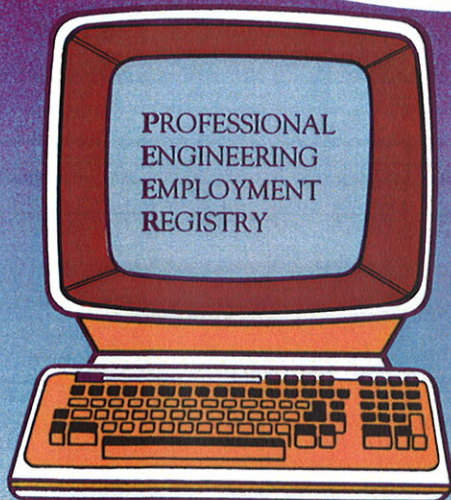


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R E P O R T



**UNITED STATES**

**ACTIVITIES BOARD**

The Institute of Electrical and Electronics Engineers, Inc.

1111-19th Street, N.W., Suite 608, Washington, D.C. 20036



# USAB 1984 Report

During IEEE's 1984 Centennial Year, President Reagan praised electrical and electronics engineers in a special message to the Institute: "You've been and you remain the pulse of America's technological power, the cutting edge of our worldwide technological leadership. You apply the theories and principles of science and math to practical problems, and your work serves as the link between scientific discovery and everyday application. You're the real heroes of high tech, and you have good reason to be proud of your countless achievements . . ."

The President concluded his videotaped message, originating from the Oval Office: "We look to you for innovation and excellence, and you've never let us down . . . We already benefit from a modern revolution in worldwide communications. We can anticipate tomorrow's weather and prepare for it. Space technology has brought one lifesaving breakthrough after another . . . [A]nd none of this would have been possible without the contributions of IEEE members."

In the same year, 1984, IEEE Professional Activities Vice President Russell C. Drew underscored Mr. Reagan's remarks about the contributions of IEEE members. According to Dr. Drew, "[I]t is . . . encouraging to see the numbers of volunteers who give so unselfishly of themselves. These individuals have made the IEEE what it is today."

This Report summarizes many of the 1984 activities of IEEE U.S. member volunteers who seek to enhance the status of the electrical, electronics, and computer engineering profession through their work with the United States Activities Board (USAB) and the IEEE Washington Office. It is organized into the following areas: Centennial Activities; Legislative Activities; Executive Branch Activities; Employment Assistance/Career Maintenance and Development; Conferences; and Communications/Public Information.

## Centennial Activities

During two major conferences held in IEEE's Centennial Year, several USAB volunteers were among those receiving Centennial Medals in recognition of their service to the Institute. At the IEEE 1984 Conference on U.S. Technology Policy, held in Washington last February, Dr. Drew awarded Centennial Medals to Richard J. Backe, Edward J. Doyle, Harold S. Goldberg, and David C. Lewis. At the IEEE 1984 National Professional Activities Committees for Engineers (PACE) Conference last August, Centennial Medals were presented to Charles K. Alexander and Robert A. Barden. The 1984 National PACE Conference was formally designated by USAB as a Centennial event, and the U.S. Technology Policy Conference included special activities recognizing the Centennial.

In addition, last spring, Senator James A. McClure (R-ID) received the USAB Award for Distinguished Public Service. In presenting the award to Mr. McClure in the Senator's Capitol Hill office, Dr. Drew noted his "advocacy of IEEE goals of professionalism in engineering before the Congress of the United States," such as addressing energy needs.

Finally, last summer, USAB approved a motion creating a Centennial Award for Excellence in Pre-College Math and Science. A maximum of six, one-thousand dollar allocations (one per U.S. IEEE Region) was approved to recognize "outstanding Section PACE programs, conceived and implemented for improving pre-college math and science education."

### Sampling of news coverage on IEEE Centennial Briefing for Media, U.S. Technology Policy Conference

#### Nobel Laureate Says U.S. Must Put Dollars Behind New Supercomputers

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G. Wilson, a  
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must greatly  
dies and computer specialists will  
collapse and take years to recover.  
Congressional action is crucial for  
those committed to designing super-  
computers and vital software and  
would feed "into the training of the  
next generation" of those learning to  
design and operate the equipment,  
according to Wilson.

problem of science and industry,  
but also of Social Security, Medicaid  
and defense as well.  
Supercomputers are needed by  
the thousands in such U.S. indus-  
tries as oil, automobiles, chemicals,  
aerospaces, pharmaceuticals, glass  
and film, Wilson told the press on  
the eve of the centennial conference  
of the Institute of Electrical and  
Electronics Engineers.

