



IEEE

Published by the Life Member Fund Committee

November 1985

# The Life Member Fund Newsletter

## A Note from the Chairman

We are delighted with the generosity of the Life Members whose contributions allow us to fund the worthy IEEE projects and programs. In fact, a special project funded this year with your contributions was the "Generations of Giants" publication. We also need your ideas on other good ways to use this Life Member Fund wisely. So please send your suggestions to us.

With deep sorrow I must tell you Donald Sinclair, a colleague who was scheduled to be my successor, recently passed away. Dr. Sinclair's dedication and efforts on behalf of the IEEE and the Life Member fund were unstinting. We shall miss him greatly.

Feel free to contact the Life Member Fund Committee or Field Services with questions concerning Life Membership. Wishing you and yours - happy and healthy holidays.

Sincerely,

Julian D. Tebo  
1985 Life Member Fund Committee

## Free to Life Members *Generations of Giants* Booklet

"Willie was a whiz kid, matriculating at the University of Glasgow at the tender age of ten," is an excerpt from the *Generations of Giants* publication about William Thomson, Lord Kelvin of Largs. Lord Kelvin, whose research on thermodynamics led to the absolute temperature scale which bears his name, is one of the seventeen electrical giants highlighted.

The booklet is based on the Centennial production held in Boston, Massachusetts in May of 1984. Made possible by a grant from the Life Member Fund, this commemorative piece is being offered to Life Members free of charge. A limited number of copies have been printed, so it's available on a first come, first served basis. Simply fill out the order form on the back page of this newsletter and send it in. By the way, can you name the seven giants shown here? (Answers on page 2.)

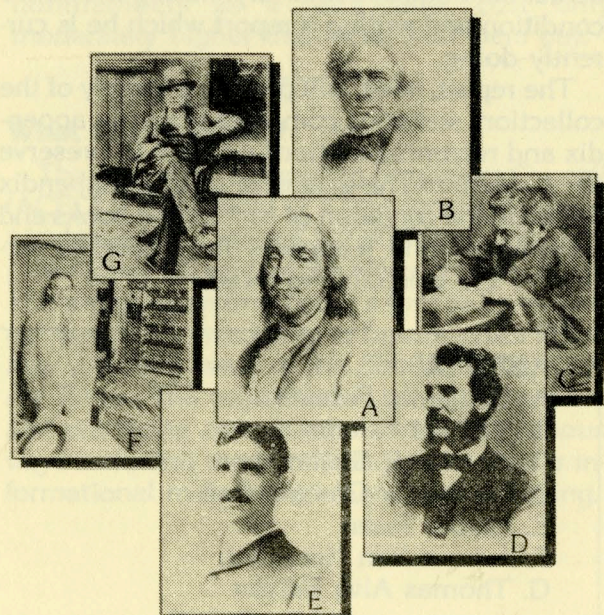
## Wanted: Ideas Requiring Special Funding

"Projects that are peripheral to the main purposes of the Institute," are the closing words to the LMF Committee's 1985 approved funding goals. In particular, projects that support "older members who have their careers behind them and the younger members who have their careers ahead of them" are being sought.

Have any ideas that have been sitting on the back burner for lack of funding? Why not submit them to the LMF Committee?

Please write in one or two pages, your proposal stating the idea, purpose, basic steps involved, estimated costs and any other information you feel is needed for the committee to make a sound decision. Please send your proposal to the Life Member Fund Committee c/o Field Services.

Note: The Life Member Fund Committee is currently only soliciting ideas via this newsletter. Since the Committee feels, as the contributors, you should have first crack at having your ideas supported. Based on response or rather lack of it, however, other IEEE publications may be asked to publish this announcement.





### What Your Dollar Buys Through the Life Member Fund

In 1984, over \$58,000 dollars were contributed by Life Members. As of September, the Life Member Fund has received over \$60,000 dollars. Standard programs this money supports include: the Student Prize Paper Contest, the Education Medal, the Donald G. Fink Prize Paper Award, Graduate Fellowships, the Life Member Directory (published every other year), the Summer Graduate internship (see below), Life Member Conference Activities and two Life Member Fund newsletters.

