



IEEE

Networking the World™

the Life Members newsletter

CONTENTS

<u>TODIC</u>	<u>PAGE</u>
Editorial	1
The latest on LM Chapters	2
Philly's LM activity	3
RE-SEED	3
The SoOBs	4
War stories	5
Can you help?	6
The financial advantage	6
An innovative partnership	6
Internet for the chronologically challenged	7
The LM Fund	8
Submitting articles	8
Roster	8
Qualifications for LM status	8
Where to write	8

**2nd-3rd quarters
1998**

The Life Members Committee (LMC) met in April and considered several matters that should be of interest to all Life members (LMs). While the committee in times past was primarily concerned with administering the Life Member Fund, it now is seeking to more actively represent Life member interests within the Institute. A prime example is the establishment of Life Member Chapters within the Sections. These Chapters should give Life members opportunities to remain active and involved. One of the articles in this issue gives information about these Chapters (page 2). Contact your Section Chair if you haven't heard of plans for your Section.

One item that was discussed at the meeting is the matter of conference registration fees for Life members. The IEEE Policies and Procedures (a formal document) clearly states that retired members and Life members should pay the same fee as Students. Because some conference committees probably don't know of this policy, full registration is required which discourages Life member attendance. Responsible people in TAB have been contacted and they will seek to make the policy known among the Societies. We intend to follow up to ensure compliance.

The new Life Member Certificate is now being given to incoming Life members. Over 1000 certificates were sent to those existing Life members who requested them. Suitable for framing, they are very attractive and they are still available to Life members upon request.

Because of the unique needs of Life members and their spouses, the committee received a report on the offerings of the IEEE Financial Advantage Program with particular emphasis on such things as medical coverage, travel insurance and investments. An article on page 6 goes into more detail. Because our Life members are found everywhere, we hope that many of the plan's benefits will be available to as many Life members as possible.

Shortly, you will be receiving your annual profile letter. Even though Life members pay no dues, it's essential that you read it carefully, fill it out and return it.

Please let me know of your ideas and thoughts. Have a happy and healthy year.

**Dick Jaeger, Chair
Life Members Committee**

The latest on LM Chapters

The LMC sees the LM Chapter initiative as a key element in representing the 28,000+ Life members throughout the world. LM Chapters will enable LMs to retain active IEEE associations, contribute to social good, advance IEEE's professional interests and, of course, enjoy each other's company. While many remain active in IEEE projects at various levels of the Institute, the LMC believes more LMs will remain involved if there are LM Chapters. LM Chapters are a special type of "Affinity Chapters" as covered in the RAB Operations Manual.

The LMC will provide any needed funds through a Regional Coordinator appointed by the Regional Director. The Regional Coordinator will establish new LM Chapters with the cooperation and advice of the Section Chair. LM Chapter information of local interest will probably be carried in the Section's newsletter.

The LMC's intention is to minimize and simplify administrative procedures for the LM Chapters and for the Sections. The LMC plans to support and encourage LM Chapters through a simple and direct interface.

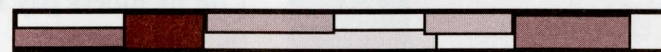
It seems clear that the establishment of LM chapters is quite timely. Independent of the LMC initiative, two Sections have already established LM activities.

LMC support

To facilitate establishment and functioning of LM Chapters, the LMC plans to provide the following support:

- Provide an overall coordinating role for all Chapters with staff assistance. Publicize and encourage LM Chapter activities via *The Life Members newsletter*.
- Cooperate with and support the Regional Coordinators in establishing LM Chapters and monitoring their activities.
- Provide modest funding to support special activities.
- Make available to LM Chapter Chairs "Best Practices," as they become known to the LMC.
- Maintain records of Chapter activities/achievements.
- Recognize outstanding LM achievements.

Local members determine the activities for each Chapter. Chapters can petition for funds for special, unique projects from the LMC. However, the LMC expects that Chapter meetings typically will be held during lunch (at the members' own expense).