#### Executives Outline Strategies For Winning High-Tech Race

By Peter Behr  
Washington Post Staff Writer

American companies will recapture world leadership in manufacturing technology, two prominent computer industry officials said yesterday, provided management and employees adopt some dramatically different practices and the government stays out of the way.

"There is no reason for broad pessimism. There is lots that's working well in the United States," said Fajle E. Smith, senior vice president of Microelectronics and Computer Technology Corp. (MCC), a joint research venture by most of the leading American computer firms that is seeking breakthroughs in key areas of data processing and manufacturing technologies.

"I'm optimistic . . . but we mustn't be smug or complacent about the future," added Erich Bloch, a vice president of International Business Machines Corp. and chairman of the Centennial Year.

most resolves," said Bloch. Management must accept the fact that the key to manufacturing competition lies in the quality of the product.

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#### Engineering Schools Archaic, TRW Director Ramo Charges

By Vivian Aglin-Brown  
Washington Post Staff Writer

U.S. engineering schools—the single most critical factor in the nation's struggle to maintain its slipping technological leadership—are nearly understaffed, out-of-date and out-of-touch, TRW Director Simon Ramo said yesterday.

Furthermore, American colleges turn out 70 engineers for every 10,000 graduates, while the Japanese graduate 400 and the Soviet Union

centrally in the international technology race, of permanently strong engineering schools.

IEEE President Richard J. Gowen, citing the "crisis in engineering education," urged Congress to support state governments and local school districts to help improve both college and pre-college science and mathematical education.

Gowen said the problem is not only outdated equipment and the decreasing number of faculty—many

pled with the "poor understanding of many senior engineers about what's happening in the 'real world.'" He said another problem is a basic conservatism that still requires undergraduate courses in circuit theory and machines but teaches nothing about computer communications.

"The qualified people problem has already reached crisis proportions," he said. "Yet the demand for such people is still accelerating."

Richard D. DeLauer, U.S. under-

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## Legislative Activities

With the help of USAB volunteers and Washington staff, the IEEE participated last year in the following legislative activities:

- A notice in *Roll Call*, the Capitol Hill newspaper, signed by IEEE 1984 President Richard J. Gowen, describing the Institute's "call to Congress to help the U.S. increase its leadership in technology and industrial competitiveness..."
- Endorsement of H.R. 3286, *A Bill to Set Federal Standards for Permissible, Pre-Invention Assignment Agreements* that would help eliminate the practice of assigning all employee inventions to the employer even though they are outside the scope of the work performed for the employer, resulting in the creation of a National Commission on Innovation and Productivity
- Support of vesting, integration, and portable pension legislation
- Endorsement of measures in the House and Senate to develop a national cable communications policy, including provisions ensuring the protection of personal subscriber information collected by cable television suppliers
- Maintenance of a database of key events in the implementation of regulations governing technology transfer
- Support of Federal funding for translation of Japanese technical literature
- Endorsement of House legislation providing protection for semiconductor chips
- Support of a Federal program (funded at approximately \$400 million per year) to improve pre-college math and science education
- Endorsement of funding for NASA's Advanced Communications Technology Satellite program
- Support of a National Technology Foundation
- Appointment of the 1984-85 Congressional Fellow, K.P. Lau, working with Senator Pete V. Domenici (R-NM)
- Development of an index of IEEE Congressional testimony from 1979 to date.