This year, the Life Member Fund also produced the "Generation of Giants" commemoration booklet based on the Centennial performance given in Boston in May, 1984. It's free to Life Members while quantities last.

Life Members interested in contributing to the Fund may do so by making out a check or money order to, "IEEE Life Member Fund." Send your donation c/o IEEE Field Services, 445 Hoes Lane, Piscataway, NJ 08854.

### Wheeler Collection Almost 90% Complete

This year, the summer graduate intern worked on surveying the Wheeler Gifts of Books. A most outstanding collection of old electrical engineering books published from the 15th to the 19th century. Wheeler, a member of the AIEE, gave AIEE the books in 1901. The 6,000 plus books and pamphlets were dispersed throughout the Engineering Societies Library when all of the Societies Libraries were combined approximately 80 years ago.

The intern's surveying tasks included comparing each item listed in the catalog against the actual holdings in the library; noting the item's condition and writing a report which he is currently doing.

The report, itself, will provide a history of the collection; statistics compiled from the appendix and recommendations on ways to preserve the collection. The extensive detailed appendix will state the condition of each of the books and pamphlets found. It appears that around 90 percent of the collection is intact.

#### ANSWERS

- A. Benjamin Franklin
- B. Michael Faraday
- C. Charles P. Steinmetz
- D. Alexander Graham Bell
- E. Nikola Tesla
- F. Johann Von Neumann
- G. Thomas Alva Edison

### Aging and You

A substantial body of research has been conducted in the field of aging in recent decades. Researchers can now demonstrate that certain crucial areas of human intelligence do not decline in old age among people who are generally healthy. A recent study of brain chemistry at the National Institute of Aging shows that the healthy aged brain is as active and efficient as the healthy young brain. Dr. K. Warner Schale at the Gerontology Research Institute has shown that, at all ages, a majority of people retain their intellectual powers. John Horn, University of Denver, says that crystallized intelligence continues to increase steadily throughout life. The oldest group tested on world knowledge by Roy and Janet Lachman, University of Houston, was more efficient in recalling facts they had acquired in their formal education and day-to-day experiences than were groups in their 20's. The belief that if you live long enough you will become senile is just wrong. People in their 70's have greater verbal skills than people in their 20's.

Concerning creativity, psychologists have studied various aspects of creativity to determine what nurtures it and what kills it. The innovators of great and memorable works are surprisingly ordinary folks. They are frequently smart but not too brainy; educated by not too learned. Dean Keith Simonton, University of California, Davis, says of creative people that they tend to start earlier and end later than other folks. In fact, Simonton theorizes that creative people in their 70's will be more prolific than they were in their 20's.

The key factors in maintaining mental ability are:

- Staying socially involved
- Being mentally active
- Having a flexible personality
- Striving for good health

You may be asking "What does this have to do with me?" Well, maybe nothing. On the other hand if you suffered age discrimination in employment whether in salary or working conditions, by being fired, or forced to retire, the message is that you do not have to be a less capable engineer just because you are older. If you desire re-employment, you can take steps to make that possible or you can become self-employed or enter consulting (see the piece on page 3). If you are retired and enjoy retirement, you can enhance your life and your profession by becoming active in the IEEE. If none of the above options interest you, then the message is to keep active both mentally and physically to enjoy the best life possible.

Walter R. Nial, Chairman  
IEEE/USAB Age Discrimination Committee

### A Section's Guide to Helping Unemployed Members

Know, from past experience, ways and means Sections can help members when their job security gets shaky? Particularly, when the whole area is in upheaval as is currently the situation in the "Silicon Valley"? Diane Barney, Chairman of USAB's Task Force on Employment Assistance would like to know about them. She wants to compile a collection of 1 to 2 page "how-to" ideas that run the financial gamut from requiring no money to ideas that work but require some investment. Examples are establishing a job hotline, publishing brief resumes and the Pittsburgh Section's annual report on which local companies most likely will be hiring.

