

The Life Member Fund Newsletter



Published by the Life Member Fund Committee

November 1982

A letter from the Chairman

Dear Colleague,

This is an interesting assignment. I enjoy working with our committee and welcome suggestions from all Life Members.

The sessions at Electro, Midcon and Wescon have been improving year after year. Attendance is constantly improving...and no wonder. Consider the programs we have had: Electric automobile, the "Boston Elbow," Personal Computers, Micro-processors, Genetic Engineering, the Lock Ness Monster, among others...and to come, a photographic trip to the moon and outerspace, compliments of NASA in Dallas.

Look at the happy faces of your fellow Life Members who attended Electro '82 in Boston. They and their wives had a truly rewarding and memorable experience renewing old acquaintances, hospitality, a delightful luncheon and a very interesting speaker.

Plan to attend. Be active. Stay young. Share your knowledge and experience.

See you in Dallas.

Sincerely yours,

Joseph F. Keithley, Chairman
1982 Life Member Fund Committee

History Center Newsletter...

The first issue of the Newsletter distributed by the IEEE Center for the History of Electrical Engineering is enclosed with this issue of the Life Member Fund Newsletter. It seems most appropriate that Life Members should receive this issue since they have already contributed so much to the history of the electrical and electronics field. It comes to you with the compliments of the IEEE History Center. (Some non-Life Members may not receive the History Newsletter, for lack of quantity.)

Richard J. Gowen is the IEEE 1983 President-Elect and Charles A. Eldon Has Been Elected Executive Vice President

There were 41,192 valid ballots cast during the annual election. Dr. Richard J. Gowen was chosen as IEEE President-Elect, 1983. Mr. Charles A. Eldon becomes the executive Vice President.

Dr. Gowen is Vice President and Dean of Engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota.

Mr. Eldon is Manager, Capital Equipment, Hewlett-Packard Company, Palo Alto, California.



An engineer, scientist, technical manager and educator, Dr. Gowen joined RCA Laboratories with the B.S.E.E. from Rutgers University in 1957. His M.S.E.E. ('61) and Ph.D. ('62) came from Iowa State U. He has been involved with NASA-DoD Space Medical Instrumentation Laboratory, the NASA Apollo and Skylab Programs. Author of 50 technical papers and reports, an advisor and consultant to government and industry, he has received numerous awards and patents. Since joining as a Student member in 1955, Dr. Gowen has served IEEE in many important posts.



During World War II, Mr. Eldon served as an electronics technician (USNR). Afterward he received the B.S. degree in Physics ('48) and the M.B.A. degree (1950) from Stanford University. He was associated with Hewlett-Packard from 1951-1969 as Production Engineer, Planner, Marketing Engineer Manufacturing Manager, Director of Corporate Systems/EDP. After a brief stint with subsidiary, Ness Pacific Inc., he rejoined Hewlett-Packard as a Management Consultant and later as Manufacturing Manager of the Integrated Circuits Department.

Mr. Eldon is currently IEEE Treasurer and, like Dr. Gowen, has served on many Boards, Committees, Sections and Regions since he joined IEEE in 1956.

Both elections were very close: Gowen - 20,298 votes; King - 19,354 votes. Eldon - 20,945 votes; Schell - 18,081.

Continued on page 2

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Proposed Constitutional Amendment Fails by a Wide Margin

Apparently IEEE members want to retain the transnational nature of the Institute. The votes for the proposed amendment were 9,839; against: 29,004, or 75% of the valid ballots cast.

Retired Members Consider "Older" Activities to Pursue

A letter to Ed Harder, recent Chairman of the Life Member Fund, prompts some thought: What activities should retired engineers pursue? There are several alternatives:

- (1) Enjoy your leisure, have nothing special in mind, and live one day at a time. This is fine if you have hobbies, sports, or something else to keep you amused. Or...
- (2) Get a full-time job. Or...
- (3) Become a consultant.

The consultant establishes his own time (in most cases) and fits in his leisure activities at his own pace. Fees are usually higher per hour, but there are no "employee" benefits, vacation pay, hospitalization. You have to be your own accountant, pay taxes, and expenses. On the other hand, expenses are tax deductible.

Full-time employment does not satisfy need for retirement. No change unless individual is not mentally ready to accept full retirement. A gradual change may be better for some. However, some people like to stay "on the job".

Recent correspondence from J.M. De Salvo, Region 2 chairman of the committee on older member activities, offers some cogent thoughts:

- There are over 13,000 IEEE members 65 or older; currently there are approximately 9500 Life Members; and there are several thousand 62 years of age or older who are retired on reduced dues. In addition, some members are retired before 62.
- Here are some activities in the form of ideas: Lecture at colleges...get on a speakers list, especially for students' programs...Attend special programs on the state of the art for older members (prompted by IEEE)...get involved with the history committee in your section...teach...organize your section to engage in activities for older members...establish car pools to make it easy for older members to get to meetings...write articles on your expertise...organize tours, special outings, attend sports events, visit industrial exhibits and historical landmarks and the like. Get a part time job...or become a consultant.
- The main thing: keep active and interested in those areas you really enjoy.