Professional Activities Vice President Russell C. Drew, U.S. Technology Policy Conference Chairman Richard J. Backe, and Technical Activities Vice President Stephen Kahne congratulating Conference Speaker Leonard Swem (center)

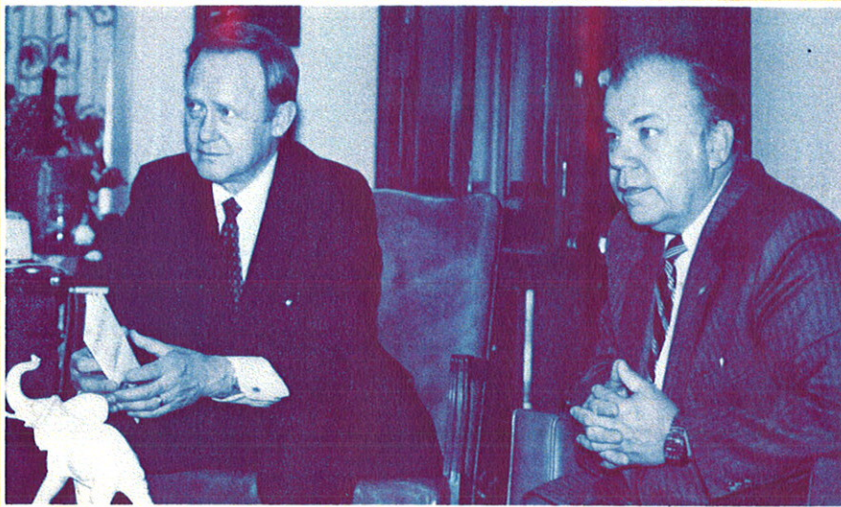


Mr. Backe, IEEE 1983 President James B. Owens, IEEE 1984 President Richard J. Gowen and Representative Judd Gregg (R-NH), at Capitol Hill footrace opening Conference on U.S. Technology Policy

Senator Barry Goldwater (R-AZ), then-President Gowen, and IEEE President-Elect Bruno O. Weinschel, opening microelectronics exhibit at the Smithsonian Institution, during last winter's Conference on U.S. Technology Policy







Senator James A. McClure (R-ID) in his Washington office (holding USAB Energy in Perspective brochure), with Dr. Drew

1984 Congressional Fellow Joseph A. Edminister, with Representative Dennis E. Eckart (D-OH) in Washington



National Institute of Education's Manuel Justiz, with then-President Gowen, co-hosting society meeting on pre-college math and science education, in Washington last summer



## Executive Branch Activities

With the support of USAB volunteers and Washington staff, the IEEE participated last year in the following Executive Branch activities:

- Opposed the implementation of policies "to restrict the participation of Department of Defense employees and contractors at unclassified scientific and technical meetings sponsored by professional societies"
- Completed meetings between Dr. Gowen and the President's Science Adviser, the Federal Communications Commission Chairman, the National Science Foundation (NSF) Director, the National Science Board Chairman, the Office of Technology Assessment Director, the National Academy of Sciences President, and the American Association for the Advancement of Science Executive Officer
- Provided liaison with White House staff to involve the President in the celebration of IEEE's Centennial
- Opposed changes in Federal Acquisition Regulations affecting accrued leave time of employees
- Identified problem areas in Government contracting for professional services
- Encouraged development of an NSF manpower model project at Stanford University
- Endorsed *National High-Tech Week* projects
- Conducted an R&D Briefing on Electro-technology-Related Research in the Fiscal Year 1985 Budget.

## Employment Assistance/Career Maintenance and Development

Through USAB, the IEEE participated last year in the following employment assistance/career maintenance and development projects:

- Inaugurated the Professional Engineering Employment Registry (PEER) allowing members and others to enter their resumes into the PEER database for matching with employers' job openings
- Activated an Ad Hoc Committee to Aid Unemployed Electrical Engineers in Michi-



gan, using PEER, the *IEEE Employment Guide for Engineers and Scientists*, as well as a local job phone line

- Published a Student Edition of the *IEEE Employment Guide for Engineers and Scientists* with chapters on career planning, definition of the marketplace, resume preparation, employment agencies, interviews, and salaries
- Participated in Hi-Tech '85, a national conference in Denver and Philadelphia, sponsored by NSF and the Department of Energy
- Participated in a nationwide videoconference linking students at colleges and universities with professionals in the electrical, electronics, and computer engineering fields
- Met with company and Congressional representatives on concerns of older electrical engineers
- Addressed the topic of "Age Discrimination: A Serious Constraint to Lifetime Careers in Engineering," before the Annual Conference of the National Council on Aging
- Initiated planning for the 1985 version of the *IEEE U.S. Membership Salary & Fringe Benefits Survey* as well as the *IEEE U.S. Member Opinion Survey*.