Contact: Ms. Diane J. Barney  
c/o Pacific Gas & Electric  
77 Beale Street, Rm. 2316  
San Francisco, CA 94106  
(415) 972-7686

### Got Any Enterprising Ideas?

Joe Edminister, Chairman of USAB's Task Force on Entrepreneurial Activities, is just getting things started on his committee. If you are interested, he would like to hear your ideas and suggestions on this subject.

Contact: Mr. Joe Edminister  
Cornell Patents and Licensing  
East Hill Plaza  
Ithaca, NY 14850  
(607) 256-7367

## Be Involved

IEEE depends on volunteers' services to get things done. So be active within your local Section or Section Chapter. Play a part in IEEE's professional, technical or educational activities. IEEE only works if you do.

## Consulting Engineering

Whether you would like to work a little or work a lot since retiring, Consulting Engineering may be an option to consider. There are two ways to go into consultant work: 1) working for yourself in which you handle the business management as well as the actual engineering consultings, or 2) working for a consulting firm where lack of staff is a major problem for most engineering firms according to Ms. Connie Neuman, Director of Information and Communications for the American Consulting Engineers Council (ACEC).

Ms. Neuman recommends that interested retired Life Members take the following steps:

- 1) Contact ACEC headquarters (address and phone given below) for a list which provides the ACEC Executive Director for each state.
- 2) Contact the ACEC Executive Director in your state. Explain your current position, background, goals. Ask for the state's ACEC Directory and if you could possibly attend a local ACEC meeting.
- 3) Start networking. Extract from the state directory, based on locale and services provided, consulting firms of interest to you. Get to know these firms, ask questions, even call or write these firms stating your expertise, and offering your services.

For more information contact:  
American Consulting Engineers Council  
1015 Fifteenth St. N.W.  
Washington, D.C. 20005  
Telephone: (202) 347-7474

They can provide free of charge the listing of each state's Executive Directors, an Annual Report, Publications Index and a brochure, "The Ingenious Ingredient." In addition, many of the publications listed in the index are available to nonmembers at a reasonable cost only moderately higher than what members pay.

### What is the ACEC?

The American Consulting Engineers Council (ACEC) is comprised of 4,100 consulting firms which represent around 112,000 employees (approximately 32 percent are electrical engineers). The median size firm being a four to seven person operation, according to figures given in the May 27, 1985 issue of the *Electronic Engineering Times*. The organization helps prospective and practicing consulting engineers in various ways including the publishing of numerous informational materials to legislature lobbying.



## What It Takes; What You Get . . . As A Life Member

To become an IEEE Life Member (LM), you must be 65 or older. You then add to your current age the number of years of IEEE or its parent societies (IRE or AIEE) membership you have accumulated. The total must be at least 100 years.

Regarding Societies, a person with five years or more membership in a Society immediately prior to attaining Life Member status may continue in that Society without paying. Thus, the LM would receive free of charge all technical periodicals—Transactions, Journals, Magazines—offered by a Society for which the prior five-year subscription requirement is satisfied.

To avoid mailing unwanted publications, Society Life Members are asked every year to confirm their continued interest in requested publications in writing. There are two options:

1. *Limited Service.* You remain a member of the Society, but receive only the main publication, Newsletters, Conference announcements and other special mailings.

2. *Full Service.* In addition to the above, you receive any Magazines, Transactions and Journals you list and are entitled to on the form sent each year in July. (Unless you return the form, the IEEE Service Center will assume you no longer want those Society publications.)

As a Life Member, you automatically receive SPECTRUM (unless you indicate 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, and so forth, are available at regular member rates.

### If It Wasn't Clear . . .

Enclosed with last March's 1985 LMF Newsletter was a Life Member Directory Order Form. The card and the newsletter failed to mention that the Life Member Directory is *free* to all Life Members on a first come, first served basis.