Our mailing list

The Life Members Newsletter is distributed to Life members, IEEE members 65 years and older, retired IEEE members 62 thru 64 and members of special boards and committees.

Philly's LM activity

In early 1997, the Philadelphia Section Executive Committee initiated discussions about increasing Life members' (LMs) participation. (Even though five members of the Section Executive Committee were LMs, not many others attended meetings/functions.) During the discussions, it became clear we did not have a strong sense on what to do. The answer—we would let our approximately 900 LM contingent tell us.

The survey included a pre-paid postcard to return. It had checkoff items and a request for feedback. About 1/3 responded. What did we learn?

- 1) The majority did not seem to be interested (at least at this early stage) in participating.
- 2) Approximately 30% were somewhat interested or at least wanted to know more.
- 3) A minority (about 10%) indicated they would give it serious thought, depending on the specific activities and the time involved.
- 4) Activities of most interest were field trips (e.g. technology centers) followed by speaker presentations. Social activities and other projects (e.g. community service) were lower in priority.
- 5) Concern was expressed about where and when meetings would be held.

It was decided to begin with field trips. A trip would commence from a convenient location accessible by both public transportation and automobile. The chosen format and procedure was:

- 1) Select a topic and location of general but high interest. Pick a date that coincides with the Section's monthly evening meeting. This way those who wanted to could stay for that night's IEEE activities.
- 2) Get the management of the proposed activity to agree to sponsor our visit and provide the necessary guides and presentation room, parking, etc.
- 3) Advertise the trip in the Section newsletter and through our industrial liaison mailing list.
- 4) Use the Philadelphia Section IEEE office for logistics, registration, coordination, etc.

We have had three field trips with good attendance and positive feedback. Our success, we believe, is a result of listening to our Life members.

Merrill W. Buckley, Jr., Life Senior

RE-SEED

RE-SEED (Retirees Enhancing Science Education through Experiments and Demonstrations) prepares retired volunteers with science and engineering backgrounds to assist middle school science teachers with activity-based teaching. RE-SEED operates out of Northeastern University (Boston, MA) under the direction of Dr. Christos Zahopoulos. The IEEE Life Member Fund is one of the major contributors and strategic partners to this program.

Three new Regional RE-SEED Centers are currently being formed: one in Mesa, Arizona; a second one in Silver Springs, Maryland and a third one in St. Petersburg, Florida. The first one was initiated by Dr. Irving Kaufman, an IEEE Life Fellow and retired Electrical Engineering professor at Arizona State University. Dr. Kaufman learned about RE-SEED from Ted Saad, a former chair of the IEEE Life Members Committee. The second one was initiated by

Dave Weiss, an IEEE Life Senior. Transnationally, a pilot RE-SEED program has started in

Stockholm, Sweden under the auspices of the Royal Swedish Academy of Sciences and the Royal Swedish Academy of Engineering Sciences.

RE-SEED focuses on communities willing to partially fund the program. Experience has shown that Regional RE-SEED Centers need some initial funds to recruit qualified volunteers. Local LM Chapters could help immensely in terms of volunteers for the schools and local fund-raising.

Doing volunteer work in the classroom is challenging. Thus, RE-SEED volunteers attend twelve training workshops, usually once a week for about four hours. However, outside the New England area, RE-SEED has reduced the on-site training to one intensive week. Volunteers are asked to work in a classroom once a week for one academic year.

Arthur W. Winston, Life Fellow

RE-SEED contact info

Web site: <http://www.reseed.org/>

Toll free phone: 1-888-742-2424

Phone: (617) 373-8388

E-mail: reseed@lynx.neu.edu

Write: RE-SEED, Northeastern University, Suite 378 CP, 716 Columbus Ave. Boston, MA 02120

The short version

The IEEE LMC, in response to numerous inquiries from Life members, is encouraging the formation of units called Life Member Chapters (LM Chapters).

Who

Life members living geographically near to each other. Funding is available from the LMC for start-up activities including printing, postage and room rental.

