

BOARD VOTES TO INVOLVE IEEE IN NEW ENGINEERING UMBRELLA SOCIETY

On Aug. 6 IEEE's board of directors voted unanimously to involve the IEEE in the American Association of Engineering Societies (AAES), scheduled to start on Jan. 1, 1980.

IEEE's action assumes that at least the other major engineering societies will also vote to join the AAES. Indications that this would happen were strong following a June organizing meeting at which all the major engineering societies' representatives agreed in principle on the start-up date and the constitutional make-up of the new society. The American Institute of Mining, Metallurgical, and Petroleum Engineers is already committed to joining the new group.

Potential costs and benefits of IEEE's participation in the AAES are discussed in the October issue of THE INSTITUTE.

The new organization will subsume the Engineers Joint Council and the Engineers' Council for Professional Development.

WORK CLIMATE TO BE STUDIED

The first joint IEEE-industry conference on "Building a Professional Work Climate" will be held at the Hyatt Regency in Atlanta on Nov. 28-29. The concept was first proposed by IEEE President Jerome J. Suran.

The program under the chairmanship of Lindon E. Saline, USAB task force leader for professional conferences and manager of human resources systems development at General Electric, will provide an opportunity for idea and information exchange, sharing experiences, and gaining new insights.

Topics will include the meaning and importance of a professional work climate from the viewpoints of the large and small employer and professional employee; surveys, interviews, and guidelines as ways of assessing work climate; work organization and design, performance appraisal and feedback, retraining professionals, successes and difficulties in maintaining credibility with dual ladders, and managerial psychology and style as ways of improving work climate; and enhancing productivity, innovation and growth, and planning for a work climate improvement effort.

A fee of \$75 includes all sessions and most meals. Con-

firmation of your registration includes information on hotel reservations. Call or write the USAB Washington Office for additional information and registration forms.

IEEE SPEAKS OUT ON ENERGY

IEEE has responded to a request by the President's Commission on Three Mile Island, under the chairmanship of John Kemeny, to provide views on several issues under investigation by the commission. Further, IEEE has joined with the U.S. Nuclear Regulatory Commission (NRC) and Brookhaven National Laboratories to organize a workshop on the human factors in nuclear power safety.

The "Kemeny Commission" request outlined the following areas for potential IEEE response:

- A technical assessment of events, their causes, and potential reasons.
- An analysis of the role of the managing utility.
- Assessment of the emergency preparations and the response of the NRC and other Federal, state, and local

Continued, p. 2

NEWS SUMMARY

1979 SALARY SURVEY RESULTS AVAILABLE

The new IEEE 1979 U.S. Membership Salary and Fringe Benefits Survey is available from the IEEE—Service Center in Piscataway, N.J. Ask for IEEE Catalog™ UN0134-7. The IEEE member price is \$36, non-members, \$54. The survey compares EE salaries relative to job function, supervisory responsibility, type of employer, company size, years of experience, and many other variables.

FELLOW GRADE NOMINATIONS ASKED

New Fellow nomination kits for 1980 are now available upon request to the staff secretary of the Fellow Committee at Headquarters, attn: Dolores Wright-Riker.

All organizational units are encouraged to submit nominations by April 30, 1980, of candidates considered qualified for elevation to the Fellow grade. An order form for nomination kits is inserted.

NOMINATIONS FOR IEEE OFFICERS SOLICITED

The Nominations and Appointments Committee solicits the active participation of individual members and all IEEE organizational units in the submission of nominations of candidates to be considered for appointment to 1981 IEEE Standing Committees and Boards.

April 1, 1980 is the deadline date for submission of nominations to the staff secretary, Nominations and Appointments Committee, at Headquarters. A nomination form is inserted in this issue. Additional forms are available upon request to the staff secretary.