Life Members To See Presentation On "Photography From Space."

"Photography from Space" will be the topic for the IEEE Life Member Breakfast at Midcon '82, to be held Dec. 1 in Dallas.

Richard W. Underwood, technical assistant to the chief of NASA's Photo Technology Division, will speak. He will also show some NASA photography taken on board the space shuttle Columbia during its last mission. Audience is "taken on a journey around the world and shown it through the eyes of an astronaut."

The breakfast will begin at 8:30 a.m. in the Hyatt Regency Hotel. It is free to IEEE Life Members and their spouses.

All IEEE Life Members are honored guests at Midcon '82 and will have their own hospitality suite at the Dallas Convention Center. Usual refreshments will be available.

Midcon '82, to be held at the Dallas Convention Center Nov. 30 to Dec. 2, is the Southwest's largest technology electronics exhibition and convention.

It alternates annually between Chicago and Dallas and is sponsored by IEEE Regions 4 and 5, the Chicago and Dallas Sections of IEEE, the Mid-USA Council or ERA and the Chicagoland Southwest Chapters of ERA.

The speaker has a bachelor's degree in Geology from the University of Connecticut and has done advanced study at the Colorado School of Mines, the University of Wyoming, the University of Houston and George Washington University.

Mr. Underwood served as Chief of operations for photogrammetry and chief of the photography products branch for the U.S. Department of Defense before joining the staff of NASA's Johnson Space Center in 1964.

He has been technical monitor for photographic experiments on the Gemini and Apollo lunar missions and worked on the development of the High Precision Photographic Laboratory which processed films from the Apollo, Skylab and Apollo-Soyuz missions.

Most recently he has been a consultant on photographic sciences and photogrammetrics to the Space Shuttle program.

Mr. Underwood served on the board of directors of the Earth Awareness Foundation and is a member of the American Society of Photogrammetry, the International Congress for Photogrammetry, the Society of Photographic Scientists and Engineers, the American Association of Aeronautics and Astronautics, the Optical Society of America and the Geological Society of America.

He was co-author for the "Manual of Color Aerial Photography" of the American Society of Photogrammetry and has lectured at universities in the United States, Canada, United Kingdom, Sweden, Italy, Mexico, Panama, Guatemala, and West Germany.

Winners Announced

37 Students Participated in Prizes in 1982 Student Paper Awards

The Life Member Fund Committee provided \$5,250 for the IEEE Student Prize Paper Contest this year.

Undergraduate Level

| Region | Name | Prize | School | Subject |
|--------|---|-----------|---|---|
| 1 | Bryan Schlieder Hyman Rosen | 1st | Cooper Union | "A Microprocessor-Based System for The Analysis of Electrocardiograms" |
| 1 | Gary E. Kraus | 2nd | Rensselaer Polytechnic Institute | "Pulmonary Vascular Input Impedance in Isolated Ferret Lungs" |
| 1 | Herbert Wing Hoi Ming Ho | 3rd | Cooper Union | "A Microprocessor-Based Computer Logic Design Teacher" |
| 2 | Stephen Pace Vincent Giacomini Steven Betza | 1st | Pennsylvania State University | "An RPM and Shaft Angle Measurement System" |
| 2 | Bret A. Boggs | 2nd | Wright State University | "Automated Mail Cart" |
| 2 | Sarah Jane Sirois | 3rd | Bucknell University | "Design of a Laser Speckle Reduction System for Holograph" |
| 3 | Paul D. Babin | 1st | Christian Brothers College | "Design and Construction of a Digital Controller for Use in a Magnetic Suspension System" |
| 3 | James E. Newby IV James R. Foppiano Jr. | 2nd | Memphis State College | "Robotics Artificial Intelligence Experiment" |
| 3 | Billy Garrett | 3rd | University of South Caroline | "Microvec - A Low Cost Vector Graphics Display" |
| 4 | Michael R. Kabala | 1st | Iowa State University | "Design of a Direct Braille Microcomputer Input Keyboard" |
| 4 | Barry Van Veen | 2nd | Michigan Technological University | "The Cepstral Technique for Determining Acoustic Reflection Coefficients" |
| 4 | Mark Kanko | 3rd | North Dakota State University | "Piano Keyboard-to-Display Processor" |
| 4 | Mitzi Crawford | 4th (tie) | University of Windsor | "ESD and Its Effects on Some Thin Film Resistors" |
| 4 | Greg Wowchuk | 4th (tie) | University of Windsor | "A Microprocessor-Based Grain-Moisture Analyzer" |
| 5 | Robert M. Branyon | 1st | U.S. Air Force Academy | "Biomedical Research Electronically Modeling Biological Functions" |
| 5 | Larry C. Denton | 2nd | University of Texas at Arlington | "Diabetes and a Survey of Proposed Methods of Blood Sugar Detection" |
| 5 | Scott Vangen | 3rd | South Dakota School of Mines and Technology | "Digital Memory System for the Yamaha CS-Series Musical Synthesizer" |
| 6 | Richard D. Morris | 1st | University of Utah | "A High Performance Graphics System for CAD/CAM Applications" |
| 6 | Wallace H. Creer | 2nd | University of Idaho | "Design of a Single Stage Low-Noise Amplifier" |
| 6 | Kenneth Williams | 3rd | University of California-Santa Clara | "A Solid-State Compass with Microprocessor-Controlled Data Acquisition" |
| 7 | Edward Krause | 1st | University of New Brunswick | "Simulation of a Communications Controller for Word Processors" |
| 7 | Kevin J.M. Campbell | 2nd | University of Calgary | "The Design of a Five Level Correlative Encoder and Decoder" |
| 7 | Horst Morell Brian Van Valkenburg | 3rd | Conestoga College | "Color Video Character Generator" |
| 8 | R.E. Schoepflin W.J. Geldmacher | 1st | Zurich Institute of Technology | "Cross-Compiler for Pocket Calulator" |
| 8 | Maria-Gabriella Di Benedetto | 2nd | University of Rome | "Voiced-Unvoiced-Silence Classification of Sounds in the Speech Signal" |