What

Suggested LM Chapter activities include:

- Arrange technical/professional/social programs;
- Join the RE-SEED program to provide assistance to middle and secondary schools;
- Enjoy each other's company.

How

To obtain a list of Life members within a Section, the LM should contact the Section Chair. IEEE Sections have available to them SAMIEEE. A diskette sent monthly to the Sections, which contains membership information for each individual Section. The Section's designated recipient will be able to provide the individual with a list or set of labels that contains the names and mailing addresses for all Life members in that particular Section.

When

There is no time like the present!

For more info, contact

Mary Ann Hoffman, Regional Projects Manager
IEEE Regional Activities
445 Hoes Lane
Piscataway, NJ USA 08855-1331
E-mail <m.hoffman@ieee.org>
Voice: 1-732-562-5506
Fax: 1-732-463-3657

The Society of Old Bats—no joke

In the last issue, Life Senior Walter W. Frey asked about the "Society of Old Bats." Did it exist or was it just a joke? Well, the question got responses. Some said no, including B. D. Smith, "My personal conclusion is that a 'Society of Old Bats' doesn't exist. But being an 'old bat' at 72, and having worked with RADAR for 54 years, I believe I should qualify as a charter member if such a society is formed!"

But Gerald M. Sallus wrote, "Arnie Acker organized it in the late 1970s. There already was a Society of Old Crows representing the Electronics Countermeasures community and he believed that the RADAR community should have its own society. Bats were chosen as the mascot since they navigate by providing a signal and then process the received signal in a way somewhat similar to RADAR. Although the frequencies may be dissimilar, the principal remains the same....I do not recall ever paying any dues. If memory serves me correctly, Arnie ran into financial difficulties trying to establish the Society and it never really took off."

Finally, Life Member Frederick H. Lund, a member of SoOBs (as he likes to tastefully

abbreviate it) and a member of the AOC (Association of Old Crows), concurred. "I believe that Mr. Acker's intent was to organize a society devoted to RADAR only, not to the various bits and pieces of RADAR technology represented by several IEEE societies," Lund wrote. Lund also provided the lead that led to Acker's door.

Mr. Arnold E. Acker was indeed the main instigator for this Society dedicated to solely RADAR. However, he felt the crucial cornerstone was a society magazine covering only RADAR issues. His plan was to get a related existing magazine to devote part of each issue to RADAR. Thus, the magazine would gradually develop a RADAR readership base. A

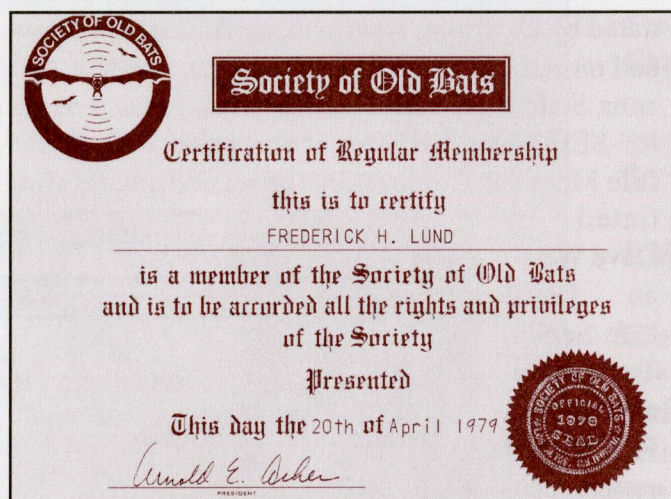
RADAR spin-off could then be established with a strong audience and used for the Society.

Acker did get a magazine to agree to feature RADAR topics regularly. However, the publisher was no longer interested after contracting to do the AOC's publication. Acker managed to line up another publisher who also later backed out. Other magazine publishers declined the proposal when approached. This includes the IEEE. Acker stated that some members in the IEEE political ranks feared the SoOBs would impinge on their turf.

