical specialty, age, degree, income, etc. The tabulations also record how IEEE leaders feel about controversial issues compared to general membership response. Some of the characteristics of the "average" member include:

Age.....42 years (median)  
Salary.....\$26,355(median)  
Experience.....15 years (median)  
Registered?.....No (73.0%)  
Ever held office?.....No (77.0%)  
Education.....B.S. (50.9%)

In expressing their primary technical specialty, Reliability was selected in 1.1% of the responses. Some of the largest included Computers (11.2%), Engineering Management (12.5%), and Power Engineering (12.9%).

For entry into the profession, 49.8% felt that graduation from

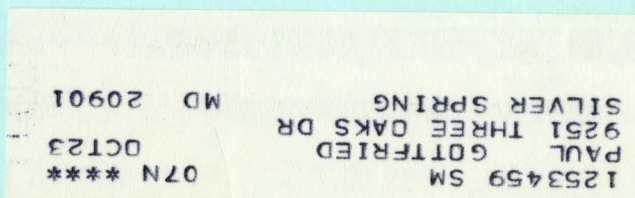
an accredited college should be a requirement, but 62.7% didn't think recertification for continued practice should be required. Also, 57.5% do not wish to see elimination of the industry exemption for engineers to practice.

In the sensitive issue of overtime compensation, less than ten percent of the respondees in engineering regimens opted for "No Compensation". Larger percentages were recorded for either 0-5 or 6-10 hours as the minimum point where engineers should receive overtime compensation, when regularly scheduled overtime is required by the job.

Interestingly, most respondees (in the 70th percentile) feel that employers should share a major portion of the cost of attending technical related courses at universities. But, substantially less (in the 50th percentile) felt that employers should allow paid time off to attend such courses (probably because of the large number of courses available in evening divisions of most universities and colleges).

Of the 180,000 members, over 12,000 were selected to respond to the detailed questionnaire. The return rate (very high) was over 60%, or about 7600. If you are selected next year, don't ignore it! The survey is an important IEEE function and deserves your support.

Sincerely,  
Alan Plait





## RELIABILITY GROUP CHAPTER CHAIRMEN

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Arlington, VA 22202

## CHAPTER NEWS



### FLORIDA WEST COAST CHAPTER NEWS

Four meetings are being planned for the 1978-1979 chapter activity year. One of the meetings will be a joint meeting with the ASQC and AIAA. For further information, please contact Charles Krzesicki who is continuing as the chapter chairman.

### NEW YORK/LONG ISLAND CHAPTER NEWS

The Chapter officers for 1978-1979 will be as follows:

Chairman—Joseph Drvostep,  
Grumman Aerospace Corp.  
Vice-Chairman—Harvey Berman,  
Underwriters Labs. Inc.  
Program Committee—Joseph J. Gerry,  
Hartman Systems  
—Carl Hermans,  
Gull Airborne Instruments  
—Don Matteson,  
Sedco Systems Inc.

Two meetings have been scheduled for this fall. Both will be held at the Polytechnic Institute of NY in Farmingdale at 7pm. On Oct. 17, Mr. Carl Hermans, Reliability Engineer at Gull Airborne, will present a paper on "Automated In-Circuit Testing". On Nov. 21, Mr. Gary Bigel, Reliability Engineer at Grumman Aerospace Corp, will present the latest information available concerning "Reliability Improvement Warrantees".

### EDITOR

Alan O. Plait  
Mantech of New Jersey Corp.  
Systems Division  
2341 Jefferson Davis Hwy  
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Arlington, VA 22202

### CLEVELAND CHAPTER NEWS

The chapter chairman, Vince Lalli, reports that four meetings for the activity year are planned. The present officers will retain their positions. For further information please contact Vince Lalli.

### CHICAGO CHAPTER NEWS

The following officers will preside during the 1978-1979 year:

Stan Anderson. . . . .Treasurer  
Paul Clawson. . . . .Secretary  
Hugh Edfors. .Membership Chairman  
Hank Malec. . . . .Chairman  
Ray Schirmer. . . . .Vice Chairman

The first meeting is scheduled for October at Gurnee, Illinois and will feature a representative of RADC who will speak on processor/LSI reliability. The meeting will be co-sponsored by the SRE Milwaukee Chapter and the ASQC North Eastern Illinois Section.

### WASHINGTON CHAPTER NEWS

The Washington Chapter co-sponsored a meeting on the risks of nuclear power plants on Sept. 13. The speaker was Virginia State Senator Clive DuVal, who, in 1977, was chairman of the Joint Subcommittee to study nuclear power plants and the disposal of marine wastes.

### PHILADELPHIA CHAPTER NEWS

The Philadelphia IEEE Reliability Chapter will hold its first meeting at the Univ. of PA on Oct.17, 1978. Mr. Edward A. Belcher, Principal Reliability Engineer at the Process Control Division of Honeywell, will be the speaker.

