



the Life Members newsletter

In my last editorial, I tried to cover two main points. First I called to your attention the delay we had in mailing the Profile Forms. The second item had to do with involving our non-North American members in the Life Members Committee. The newsletter not only generated a number of responses, your letters made up a large part of our agenda at our April 7 meeting. With regard to the Life members who live outside North America (NA), a number of suggestions were proposed, all of them interesting, none of them easy. One general suggestion was to invite Life members from outside NA to attend our meetings when it is convenient to their travel plans. Our next meeting will take place in Piscataway on Monday, October 30, 1995.

Another suggestion was to have Regional Life Members Committees plus some type of communication network for the exchange of ideas and information. At least two of you suggested using our technology (the Internet) to conduct much of our business thereby eliminating distance as a barrier. We are asking Frank Moore in Piscataway to look into the possibility of establishing a "LM" Bulletin Board. With regard to having Regional Life Members Committees, that makes sense, but the stimulus has to come from the Life members in the Regions themselves.

We received two letters with comments and suggestions relative to education. One has been sent on to the Education Activities Vice President. The second included a letter to be published in the Computer's Open Channel. But beyond these two letters is the ongoing undercurrent of concern for education. I suspect we will hear more.

Not all the letters were complimentary. There are some problems that need and will receive attention. One individual was unhappy with the tone of the Profile letter. Another felt that the IEEE is constantly asking for money, which I suppose it is, but then, who isn't these days?

One issue that might affect some non-NA members is the new Ground Rules for Life membership that appears again on page 8 of this newsletter. Some of our non-NA members expressed concern that they would be at a disadvantage regarding their eligibility date. We have assigned someone to examine the algorithm and report back in October.

My first editorial for this newsletter was an interesting experience. Please keep those lines of communication open. We are anxious to hear from you with suggestions, complaints or even, in those rare instances, compliments.

Theodore S. Saad, Chair
Life Members Committee

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Spring/Summer 1995



War stories

Paul D. Andrews

The winter of 1918-1919. It was believed that electric wiring brought in static. Thus, no electricity was permitted in the receiving shacks. The only light at night was by kerosene lantern and the heat was provided by kerosene heaters. The fumes on sub-zero nights were terrible. As the barracks had not been built, everyone but the officers lived in tents heated by kerosene stoves. The mess hall had been started but had no roof so you drank your coffee fast before it froze.

We stood watches of six hours on and twelve hours off. Most of the transmissions were in five-letter code at about twenty words per minute which was all we could handle. One station had a machine sender at about fifty words per minute. To handle this, we used an oscillograph-like photographic recorder made by the General Electric Research Laboratory. We had one operator who could copy fifty words a minute so when the recorder failed, the call went out for Benny Suter.

M. Lloyd Bond

And then came THE WAR. On December 8, 1941, I volunteered to the Navy. Because radio (soon to be called "electronic") engineers were so scarce, I was an ensign! My work was almost entirely engineering. And, in my four plus years in the Navy, I was never aboard a ship (except for one three hour visit). My toughest challenge was setting up a specialized navigation radio equipment training school, and becoming its Superintendent of Training. Being quite inexperienced in management, I stepped on lots of toes and ruffled a lot of feathers. However, I gradually got promotions in spite of myself.

Edmond S. Klotz

My orders were to proceed to Knoxville, Tennessee. Upon arrival at the train station, I was to call a telephone number for further instructions. I wound up at Oak Ridge and, after about a week of interviews and killing time, I boarded a train for Lamy, New Mexico. Once there, I again called a phone number for further instructions. I spent the next two years at Los Alamos as a member of the Special Engineering Detachment assigned to the Manhattan District Corps of Engineers.

My assignment was to design and test an antenna for "Fat Man," the name by which the Nagasaki bomb was known. I used a full-scale model of the gadget and made radiation pattern measurements across a canyon. The process was time consuming. Patterns were measured on a point by point basis using a remote source that was anything but stable and had to be hand tuned to vary frequency. Eventually, an acceptable design was completed and the war came to an end.