At the time, Acker was working for Varian Associates, Inc. They agreed to help with the marketing by distributing "Society of Old Bats" coffee mugs. (Now a collector's item if any of you are still holding onto one.) While the name was somewhat jocular in nature, which some people disapproved of, the intent was entirely serious. About 1,000 members were recruited. Each received a certificate. However, a convention was never held and the whole effort fizzled in the early eighties.

Mr. Acker has had his hand in the RADAR business since 1943. (He started as a RADAR technician in WWII.) Acker currently teaches courses on microwave tubes and RADAR fundamentals at The George Washington University (Washington, DC) and around the world.

Note: "Old Crow" denotes professionals working in electronic warfare for 25 plus years. The term "crow" originated during WWII when Winston Churchill referred to those who went on secret missions as Ravens. However, some feel the Association's name has created a credibility crisis and should be changed. (Source: Lund and *Journal of Electronic Defense* 12/97)



How rain bent the beam

In February, 1942, the late Ed M. Usher and I were stationed at Hurn, a large air base on Britain's south coast near Bournemouth. Here the Royal Air Force (RAF) did experimental work. We were both 2nd Lieutenants in the Electronics Training Group (ETG) of the US Army Signal Corps.

The RAF posted us to Hurn, after a brief tour with the 233 Squadron, as Radar Observers (RO) in the Hudsons, looking for U-Boats in the Channel. We never located a U-Boat. Perhaps that prompted our transfer from "ops" to experimental work!

One project we worked on was a scheme to lay a beam across a bombing range. The idea was that RAF bombers aborting a mission could drop unarmed bombs on the range for later salvage. The current practice had been to drop them into the sea.

We mounted two 212 MHz (then called "Mc/sec"!) yagi antennas on a small van. It was driven to the range, carefully aligned and leveled. Ed and I then made runs in a Wellington bomber with cameras to

check the accuracy of the simulated "drops."

Developed film, after the first day's runs, showed surprising accuracy. We were pretty excited. Our next test was flown on what the British call a "showery" day. That night, the photos showed very uneven results. We began to discuss wet antenna fittings, impedance changes and other possible causes.

Using a magnifying glass, Ed Usher detected that, on the good runs, the driver was outside away from the van as instructed. On bad runs, he was nowhere in sight. Sure enough, we learned that when the rain started he got in the van to stay dry. His weight tilted the van enough to throw the beam off!

Shortly afterwards, I was ordered back to the States where I tested radars for the Air Force Board in Orlando, FL. Then and later I, too often, forgot the Hurn lesson by overlooking a simple solution to a complex problem.

**Jerry S. Stover, Life Member
Dallas, TX**

An unsubstantiated bombshell

Back in early 1945, while WWII was still in progress, I was an assistant professor of Electrical Engineering at the University of Pittsburgh (PA). One evening at home, I was listening to a radio program entitled, "Confidentially Yours," featuring Arthur Hale. I believe it was a nationally syndicated 15 minute program that came on three times a week at 7:30 PM on the Mutual Broadcasting System.

Imagine my surprise when Hale announced he had a very interesting story to tell. He then calmly said the United States was working on a secret project. And, if the Germans knew what we knew, they could still win the war. Hale went on to describe, in considerable detail, the Manhattan Project and much more that was not public knowledge at the time. I was shocked that this story had been broadcasted; but, the story did make sense to me.

In 1941, I had represented the University at an Engineering, Science and Management Defense Training Course (ESMDT) at MIT. I also had some background with atomic physics. What's more, many of my graduate students worked for the Westinghouse Research Laboratories. Often, a few

would make sudden unexpected business trips to Oak Ridge, TN. Some were even transferred there. It seemed to be a very hush-hush project. I suspected something "big" was going on.

The next day I asked many of my friends if they had heard the program. No one had. And there wasn't a mention of the story on subsequent programs. Once I was given one reference on wartime security. It states "...On another occasion MBS broadcaster Arthur Hale on his 'Confidentially Yours' series referred to Pasco, WA as the site of atomic research..."