So if you would like a Life Member directory, now knowing it is free to Life Members, simply send a brief letter requesting the directory with your name, IEEE Member number and your mailing address clearly printed to:

IEEE Life Member Directory  
Member Services  
445 Hoes Lane  
Piscataway, NJ 08854

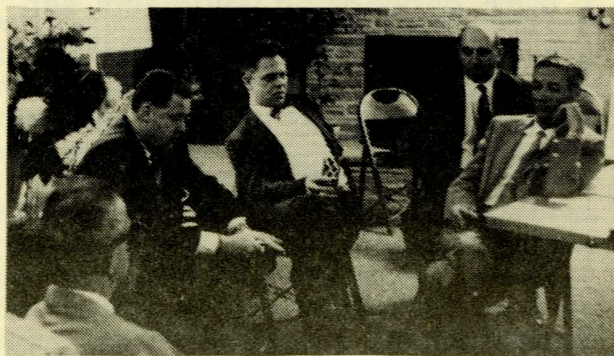
## Donald B. Sinclair, LM Vice Chairman Dies

Last August 24, Donald B. Sinclair died from cancer. He was seventy-five years old. According to Dr. Truman Gray, a member of the Life Member Fund Committee and long time friend, "Sinclair's leadership ability was built on having visions, knowing the direction the visions should go and having the energy and drive to see his visions bear fruit." This need for fulfilling goals brought about Sinclair's active role in first the IRE and then the IEEE. The reason Gray believes is that Sinclair felt he could exert the most influence within the profession through these organizations. Sinclair was President, Vice President, Treasurer as well as a Director of the Institute of Radio Engineers (IRE) from the mid-forties through the fifties almost non-stop.

A stickler for accuracy and completeness, Sinclair was very active in standards within radio. He devoted most of his career to the measurement of properties of high frequency electrical circuits. His IRE Fellow Award given in 1943 reads, "For the development and application of various types of networks for high-frequency measurement of impedance." He was also among a select group of Western engineers invited to speak to the Soviet Academy of

Sciences and the Hungarian Academy of Sciences on microwave electronics, antennas and electrical circuits. It was part of the first cultural exchanges behind the iron curtain after World War II.

Sinclair did equally well in business. He joined General Radio (now GenRad, Inc.) as an engineer in 1936. He became assistant chief engineer in 1944 and was appointed chief engineer in 1950. Before retiring in 1974, he had also been Chief Executive Officer.



Dr. Sinclair (middle) at an IRE Executive Committee meeting in 1958. His ability to forge ahead, while others rested, helped Dr. Sinclair achieve his dreams for the profession.

## Talk About A Life Saver

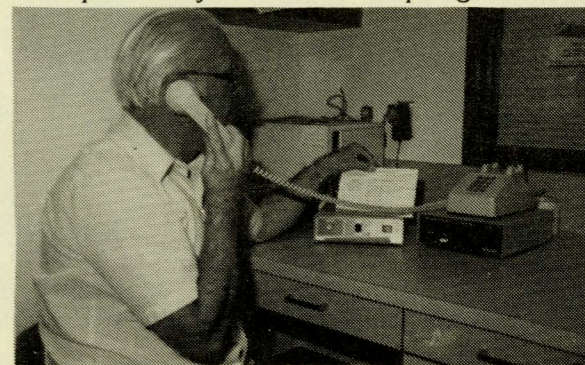
Today in the United States alone there are more than 27 million people aged 65 and over, with 7.7 million of these people living alone. Not only do unnecessary deaths occur, but there is the worry of injuring one's self and being unable to get help quickly. Today, there are positive alternatives with electronics playing a part. Merritt Hospital in Oakland, California provides a good example. They have had an electronic emergency alarm system for the past five years and today there are 160 subscribers.

Merritt Hospital bought the necessary equipment from a company specializing in emergency alarm systems for handicapped and elderly people. The major expenses (the Emergency Response Center unit cost \$7,000 and each home unit cost \$500) are paid by community organizations such as the King's Daughters Foundation and Rotary Club. Total cost for each subscriber on the system is a monthly payment of \$10.

Volunteers play a vital role at Merritt Hospital. The home units are all installed and serviced by volunteers. Each home unit is tested every month. To test a unit, a volunteer goes to the home of the subscriber and makes sure everything goes well as a practice emergency is enacted by the subscriber. At the hospital Emergency Response Center (ERC), the incoming calls are monitored by other volunteers.

Here is how the system works: Each subscriber (handicapped or elderly person) has a small remote transmitter which he or she carries on the wrist or around the neck. If an emergency occurs, the subscriber pushes the transmitter button which triggers the "home communicator." This microcomputer sends a "help" message over the telephone line to the ERC where there is 24 hour attendance.