Index of Inserts

| | |
|---------------------------------------|-------|
| USAB: Speakers Bureau | 2A-2D |
| Fellow Nomination Kit Order Form | 2E |
| Committees and Boards Nomination Form | 2G-2H |
| Membership Development Newsletter | 2I-2N |
| Continuing Education | 2O-2P |
| Student Activities News | 2Q-2R |

authorities.

- Evaluation of NRC regulations and enforcement procedures.
- Assessment of the public's right to know and steps which should be taken during similar emergencies.

IEEE's Energy Committee is responding to the request. But because of limited time given for comments, the IEEE response will take the form of testimony approved and offered earlier (see THE INSTITUTE, October, p.3).

IEEE plans to take a major role in the joint IEEE/NRC/Brookhaven workshop on human-factors standards "The Human, The Key Factor in Nuclear Safety," to be held during the week of Dec. 2 in Myrtle Beach, S.C.

Again the Three Mile Island accident precipitated this event by demonstrating a need for research in the application of human engineering to nuclear power generation.

Among the invited guests will be representatives from the aerospace and nuclear industries as well as academia. Their areas of expertise will include industrial psychology, the design of complex man-machine interfaces, statistics, operation of nuclear power plants, reliability and nuclear safety. The workshop is the first time that such a group of experts will be meeting to share their knowledge and research efforts.

RESEARCH GRANTS AVAILABLE

Engineering Research Initiation Grants for 1980-81 are available from the Engineering Foundation in fields represented by the founder societies—the IEEE; the American Society of Civil Engineers; the American Institute of Mining, Metallurgical, and Petroleum Engineers; the American Society of Mechanical Engineers; and the American Institute of Chemical Engineers.

Up to two grants of \$12 000 each may be awarded on a competitive basis to members of each founder society for proposed research projects in fields of mutual interest to the founder society and to the Engineering Foundation.

All proposals must be received at IEEE by Dec. 1. For details contact Irving Engelson at Headquarters.

EE HISTORY CENTER PLANNED

The IEEE board of directors has approved 1980 funds for a Center for the History of Electrical Engineering, tentatively scheduled to begin in early 1980, in the United Engineering Center.

An advisory committee set up by the IEEE History Committee is seeking a director for the center; preferably a person with an electrical-engineering background and graduate training in history.

The director will be responsible for organizing projects in oral history, locating and preserving documents and artifacts, and disseminating information on Center activities. The deadline for submission of applications to Reed Crone, secretary of the IEEE History Committee, at Headquarters is Nov. 15.

TASK FORCE APPOINTED TO STUDY DUES

The board of directors has directed the treasurer to convene a task force of his choice to study the issue of dues and the dues structure, with a progress report to be submitted in December and a final report to be presented at the first meeting of the 1980 board.

TASK FORCE TO REVIEW OCCUPATIONAL BOOK

An ad hoc USAB task force has been requested to review the engineering section of a new edition of the Occupational Outlook Handbook (OOH), a publication of the U.S. Dept. of Labor, distributed to career guidance counselors, libraries, and employment agencies. The OOH describes various professions and career outlooks.

SURVEY PROPOSAL APPROVED

USAB approved consideration of a proposal for a 1980 U.S. Member Opinion Survey, to include development of content, cost estimates, and a test sample. Efforts are being spearheaded by Herb Heller, USAB survey task force leader.

WASHINGTON OFFICE RELOCATION PLANNED

The IEEE/USAB Washington Office will relocate before the end of the year to new quarters near the present location.

The new address will be 1111 19th St., N.W., Washington, D.C. 20036. The date of the move will be announced in the next edition of *Impact*.

USAB DEVELOPING AGE DISCRIMINATION GUIDE

USAB's Task Force on Age Discrimination is developing a digest of possible information useful to members pursuing a complaint of age discrimination against their employers.

The reference source covers Federal and state age discrimination laws and activity of the courts and responsible agencies as they affect EE employment.

The task force is also interested in providing information to employers. A section of the digest will contain examples of how some companies have not only complied with the law but have developed employment programs, guidelines, and policies supportive of older employees.