An industrial reliability program which is based on results will be the topic of Mr. Belcher's presentation. Examples of the various elements of a reliability program and a practical evaluation of each will be given.

### WANTED

Reliability group members to join or form area chapters. If you do not have an area chapter and would like to be associated with one, please contact Henry A. Malec, Chapter Activities Chairman, at GTE Automatic Electric Labs., P.O. Box 2317 A-6, Northlake, IL 60164, or call (312) 681-7100 Ext.4511. An area for the previous purposes is defined as being within 1,000 direct airline miles.

### Special Issues of Interest to Reliability People

October '1978—Proceedings of IEEE  
— Fault Tolerant System Design

February '79—Electron Devices  
— Device Reliability

August '79—Reliability  
— Software Reliability

## INVESTMENT INCENTIVE ACT OF 1978 SUPPORTED BY BOARD OF IEEE

The Investment Incentive Act of 1978, the so-called Steiger Amendment which reduces the tax on capital gains, has been given the support of the Board of Directors of the IEEE, the world's largest engineering society.

At its recent meeting in Boston, the Board recommended approval of House of Representatives Bill 12111 which, if passed, might help to reverse adverse technological developments and improve the US economy.

Dr. Bruno O. Weinschel, vice president for professional activities of the Institute, stated: "A recent study has outlined the specific positive effects of the provisions of H.R. 12111. Were this legislation to go into effect Jan. 1, 1980, the rate of growth in constant-dollar gross national product for 1980 to 1985 could increase from a 3.4 percent annual growth rate to 3.6 percent.

"It is estimated that this would provide an additional 440,000 jobs by 1985. Estimated expenditures for facilities would rise from 4.7 percent to 5.7 percent per year in constant prices. Further, while the revenue raised per capital gain dollar would decrease, increased investment promoted by reduced taxation should more than compensate lost revenues because of the expanded tax base."

This bill, which is pending before the House Ways and Means Committee, would repeal the 1969 amendment to the US Tax

Code regarding capital gains tax, and reinstate a reduced rate of taxation on capital gains which was in effect in 1968.

The Institute pointed out that a substantial portion of the nation's technical advancement in the last twenty years has stemmed from the efforts of relatively small organizations which market new inventions.

The Tax Reform Actions of 1969 and 1976 doubled the maximum tax on capital gains from 25 to 49 percent, also resulted in a decrease in investors supporting new ventures directly or through the stock market, along with a sharp decline in primary investment capital.

Dr. Weinschel observed: "Such constraints on primary investment capital mean that companies must rely more heavily on foreign sources of capital, or debt, rather than domestic equity capital, further limiting the growth of the industrial sector on which the US is dependent for its high technology innovations.

"Foreign capital often implies transfer of know-how or technology to a foreign industry which ultimately competes with the US in the export market. All other major industrial nations tax capital gains at comparatively reduced rates.

"These circumstances have several adverse implications for the US economy. As our production facilities can no longer re-

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main competitive, we witness the elimination of badly needed employment opportunities, such as has occurred in the hi-fi, television, and citizens band radio equipment industries."

Other negative effects have been increasing dependency on foreign sources of supply, unfavorable international balance of trade, and related devaluation of the dollar.

## BOOK ANNOUNCEMENT

Monographies du BUREAU NATIONAL DE METROLOGIE

No.4

CONTROLE STATISTIQUE

DE QUALITE

POUR L'INSTRUMENTATION

L.F. PAU

with the collaboration of C.H. CHEN and G. WEBER

Editions Chiron  
40, rue de Seine  
75006 PARIS  
Tel. 633.18.93

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Notation  
Terminology

- I. Statistical quality control for instrumentation.
- II. Introduction to acceptance sampling, and a priori information.
- III. Elements of statistics.
- IV. Classical one-stage acceptance sampling by variables using scalar measurements.
- V. One-stage acceptance sampling by variables using several measurements : use of a linear model.
- VI. Sequential quality control by variables.
- VII. Bayesian acceptance sampling using scalar measurements, with global cost minimization.
- VIII. Acceptance sampling by variables with multidimensional measurements : use of automatic classification rules and of training samples.
- IX. Statistical quality control and fault-tree analysis.
- X. Processing of quality control measurements.
- XI. Bibliography : standards, publications, journals, software.

PRICE: 90 F.  
264 pages, 15x24 cm

## HELP WANTED

### System Reliability Engineer

Position available in Washington, DC for engineer who could translate data into system recommendations for clients. Primarily involved with emerging technologies in the process industries, and the engineer will have key responsibility in defining the mechanical systems used by these industries. A mechanical background is not necessary, although a demonstrated skill in translating classical techniques into reliable hardware is important. The salary range is suitable for candidates with 10-20 years of experience, and the opportunity for career growth is excellent.

