



IEEE

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the Life Members newsletter

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2nd-3rd quarters

1999

Being chairman of the Life Members (LMs) Committee is a most interesting and challenging job. The committee represents more than 29,000 extremely capable, high achievers spread around our globe. Thus, as I sit here writing this editorial, I am humbled to think that I should have something worthwhile to bring before those who have achieved Life member status in IEEE.

The vitality and abilities of the Life members is constantly brought before me in the diversity of opinions and interests manifested in the communications I receive. What's clear from these messages is that though many LMs are retired, they continue to serve in diverse, useful ways, applying their technical skills locally. Some are assisting in teaching pre-college students, seeking to stir interest in technical fields. Others are using their skills to help in their communities in various ways such as in hospitals, local government affairs or community groups. Many are staying technically up-to-date by taking courses in local colleges and staying involved with Section Society chapters. The retirement stage of life is quite wonderful allowing us to pursue things we couldn't while working. We, on the Life Members Committee, seek ways to encourage LMs to stay active in IEEE affairs. The establishment of Life Member Chapters in the Sections is a prime example. Although the program isn't catching on as quickly as I would like, there has been progress. I am hoping it gains momentum.

On behalf of the LMs Committee, I would like to thank each of you who contributed to the LM Fund by adding a gift to your 1999 IEEE Life Membership Profile. Your contributions are greatly appreciated and make it possible for us to fund all the projects listed in our last Newsletter. If you returned your Profile but would like to make a gift, you still can. Just make your check payable to the IEEE Life Member Fund and mail it to the Life Members Committee. (Address is on page 8, "Where to write.")

Our recent committee meeting was typical with a review of the finances of the Life Member Fund, the consideration of and approval of several requests for funding and reports about ongoing activities. Shortly, we plan to have a working web site, which will give a more detailed view of all LM activities. In closing, I'm happy to report that TAB has taken steps to ensure that conference registration fees for LMs will be no more than those for Student members.

Dick Jaeger
LM Committee Chair

LM Chapter & you — perfect together

Help. Help-help. LM Chapter formations are being formed at a slower rate than anticipated. Slow and steady is good but only to a point. And since summer is the optimum time to plan for fall start-ups.....

Is your locale a natural for a LM Chapter: The Section's population is geographically condensed? There is a small, friendly group who can work together to "get the show on the road?" The Section Executive Committee is receptive to supporting its various constituencies? If the answers are yes, yes and yes, your area could be an ideal candidate.

But while you are interested in forming a LM Chapter, you want to avoid being its Chapter Chair. Read "Boston's beginnings" to learn how to successfully implement the "now I'm the Chair, now I'm not" maneuver.

Inspired!? Contact your Region Coordinator or Dan Jackson, Regional LM Chapter Liaison (see the listing on this page). The next move probably should be getting a list of all the Life members within your Section. IEEE Sections have them available through SAMIEEE. This is a diskette containing membership information for your Section. The designated recipient can provide a list or labels with all the Section's LM names and mailing addresses.

Obviously, you will need to talk to the Section Chair and so forth. Also, keep in mind that start-up funding is available from the LMC for printing, postage and room rental.

If you would like information about forming a Life Member Chapter in your Section, contact your Region LM Chapter Coordinator, Regional LM Chapter Liaison or Life Members Committee Staff Support.

Region Life Member Chapter Coordinators

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1	Ted Saad	t.saad@ieee.org
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7	TBA	—
8	No appt.	—
9	Eduardo Bonzi Correa	e.bonzi@ieee.org
10	TBA	—

Dan Jackson, Regional LM Chapter Liaison, 5704 Castle Rock Road, Roanoke, VA, 24018, USA; e-mail <lm-chapters@ieee.org>.

Life Members Committee, 445 Hoes Lane, Piscataway, NJ, 08855-1331, USA; Phone: (732) 562-5501, Fax: (732) 463-3657; e-mail <life-members@ieee.org>.

Boston's beginnings

Getting a LM Chapter started in the Boston area was easy. Although I have never been on the Boston Section Executive Committee, I have been IEEE active here for many years.

When we started the Boston LM Chapter, there were no instructions, so we went by the seat of our pants. It all started with a lunch I had with Art Winston, the then IEEE Region 1 Director. Dick Jaeger, IEEE LMC Chair, had asked him to appoint a LM Chapter Chair in the Boston area. That person turned out to be me.