At the ERC, a display and printout indicate which subscriber has sent the "help" message. The staff member pulls that subscriber's file which includes the person's medical history. The staff member then telephones the home of that subscriber to find out the problem and make sure it is not a false alarm. If there is no answer, he or she then phones one of several neighbors or nearby relatives of the subscriber whose phone numbers are also listed in the file, and who have a key to the subscriber's house.



At Merritt Hospital, Bob Van Buskirk is the Service Director. Retired from the telephone company, he coordinates equipment installation, testing and repair.

Finally, if nobody can be reached, either an ambulance or the Police or Fire Department are sent as indicated in the file.

The company used by Merritt Hospital got its start in 1972, when a psychology professor who specialized in gerontology hired an unemployed electronics engineer to construct a prototype communication system he had in mind. The engineer managed to get a working model by adapting off-the-shelf security equipment and a modified Radio Shack tape recorder.

One of the problems of that audio message was that a child might pick up the phone at the receiving end, ignore or not understand the taped message. Despite the problems, however, the demonstration prototype was successful. Dr. Dibner, the psychology professor with the idea, took his idea to the U.S. Department of Health,

Education and Welfare, which in 1974, approved a grant of \$640,000 for research and testing of the system.

While getting the prototype ready for testing it was decided a digitally encoded message which would need to be received by special equipment and would require 24 hour monitoring would prove more reliable. So they redesigned the product, using integrated circuitry and digital transmission.

The system was offered free of charge to several hundred persons in publicly assisted housing. Two hundred and nine persons chose to use the devices. They were all living alone and were either severely functionally impaired or medically vulnerable, e.g. prone to heart attacks. At the end of the three year study, 88 percent of 135 users interviewed regarded the system as a "real benefit". One hundred and twenty emergencies had been dealt with. In 1978 the new company, Lifeline, offered their system to the public for the first time.

The Merritt Hospital using this emergency alarm system presents a good example of the potential power and social value of micro-electronics. It's not leading edge technology. It's not technology for warfare or outer space. It is micro-electronics applied toward a real problem for millions of people. For some of these people it has already proven to be a life-saver.