"Military leaders were furious about the incident and demanded abolition of the voluntary system. They wanted a military censor posted at every station. This incident presented the voluntary review plan with its most serious crisis, but it survived."

I once read that in the entire atomic program there were only two serious breaches in security. Was this one of them? My search has included writing to Paul Harvey to find "the rest of the story." (However, no response.) Can any Life members help?

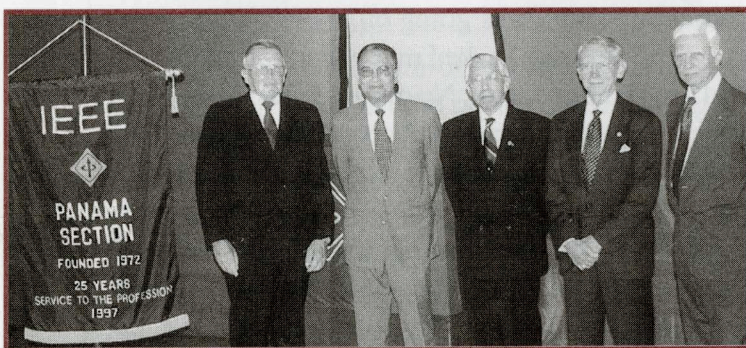
**LaVergne E. Williams, Life Senior
Melbourne Beach, FL**

Can you help?

Since 1987, Life Senior Julian Reitman has emphasized the need for science/technology history. However, visual presentations on industrial history are lacking. One source is the Library of Congress films covering Westinghouse's production operations (web site <<http://lcweb2.loc.gov>>, under "Browse" on the "American Memory" page hit "Motion Pictures," then under "The Collections" page hit "Inside an American Factory"). Initially presented at the Louisiana Purchase Exposition in St. Louis in 1904, these silent films show the "cutting edge" technology employed by men and women back then.

These films have been downloaded to the University of Connecticut-Stamford where Reitman operates. Current efforts aim, with the IEEE Life Member Fund's support, to provide an educational CD-ROM enhancing these silent films. Help is needed in identifying: what was made, where the products were used, who worked/supervised the processes, how employees were trained, and where and how these people lived.

Can you help? Reitman can be contacted by e-mail <reitman@stamford.stam.uconn.edu>, phone (203) 251-8548 or mail to: UConn-Stamford, One University Place, Stamford, CT 06901-2315.



Soon after Kao Chen was elected an Industry Applications Society (IAS) distinguished Lecturer for 1996 and 1997, he and Erling Hesla, IAS Chapter Communications Chair, developed a partnership.

First, they were invited to lecture in five cities in China in October/November of 1996. This was a huge success.

In October/November of 1997, they were invited to tour four Central American countries—Honduras, El Salvador,

nate to be invited to the celebration dinner party for the 25th anniversary of the Panama Section of the IEEE. The celebration was well attended by its past presidents, local industry dignitaries and their most dedicated IEEE members.

The ceremony was officiated by Jaime R. Jaen, Region 9 Chapters Coordinator; Rodrigo Chanis, Section President and Evaristo Alvarez, the IAS Chapter Chair and the Section

The financial advantage for LMs

When comparing insurance coverage or medical plans, it pays to check out the IEEE's Financial Advantage Program (FAP). For instance, the IEEE Rx America Plan is a discount prescription drug service available at no extra charge. Based on a computer generated comparison, you pay the pharmacy "sale price" (loss leader) or the discount price, whichever is less at participating pharmacies.

The LMC is now identifying special LM needs. One area being explored is medical care insurance. Some retired LMs, and their spouses, on Medicare A and B can purchase needed Medigap insurance from various companies, including FAP. When the non-member spouse is 65 or older, s/he can use the same IEEE insurance program. But, if the spouse is younger, s/he needs full medical insurance but is not eligible through IEEE without the member having the same coverage—which the 65+ member doesn't need. The LMC has requested the IEEE Individual Benefits & Services Committee to research possible group medical care coverage for these spouses.