Rowland Medler

The war intervened and I took two moonlighting jobs: teaching basic electronics at a local trades college, and teaching an electronics course under the Engineering Science and Management War Training Act at the now East Tennessee State University.

When my draft number came up, the military drafted me, the teacher, although my students had been deferred for the thirty-nine week course. In disgust I volunteered to the Navy. I promptly flunked the physical exam due to an old hernia suffered in the cotton mill. The draft board was standing on the depot platform when the train returned me home. I was promptly hustled off screaming and kicking to Chattanooga to be inducted.

Excerpted from *Legacies*. To order the book, see page 7.



Submitting proposals for funding

Have a proposal for funds you would like to direct to the Life Members Committee? Please use the format shown below. To be considered for funding, a project should have a clearly defined objective and should support one of the following:

- A. Young electrical engineers and potential electrical engineers.
- B. IEEE Life members and other similarly mature members who lack Life membership tenure.
- C. History of electrical engineering.

Generally scholarships are excluded, but may be considered in special circumstances.

Format

- I. Executive Summary
 - A. Synopsis of the Project and a succinct statement of why you feel it should be funded by the LMC.
- II. Detailed Proposal
 - A. Objective
 - B. Description
 - C. Budget
 - D. Funding Support Requested
 - E. Entities Involved
 - F. Expected Outcomes
- III. Participating Individuals
 - A. IEEE Staff Personnel: If yes, what specific personnel (or entity) are involved and what is the estimated level of effort?
 - B. IEEE Volunteers: Specific individuals, group, etc. Is there a commitment to the project: Estimated level of effort?
 - C. Professional Biography: Brief summary of the professional experience of the lead personnel would be helpful in making the decision.

Historical notes

(on projects the IEEE Life Member Fund helps sponsor)

1995-96 Graduate Fellowship. This Fellowship encourages graduate students to pursue their studies in the History of Electrical Technology. David Morton was awarded the 1995-96 Fellowship. He is writing a dissertation on the history of magnetic recording.

IEEE Life Members' Prize in Electrical History. The award goes to the author or authors of the best article published in the previous year on the history of electrotechnology and its practitioners. The selection committee has been formed and are beginning to read the papers. The award will be presented at a banquet in October.

Power and Control Project. This is the largest project presently being conducted by the IEEE History Center. The project includes three components: a) production of a three-volume history on electrical technology; b) conducting 200 oral history interviews which are taped, transcribed, edited and made available to researchers, and c) ensuring that the documentation of the history of electrical technology is preserved. The oral interviews are six months ahead of schedule. The writing of the book is approximately one month behind schedule.

Transcription of Oral Histories. This is a two-year project to transcribe and edit the History Center's backlog of approximately 50 oral history interviews, and to place the majority of the Center's almost 200 interviews on the IEEE's file server. The History Center has lost four interviews because of tape deterioration. Thirty-three of the 50 tapes have been transcribed. The project is currently on schedule. Abstracts of the interviews will be put on the World Wide Web. The interviews will be made available via auto-retrievable files.

The Fund also supports the Student Prize Paper Contest and Donald G. Fink Prize Paper Award among other projects.



Keep in mind

"I think adults are more afraid of youth now...than at any time in our history," states Shirley Brice Heath, Professor at Stanford University (CA) and co-winner of the \$150,000 Grawemeyer Prize in Education, provided by the University of Louisville (KY).

The other co-winner, Professor Milbrey McLaughlin, says the award points out "the irony of whose perspective counts." When adults talk about the problems of today's youth, they invite experts, such as herself, but "the youth perspective itself is never invited to the table."

However, the youth would like to participate. When asked, "they [students] wanted a conference where they could talk to 'the suits'—educators, foundation officers and police," states McLaughlin.