The prizes: \$300 first prize, \$150 second prize, and \$75 third prize.

Twenty-seven colleges were represented by the winners:

Centennial Activities Beginning to Jell...

Here is a Brief Review:

The various Sections, Chapters, and some major departments of IEEE (TAB, USAB, etc.) have started planning their own celebrations of the IEEE Centennial. Here, however, are the major Centennial Institute level events now in the planning stage:

1. *IEEE Power Engineering Society, Winter Power Meeting, Dallas, January 29 to February 3, 1984.*

The power systems field was the first technology given emphasis when AIEE was formed on May 13, 1884. Result: The opening Centennial event will take place at the Winter Power Meeting. A special part of this celebration will be the first showing of a presentation on the history of the development of electric power.

2. *TAB Centennial Conference for the Technical Press, Washington, D.C., February 1984.*

Under the direction of the special task force of the Technical Activities Board, a unique new conference has been conceived to provide to the technical press developments in the field of electrotechnology.

3. *IEEE 1984 Conference on U.S. Technology Policy.*

Sponsored by TAB and U.S. Activities Board (USAB), a unique program planned in keeping with the Centennial Year. Date to be established.

4. *IEEE Founders Day, New York, May 13, 1984.*

A special celebration sponsored by the New York Section of IEEE is tentatively planned involving a reception at the United Nations Building and a special dedication commemorative service at the United Engineering Center.

5. *IEEE Centennial Day, Boston, May 14, 1984.*

Tied in with Electro '84, the celebration will encompass the whole day. The annual awards luncheon will be held at the Westin Hotel, followed by a reception for the Learned Societies (approximately 100 engineering societies from around the world). A formal banquet in the evening will feature a brief theatrical presentation on the history of electrotechnology, comments by the IEE President and an address by a distinguished convocation speaker.

6. *IEEE Centennial Technical Convocation, Franklin Institute, Philadelphia, October, 1984.*

This convocation is a capstone event featuring a series of meetings at the Franklin Institute.

To the New Life Member and 65'ers - Some Facts for You...

The Board of Directors and the Technical Activities Board encourage reduced conference fees for Life Members. The essence of the policy (1978) which can effect your payment for attendance at various conferences reads:

Reduced fees, or waiver of fees, or fee differential for Students, for retired members, for Life Members, and for special registrants...are permitted at the discretion of the Conference Committee.

About Society Membership

An IEEE Life Member with not less than five years of membership in a Society may also be designated a Life Member in that Society. Thus, the LM would receive free of charge all technical periodicals - Transactions, Magazines, and Journals - offered by each Society for which the five-year requirement is satisfied.

To avoid mailing of unwanted publications, Society Life Members are asked *every year* to confirm their continued interest in requested publications.

There are two options:

1. Limited Service. You remain a member of the Society, but receive only Newsletters, Conference announcements and other special mailings.
2. Full Service. In addition to the above, you receive Magazines, Transactions and Journals that you list on the form which is sent each year in July.

Unless you *return* the form, the IEEE Service Center will assume you no longer want the Society publications.

As a Life Member, you automatically receive SPECTRUM (unless indicated in writing otherwise). All other publications - Conference Records, Proceedings of the IEEE, IEEE Press Books, IEEE Membership Directory, IEEE Standards Dictionary of Electrical and Electronics Terms, etc., are available at regular member rates.