Rick Sterling, Senior EET Student at  
Cogswell College in Cupertino, California

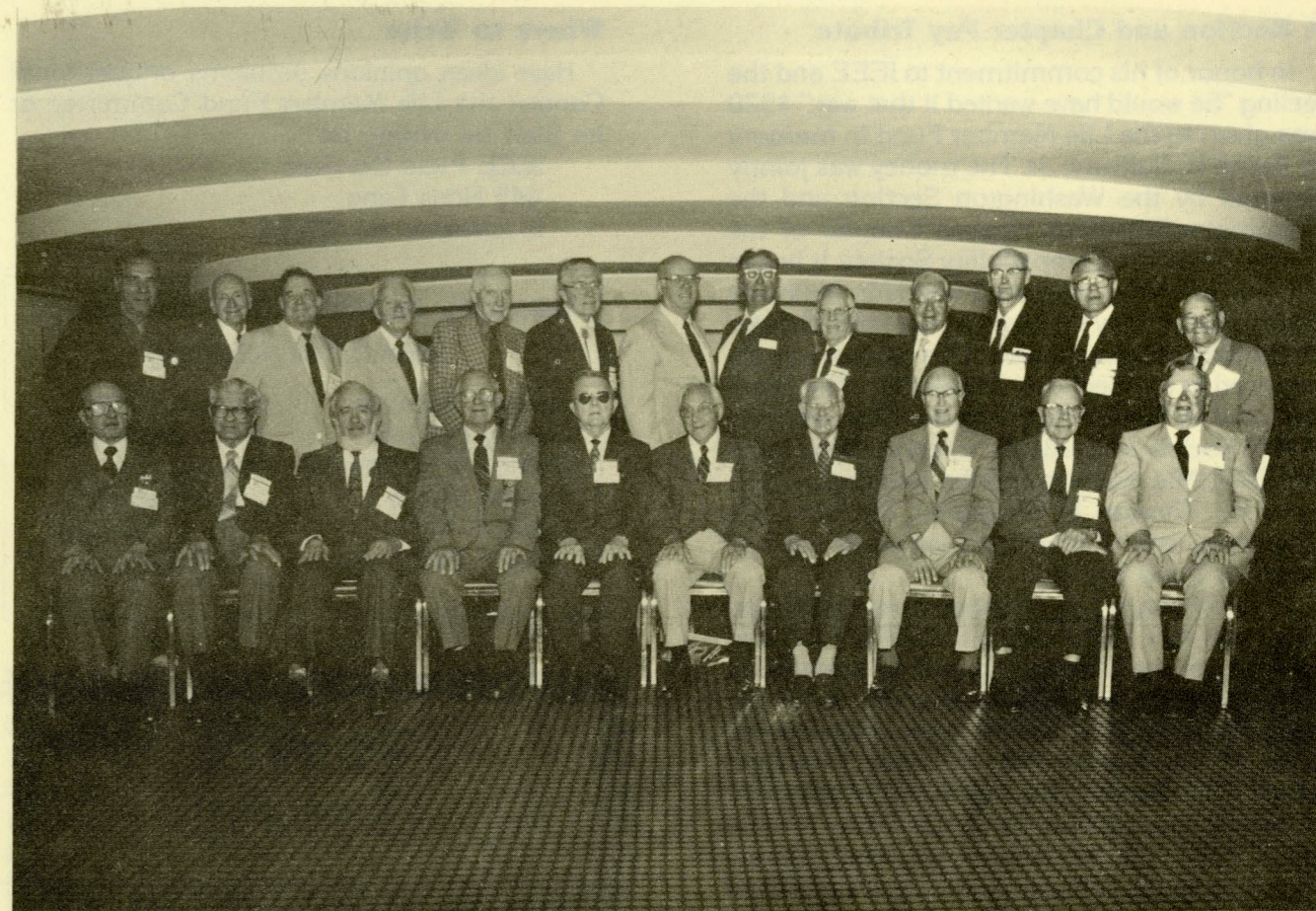




**Electro/85 IEEE Life Members** (Left to right) **Top:** J. Morgan, L. Kovach, B. Lippel, G. McDaniel, J. Yoh, R. Anderson, M. Agress, E. Sieminski, A. Sorensen, H. Lewis, W. Bowie, J. Mulligan, J. Stephenson, R. O'Brien. **Standing:** J. Davey, G. Snyder, R. Mukherji, J. Kopf, G. Becken, L. Weinberg, N. Herman, M. Schramm, J. Guldmond, M. Goetz, S. Zaslavsky, R. York, L. Kirkwood. **Seated:** W. Doxey, W. Chow, A. Mundel, E. Trifari, J. Rosenbaum, J. Nordahl, S. Abilock, F. Munich, C. Guckel, J. Boyd, N. Raskhodoff, A. Dolan, N. Alexander.



**Electro/85 IEEE Life Members** (Left to right) **Top:** K. Wybrands, J. McManus, R. Beers, F. Kammerer, L. Schimpf, H. Butler, E. Ebersol, C. Strom, J. Goetz, P. Herkart, H. Pastorinsky, B. Sanderson, G. Diehl, M. Acker, F. Shunaman. **Standing:** D. Sinclair, G. Raymond, D. Moll, W. Lundry, D. McCormick, J. McPher-son, C. Lapinski, L. Grandizio, E. Herold, P. Rounds, H. Meswarp, J. Strongin, H. Abbott, J. Cave, F. Oliver, R. Stern, J. Fox, A. Giordano, J. Halpern. **Seated:** F. Shepard, P. King, M. Groder, H. Rowe, T. Paledes, G. Varza, B. Ranky, D. Vitrogon, J. Tebo, E. Taenzer, W. Rowley, R. Bowie, H. Cameron, R. Sloan, B. Sheffield.