The needs and abilities of youth (ages 8 to 18) boil down to two R's—responsibility and relationships. "Challenge is essential," Heath says, "And kids don't like adults creating challenges and giving it to them piecemeal or as a form of punishment. They want to help make and break the rules." Teenagers who "can't pass a fill-in-the-blank test in English class," Heath states, can and do write press releases for their theater groups or bands.

The key to instrumental change is wizards. (See definition.) Adults have to support environments that enable youths rather than "fix them."

Career reality check

A famous Zen Buddhist text states that masters in the art of living make little distinction between work and play, labor and leisure. Yet how inadequately our society assists young individuals in selecting the "labor or work" in which they may be involved for the rest of their working lives. This became very evident to me during my presentation to a class of high school seniors.

The questions regarding work performed by engineers were overwhelming. Most students had no concept of what mechanical, electronics, manufacturing or patent engineers do. At a time of their lives when serious thought should be given to selecting a career, they were ill-prepared to make an intelligent decision. Why? Because they had never been informed about the day-to-day aspects of engineering work. In fact, they had little knowledge about the nature of work for most other disciplines as well.

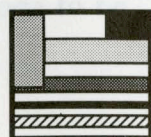
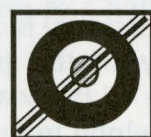
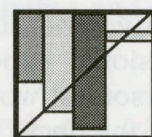
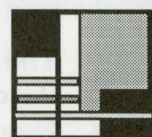
Ignorance concerning characteristics of careers is not only a handicap to the individual but to our society as well. Competent but dissatisfied individuals often find themselves in the wrong profession too late to effect a change. No other activity of such importance is as neglected as career planning.

The suggestion has been made that an organized educational program be developed for high schools relating to "Career Planning." The program should not only describe engineering work but other professions and careers as well. IEEE could support such a program in two ways: first, the IEEE could assume a leadership role in promoting this concept; and, secondly, the IEEE could accept the responsibility of preparing course materials relating to electrical and computer engineering. The results should produce not only more satisfaction to individuals but a stronger technical force as a whole.

Roy L. Kaufman,
Life Members Committee

Wizards. Charismatic leaders who care deeply about youth and treat them as whole individuals.

—Professor Milbrey McLaughlin, head of Stanford University's Center for Research on the Context of Secondary School Teaching



What is an engineer?

One primary function of the Life Members Committee (LMC) is to participate in programs designed to counsel potential engineering students. In keeping with this charge, the LMC reviewed a shell presentation that was prepared by the IEEE Precollege Education Committee.

This professionally packaged program consists of general instructions to the volunteer speaker, slides and a script around which the speaker can build his/her talk. The instructions include some obvious and fundamental speaker hints: assemble your notes and time your talk in advance; speak to the teacher to learn specifics about the audience; have enough handouts, etc. Most importantly, gear your presentation to what is appropriate for the age level.

For instance, children from K-5 will believe what they see; they will see parts, not the whole; they are anxious to please adults. Middle School or Junior High School (grades 6-9) students can conceptualize; they are developing an understanding of ethical principle; but they are also self-conscious and concerned about how they are perceived by others. High School (grades 10-12) students, can be apathetic; may rebel against authority, but, do understand cause and effect, and have ethical concerns.

The package includes a fairly complete list of such characteristics and should prove helpful in developing each talk. This shell presentation stresses the fact that this is only a start. The presenter should also include his/her own personal history and experience.

The slides and script use colorful pictures and text. Almost immediately, a slide shows a modern locomotive providing the opportunity to dispel the notion that all engineers drive trains. The text talks about the various areas of engineering and the subjects that should be studied in high school.

Speaking before others is not for everyone. However, this package goes a long way to increasing the comfort level for those who wish to do so.

Stanley H. Horowitz
Life Members Committee

Compared to other large countries, U.S. students rank last in science and math. What's more, they have shown little improvement in these two subjects over the past two decades.
Source: Council on Competitiveness.