Please contact Mike Graham at (518) 785-2407, or Dave Gabriel at (703) 979-7600, or write:

MECHANICAL TECHNOLOGY INCORPORATED  
968 Albany-Shaker Road  
Latham, NY 12110

### Senior Reliability Engineer-Electronics

Electrical Power/Load Management Systems  
and Components  
Atlanta, GA, area in New R&D Center  
Salary—Open

BSEE or Physics and 5-10 years experience with ability to determine optimum circuit reliability, devise self test procedures, recommend and qualify component suppliers. Will set up small lab to analyze failure mechanisms and consult with factory Q.C. people.



## MODIFICATION TO IRS ADVOCATED BY IEEE TO AID PENSION PLANS

A proposed piece of Federal legislation, which culminates several years of intensive legislative effort by IEEE has been introduced by Congressman James C. Corman (D-Cal), a senior member of the House Committee on Ways and Means.

The bill brings to reality IEEE's "LERA" concept for Limited Employee Retirement Account. It would allow employees covered by an employer-sponsored pension plan to invest a portion of their income in a LERA account.

The proposed legislation is known as H.R. 11347, "The IRA-Employer Coordination Plan Act of 1978". It is designed to provide retirement income to professionals, such as electrical/electronics engineers, who may never vest in an employer-sponsored plan because of career mobility.

It would modify the Internal Revenue code of 1954 to allow individuals to invest in certain individual retirement savings plans even though they are "active participants" in employer-sponsored pension programs.

In order to further this legislation, on Thurs., Aug. 10, there will be a special meeting of the United States Activities Board (USAB) special Pension Task Force with Congressman Al Ullman (D-Oregon), Chairman of the House Ways and Means Committee, and Congressman Corman.

IEEE USAB's office in Washington explains that the core problem faced by tens of thousands of mobile engineers, scientists, and related professionals is the forfeiture of accrued pension benefits before these men and women have worked long enough to become vested in any single company's pension plan. The typical corporate plan, it is explained, requires ten years of service to become vested. This means that in many instances highly qualified engineers reach retirement age, after having worked for various employers, with no income from any industrial plan and dependent upon grossly inadequate social security benefits plus any personal savings.

The Corman bill would allow a participant in a qualified plan to contribute to an Individual Retirement Account (IRA) up to the IRA limits until he or she is fully vested. At vesting, the employee could choose the greater amount—the IRA or the employer pension plan.

If the IRA is more than the qualified plan, the individual would yield from the IRA an amount equal to that in the plan and pay taxes on it at ordinary rates. If the plan exceeds the IRA, then the individual would terminate the IRA and again pay taxes on the amount yielded at ordinary rates.

The IEEE Pension Task Force has been working with Congressman Corman and in consultation with the Joint Committee on Taxation and the US Treasury Department.

## MEMBERSHIP DEVELOPMENT COMMITTEE

### IEEE MEMBERSHIP GROWING AT RECORD RATE THROUGH JUNE 1978

According to IEEE membership statistics through June 30, 1978, Institute overall membership is growing at a rate which will far surpass 1977's year-end record of 183,021. June 30 membership for 1978 was 176,777—an advance of 6,371 (3.7%) ahead of the same time last year. Technical Society membership also continues to grow, with 173,217 memberships held—including Affiliates—an increase of 10,247 (6.2%) over the previous year's June 30th figure. IEEE Student membership at June 30th was 22,282—a gain of 1,475 (7.0%) compared to 1977. During this period, Reliability increased to 2484 members (3.2%).

### IEEE President Getting Appeals to Industry for Joint Efforts to Improve Career Stability for Electrical Engineers

Dr. Ivan A. Getting, President of IEEE, asked the chief executives of firms employing electrical engineers for a joint effort in attacking problems affecting the mid-career opportunities of these individuals.

In his personal letter, Dr. Getting suggested that such a cooperative enterprise would enhance the careers of established electrical engineers through positive professional development practices, and result in decreased concerns about job insecurity.

He also spoke of the positive side of such an effort which would make a career in electrical engineering a satisfying experience for the individual with appropriate rewards to the employed engineer, the employer, and the general public.

He asked the business leaders to "share with us any innovative techniques or programs utilized by your organization."