Obituary

Vladimir Kosma Zworykin, 92, Invented TV Picture Tube for RCA

Often called "the father of Television" for his technological achievements in the field, Vladimir Kosma Zworykin, died at Princeton Medical Center last July. He was one day shy of 93.

He was a native of Russia who became an American citizen in 1924. He conceived the first practical televi-

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|-----------------------|-------------------|-----|--|---|
| 8 | P. Anderson | 2nd | Chalmers University of Technology | "Absorption Coefficients at CO ₂ -Laser Wavelengths for Toluene, m-Xylene, o-Xylene, p-Xylene" |
| 10* | E. Hian Loo | 1st | National University of Singapore | "Approximate Methods for the Computation of Proximity effect Corrections in E beam Lithography" |
| 10 | Ajit U. Dubhashi | 2nd | Indian Institute of Technology, Bombay | "A Microcomputer-based Variable Stepper Motor" |
| Graduate Level | | | | |
| 10 | Dinesh K. Anvekar | 1st | Indian Institute of Science, Bangalore | "SKARC - 81: Illustrative Microcomputer-based Robotic System" |
| 10 | Shiro Ryu | 2nd | University of Tokyo | "Measurement of Polarisation Parameters of a Single-mode Optical Fibre" |

*Region 9 results unavailable at press time.

Life Members at Electro '82 Enjoyed Boston Hospitality

In addition to sharing the activities of Electro '82, Life Members thoroughly enjoyed touring Boston and "seeing the sights." That is the general consensus of Life Members who registered at the Sheraton-Boston hotel.

The Electro '82 Board of Directors and the Life Member Fund provided Life Members with complimentary registrations which offered admission to all sessions and the exhibits. The hospitality suite with its daily refreshments was the popular "meeting place" for 93 registrants—an excellent turnout for the meeting May 25-27.

The Life Member Committee contacted all Life Members in Region 1, arranged for the speaker, and manned the hospitality suite. We also had great assistance from Sue Kingston of ECI, Inc., who made all hotel arrangements with the good assistance of Ernie Witschi.

Dr. Allen Cudworth, Vice President and Director of Research for Liberty Mutual Insurance Company, Boston, was the speaker at the special morning session, May 26. The meeting room held 100 and was filled to hear this illustrious doctor's discussion of the "Boston Elbow"—an artificial arm powered by a battery pack and motor. With motion pictures and slides, Dr. Cudworth illustrated how the prosthesis was controlled by the muscle potentials of the wearer. The device is utilized by about 1000 people a year. Research is now in progress to permit nerve, rather than muscle, potentials for control. It was a fascinating talk and very well presented to an interested and appreciative audience.

The group photograph was taken following lunch for about 100, including some guests. A delightful chicken dish was served followed by ice cream pie covered with a strawberry sauce. It was so good, it has to be mentioned here! LMF Chairman, Joe Keithley spoke for the Life Member Fund, Frank Timmons, editor of this Newsletter, reiterated the qualifications for Life Memberships and mentioned reasons for new approaches to members 65 and over. He then introduced Don Brereton, Coordinator of the Centennial Task Force, who gave a summary of plans for 1984. (See page four.) Dr. Harry Shepherd brought greetings from Region 1. Dr. Edwin Harder then announced an afternoon meeting where he and Dr. Thelma Estrin, IEEE Executive Vice President, would explore ways of increasing the involvement of older members (not yet Life Members) in IEEE activities.

Edmund Povey, chairman of the Life Member Committee, did a fine job. He asked to extend thanks to all concerned, especially vice chairman Donald Sinclair and past chairman Laurence Cleveland. Convention Director Theodore Saad also was most helpful.

Dr. Clifford F. Brunk, Professor University of California Was Principal Speaker at Wescon Life Member Luncheon

A highlight of the Life Member luncheon at Wescon/82 featured a reknowned professor who has been involved with extensive research especially with DNA. Professor Clifford F. Brunk heads the research department at the University of California in Los Angeles. He holds a B.S. and M.S. in engineering from Michigan University and achieved his Doctorate at Stanford University.

His talk covered "Genetic Engineering and Molecular Biology." He explained how the manipulation of the genetic material from plants and animals by recombinant DNA techniques provides a powerful technology for both basic and applied science.

This technology allows the molecular biologist to redesign the genetic complement of an organism, much as an engineer would choose modules for designing a new system. In some cases a new capacity is added to the biological make up of the organism, while at other times the organism is converted to the production of some novel product foreign to its original nature. In either case, the genetic engineer has directly rearranged the biological modules to serve a new purpose.

The biochemical procedures in the process are quite straight forward and the potential for new biological combinations is vast.

Dr. Brunk has said, "In many respects recombinant DNA technology may be to biology of the 1980s what solid state devices were to electronics of the 1960s."