USAB needs your help in collecting this information. Let USAB know the names of companies that have demonstrated concern for the career development and utilization of their engineers without regard to age. USAB will contact the company for the information, mentioning your name only at your request. Companies will not be identified by name in the digest. Contact the Age Discrimination Task Force at the IEEE/USAB office in Washington.

USAB INFORMATION LINE HEATS UP

It isn't a true "hotline," with communication only one way, but USAB's Info Line has handled a whopping number of calls lately. Fast-breaking news of legislative activities and program development can be heard by calling 202-785-2180.

Electrical Engineering is a management newsletter on IEEE operations intended to encourage communication among all organizational entities and the staff. *Electrical Engineering* is published bimonthly by The Institute of Electrical and Electronics Engineers, 345 East 47 Street, New York, N.Y. 10017—Telephone (212) 644-7562.

Electrical Engineering is sent without cost beyond dues to officers of IEEE boards, committees, divisions, societies, groups, technical councils, conferences, regions, regional councils, sections, subsections, chapters, and branches. Second-class postage is paid at Piscataway, N.J.

Names and assignments of IEEE staff members referred to in *Electrical Engineering* are listed on page 4 of *IEEE Spectrum*.



IEEE

Contact: Bill Herrold

United States Activities Board

USAB POSITION PAPERS

The following summaries represent a few of the position papers available from the Washington USAB Office. Positions dealing with Patents, Pensions, Solar Energy, Solar Power Satellite, and Breeder Reactors are also available upon request. For further information or copies of the following, write: IEEE/USAB Office, 2029 K Street, NW, Washington, DC 20006.

Summary of IEEE Position on Electricity in the United States Economy—The position statement addresses the perceived need for a national energy policy to be developed by the government, in cooperation with industry and technical and professional organizations. The availability of energy is noted to be fundamental to the welfare and economic health of society.

The position recommends prompt action to promote utilization of coal and uranium for electric power generation, as well as major emphasis on conservation, efficiency, and reliability. Adequate public safeguards and environmental protection is urged, as well as the development of most favorable new and advanced energy technologies.

Summary of IEEE Statement on Fusion Power—The IEEE endorses fusion power as a source of abundant fuel with reduced radioactive hazards and environmental impact, as well as the potential for improved operating safety. The IEEE urges the continuance of broad areas of international cooperation in promoting fusion power, and fears that the present funding levels, although significant, correspond to research-level programs, without adequate provision for the engineering development of demonstration devices leading to construction of full-scale on-line power plants.

The Institute therefore urges substantial increases in funding levels for fusion power.

Summary of IEEE Position on Energy Conservation—It is the IEEE position that energy conservation programs should be given the highest national priority in energy planning. In promoting such programs, the Institute urges consideration of the following concepts and objectives:

- Immediate reduction of energy use by measures such as modifying thermostat settings, car pooling, and lowering lighting levels.
- Improvement of efficiency of the transportation sector.
- Application of modern technologies for improved control and utilization of energy.
- Reduction of energy loss during generation, transmission, and conversion of energy.
- Recapture of waste energy released during generation and use.
- Maximum utilization of work capability of energy prior to use for space or water heating.

- g. Utilization of energy potential of discarded solids and liquids, including agricultural, industrial and municipal waste, and sewage sludge.
- h. Maximum recovery and reuse of materials and products which require relatively large amounts of energy in their production and distribution.
- i. Reduction in use of energy intensive materials having short service life and poor recoverability relative to competing materials.

The Institute also urges the adoption of measures to promote voluntary compliance with energy conservation techniques, as well as cost incentives. The Institute also supports the review of appropriate product performance requirements and building codes in improving conservation.

Summary of IEEE Position on Role of the U.S. Government in Civilian Communications Satellite Research and Development--The IEEE is concerned with the dramatic decrease in funding for domestic communication satellite research and development since the U.S. Government withdrawal from that role in 1973. While the U.S. enjoyed an early lead in the development of communication satellite technologies, that lead is rapidly evaporating. In the countries committed to communications satellite R&D programs, government funding for them outweighs that of the U.S. by a substantial margin.