## CONFERENCE SCHEDULE

1978	Conference	Location	Info. Contact	Publication Plans
Oct. 1-5	<i>Industry Application Society Annual Meeting</i> Sponsors: IA, Toronto Section Exhibits: No Est. Attendees: 900	Royal York Hotel Toronto, Ontario Canada	W. Harry Prefey 4141 Yonge Street Willowdale, Ont., Canada M2P 1N6 (416) 222-3067	Record 78CH1346-6 IA OOP OPTION 1 SUB-OPTION 1B
Oct. 16-17	<i>Joint Engineering Management Conf.</i> Sponsors: EM	Regency Hotel Denver, CO	Henry Bachman Hazeltine Corp. Greenlawn, NY 11740 (516) 261-7000	Record 78CH1359-9 EM OOP OPTION 1 SUB-OPTION 1F
Oct. 18-20	<i>Joint Automatic Control Conference</i> Sponsors: CS	Civic Center Philadelphia, PA	Dr. Harlan J. Perlis NJ Institute of Tech. 323 High Street Newark, NJ 07102 (201) 645-5492	Record OOP OPTION 1 SUB-OPTION 1A
Oct. 18-20	<i>Canadian Communications &amp; Power Conference</i> Sponsors: Canadian Region, Montreal Section Exhibits: Yes	Queen Elizabeth Hotel Montreal, P.Q. Canada	Andre Dupont - 1978 Chairman 409 Marquette Street Longueuil, Quebec, Canada J4K 4G8	Record 78CH1373-0 Reg.7 OOP OPTION 1 SUB-OPTION 1H
Oct. 18-20	<i>Nuclear Science Symposium</i> Sponsors: NPS Exhibits: Yes	Shoreham Americana Washington, DC	J.H. Trainor Code 663 Goddard Space Flight Ctr. Green Belt, MD 20771	Nuclear Science Trans. Vol. NS-26 No. 1, Feb. '79
Oct. 18-20	<i>Nuclear Power Systems Symposium</i> Sponsors: NPS Exhibits: Yes	Shoreham Americana Washington, DC	E.A. Corte General Atomic Co. P.O. Box 81608 San Diego, CA 92138	Nuclear Science Trans. Vol. NS-26 No.1, Feb. '79
Oct. 21-25	<i>Engineering in Medicine and Biology</i> Exhibits Sponsors: EMB	Marriott Hotel Atlanta, GA	Walter L. Bloom, M.D. Georgia Institute of Tech. Atlanta, GA 30302	Record OOP OPTION 1 SUB OPTION 1F
Oct. 23-25	<i>Digital Satellite Communications</i> Sponsors: REG.7 Exhibits: Yes Est. Attendees: 400	Hotel Reine Elizabeth Montreal, Canada	Marcel Perras Teleglobe Canada 680 Sherbrooke St.W. Montreal, Quebec H3A 2S4 (514) 281-7976	Recrd 78CH1326-8 Reg.7 OOP OPTION 1 SUB - OPTION 14
Oct. 23-25	<i>Frontiers In Education</i> Sponsors: Ed	Dutch Inn Lake Buena Vista, Florida	E.R. Chenette Dept. of Elec. Eng. University of Florida Gainesville, FL 32611	Record 78CH1368-0 Ed. OOP OPTION 1 SUB OPTION 1F
Oct. 25-27	<i>Intelec (Int'l Telephone Energy Con.)</i> Sponsors: COMM. Est. Attendees: 500	Sheraton Park Washington, DC	J.J. Suozzi Bell Labs Room 5D-178 Whippany, NJ 07981 (201) 386-2381	Record 78CH1353-2 COMM OOP OPTION 1 SUB-OPTION 1C