## Conferences

- USAB conducted a series of activities with the Technical Activities Board (TAB) during Engineers' Week including: a Capitol Hill footrace dramatizing the application of electrotechnology to the needs of the handicapped; the IEEE 1984 Conference on U.S. Technology Policy featuring the Presidential Science Adviser, the Department of Energy Secretary, as well as key Congressmen and industry officials; an industry exhibit; a Smithsonian reception and microelectronics exhibit; and IEEE Society President visits with Congressmen
- USAB initiated planning for the 1985 Technology Policy Seminar and 1986 Conference on U.S. Technology Policy, and
- It assembled members of the Board of Directors, Vice President Drew, other members of USAB, the IEEE President and President-Elect, other IEEE Vice Presidents, as well as three of the four candidates for President-Elect and Executive Vice President,



*IEEE's Lawrence P. Grayson and Edward W. Emst, at last fall's 'Pyramid Conference'*



*1984-85 Congressional Fellow K.P. Lau, appearing in an IEEE Public Service Announcement on supporting pre-college math and science education*

*Dr. Drew and 1982-83 Professional Activities Vice President Edward J. Doyle admiring awards display, at last summer's National PACE Conference in Phoenix, AZ*



IEEE/P.M. McCarter

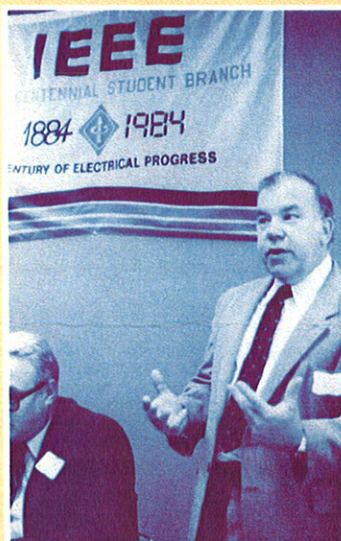
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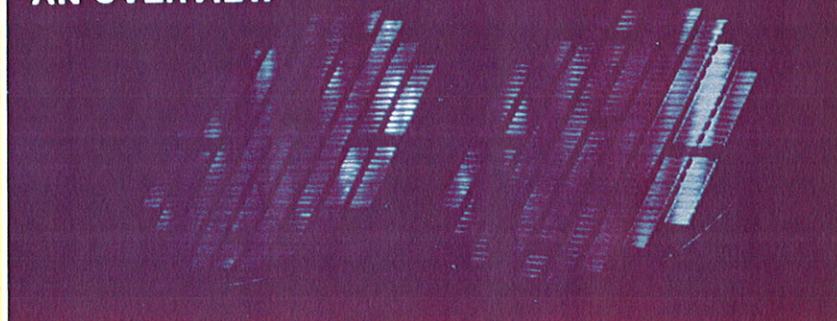


PACE members at mountain-top barbecue, during National Conference in Phoenix, AZ

Dr. Drew at fall opening of the IEEE Washington, DC, Centennial Student Branch, University of District of Columbia



## THE IEEE UNITED STATES ACTIVITIES BOARD (USAB): AN OVERVIEW



at the 1984 National PACE Conference highlighting solutions to the national crisis in pre-college math and science education as well as other professional issues

- With the Educational Activities Board, USAB gathered representatives of mathematical, scientific, engineering, and educational professional societies in the "Pyramid Conference" to initiate cooperative activities addressing the "national crisis in pre-college math/science education," and
- It participated in the IEEE Centennial Exhibit shown at SOUTHCON in Orlando, ELECTRO in Boston, MIDCON in Dallas, and WESCON in Anaheim
- Finally, USAB initiated planning for the IEEE 1985 Careers Conference to be held in Boston October 2-4.