The talk was received with great interest, according to Henry A. Samulon, Chairman of the Life Member activities at Wescon/82. He said that a question and answer session followed that was so "lively" it had to be halted to let the Professor leave for another appointment.

There was a tour of Rockwell International's C-MOS Microelectronics facility which was well attended. The Newport Beach facility gave Life Members interesting insights into the complexity of Large Scale Integrated Circuit Fabrication.

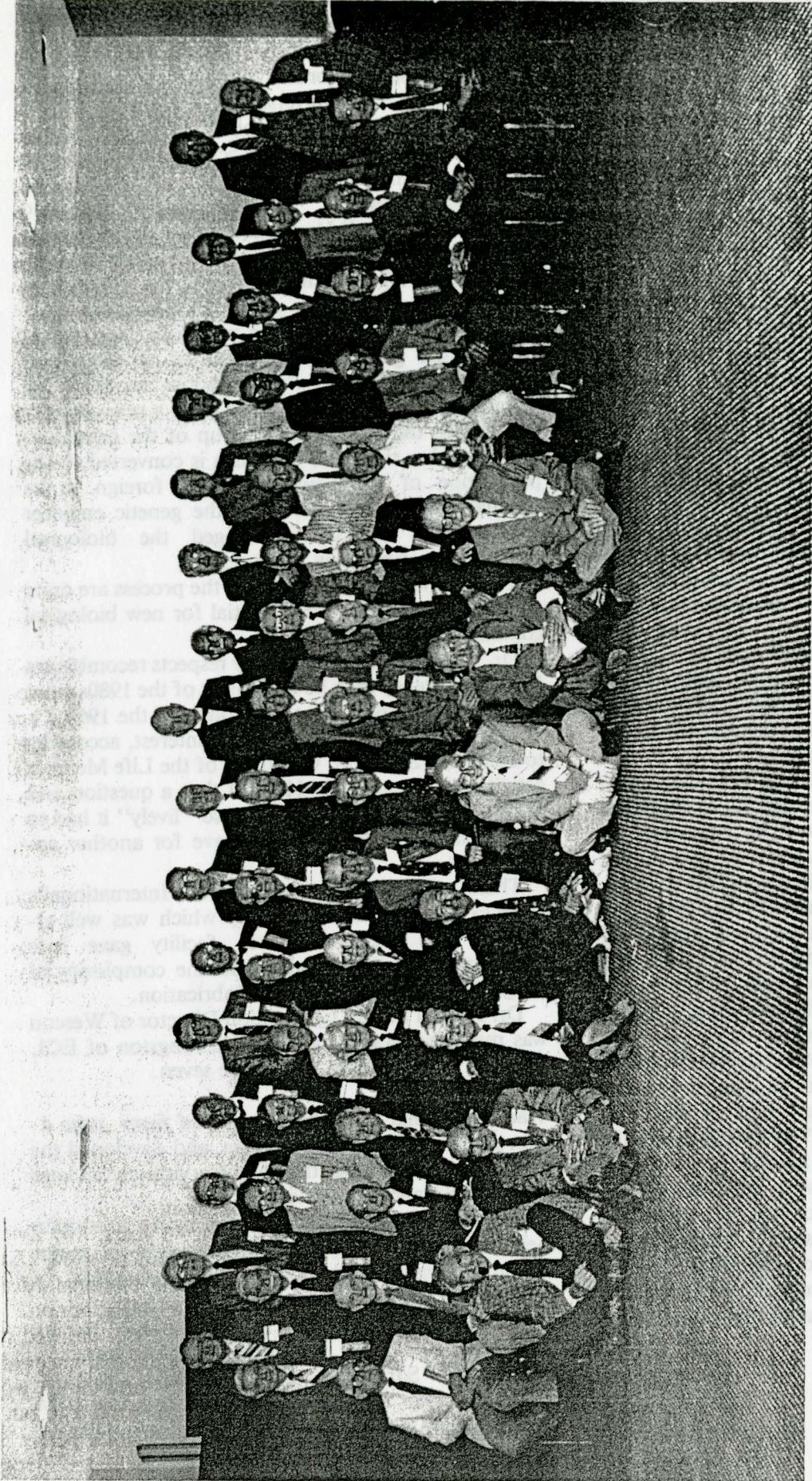
Dr. Harold Foster, Convention Director of Wescon was most cooperative, as was Sue Kingston of ECI, Inc. The group picture is on page seven.

Vladimir Kosma Zworykin *Continued from page 4*
sion camera tube, the iconoscope, and developed the kinescope picture tube, the basis for virtually all later technical advances in television.

Associated with RCA for 45 years, Mr. Zworykin held more than 120 patents and received 27 major scientific awards, including the National Medal of Science, the nation's highest scientific honor.