The IEEE recommends that the U.S. Government resume active participation in communications satellite research and development, as industry cannot fill the void left by the U.S. Government in this role in 1973. The position of the Institute stresses that additional R&D support be extended to include:

- a. Communications technology, including improved modulation and multiple access systems.
- b. Communications satellite technology, including higher frequencies, greater radiated power, multiple beam antenna, on-board processing, and inter-satellite links at microwave and optical frequencies.

Summary of IEEE Position on R&D--The Institute voices its concern that domestic investment in research and development has been declining since 1965 when measured as a percentage of the GNP. The position focuses on the downward trend in government support for research and development in three areas: research and development conducted by the Department of Defense, the National Science Foundation, and the National Aeronautics and Space Administration

The position recommends that in order to reverse this trend, it should be national policy to devote 3 percent of the GNP to research and development; also, that the Federal government take the necessary steps to fill the gap between private-sector support for R&D and this 3-percent figure. Further, the Government is urged to make appropriate allowances and inducements to promote private-sector investments in research and development and that these investments exceed 1 percent of the GNP. Finally, the position urges modification of Government regulations and procedures which discourage long-term research projects.

FROM IEEE--BOOKS AT DISCOUNTS

"STIMULATING INNOVATION THROUGH U.S. POLICY"

This newly released IEEE Conference Proceedings presents today's significant issues, directions, and trends in U.S. research and development as seen by distinguished industrial, governmental, and professional authorities who attended the 1979 U.S. Technological Policy Conference in Washington, D.C., during May 1-3, 1979.

Keep a step ahead, and order today your personal copy of this timely two-part publication.

CH14720 -- List: \$15.00 IEEE Member: \$11.25

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1977 U.S. Technological Policy Proceedings
"U.S. Technological Policy Issues"
CH12906 -- List: \$6.00 NOW \$3.00



Contact: Dolores Riker

Fellow Committee

ORDER FORM

IEEE FELLOW NOMINATION KITS

Staff Secretary, Fellow Committee
The Institute of Electrical and
Electronics Engineers, Inc.
345 East 47 Street
New York, New York 10017

Please mail _____ IEEE Fellow Nomination Kits.

Ship to: (Please print)

Name _____

Address _____

City _____ State/Country _____ Zip Code _____

Date _____

Your Signature

"IEEE 1975 U.S. Membership Salary, Fringe Benefit
and Opinion Survey"

EH01131 -- List: \$35.00 NOW: \$15.00

1977 Edition of U.S. Membership Salary, Fringe Benefit
and Opinion Survey" (Part I)

UH01255 -- List: \$40.00 NOW: \$20.00

(Part II) "A cross tabulation of each demographic variable"

UH01263 -- List: \$40.00 NOW: \$20.00

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IEEE Service Center, 445 Hoes Lane, Piscataway, N.J. 08854
Please send me the publication(s) I have checked:

CH14720 CH14506 CH12906 EH00893 EH01107

EH01172 EH01016 EH01131 EH01255 EH01263

Payment enclosed. (Make check payable to IEEE.)

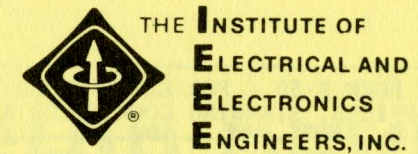
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GUIDELINES FOR NOMINATION FORM B-50

The IEEE is a volunteer organization in a very fast evolving profession. IEEE needs the high quality leadership and service of countless talented and energetic volunteers on its Boards and Committees. It is vital that a pool of talented and energetic persons be continuously available from which qualified persons can be called upon for leadership and service roles in IEEE activities.

