UNITED STATES ACTIVITIES BOARD

USAB

1987 REPORT

IEEE

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.
Introduction

To build a rewarding career, electrical and electronics engineers must first complete a rigorous education and then remain current on technological advances in their field. They are constantly challenged to apply technology in socially constructive ways.

Yet, there are many policies and issues affecting their profession in which they have no voice. The United States Activities Board (USAB) mediates and reports on these policies and issues on behalf of almost 235,000 IEEE members living in the United States.

With a budget of more than $2.5 million, USAB conducted targeted programs to support the professional well-being of electrical engineers and the constructive application of technology for all people. The budget includes expenditures on USAB's work with an engineering umbrella group, the American Association of Engineering Societies (AAES). USAB's efforts on behalf of U.S. engineers are magnified by cooperation with this organization of 22 societies representing more than half a million engineers in industry, government, and academia.

The United States Activities Board operates in three areas. The first encompasses those efforts aimed at influencing technology policies and practices propounded by the U.S. government. Included are such technology-related issues as energy resources, communications and information policy, health care engineering, international competitiveness, and technology transfer.

The second encompasses efforts to support or reform state or national policies and practices that affect the livelihoods of electrical engineers in the United States. Efforts include resource utilization, continuing education, and pension reform.

The third consists of efforts to bolster the professional standing and careers of U.S. IEEE members. Efforts include job data banks, career maintenance and development activities, and awards and recognition programs.

This summary report describes activities in all three of these areas, beginning with efforts aimed at influencing technology policy and practices propounded by the U.S. government. Additional sections are devoted to briefings, workshops, conferences, and multiyear planning. A single asterisk following an item indicates that it can be obtained without charge from the IEEE Washington Office (telephone 202-785-0017). A double asterisk indicates that an item can be purchased from the IEEE Service Center (telephone 201-984-1393).

EFFORTS TO INFLUENCE TECHNOLOGY POLICY PROPONDED BY U.S. GOVERNMENT

'IEEE Federal Legislative Agenda'

The USAB National Government Activities Task Force produced an updated version of the IEEE Federal Legislative Agenda* for the 100th U.S. Congress. The Agenda provides IEEE-related positions on such diverse topics as retirement income benefits, professional careers of IEEE members, intellectual property, computers and communications, and technology transfer. The publication has been distributed to all members of Congress with a cover letter from Carleton A. Bayless, IEEE Professional Activities Vice President and USAB Chairman.

Presenting Technical Papers

In October, the U.S. Department of Defense (DOD) issued a final rule determining how technical papers prepared under DOD auspices can be reviewed and presented at technical conferences. Between 1985-86, IEEE and other societies urged the Defense Department to develop procedures that would limit the time officials take to review papers. IEEE and its counterparts expressed concern that their members were often denied access to needed information because of long review cycles.

Preserving Semiconductor Technology

In 1987, the United States Activities Board urged the U.S. government to act immediately to implement long-term solutions to research and development problems in both semiconductors and gallium arsenide components. In position statements* sent to the President and his Cabinet, USAB stressed that losing the lead in semiconductor technology threatens key American industries, including the U.S. supercomputer industry. USAB suggested that foreign countries gains in gallium arsenide technology could hurt the U.S. computer and communications industries.
With the objective of avoiding semiconductor overproduction and of opening markets to the United States, USAB recommended placing temporary tariffs on imported semiconductors from Japan, in addition to making changes in U.S. tax policy and laws. As a result of efforts by USAB and others, temporary tariffs were imposed.

The Defense R&D Committee, also a joint group of TAB and USAB, developed concepts for a series of industrially-managed Centers of Excellence in advanced electronics materials and persuaded the Defense Advanced Research Project Agency (DARPA) to include a prototype center in optoelectronics as one of three new initiatives.

The Engineering R&D Committee, another joint TAB-USAB group, developed a position statement on U.S. Engineering R&D,* and is working on a position on recommendations for enhanced engineering education. The committee also endorsed National Bureau of Standards (NBS) programs in computer science and technology.

The Energy Committee, also a joint TAB-USAB group, testified on fusion as well as U.S. Department of Energy electric energy systems and energy storage programs. In addition, the committee produced materials and conducted seminars on the U.S. energy program and on fusion power for Congress, IEEE membership, and the public at large.

**IEEE Congressional Fellows**

USAB sponsors the IEEE Congressional Fellows program which selects electrical and electronics engineers and allied scientists to complete one-year fellowships on the personal staffs of individual Senators or Representatives and on the professional staffs of Congressional Committees. Serving in 1987 as

[Image of two men with text: "1987 IEEE Congressional Fellows Steinar Dale (left) and Lawrence P. Grayson chat during break in March 1987 Briefing on Federal Electrotechnology R&D Funding on Capitol Hill.

EFFORTS TO SUPPORT STATE OR NATIONAL POLICIES AFFECTING LIVELIHOODS OF U.S. ELECTRICAL ENGINEERS

Opposing Section 1708 of "Tax Reform Act"

In response to member concerns, a major effort was launched in 1987 to "roll back" Section 1708 of The Tax Reform Act of 1986. According to USAB leaders, Section 1706 disrupts the tax status of consulting engineers, computer specialists, and individuals and firms providing technical services.