1978	CONFERENCE	LOCATION	INFORMATION CONTACT	PUBLICATION PLANS
Oct. 30-31 Nov. 1	<i>Semiconductor Laser Conference</i> Sponsors: QEA Exhibits: No Est. Attendees: 120	Sheraton at Fisherman's Wharf San Francisco, CA	T.L. Paoli Bell Labs 600 Mountain Ave. Murray Hill, NJ 07974 (201) 582-2903	Record OOP OPTION 1 SUB OPTION 1D
Nov. 1-2	<i>Technology of Electro-Luminescent Diodes</i> Sponsors: QEA, ED Exhibits: No Est. Attendees: 60	Sheraton at Fisherman's Wharf San Francisco, CA	R.N. Bhargava Phillips Lab. Briarcliff Manor, NY 10510 (914) 762-0300	Electron Devices Trans. Summer '79
Nov. 5-8	<i>Symposium on Computer Applications in Medical Care</i> Sponsors: Northern VA Section, COMP, EMB Exhibits: Yes Est. Attendees: 350	Mariott Twin Bridges Hotel Washington, DC	Richard M. Mansfield Medical College of VA Box 91 Richmond, VA 23298 (804) 770-8207	
Nov. 6-7	<i>Chicago Fall Conf. On Consumer Electronics</i> Sponsors: BCCE: Chicago Section Exhibits: Yes Est. Attendees: 380	Ramada-O'Hare Inn Rosemont, IL	Robert Podowski Zenith Radio Corp. 1000 N. Milwaukee Glenview, IL 60025	Transactions
Nov. 6-8	<i>Twelfth Annual Asilomar Conf. on Circuits, Systems and Computers</i> Sponsors: COMP.	Pacific Grove, CA	Dr. G.G. Hsieh, (Pub. Chrm.) 5855 Naples Plaza Suite 301 Long Beach, CA 90803 (213) 438-9951	Record 78CH1369-8 C/CAS/CS OOP OPTION 1 SUB-OPTION A,E
Nov. 6-9	<i>Advanced Techniques in Failure Analysis</i> Sponsors: Reg. 6, Los Angeles Council Exhibits: Yes Est. Attendees: 500	Marriott Hotel Los Angeles, CA	Robert J. Kolb TRW Defense & Space Systems 1 Space Park R6/2184 Redondo Beach, CA 90278 (213) 536-3430	Record OOP OPTION 1 SUB-OPTION 1H
Nov. 7-9	<i>Position, Location, &amp; Navigation Symp. (PLANS)</i> Sponsors: AES, San Diego Section Exhibits: Yes Est. Attendees: 500	Hilton Mission Bay San Diego, CA	Mr. Nelson Harnois Cubic Corp. P.O. Box 80787 San Diego, CA 92138 (714) 277-6780 ext.555 Dr. Joseph Ravenis II, Prog. Chmn, Cubic Corp. 9233 Balboa Avenue San Diego, CA 92123 (714) 277-6780 ext.360	Record OOP OPTION 1 SUB-OPTION 1C
Nov. 13-16	<i>Computer Software &amp; Applications Conf. (COMPSAC '78)</i> Sponsors: C Est. Attendees: 700	The Palmer House Chicago, IL	Harry Hayman Computer Society P.O. Box 639 Silver Spring, MD 20901 (301) 439-7007	Record 78CH1338-3 C OOP OPTION 1 SUB-OPTION 1E
Nov. 14-17	<i>Magnetism &amp; Magnetics Materials Conference</i> Sponsors: MAG	Stouffer's Inn on the Square Cleveland, OH	Dr. J.J. Rhyne Reactor Radiation Div. National Bureau of Standards Washington, DC 20234	J. Appl. Phys.



1978	CONFERENCE	LOCATION	INFORMATION CONTACT	PUBLICATION PLANS
Dec. 4-6	<i>Int'l Electron Devices Meeting</i> Sponsors: ED Exhibits: No Est. Attendees: 1000	Washington Hilton Washington, DC	Susan Henman Courtesy Associates 1629 K Street NW. Washington, DC 20006 (202) 296-8100	Digest 78CH1324-3 ED OOP OPTION 1 SUB-OPTION 1D
Dec. 4-6	<i>National Telecommunications Conference</i> Sponsors: CSCB Exhibits: Yes Est. Attendees: 1000	Hyatt Hotel Birmingham, AL	H.T. Uthlaut, Jr. South Central Bell. P.O. Box 771 Birmingham, AL 35201 (205) 321-4469 877-5557	Record 78CH1354-0 CSCB OOP OPTION 1 SUB-OPTION 1C
Dec. 4-6	<i>Winter Simulation Conference</i> Sponsors: SMC, NBS Exhibits: No Est. Attendees: 350	Deauville Hotel Miami Beach, FL	Larry G. Hull Code 533.1 GSFC Greenbelt, MD (301) 982-5308	Record 78CH1332-6 SMC OOP OPTION 1 SUB-OPTION 1F
Dec. 12-14	<i>MIDCON</i> Sponsors: Los Angeles & San Francisco Councils, Reg.6	Dallas Convention Center Dallas, TX	W.C. Weber, Jr. EEEI 999 N. Sepulveda Blvd. El Segundo, CA 90245	

## CODE OF ETHICS

The Board of Directors of the IEEE at a recent meeting took action to implement enforcement of its code of ethics and authorized establishment of a United States Activities Board Committee on Telecommunications Policy.

The ethics action consists of the appointment of a panel of 34 individuals from which will be drawn hearing boards, consisting of 5 to 9 persons, to consider individual complaints.

Last February the Institute's Board of Directors announced that policies and procedures have been adopted either to censure members for violations of the IEEE code of ethics, constitution, or bylaws or to protect members who may have jeopardized their employment by adhering to such principles. This was done through an amendment of Bylaw 112 and culminated several years of efforts by the United States Activities Board of the Institute.

## IEEE PRESS WELCOMES PROPOSALS FOR NEW BOOKS

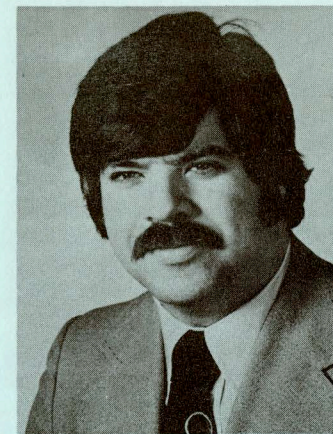
With 49 titles in print, the *IEEE PRESS* has attained the stature of an established book publisher. *PRESS* books, which for the most part are carefully edited collections of reprinted papers, have been well received, particularly by the IEEE membership.