David Sarnoff, who died in 1971, enjoyed teasing the inventor by telling him of their first encounter. "I asked him," Sarnoff recalled, "how much would it cost to develop TV. He told me \$100,000, but RCA spent \$50,000,000 before we ever got a penny back."

ELECTRO '82

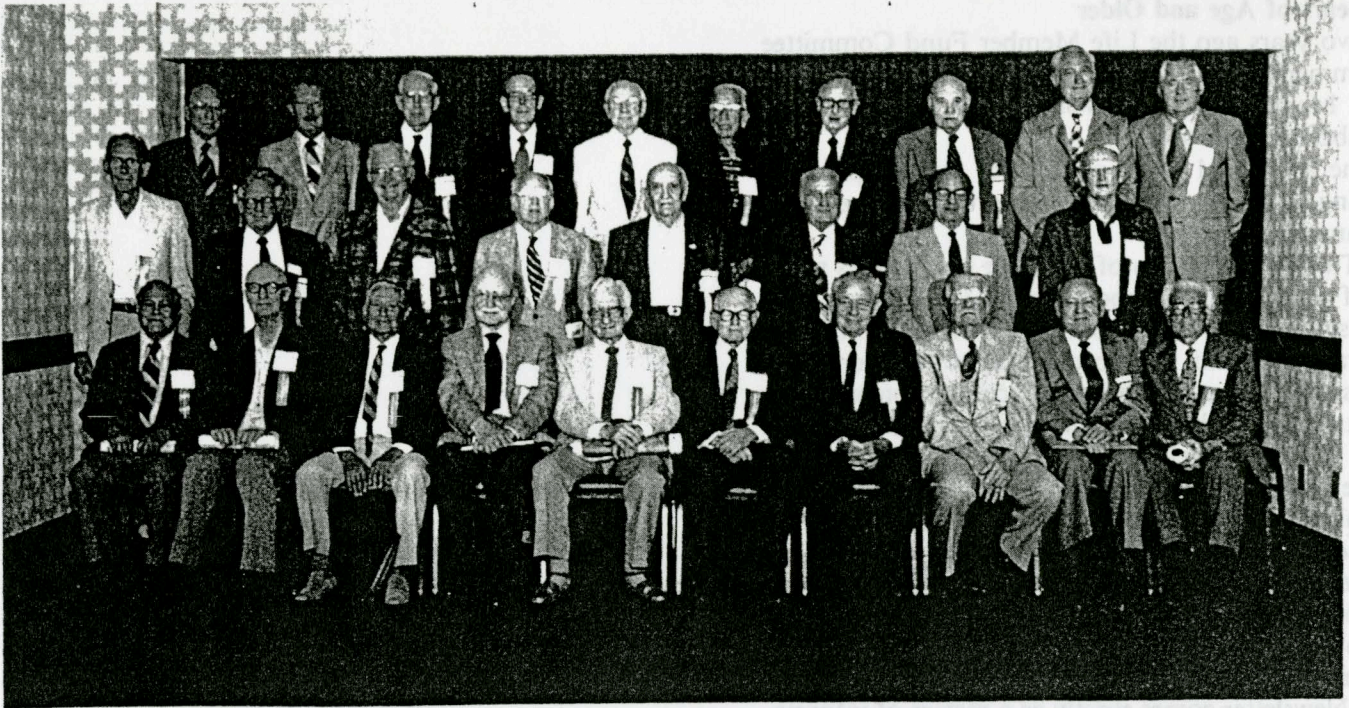


Life Member Luncheon

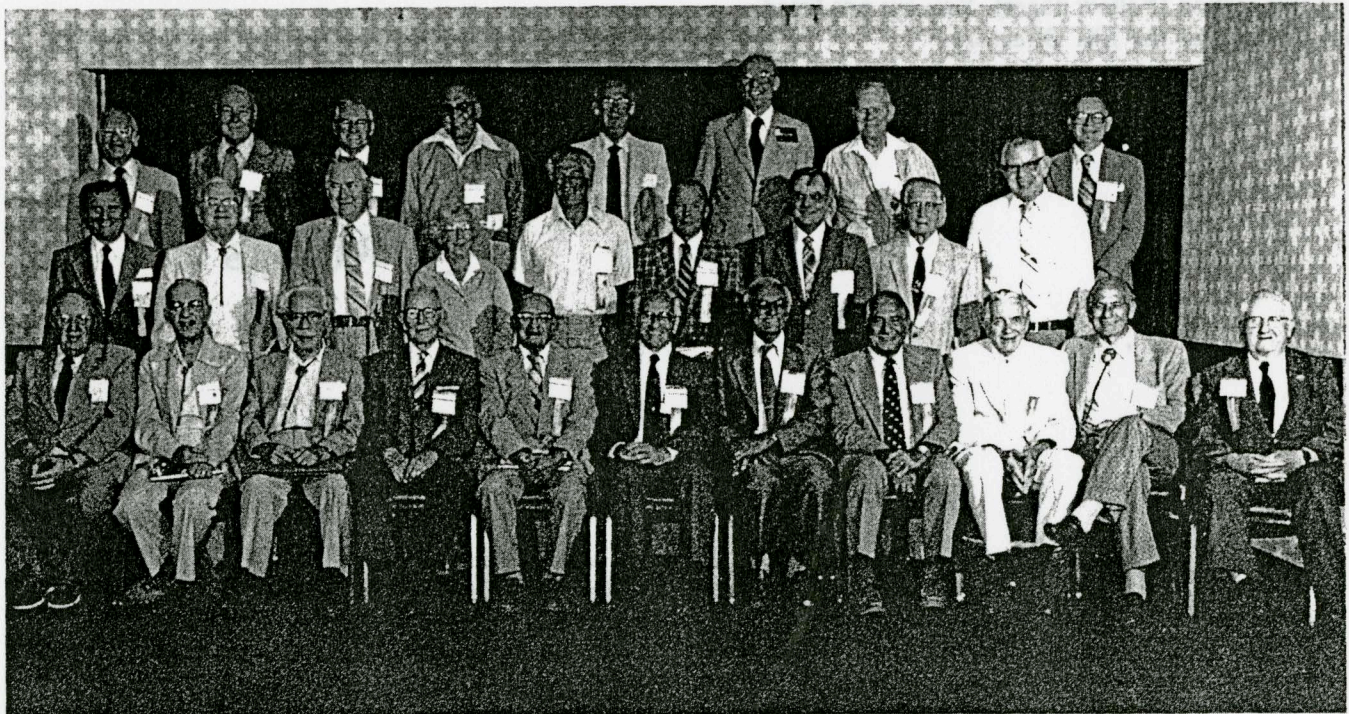
Although more Life Members attended, here are 55 "happy" IEEE old-timers who enjoyed activities at Electro '82 Boston. In the usual order: (Top Row, left to right) John McNiff, George Gilman, James Moran, Hyam Yamins, William Hall, R.S. Arthur, Edwin Harder, Arthur Miller, Amos Hilton, John Ohman, Mario Messa, Walter Nisula, Laurence Stein, Elmer Hansen. (Second Row) Joseph Keithley, Lewis Mendelsohn, Edmund Staples, Alex Edmonston, David Terwilliger, S.B. Lent, Milo Hnilicka, Karl Clough, Sam Grodzinsky,

Harry Kihn, Ed Corea, Frank Lewis, Carl Peterson, Fred Lingel, Herbert Wagner, Richard Shea. (Third Row, seated) Bill Gogbill, L. Cleveland, Harry Johnson, H.A. Baines, Truman Gray, Alan Burke, Tom Carrell, Edmund Povey, D.B. Sinclair, David Vitrogon, Michael Tobin, Nicholas Raskhodoff, David Buchanan, Ted Braaten, H.R. Stewart, W.H. Falls. (Fourth Row, floor) B.S. Gilman, Sam Zaslavsky, E.M. Pritchard, John Reeze, S. Glassman, Henry Brainerd, Edward Herold.