Only 15.3 percent of all U.S. undergraduate degrees are in science and engineering compared to more than 20 percent in most European nations. *Source: Council on Competitiveness.*

The majority of Stanford students have had science and math in high school. Many of those who do not choose science majors have the skills, but they have voted not to use them because they did not find (science) sufficiently engaging.
—Virginia Walbot, Biologist, Stanford University, (CA).

To order

The "What is an engineer?" slides and script are available for the cost of reproduction, \$20 (U.S.). It is recommended that each Section acquire a copy for use by its members. Individual members can order copies as well. To order, please contact Ann Hartfiel at the IEEE-USA office (202) 785-0017 or a.hartfiel@ieee.org.

Nursing homes — make sure you have a say

According to the U.S. National Institute of Health, approximately 30 percent of all individuals will spend time in a nursing home environment. Many other options are available and should be explored first such as meals on wheels, adult day care and alternative housing arrangements; however, the day may come when the nursing home is your only choice.

Typically, frail individuals who require daily medical care or extensive rehabilitation are candidates. Nursing homes "cater to people who need oxygen, tube-feeding or catheters or who are mentally impaired by a stroke or Alzheimer's disease," according to *The Wall Street Journal*. This state often comes unexpectedly. Thus, your family ends up deciding where you'll live, most likely under a great deal of stress.

Good nursing homes often have long waiting lists so start looking now. Check your phone book; ask your doctor, the local hospitals; people in the community who have relations in one, or your area's Agency on Aging for referrals.

Narrow down your choices first with phone calls and gathered information. Then you should set up actual visits.

Things to look for during the visit: Respect for the residents should be evident. Treatments and activities should be tailored to each individual's needs.

Questions to ask yourself: How do the rooms look? How do they smell? What does the

food look and taste like? Does the place's environment encourage socializing? Are the facilities up to code? Do the individuals running it have current licenses? Definitely, you should also drop in one or twice unannounced.

This way you can get a feel for life there when the people in charge are not "putting on a show."

Financial considerations will play a part. Ask for help in understanding what different plans and arrangements will mean under various circumstances. Look into insurance plans for long term coverage if you haven't already.

For more information. The American Association of Retired Persons (AARP) has useful information on the subject. You can find AARP easily on America Online under the Lifestyles department.

Also, the Eldercare Locator (1-800-677-1116) helps families and friends locate alternative community services. When you call between 9 a.m. and 8 p.m. (Eastern Standard Time), all you need is your zip code.

Just in case they need to narrow down the choices, be prepared with a brief description of the problem or type of assistance you are seeking. They will provide you with the telephone number(s) of the appropriate state or local agency.

Boning up

Osteoporosis creates thin, brittle bones that can easily fracture. Taking calcium helps reduce this risk. The National Institute of Health recommends 1,500 milligrams daily for men and women, 65 and older. However, there is more to it than just taking a calcium supplement.

According to the *Mayo Clinic Health Letter*, calcium absorption decreases as you get older, especially after 65. Also, your body makes less vitamin D as you age. (Vitamin D is needed to increase the actual amount of calcium that ultimately reaches your bones.)

What to do? Eat foods that are calcium fortified. For instance, a bowl of calcium-fortified cereal with a cup of skim milk provides about 500 milligrams. Make sure the skim milk has Vitamin D added.

If need be, take a calcium supplement not exceeding 600 milligrams in dosage. (Your body absorbs calcium best in small doses.) The *Mayo Clinic Health Letter* also recommends avoiding supplements made from bone meal or dolomite. They may have lead, mercury or arsenic contaminants.

Bearing down

Regular weight bearing exercise also contributes to keeping you up and about. In an U.S. Agricultural Research Service study, 100 volunteers in their 80s and 90s doubled their leg strength in 10 weeks. They also became more active in general.