The *PRESS* Editor and his Editorial Board are constantly on the lookout for new books, especially on subjects that are of wide interest to the profession. Book proposals, either from individuals or from Groups or Societies, are always welcome. Such proposals should be submitted on a standardized form, copies of which are available from the Managing Editor, IEEE PRESS (345 East 47th Street, New York, NY 10017).

Each proposal for a new book is reviewed carefully by the *PRESS* Editorial Board and by others to determine the need and marketability for the book and to ascertain its likely quality. Books on most subjects require the endorsement and sponsorship of the appropriate IEEE Group or Society, so a proposal normally should be submitted to the proposed sponsor before or at the same time it is submitted to the *IEEE PRESS*.

Any reader wishing a copy of a brochure describing the books published so far should request one from the Managing Editor of the *IEEE PRESS* at the address shown above.

## MEMBER BIOGRAPHIES

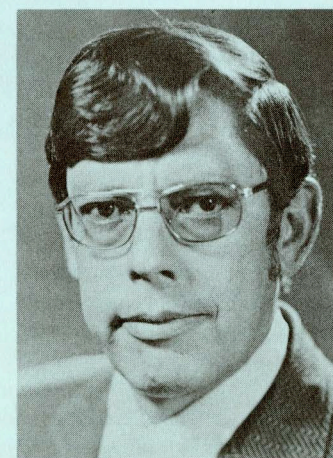


**Rafael J. Hernandez**

Rafael J. Hernandez was born in Havana, Cuba, on August 26, 1952, and came to the United States in 1967. He received a B.S. degree in Electrical Engineering in 1974 from Newark College of Engineering and is currently pursuing an M.S. Degree in Engineering Management.

Mr. Hernandez has performed as the Manager of Mission Assurance for several Space Shuttle Programs at the Conrac Corporation, Systems East Division, West Caldwell, NJ. Presently he is the Supervisor of the Failure Analysis Laboratory at the Bendix Corporation, Flight Systems Division, Teterboro, NJ.

Mr. Hernandez has been actively involved with the IEEE since 1973, when he was elected to the New York Metropolitan Student Council. In 1975 and 1976 he served as program chairman of the North Jersey IEEE Reliability Chapter and he was elected chapter chairman in 1977. He has been nominated for IEEE North Jersey Section Member at Large.



**Carl M. Bird**

ADCOM MEMBER (1980)

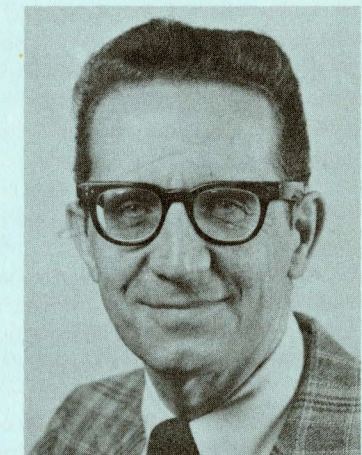
Carl Bird is employed by the IBM Corp. at Owego, NY. As manager of Systems Analysis and Control in the Product

Assurance organization, he is responsible for establishing and coordinating an effective R&M program for the LAMPS Weapon System development. Included in this responsibility are reliability, maintainability, parts control, quality assurance, and environmental qualification program elements. The LAMPS program involves extensive coordination of activities between IBM (the System Prime Contractor) and many sub-contractors, associate contractors, and CGE contractors.

Prior to his present assignment Mr. Bird was Product Assurance Manager at IBM's Cape Kennedy facility, responsible for all reliability, quality, safety, and logistics functions related to checkout and launch activities for the Saturn Instrument Unit.

Since joining IBM in 1955, Mr. Bird has held several management and technical positions in the reliability engineering and quality engineering disciplines on programs including the B-52, B-70, Titan, OAO, Gemini, and Saturn.

Mr. Bird has written several technical papers dealing with the field of reliability and is a former Chairman of the Binghamton Chapter of the Reliability Group. He served for twelve years on the Management Committee and was 1976 General Chairman of the Annual Reliability and Maintainability Symposium. He is currently on the Board of Directors of the International Reliability Physics Symposium.



**Val Monshaw**

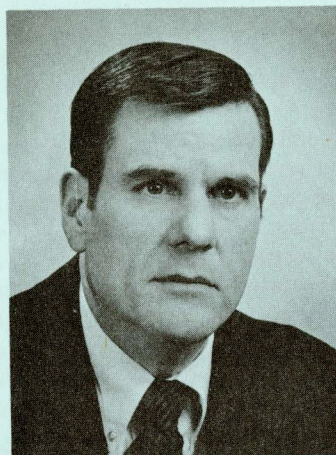
CHAIRMAN, LONG RANGE PLANNING, RAM.