Have ideas on ways FAP can better serve your needs? Please e-mail me (see Roster pg. 8) or send them to me c/o the IEEE Life Members Committee. Check out <<http://www.ieee.org/fap/index.html>> or call 1-800-GET-IEEE (438-4333) for more information on the IEEE Financial Advantage Program.

Irving Engelson, Life Fellow

An innovative partnership program

Costa Rica and Panama. While lecturing in Panama, they were very fortunate

to be invited to the celebration

dinner party for the 25th anniversary of the Panama Section of the IEEE. The celebration was well attended by its past presidents, local industry dignitaries and their most dedicated IEEE members. The ceremony was officiated by Jaime R. Jaen, Region 9 Chapters Coordinator; Rodrigo Chanis, Section President and Evaristo Alvarez, the IAS Chapter Chair and the Section President Elect. A memorable photo (left) was taken and five IEEE Life Members are shown here, together for the first time. From left to right they are: Frank Faulkner (Panama), Numan Vasquez (Panama), Kao Chen (US), Erling Hesla (US) and Horacio Alfaro, Jr. (Panama). Both Numan Vasquez and Horacio Alfaro are their Section's Past Presidents. It can be said without hesitation that the IEEE Life members in the Panama Section are very dedicated professional leaders. Both Hesla and Chen greatly appreciated having the opportunity to meet with these gentlemen.

Internet for the chronologically challenged

The red hot Internet issue these days is whether Windows 98 will stifle the consumer's ability to select the browser of his or her choice. I confess some ambivalence on this issue. Choice means competition among suppliers in features as well as price. All browsers are likely to be much better as a result. An expert in *IEEE Internet Computing* (Jan./Feb. '98) speculated that keeping Microsoft from giving away its Internet Explorer browser would bring 10 other companies into the browser business. But can this be true at this late stage?

In any case, I am not sure I can cope with that much choice. I just don't have the time to sort through all the possibilities. My opinion is to let a dozen browsers bloom for those other guys who get great pleasure from optimizing their choices. I'll stick with what works for me figuring it can't be too far off the mark. Otherwise, my supplier surely would have gone out of business. That's the way I deal with the long distance telephone competitors.

Of course, I feel strongly that all suppliers should adhere to industry standards and open interfaces, and should provide compatible products. We have had some good news with regard to 56 kb/s modems. The 16 February 1998 issue of *Telephony* reported that the rivalry between the X2 proponents (3Com/US Robotics) and K56Flex (Lucent Technologies and Rockwell Semiconductor Systems) has come to an end with the adoption of the ITU standard V.90. Consumers can finally make the leap of faith to 56 kb/s, without worrying they'll be left holding the equivalent of an 8-track tape player. Hopefully, the Internet Service Providers will now move forward aggressively and provide dial-up ports meeting the new V.90 standard.

I cannot help wondering, though, how much of the access link improvement from 56 kb/s modems we Internet users will really see. On a recent Saturday, I decided to download the updates to my *Norton AntiVirus* program over the Internet. I was informed that the update was 1200 kbytes and it would take about eight minutes. Let me see. That's 480 sec for 1,200K eight bit bytes, or 20 kb/s. Since I use a 33.6 kb/s modem something else is limiting the speed. On a weekday, it can be much worse and very painful.

In my last column, I gloated over how I had used *MapQuest* to find a trailer rental agency in White Plains (NY). I tried it again for the best route between LA (CA) and Santa Barbara (CA). This time the step by step zooming operation was too slow to be useful. Then I remembered a bonus CD-ROM I had received called *Road Trips City to City*, by TravRoute Software. That baby worked great, limited only by my own machine's response time. Long live the CD-ROM! For stuff that is not changing day to day, CD-ROMs may well be the medium of choice for a long time to come.

Finally, I have a little more clean-up work to do with regard to my last column, where I pointed out the limitations of the ASCII character set. I got a very nice e-mail from Gerald Chandler in Britain who called my attention to UNICODE. The UNICODE General Information Web page <<http://www.unicode.org>> says, "The UNICODE Worldwide Character Standard is a character coding system designed to support the interchange, processing and display of the written texts of the diverse languages of the modern world."