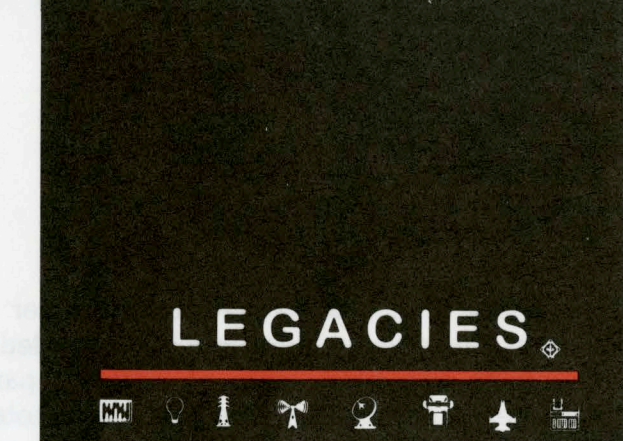
Down on paper at last!!

How one Life member's technical skills helped the Juarez police catch a gang of bank robbers. —Paul Burk, page 146

How another Life member prevented his lab's parent company from shutting down the lab with "creative" reporting. —J. Rennie Whitehead, page 166

How one Life member's innovation caused him to be fired from his job ... by his own father. —William H.J. Kitchen, page 94

Legacies is full of anecdotal glimpses of how technology has been created and used this century. Compare notes with 139 IEEE Life members on education, military and job experiences. Complimentary to Life members, you just pay the shipping and handling costs.



Here's what your peers have to say:

I have been enjoying it "bit by bit."... I would like to purchase a copy of "Legacies" to donate to the local high school library.

The complimentary copy has been received and has become a treasure in my library.

You have produced an attractive and readable work that is a worthwhile contribution to the history of electrical engineering. I am enjoying it very much.

Please rush me my copy!!

Product # JP27023

Return form to:

IEEE Regional Activities Dept.
445 Hoes Lane, PO Box 1331
Piscataway, NJ 08855-1331

or call 1-800-678-IEEE (4333)

Please send me "Legacies."

I am a Life member, enclosed is \$6.00 (U.S.) for shipping & handling.

I am not a Life member but would like a copy, enclosed is \$15.00 (U.S.) which includes shipping & handling.

Member Number _____

Name _____

Street _____

City _____ State _____ Zip _____

Country _____

Please indicate method of payment:

Check Charge

Mastercard

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Diners Club

Expiration Date: _____

Credit Card Number: _____

Signature: _____

Please make checks out to:
IEEE Life Member Fund

Ground rules for Life membership

Before 1993, qualifying for Life member status was based on an algorithm that included the member's age plus years of IEEE (or parent societies) membership. The sum had to total at least 100, with the caveat that the IEEE member had to be at least 65.

In 1992, this qualification process was reviewed and changed. It was decided that Life membership should be based solely on years of membership, regardless of the candidate's age. The requirement was set at 40 years of membership. However, the change is being phased in over five years in order to "grandfather" those members who were approaching Life membership via the then-existing (100, minimum 65) algorithm.

Beginning January 1, 1998, the only criteria for Life membership will be 40 years of IEEE (or AIEE/IRE) membership. Until then, however, the year-to-year transition, with the year of eligibility and the age/years of membership indicated, is as follows:

- 1994:** 100 algorithm or 64/36
- 1995:** 100 algorithm or 64/36 or 63/37
- 1996:** 100 algorithm or 64/36 or 63/37 or 62/38
- 1997:** 100 algorithm or 64/36 or 63/37 or 62/38 or 61/39
- 1998:** 40 years of membership

1995 Life Members Committee

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Who is on the mailing list?

Surprisingly enough, Life members are not the only ones who receive this newsletter. The Life Members Newsletter is also distributed to IEEE members 65 years and older, retired IEEE members 62 thru 64, and special boards and committees.

Where to write

Any ideas you would like to share? Opinions you wish to make known? Questions or problems that require assistance? Simply 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.

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