USAB found the section detrimental to problem solving, productivity, innovation, and new business development. Through Legislative Alerts* to IEEE members and the press, an advertisement in the trade press, work with other interested
groups, and contacts on Capitol Hill, USAB sought a moratorium on or a repeal of Section 1706.

Let's Roll Back Section 1706

According to the 1987 IEEE U.S. Member Salary & Fringe Benefit Survey, the median salary of IEEE members is $53,889. The survey, which has been purchased by some 1,400 individuals, also notes that IEEE members living in Santa Cruz, CA, and Atlanta, GA, fare the best "across the board." In addition, the Salary & Fringe Benefit Survey has been distributed free of charge to regional Labor Department offices assisting Federal officials in determining prevailing wages for immigrants. The survey results have been widely covered by publications in and out of IEEE.

Encouraging Pension Portability

USAB's Pension Committee endorsed legislation in the U.S. House of Representatives considered to be an important first step in establishing portability for vested pension benefits. The legislation would permit employers to transfer the accumulated assets of former employees to accounts that are similar to Individual Retirement Accounts and simplified employment pension plans.

Combating Age Discrimination

USAB's Age Discrimination Committee joined other interest groups to obtain Senate hearings on a lack of responsiveness of the Equal Employment Opportunity Commission (EEOC) in enforcing the law on age discrimination. In September, USAB's chairman provided written testimony to the Senate Special Committee on Aging that older engineers are "particularly hard hit by age discrimination in employment" because their technical knowledge and experience is often underestimated.

1987 IEEE U.S. Member Salary & Fringe Benefit Survey

In 1987, USAB inaugurated a new employment registry, the Self-Employed Engineers Registry, or SEER. The registry is designed for semiretired consultants, presently employed but aspiring entrepreneurs, and full-time or part-time consultants and contractors — all of whom can store their resumes in a computerized data base. The SEER service, operated under contract with Career Technologies Corp. in Andover, MA, supplements the already available Professional Engineering Employment Registry (PEER).

IEEE members can gain access to both services by writing to Career Technologies and by dialing into the firm's computer with a touch-tone telephone or personal computer and modem. During 1987, approximately 8,000 IEEE applicants were contacted by prospective employers using PEER. Brochures* are available describing both services.

BRIEFINGS, WORKSHOPS, CONFERENCES

With five councils and 50 committees and task forces, USAB-volunteer leaders met on scores of occasions in 1987 to plan and implement professional and technology policy activities. In September alone, almost 30 meetings were held; in October, USAB led a leading role in several conferences.

In 1987, 34 Student Professional Awareness Conferences (S-PACs) were held to acquaint engineering students with professional issues in

created in 1987. These included awards for Distinguished Literary Contributions Furthering Public Understanding of the Engineering Profession and Distinguished Contributions Furthering Engineering Professionalism.

Stephen H. Unger, professor, ethicist, and adviser to the USAB Ethics Committee, was chosen to receive the USAB Award for Distinguished Contributions to Engineering Professionalism. The award, USAB's most prestigious, is given annually to an individual for "expanding public understanding of the engineering profession."
their field. Since 1979, 171 S-PACs have taken place.

Major briefings, workshops, and conferences held in 1987 included:

- **February:** 1987 IEEE U.S. Technology Policy Conference on "Engineering Education Policy to Enhance U.S. Industrial Productivity" (Digest*)
- **March:** IEEE Briefing on Federal Electrotechnology R&D Funding In Fiscal Year 1988 (Document*)
- **May:** Breakfast Meeting of the Technology Policy Study Task Force/House Science, Space, and Technology Committee
- **September:** 1987 National PACE Workshop (Report*) and Symposium on Policy Issues in Information and Communication Technologies in Medical Applications (Publication*)
- **October:** Fifth Biennial IEEE Careers Conference on "The Engineer's Life and Career in Today's World" (Record**)
- **November:** Symposium on "Ethical and Economic Issues in Biomedical Engineering Technology" and "Technological Advances in Models for Biomedical Research."

**MULTIYEAR PLANNING**

Under the leadership of USAB Chairman Bayless, Vice Chairman Edward C. Berntoli, and Professional Activities Staff Director Leo C. Fanning, USAB developed Strategic, Tactical, and Operational Plans. The **Strategic Plan** specifies USAB's long-term goals and objectives. The **Tactical Plan** pinpoints possible activities from 1988 to 1992. And the **Operational Plan** provides a short-term guide for completing these activities. In addition, USAB published a six-panel brochure, titled 'IEEE U.S. Professional Activities,' and revised its slide-tape presentation, USAB: An Overview.*

**Conclusion**

In conclusion, Mr. Bayless summarized 1987 goals and accomplishments as improved communications with members, enhanced and expanded conference programs, strengthened relationships with other societies, increased influence on career and technical issues in Washington, and improved planning activities.