Actually, UNICODE provides "scripts," a set of symbols shared by one or more languages. For example, the Latin script serves to write hundreds of languages, including English. Chinese, Japanese and Korean are covered by the unified Han script. UNICODE 2.0 contains 38,885 distinct coded characters derived from 25 supported scripts. Wow!

I suppose I should be encouraged by this, but I'm not. Technology makes it possible to transmit and display this Tower of Babel, but that doesn't mean we are communicating.

Fred Andrews, Life Fellow



William Powell Lear, AKA the Lear Jet guy, also invented the 8-track cartridge (Lear Packs) tape system. The big contribution was making the pinch roller a part of the tape cartridge.

However, Lear's selling prowess was truly inspiring. He got the backing of RCA Records and Ford. Thus, 1966 Ford cars offered an optional factory installed in-dash 8-track player. The 1967 GM and Chrysler models offered the same due to Ford's success.

8-tracks reigned supreme in the early '70s and stumbled into the '80s thanks to record clubs. Similarly, perhaps Gates' complaint is really one of interfering with promotional genius not technical creativity.

source: <<http://www.hickory.net/malco/8track>>



The Life Member Fund

How are your contributions used? In 1998, the LM Fund is supporting LM Chapters (pg. 2), RE-SEED (pg. 3), the Westinghouse Films Project (pg. 6), the IEEE Technologies Project, LM certificates and, of course, this newsletter. Other worthwhile endeavors the LM Fund backs include: the IEEE Student Prize Paper Contest, the Graduate Fellowship Program, the Donald G. Fink Prize Paper Award and the LM Prize in Electrical History.

All contributions are greatly appreciated. If you wish to make a contribution, please make your check payable to: IEEE Life Member Fund. Please send it to the address listed in "Where to write." Thank you.

1998 Life Members Committee

Richard J. Jaeger, Jr., Chair
r.j.jaeger@ieee.org (E-mail)

Frederick T. Andrews, Jr.
f.andrews@ieee.org

George R. Dean
g.dean@ieee.org

Irving Engelson
i.engelson@ieee.org

Eric Herz
e.herz@ieee.org

Wasył Janischewskyj
janisch@ecf.utoronto.ca

John E. Martin
jo.martin@ieee.org

William W. Middleton
w.middleton@ieee.org

Alexander Richardson
a.richardson@ieee.org

Arthur W. Winston
a.winston@ieee.org

Cecelia Jankowski
Secretary (Staff)
c.jankowski@ieee.org

Mary Ann Hoffman, Manager, Regional Projects
Mary K. Campbell, Managing Editor
Lisa Dayne, Desktop Publishing

Submitting articles

We welcome articles for this newsletter. In general, published story lengths are:

quarter page--175 words

half page--350 words

three-quarters page--525 words

full page--700 words

Acronyms should be spelled out once. Reference dates (years) should also be included. Editing, including for length, may occur. To discuss a story idea beforehand, contact me by e-mail <jo.martin@ieee.org>. Or, call Mary Campbell, Managing Editor, at (732) 562-5526.

The deadline for possible inclusion in the next issue is 16 October 1998. Please include a phone number and/or an e-mail address.

John E. Martin, Editorial Liaison

Qualifications for Life member status

To qualify as a Life member, an IEEE member must be at least 65 years old, and the sum of the member's age and the number of years of paid membership must equal or exceed 100 years.

Under a 1994 Bylaw, now repealed, Life member status was granted to a member with 40 years of paid membership with no age requirement. Members who achieved Life membership status under the 1994 Bylaw will remain Life members.

Where to write

Have questions, opinions or problems? Contact the Life Members Committee or its Staff by writing to: IEEE Regional Activities, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331, Fax: (732) 463-3657 or E-mail to: <m.hoffman@ieee.org>.

The INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS, Inc.
445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, USA

Non Profit Org.
U.S. Postage
PAID
IEEE
Piscataway, NJ
Permit #52