Thus, I went to a IEEE Boston Section meeting, explained the concept, and asked for funding to pay for a dinner meeting. I then called a number of IEEE individuals to attend the dinner meeting to establish the Boston LM Chapter. Winston then suggested Ed Altshuler as Chair of the Chapter, which he accepted. This is one of the keys to our success. Altshuler is a Research Physicist at the Air Force Research Laboratory, and has been a dynamic Chair for our LM Chapter.

We have held seven meetings starting in March of 1998. Meetings are held in the Lincoln Laboratory Auditorium with refreshments (paid for by the IEEE Section and the LMs Committee) served prior to the meeting. Attendance has averaged above 35 each meeting. We had our seventh and final meeting of the year in early May. The presentation was "Radar before the Magnetron" by Rick Ferranti of MIT Lincoln Lab. We had over 180 people in attendance. I hope this fact encourages others.

I think it is important to note that the IEEE Boston Section is unique. Geographically, it is a small area; however, it has a long history of EE technology in both education and industry. The Boston area is perhaps the most ideal area in Region 1 for this type of activity. The density of our EE technical population is perhaps higher than in most other IEEE Sections.

Ted Saad
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Region 1 Life Member Chapter
Coordinator

Good works your dollars support

This year the Life Member Fund will give over \$126,000 (US) to good works such as RE-SEED, Student Branch Centers of Excellence, Student Prize Paper contest, Graduate Fellowship Program in the History of Electrical Engineering and the Pre-college Engineer Training (PET) Pilot. This doesn't include the \$77,000 (US) spent to support this newsletter, the LM Chapters and the Sections Congress '99 event to promote Life members' interests to Section chairs worldwide.

Just right there, that's over \$200,000 (US) dollars going to causes you have said in past surveys you want to support. (In case you've forgotten, they are: 1) young electrical engineers and potential electrical engineers, 2) Life members and other similarly mature members not yet LMs and 3) the history of electrical engineering.)

If you wish to contribute, please make your check payable to: IEEE Life Member Fund. Please send it to the address on page 8, "Where to write." Thank you.

Centers of Excellence

IEEE Student Branches worldwide prepare business plans and submit proposals to establish Student Branch Centers of Excellence. They are competing for grants of up to \$5,000 (US). These centers are intended to enhance the students' learning experiences. The centers are to provide a focus for IEEE activities on campus with due regard for local interests and needs. The centers should also provide opportunities for students to network with practicing electrical and computer engineers and scientists.

Approved plans have included:

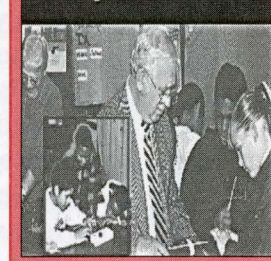
- An open design lab for students to independently build and experiment with circuits and devices.
- An information center designed to notify students of upcoming events and meetings, commend recent achievements by students and update IEEE members on EE department news and job openings.
- A center with modern office equipment for Student Branch activities and meetings. Plus, new programs including workshops, a computer database of industry contacts and a mentor program that pairs IEEE upper classmen with freshmen.

RE-SEED

Since 1997, the LM Fund has contributed to this program which stands for **R**etirees **E**nhancing **S**cience **E**ducation through **E**xperiments and **D**emonstrations. RE-SEED training has taken place in Massachusetts, Maryland, Colorado, Arizona and Alabama. Many of the retired professionals being trained (consistent with each state's science education standards) are IEEE Life members.

MAKING A TESTING DIFFERENCE. Measuring the impact of any teacher enhancement program on the students is difficult. In 1997, Dr. Zahopoulos (RE-SEED's founder) devised a multiple-choice questionnaire to assess students' critical thinking skills and understanding of some science concepts. The areas

RE-SEED Volunteers
Making A Difference.



tested are contained in the Massachusetts Mathematics, Science and Technology Curriculum Frameworks. In the last two years, 1040 eight grade students have taken the test. Five hundred sixty of them had SEED-trained teachers and 580 had non-SEED trained teachers. The students of the SEED-trained teachers substantially outperformed the students of non-SEED trained teachers, with an average score of 60% versus 47%.