**Midcon/85 IEEE Life Members** (Left to right) **Sitting:** William Laube, Alfred LaRose, Thomas Tierney, J. P. Sukup, George Herman, Julius Solomon, Louis Mayle, Merton Paddleford, Earle Wild, Irwin Lietzke. **Standing:** A. D. Giacchetti, Jack Miller, Gordy MacDowell, Stephen Bushman, Les LeVesconte, Wayne Mitchell, L. P. Lanham, L. R. Norberg, Joseph Dunlap, Richard Wesseling, L. E. Matthews, Paul Jahn, A. E. Rodriguez.

## Life Member Conference Activities

### May 1985 Electro

Life Members received complimentary registration upon request to all exhibits and professional sessions. A hospitality suite was available all three days to the Life Members. A minimal charge of \$2 per person for Life Members and their spouses was requested to help defray costs for the Life Member Luncheon. The guest speaker for the Technical Session immediately following the luncheon was Dr. David Gunderson of AT&T. His topic covered recent developments on transatlantic undersea transmission.

Dr. Gunderson stated that the semiconductor laser transmitter "is the very heart of the cable transmission system." His talk also provided a capsule history of undersea transmission from the early telegraph systems and methods of installation. The talk was well received by the over 200 attendees as evidenced by the rapid devouring of hand out materials after the talk.

### September 1985 Midcon

The Life Member Program was a full one. Complimentary registration to the Electronic Show and Convention was provided. A Hospitality suite complete with magazines, cards and refreshments for Members and their wives was also provided each of the three days.

The special Life Member Session was on "Security and Safety in Residential Environments" by William Gillen and Michael Moran from the ADT Company. They stressed that fire protection is more important than burglary protection. Since most burglaries take place in the day between 9 a.m. and 4 p.m. with the burglar entering through the front door.

Lunch immediately followed with the guest speaker, John Hymel, Chief of Police (Brookfield, Illinois), talking about Neighborhood Protection Groups. Around 45 people were there. The whole program was well received by everyone who attended.



### A Section and Chapter Pay Tribute

In honor of his commitment to IEEE and the feeling "he would have wanted it that way," \$520 was given to the Life Member Fund in memory of Aaron H. Sullivan, Jr. The money was jointly donated by the Washington Section and the Washington/Northern Virginia Chapter of the Electromagnetic Compatibility Society. It began with his wife, who requested upon Mr. Sullivan's death, that money be given to the local chapter rather than sending flowers. This request was announced in the Section's newsletter, "The Scanner," and in the Electromagnetic Compatibility (EMC) Society's Newsletter. In consultation with the EMC, Mrs. Sullivan and the Washington Section, Mr. Thomas W. Doepfner, the Section's Chairman, contributed the monies to the Life Member Fund instead.

Mr. Sullivan, a Life Member when he passed away, was very active within the IEEE. A charter member of the Electromagnetic Compatibility (EMC) Society, he held various offices at the local chapter level as well as at the transnational level. Mr. Sullivan's offices included: President of the EMC Society; the first editor of the EMC Society's Transactions and Chairman of the 1983 EMC International Symposium. Highly regarded by his colleagues, his contributions to IEEE will be remembered.

### Where to Write

Have ideas, opinions, problems, or questions? Contact the Life Member Fund Committee or its Staff by writing to:

IEEE Field Services  
445 Hoes Lane  
Piscataway, NJ 08854

#### 1985 LIFE MEMBER FUND COMMITTEE

Julian D. Tebo, Chairman

Henry L. Bachman	Julian Z. Millar
Thelma A. Estrin	Jan A. Rajchman
Gordon D. Friedlander	Don Suppers
Truman S. Gray	Staff Secretary
Edwin L. Harder	Laura S. Jobmann
John C. McPherson	Staff Support



## **GENERATIONS OF GIANTS Booklet** (Free to Life Members while quantities last.)

TO ORDER: Clearly print your name, member number and mailing address in the space provided below. Then send this order form to:

IEEE Life Member Fund  
Field Services Department  
445 Hoes Lane  
Piscataway, NJ 08854

\_\_\_\_\_  
Name

\_\_\_\_\_  
IEEE Member #

\_\_\_\_\_  
Address

\_\_\_\_\_  
City

\_\_\_\_\_  
State/Country

\_\_\_\_\_  
Zip Code

TH-0130-5