RCA Astro Electronics, Manager of Reliability and Quality Assurance Engineering including Failure Analysis Laboratory. Has been actively involved in management of reliability and quality efforts on spaceflight systems and hardware in various assignments since 1962, including the TIROS, Atmosphere Explorer, Defense Meteorological Satellite Program, Viking Communications Systems, RCA SATCOM and Anik-B Communications Satellites, Transit and NOVA Navigational Satellites and others. Was a member of the Advanced Systems Group for several years which included work on the European-U.S. Aerosat Communications Satellite proposal. Prior to 1962, assignments included RCA Airborne and Ground Electronics Equipment (1956-62) and civilian Electrical Engineer at U.S. Army Signal Corps, Fort Monmouth, NJ.

Educational and professional associations include BS and



MS in Electrical Engineering from City College of NY (1949, 1954); Senior Member IEEE and Past President of the IEEE Group on Reliability (1970-72); General Chairman (1970) of the Annual Symposium on Reliability and Maintainability; member of AIAA Systems Effectiveness and Safety Technical Committee, and member of the United States Technical Advisory Group to the International Electro-technical Commission—(TC-56 on Reliability and Maintainability) since 1976.



**Bernard L. Retterer**

Mr. Retterer is Manager of the Advanced Research and Development Group at ARINC Research Corporation, responsible for directing the company's technical staff in long-range technical planning and for initiating company research projects. These research projects have included studies of techniques for management and analysis of a broad range of system types. Specific techniques of concern have been associated with performance, software quality, life-cycle cost, specifications and standards, and management control methods. A significant recent activity has been his participation in studies related to reliability improvement warranties. Also, he participated in the formulation of advanced maintainability techniques based on information theory concepts.

Before joining the ARINC Research staff in 1965, Mr. Retterer was associated with RCA, where he served as Manager, Production Assurance Research and Application. He engaged in reliability and maintainability technology application to a wide range of communication, avionics, and other weapon systems. During this period, he participated in studies resulting in the development of maintainability prediction and demonstration techniques. These results first led to the formation of Air Force Specification MIL-M-26512 and later incorporated into MIL-STD-470 and 471 and MIL-HDBK-472. Mr. Retterer also served on the Weapon Systems Effectiveness Industry Advisory Committee which formulated broad concepts of system effectiveness analysis.

Mr. Retterer is a registered engineer in the State of OH. His papers and articles on maintainability have appeared in technical journals and have been presented to national symposia. He is a member of the IEEE and the Operations Research Society. He serves as a member of the ADCOM for the IEEE professional group on reliability and is a member of the International Electrotechnical Commission technical group on reliability and maintainability. He has a B.S., electrical engineering, from Ohio Northern Univ. and a M.S., system management, from The George Washington Univ.



**Marion P. Smith**

**EMPLOYMENT/BUSINESS:**

Mr. Smith is Manager of Material Quality Assurance for the Honeywell Avionics Division, St. Petersburg, FL.

Before joining Honeywell in 1957, Mr. Smith was associated with Vitro Laboratories, Silver Spring, MD. His previous affiliation was with the Armed Forces Security Agency and the Bell Telephone Co.

**PROFESSIONAL:**

Served as National Chairman of the IEEE Reliability Group and member of the Group's Administrative Committee. He was General Chairman for the Annual National Symposium on Reliability and Quality; past Chairman of the Florida West Coast Section of IRE.

- Listed in "Who's Who in America"—1976 edition, and "Who's Who in Engineering"—1977 edition.
- Named "Engineer of the Year" for the Florida West Coast in 1970. Selected by Florida Engineering Society, 20 engineering groups and the Univ. of South Florida.
- Received Outstanding Service Award 1968-1969 from American Society for Quality Control—Aircraft & Missiles Division.
- Was selected in January 1973 as a FELLOW of the IEEE.
- Appointed in 1975 as Consultant to U.S. Army Management Engineering Training Agency and member of the Agency's Quality and Reliability Industry Advisory Committee.
- Mr. Smith was appointed in 1975 as Technical Advisor for the USA National Committee to the International Electrotechnical Commission for TC-56—Reliability and Maintainability. Appointed in 1977 to Executive Committee of U.S. National Committee to the IEC.
- USA Delegate First North Atlantic Treaty Organization (NATO) Conference on Quality—1973.
- He served as Honeywell's Corporate representative on Safety, Reliability and Maintainability for the Aerospace Industries Association.
- Appointed in 1978 to the Univ. of South Florida Engineering Board.
- He is the author of contributed and invited papers on inertial navigation systems, reliability engineering and product assurance topics.