A TESTIMONIAL EXCERPT. "We are very pleased to inform you that Project RE-SEED has been a successful addition to the professional development of middle school science teachers of Montgomery County Public Schools. Since October 1998 the scientists, under the direction of Dave Weiss (IEEE Life Senior), have been working with teachers in eight of our county's middle schools.

"The teachers have reported that interaction with the scientists has increased their own content knowledge and enhanced their teaching. Scientists have worked with small groups of students, given whole class demonstrations, mentored students with science fair projects, and helped teachers prepare for class activities... Since Project RE-SEED's activities have been so successful, we would like to expand the number of volunteers to the program for the next school year..."

Patricia A. Hagan, Middle School Science Specialist & Gerard F. Consuegra, Ph.D. Secondary Science Coordinator (Montgomery County Public Schools, Maryland)

RE-SEED contact info

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

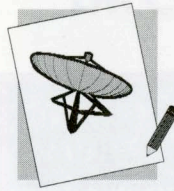
Toll free phone: 1-888-742-2424

Phone: (617) 373-8388

E-mail: reseed@lynx.neu.edu

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

A working format



In 1946-47, the Houston Corporation was engaged in the design and production of the AN/APS-42 radar. This was a Navy contract, except that it was also a joint Air Force and Navy contract. Also, the radars were being planned mostly for Air Force aircraft.

According to the contract, engineers at the Houston Corporation forwarded data to the Navy about the cable wiring between units of the radar and the aircraft. The Navy forwarded this information to the Air Force at Wright Patterson Air Force Base in Dayton, Ohio.

The Air Force promptly redrew the drawings to fit their format, adding changes they felt were required. The first radars scheduled for the C-97 aircraft were to be manufactured by Boeing in Seattle. Thus, the Air Force forwarded the modified drawings to Boeing. The company, in its infinite wisdom, promptly redrew them to fit the Boeing format.

Installing the radar resulted in major problems. There was no correlation between antenna pointing and the sweep on the display; there were sudden changes of performance, and so forth.

I sent a senior engineer to Boeing. He found that all the drawings were now showing all grounds running directly from each connector to the near airframe.

The circulating currents in the airframe as a function of varying loads and structural flexing meant that there was no reliable ground. My senior engineer pointed out to Boeing the problem. He had Boeing rewire the ship according to the copy of the original drawing he had brought with him. Test flights showed good and normal radar performance.

The design engineers felt very good about the radar. It served in all the C-97 aircraft, in the three Strategic Air Command Aircraft, in the aircraft in the Berlin Airlift, and also in the Presidential Aircraft.

Frederick G. Suffield, Life Fellow
(Sequim, Washington)



A radar jam session

My first industrial job was as a radar design engineer for the General Electric (GE) Company in Syracuse, New York. GE designed and produced the AN/SPS-2 and AN/FPS-7 (3-D/search and height finding) radars for the Navy and for the Air Force. These were the same radars.

Somehow, it was assumed that I knew how to design and document equipment, and that I knew what a radar was. My first assignment was to design, build, test and document a continuous, automatic, self test subsystem for the radar receiver. There were no textbooks or mentors for this. It had never been done. Well, it worked. There was a list of standard parts for the program. The list did not include coils. But, I needed a coil. The list did include transformers, so I used half of a transformer as a loading coil. I often wondered what the maintenance personnel thought of this.

After a while, people started talking about jamming radars. Thus, the Navy funded GE to

add some anti-jam features to the AN/SPS-2's. They planned to conduct ECM (electronic countermeasures) versus ECCM (yes, electronic counter-countermeasures) tests. I think the program was called WEXVAL (no clue what this acronym stood for). Well, no one told us what the ECM or the ECCM were to be. GE, meaning me, was told to add whatever ECCM fixes we thought appropriate. We were *not* told to provide any drawings or descriptions. Of course, at that time, no one knew anything about ECCM. I talked to several "brains" at GE and obtained some conceptual ideas. My tech and I built and tested some boxes. We then rode the Northampton while we butchered the radar without having to document the changes we made. I guess it worked, sort of. I am sure the AN/SPS-2 was never the same after that.