## Communications/ Public Information

Through USAB, and other entities, the IEEE participated last year in the following communications/ public information activities:

- Three special IEEE IMPACT issues including two on "Pre-College Science and Math Education" and one on "Energy in Perspective"
- A Profile of IEEE Women Members: Their Salaries, Demographics, Attitudes Toward the Workplace, and Professional Status
- A PACE Guide to Manpower: Foreign Engineers in the U.S., Immigration or Importation?
- A National Press Club Briefing with Dr. Gowen addressing the pre-college math and science issue, prior to the Conference on U.S. Technology Policy
- With TAB and the Public Information Committee, the IEEE Centennial Briefing for Media, resulting in page 2 *Washington Post* coverage of the Institute
- An updated, generic USAB slide show, entitled "USAB: An Overview"
- The revised USAB slide show on "Energy in Perspective"
- *Washington Post* and *TIME Magazine* ad supplements covering the electrical engineering field as well as IEEE.



## Conclusion

Last year, USAB received the Institute's customary five-year evaluation. Then-President-Elect Eldon conveyed the preliminary favorable results of the evaluation to volunteers and staff assembled at a workshop on improving interactions.

In addition, plans were made to produce a long-term financial plan as well as a legislative agenda. Also, the USAB task forces reorganized into committees with charters.

To improve communications, micro-computers were purchased for the USAB Operating Committee. And the Washington Office expanded its word processing/facsimile capabilities.

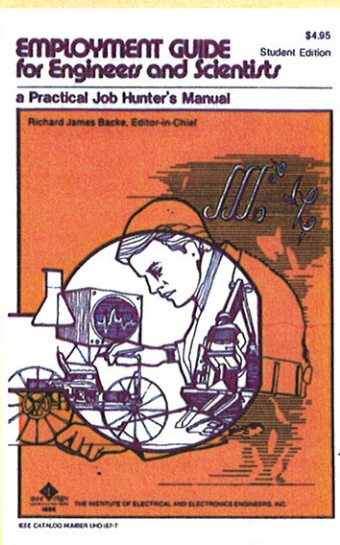
In conclusion, Vice President Drew presented USAB's Centennial goals by describing the Board's strengths and needs. Strengths included: over 200,000 members in Regions 1-6; a decade of growth and maturation in programs; increased recognition in Washington; solid staff support; and an effective management structure. Needs were identified as: broadening the base of participation; responding more effectively to member concerns; and increasing the effectiveness of efforts to influence the Government.

Further information about this Report and USAB activities can be obtained through IEEE Public Information, IEEE Washington Office, 1111-19th Street, NW, Suite 608, Washington, DC 20036, USA, telephone (202) 785-0017.

Updated, recorded information about USAB, and the IEEE, is available by calling (202) 785-2180.

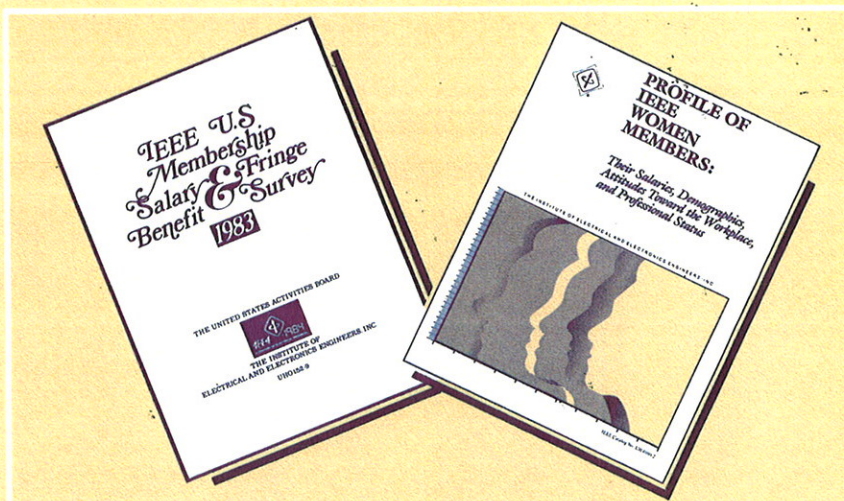


USAB energy slide show available from Washington Office on loan



Student Edition of IEEE Guide, with a listing of 1,500 engineering employers

Salary & Fringe Benefit Survey and Profile of IEEE Women Members available from IEEE Service Center







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January, 1985  
IEEE Public Information  
Washington, D.C.