**COMMUNITY/CIVIC:**

- Served as President, National Association for Retarded Citizens (NARC)—October 1973–October 1975. Currently is national Governmental Affairs Chairman for NARC.
- Member—Presidents White House Summit Conference on Inflation—1974–1975.
- Delegate—White House Conference on Handicapped Individuals—1977.
- Appointed October 1974 to National Advisory Council on Developmental Disabilities.
- Current member of State of Florida Developmental Disabilities Planning and Advisory Council.

**AWARDS/SERVICES:**

- 1977—Sertoma Service to Mankind Award.
- 1977—Kiwans annual Marion P. Smith Award.

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The 1979 Cleveland Electrical/Electronics Conference and Exposition will be held at the Cleveland Convention Center on June 5, 6 & 7. The Deadline for Papers is December 1, 1978. Please mail to: *Cleveland Electronics Conference*  
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APRIL 24-26, 1979

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SAN FRANCISCO, CA**

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October 22, 1978

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*Dr. John R. Edwards, Technical Program Chairman*  
1979 International Reliability Physics Symposium  
American Microsystems, Inc.  
3800 Homestead Road  
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- 1970—United Commercial Travelers Award for most outstanding service to the mentally retarded in Florida.
- 1969—Bilgore Award in Clearwater—Outstanding Citizen of the Year.
- 1968—McDonald Award from Florida Rehabilitation Association: Person doing most for the retarded in 1968.

**PERSONAL BACKGROUND:**

- Is an electrical engineering graduate from Louisiana State Univ, 1949. Has done other undergraduate and graduate work at Oklahoma A&M, Yale Univ. and the Univ. of South Florida.
- Married with three children; lives in Clearwater, FL. His wife, Pat, also attended Louisiana State Univ.
- Born in Waycross, GA on December 12, 1925. Attended public schools in Louisiana and Florida. Worked and resided in the District of Columbia, Maryland and Minnesota prior to moving to Florida.

**Electronic Components Conference**

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MAY 14-16, 1979

**PAPER SUBMISSION**

A 500 word abstract and extended outline which clearly describes the nature, scope, content, organization and key points of the proposed paper are required for paper selection and session assignment. The paper should comprise work not generally published or presented previously. Mail 10 copies of the abstract and outline with your phone number by Nov. 3, 1978 to:

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Elec. Eng. Dept.  
Texas A & M Univ.  
College Station, TX 77843

Authors will be notified of paper acceptance with instructions for publication by December 25, 1978. Manuscripts are due in final form for publication in the Conference Proceedings by February 23, 1979.

*For additional information  
write W. A. Porter at the address above,  
or call (713) 845-7030*

**IEEE Power Engineering Society:  
1979 Summer Meeting**

VANCOUVER, BRITISH COLUMBIA, CANADA

The 1979 Summer Meeting of the IEEE Power Engineering Society will be held July 15-20, 1979 in Vancouver, B.C., Canada.

Prospective authors should immediately request an author's kit from the Technical Conference Services Office at IEEE Headquarters, 345 East 47th Street, NY, NY 10017. The kit includes a Declaration of Intent form, the newly revised Publication Guide for Power Engineers (January 1977) outlining the current requirements, and a supply of model paper which the manuscript is to be typed.

February 1, 1979 is the deadline for receipt of papers.



# SRE-78 ADVANCED PROGRAM

## Society of Reliability Engineers

P.O. Box 1475  
Postal Station "B"  
HULL, Quebec  
Canada J8X 3Y3

### 1978 CANADIAN SRE RELIABILITY SYMPOSIUM (SRE-78)

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SRE'78 will focus on two important areas of reliability. Consumer interest in product durability and the consumer-type society is producing a demand to have the reliability evident in products like nuclear power plants, military hardware and the space vehicles introduced into consumer products. The inherent capital cost implications of reliability require an effective education of senior management before these techniques will be widely accepted into consumer products.

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THURS. OCTOBER 19, 1978

- A.M. Session 1 KEYNOTE
- Session 2 R&M Management
- P.M. Session 3 Life Cycle Costing
- Panel Discussion—Software Reliability

FRI. OCTOBER 20, 1978

- Session 5 Analytical Techniques
- Session 6 Nuclear Power R&M
- Session 7 Large Scale Integration Reliability
- Session 8 System R&M
- Parallel Program—Software Reliability Tutorial

## Reliability Group Tutorial

November 8-10, 1978

Rickey's Hyatt House, Palo Alto, CA

on

"Accelerated Life Testing of Semiconductor Devices"  
by D. Stewart Peck, Bell Telephone Labs &  
O. D. "Bud" Trapp, Technology Associates

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### AUTHOR'S SCHEDULE

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Authors are requested to send five double-spaced copies (in English) of the one-page abstract and manuscript (not to exceed 3000 words) plus illustrations to:

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