Herbert J. Friedman, Life Senior Member
Santa Barbara, CA

Re: Mr. Vasko's interesting article in the last newsletter about German radar

I would suggest that his assumption that the H2S radar was American is incorrect. For a Sterling bomber shot down in 1943, the H2S was most probably British built. As a Canadian Army Radar tech assigned to the National Research Council in Ottawa, I know improvements were still being made to the H2S in 1944.

E.A. Duncan, Life Member
Ontario, Canada

Editorial note: *Lex Duncan is correct as Commander Eur Ing A C Cowin, Royal Navy from Hants, United Kingdom attests in the following text.*

The Royal Air force (RAF) entered WWII with aircraft and training totally unsuitable for mounting a night-bombing campaign in Europe. Post-mission debriefs of aircrew, photo reconnaissance, reports from agents and, finally, detailed analysis of bomb release-point photography of 650 aircraft persuaded the Air Staff and Winston Churchill of these facts. Crews thought they had hit the target when only one in three were within five miles of it! In the more distant Ruhr, only one crew in 10 was within five miles.

The solution was multi-faceted. A hyperbolic area navigation system was set up. A "Pathfinder" force was established to mark targets for subsequent attack by the "ordinary" bomber force. (August 1942: The downed Stirling of No. 7 Squadron was part of that Pathfinder force.) An intersecting beam system was set up from widely separated transmitters in the United Kingdom. It relied on the measurement of the range from the transmitters to aid the pathfinders in marking. The goal was also established to develop the centimetric radar for navigation and blind bombing (H2S).

The key to high-power (several kilowatts) radar transmission at centimetric wavelengths was, of course, the resonant-cavity magnetron. Successful UK trials of a research radar using such a magnetron against both aircraft and surface vessels were achieved in November 1940. In 1941, an experimental 9cm. Airborne Intercept (AI) system was flown in a 360° ground-mapping mode over the city of Southampton. This trial led to rapidly developing a centimetric radar for the

bomber force (H2S) and to a very similar Air-to-Surface Vessel (ASV) radar for maritime patrol aircraft (ASV Mark III). Both designs owed much to the existing AI Mark VIII. US maritime patrol aircraft carried a similar set (ASV Mark V).

By September 1942, service trials of H2S in a Halifax had been completed with encouraging results. Bomber Command sought permission to use H2S operationally as soon as the first two Pathfinder squadrons were ready (No. 7 with Short Stirlings, No. 35 with Handley-Page Halifaxes).

The H2S equipment recovered from the No. 7 Squadron Short Stirlings downed (by a night-fighter) near Rotterdam in February 1943 was taken to the Telefunken works in Berlin. (The Short Stirling was the least capable of the three heavy bombers the RAF used in terms of payload and operational ceiling. This was less critical when acting in the Pathfinder role. (The other two aircraft were the Avro Lancaster and the Handley-Page Halifax.))

After some initial exploitation, a "Rotterdam Commission" was formed. They met for the first time at the Telefunken works on 22 February 1943. Telefunken was instructed to manufacture: a) Six working copies for use in trial tests. (No display had been recovered. From subsequent events, it is clear that they were also tasked with

Dissecting the lexical background of H2S

The designator "H2S" according to RAF Official History is based on the first letters of "Home Sweet Home." It thus reflects the understandable wish of the aircrew to return to their base.

R.V. Jones, however, gives a more detailed explanation. The designator allocated by the Telecommunications Research Establishment (TRE), the developers of the radar, was originally TF (for Town Finding). R.V. Jones suggested to Professor Lindemann, (widely known as "The Prof." and Churchill's scientific adviser), that TF was naive from a counter-intelligence viewpoint. It was, too, indicative of the radar's role.

Lindemann visited TRE seeking a new designator from the development team. The team recalled an earlier meeting with Lindemann. At that time, he had criticized their lack of urgency in tackling the mapping radar task. He had ended with the comment, "It stinks!" This suggested to them a new title, H₂S, for hydrogen sulfide. A gas that smells like rotten eggs. When this suggestion was later put to Lindemann, he sought the reason for this designator. (Or, he perhaps wished to check that the designator did not reveal its intended role.) A quick-thinking member of the TRE team came up with "Home Sweet Home" which satisfied "The Prof."—ACC

War stories (continued)

proposing a suitable display. These would possibly be inscribed: "Das Rotterdam-Gerät," i.e. The Rotterdam apparatus or "gadget." *Note:* This was the name used in the intelligence reports subsequently issued. In many references, the name has been applied more generally to the set originally recovered.); b) A simple detector set for H2S to be called NAXOS; c) A direction finding set to be called KORFU.