WESCON '82



Wescon/82—Here are 56 of the Life Members who enjoyed true hospitality in Anaheim. In the usual order: (Top Row) Joseph Pernice, Richard Griffiths, George F. Levy, George A. Davis, Charles A. Sidway, Harold Endicott, Harry R. Lubcke, Harold Rieth, Charles M. Edwards, John W. Thatcher. (Second Row, standing) Dean E. Batchelder, Glenn W. Bills, Philip W. Martin, T.I. Humpreys, M.W. Brainard, R.A. Isberg, Abe M. Okun, A.W. Atwood, Jr. (Third Row, sitting) D.M. Vanvales, V. Welge, Michael G. Demeny, Ludwig W. Sepmeyer, Miles A. McLennan, Schultz, Louis H. Powell, W.S. Earl, David Bodle, John F. Katzmaier.



(Top Row) Nat Motta, Ernest F. Donatie, Arthur W. Gelbke, R.B. Nourse, Levine, Wallace, B.F. Fredendall, John G. Gehman. (Second Row, standing) Alfred J. Siegmeth, T.L. Gottier, Logan E. Setzer, Mrs. Logan Setzer, Harold Margolis, J.J. Caldwell, Ellis F. King, Elwin J. O'Brien, Ken Moore. (Third Row, sitting) Walter Bacon, W. Ross Appleman, I.J. Kaar, C.R. Rowe, Harry W. Becker, Henry A. Samulon, Bela A. Lengyel, Harold E. Felix, James Hicken, H.A. Carlberg, Jerome R. Sullivan.

A Review...

**This Newsletter Being Sent to All IEEE Members
65 Years of Age and Older**

Two years ago the Life Member Fund Committee recommended to the Executive Committee that the Life Member Fund Newsletter be distributed to members 65 and over.