On 1 March 1943, the original H2S equipment held by Telefunken was destroyed in a RAF attack on Berlin. However, a Pathfinder Halifax bomber from the No. 35 Squadron was brought down in Holland that same night. Very similar evidence was recovered from this aircraft; again, no Plan-Position Indicator was available. However, the individual "black-box" numbering and cabling showed that there were at least two other units mounted in the front of the aircraft. The H2S radar was fitted to aircraft of the US 8th Air Force in Europe in the autumn of 1943.

A. C. Cowin, Life Member
Hants, UK

FYI

I was, of course, only a schoolboy when these events occurred. Some material was learned in my service career. Otherwise, I have relied mainly on published material.

- Key to the whole story must be R.V. Jones' 1978 book, "Most Secret War—British Scientific Intelligence 1939-1945," published in the US (as I recall) as "The Magic War."

- The operational side of the Royal Air Force activity in Bomber Command and Coastal Command is well-summarized in Vol. 2, "The Fight Avails," by Denis Richards and Hilary St. G. Saunders. It is part of the three volume official history series: "Royal Air Force 1939-1945." It was first published in 1954 but there is a more recent second edition.

- The electronic warfare aspects are well covered in two books by Alfred Price: 1) "Instruments of Darkness" published by Macdonald and Janes in 1967.

- 2) "The History of US Electronic Warfare, Vol. I (The Years of Innovation—Beginnings to 1946)" published by the Association of Old Crows in 1984.—ACC

Coming soon

to a [IEEE web page](http://www.ieee.org) near you—



The finishing touches are being made for the web pages concerning Life members and the LMs Committee's activities. They should be accessible by September 1999, if not sooner. And when checking <<http://www.ieee.org>> to see if they're ready, take a look at the other sundry IEEE offerings.

Conference Registration Policy 10.1.15.

REGISTRATION FEE REQUIREMENTS (from the IEEE Policy and Procedures Manual 1999)

One benefit of IEEE Life Membership is reduced conference registration fees. This benefit is specified in the *IEEE Policy 10.1.15. Registration fee requirements*. The relevant excerpts of the policy are highlighted in red.

"IEEE solely sponsored and co-sponsored conferences, must have a member/nonmember individual registration fee differential, whether paid in advance or at the door. The amount of the differential must be in the range of 25% to 50% above the member price, the exact amount being set by each Conference Committee. There shall be no fee differential among members of the IEEE based on membership in sponsoring IEEE entities.

"There must be a reduced fee, waiver of fees, or fee differential for student members. Reduced fees, waiver of fees, or fee differential for unemployed IEEE members, retired members and Life Members, and for special registrants (e.g., guests, speakers, and exhibitors) are permitted at the discretion of the Conference Committee. **The individual registration fee for retired members and for Life Members must be no more than that for Students.**

"At the discretion of the Conference Committee, the IEEE member registration rates may apply to members of non-IEEE co-sponsoring, cooperating organizations, or sister societies."

Because this policy only became effective this past January, some conference registration officials may not be familiar with it. Also, conference registration fees are often established years before the conference date. Thus, fees may have been set before this new policy came into being. However, any previously established registration fees notwithstanding, this new policy is now in effect and should be followed.

For in-person registration at a conference, we suggest bringing your Life Member IEEE membership card and the above policy. Having a copy of the above policy excerpt may help in resolving any potential misunderstanding.

Irving Engelson, Life Fellow
i.engelson@ieee.org

Note: Since most of us are retired, we typically attend conferences to keep up with the profession, and interface with friends and colleagues. We normally do not need the conference proceedings. (The greatly reduced registration fee often does not include the conference record.) Obviously, those Life members who continue to be employed need the conference proceedings. Thus, they should realize that this reduced fee benefit is for them, as Life members. It is not intended to be a subsidy for their employers.

Internet for the chronologically challenged

Compiling "members' favorite sights"

Have you taken a look at the IEEE home page at <<http://www.ieee.org>> lately? It has an entirely new look, much more consistent with what other organizations are doing these days. As you might expect, it provides links to just about everything that you would ever want to know about IEEE: membership, products and services, conferences, how the IEEE is organized, etc. On 17 April 1999 (the last time I looked), there were links to four hot topics. They were 1) the debut of the *Spectrum* Conference Companion online service; 2) the virus protection feature of the e-mail alias service; 3) a *Spectrum* article on Java vs. Windows CE and 4) an *IEEE Proceedings* article on molecular-scale electronics.

This is good stuff. But, it is not likely to make the IEEE homepage your favorite starting place for surfing. IEEE volunteers realize this fact. The Electronic Services Steering Committee and the Electronic Products Committee met jointly this past February in Savannah (GA). One challenge we talked about was promoting member visits to the IEEE home page. The workshop participants were a pretty serious bunch. (I hesitate to say they were nerdy.) Their focus was making the IEEE home page THE place to go for electro-technology information. A worthy, albeit a one dimensional, objective.

My view is that the members in general, and Life members in particular, have much broader interests. Sure you would like to keep up with what's happening in your old technical field. However, you probably are not going to at the exclusion of all the other great stuff out there.

One web site that I am much more likely to click on from my "favorites" list than <[ieee.org](http://www.ieee.org)> is the <[drudgereport.com](http://www.drudgereport.com)>. I am no particular fan of Matt Drudge and his own brand of gossipy news. But his low budget web site provides links to just about every freely available English language news source and columnist in the world. At my last count, there were links to 18 news services, 63 media outlets and 70 columnists. These publications and writers are from both ends of the political spectrum.

In effect, Matt has put together a one-stop portal for what influential people are saying on current topics. This is obviously a great formula because it brings an enormous number of eyeballs to his site. The reported rate of hits would qualify him as a \$4.3 (US) billion business if he offered his company as an IPO in this crazy internet market!

What can the IEEE learn from this? Well, I think that they should lighten up. They need to recognize that members (and prospective members) have interests well beyond the technical business that pays the rent or provides the pension. My idea is that we emulate Matt, but with more varied subject matter. This would help bring more eyeballs to the IEEE web site. I propose compiling a list of IEEE favorites. It would be based on nominations from the 100,000+ members regularly surfing and finding the best information sources.

The list could include anything: stock quotes, weather, maps, travel, financial news and so forth. If enough members name a particular site, we would include it. Life is too short to individually make our own exhausting search for the best. Why not use the power of our diverse membership to seek and to share the best information? All we would need to make the list available is a simple link on the IEEE home page. We could use a catchy title, such as "Members' Favorite Sites." No big deal.

What do you think? Please let me know. Is this a completely crazy idea for increasing traffic to the IEEE home page? Those who pass by might well stop and learn something new about what the IEEE has been doing. For example, the E-mail alias program you can join free of charge. It blocked 2800 virus infected attachments from being forwarded in the past year. This year it appears to have stopped the dreaded Melissa virus dead in its tracks. That's good news that you might miss.

Fred Andrews, Life Fellow
f.andrews@ieee.org



<http://>



<http://>



<http://>



Stopping services

Those who wish to have all services stopped should contact IEEE Member Services (use the NJ address on this page). Phone calls are accepted but submitting this request by fax, e-mail or snail mail is preferred. This way IEEE has something for its records.

If you are doing it as a favor for someone else, submit the member's name, number, grade, address, change date and your connection, e.g. Section Chair. To reach IEEE Member Services via e-mail <member-services@ieee.org> or fax: 1-732-562-6380.

Our mailing list

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

Submitting articles

We welcome articles for this newsletter. In particular, we seek articles about projects initiated at the Section and Region level by Life members. 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. If you wish to discuss a story idea beforehand, you may contact me by e-mail <jo.martin@ieee.org>. Or, you may call Mary Campbell, Managing Editor, at (732) 562-5526.

The deadline for possible inclusion in the next newsletter is 15 October 1999. Please include a phone number or an e-mail address.

John E. Martin, Editorial Liaison

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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 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, P.O. Box 1331, Piscataway, NJ 08855-1331, Fax: (732) 463-3657 or E-mail to : <life-members@ieee.org>.

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