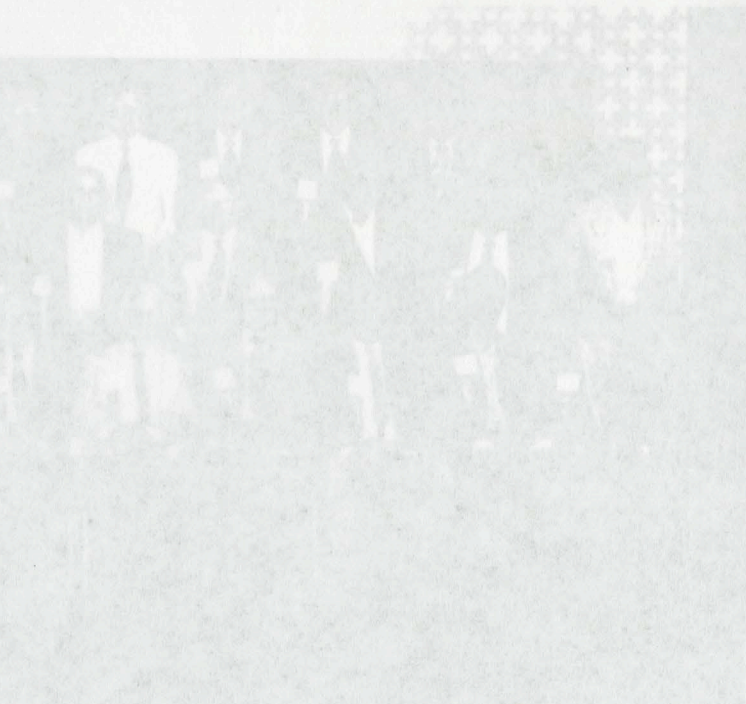
The additional funds needed for extra copies and mailing is money well spent, according to the LMF Committee:

“This post-65 group of non-Life Members is made up of peers and contemporaries of Life Members. It is unwise to leave them out of communication for several years until they become Life Members. The Newsletter will strengthen their connection with the Institute and with the Life Members and help sustain their interest - a definite asset to the Institute.”

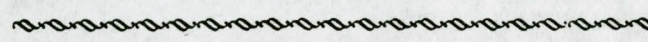
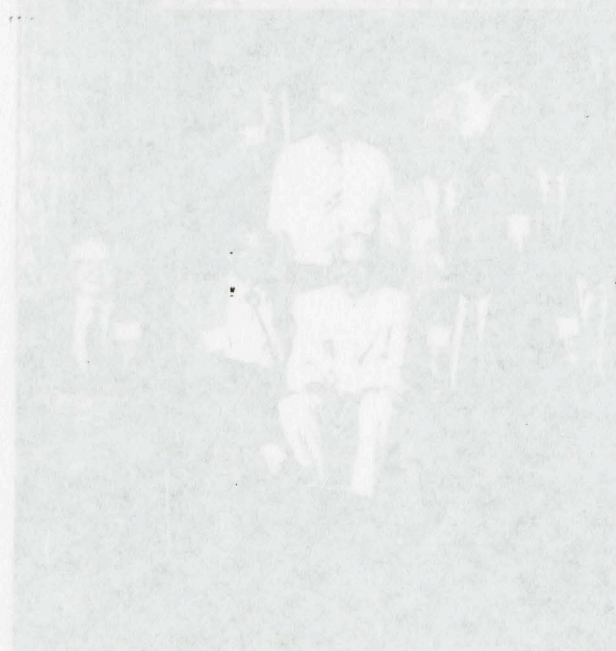
Here are the qualifications to become a Life Member: The individual *must be 65 and have accumulated enough years of Membership in IEEE so that those years plus his/her age equals 100.*

To avoid any misunderstanding, however, those of you who are not Life Members should not feel that you are receiving similar benefits as Life Members. This Newsletter comes strictly as a matter of information and nothing more is intended or implied.

The LMF Committee has included all IEEE members 65 and over who are not Life Members in the 1981 LM Directory in a special section and will do so in 1983 as well. If you are a Life Member, the LM Directory lists you as such (White section). If you are not a Life Member, but are 65 or over, you are listed in this section (Yellow pages). You are not listed in both Sections of the LM Directory.



Wescon 82—Here are 16 of the Life Members who enjoyed the... (Row) Joseph Ferris, Richard Griffith, George R. Lacy, George... (Row) Harry R. Lubcke, Harold Kahn, Charles M. Edwards, John W... (Row) Charles W. Bell, Philip W. Martin, T.J. Hunsberger, M... (Row) Alwood, Jr. (Third Row, sitting) D.M. Vanover, V. Walter M... (Row) McLennan, Schmitt, Louis H. Fowell, W.S. Earl, David R...



Greetings
of the Season
and best wishes
for a Happy New Year