Individual members and all IEEE organizational units are invited to submit names of candidates for possible election or appointment to IEEE offices, Boards, and Committees. The IEEE Organization Roster, furnished periodically to officers of IEEE organizational units, contains a list of all Institute offices, Boards, and Committees.

OBJECTIVES

This form shall be used in submitting the names of potential appointees to IEEE leadership and service positions on Institute Committees and Boards. It is most important for the nominator to provide as much information about the individual as possible, and to identify the particular position to which the candidate is being nominated (Institute office, Committee, or Board). Care should be exercised in filling out the recommendation form to ensure its completeness. The nominator is invited to list additional pertinent information which cannot be accommodated on the recommendation form. The completed form for recommendation for Institute-level leadership and service should be mailed to IEEE at the above address, attention Staff Secretary of the Nominations and Appointments Committee.

The general qualifications for service to IEEE are the same as those in any other position of leadership responsibility and trust: competence, experience, willingness to take on the task, availability of time to participate, enthusiasm, and vigor.

The responsibilities of the IEEE Directors and the tasks of the various Standing Committees and Boards are described in the IEEE Bylaws, and these should be consulted if the nominator is not certain of the tasks to be performed. Two types of competence are involved, technical and administrative. The technical tasks require knowledge of one or more engineering or scientific fields and the ability to make sound judgments. Administrative tasks involve the judgment of people and organizational operations, and the ability to develop appropriate Institute policies and objectives.

In judging candidates on the basis of experience, prior work in Institute affairs is, of course, important but should not outweigh ability. Since new vitality must be brought into the IEEE organization, equivalent experience outside the Institute (as in other organizations, or in connection with the candidate's professional employment) should be taken into account. In many cases a candidate having no experience bearing specifically on the task may be suitable if highly competent, since he or she will soon "learn the ropes."

Willingness to serve is, of course, essential. There is no rule against a nominee being consulted by the nominator to ascertain this. However, since candidates are proposed from many sources, there are usually more candidates than there are open positions. This is as it should be if the clearly qualified persons are to be identified. When consulting nominees, it should be made clear that they cannot be assured of appointment.

Availability of time to participate is usually an important consideration in the candidate's selection. Enthusiasm, vigor, creativity, and dedication to the purposes of IEEE are, we believe, among the most important considerations. Electrical and electronics engineering is a fast moving profession, and the Institute needs a continual infusion of new talent and ideas.



NOMINATION FORM B-50 - FOR ELECTION OR APPOINTMENT TO IEEE OFFICES, STANDING COMMITTEES AND BOARDS

Before completing this form, please refer to guidelines on reverse side. Please type all information.

RECOMMENDED POSITION: _____
(Please identify Office, Standing Committee or Board)

NAME OF NOMINEE: _____

IEEE Grade _____ Affiliation: _____

IEEE Number _____ Position _____

Mailing Address: _____ Employer's Name _____

_____ Employer's Address _____

_____ Telephone Number _____

Telephone Number _____

COMMENTS BY NOMINATOR: Include an evaluation of the nominee's particular experience and performance record for this nomination and the special attributes which prompted this nomination.

BIOGRAPHICAL SKETCH: Please attach a short biographical sketch of the nominee, including information on services to the Institute.

Is this nominee willing to serve in an IEEE leadership and service role? Yes

Name of Nominator _____

Address _____

Telephone Number _____

Date _____



MEMBERSHIP DEVELOPMENT NEWSLETTER

INSTITUTE & SOCIETY/GROUP MEMBERSHIP GROWTH STRONG IN AUGUST

Membership growth in IEEE and the Societies continues to increase at a rate far above 1979 goals. Total Institute membership of 188,068 is 5.7% ahead of last August while Society membership of 194,776 is up 10.7%. MDC projects that 1979 year end membership will pass the 200,000 mark by a substantial margin.

Further details are shown on the attached graphs and charts. A "bull's eye" target has been added to indicate the 1979 goals.

FINAL ARREARS NOTICES TO BE MAILED TO ALL REGIONS IN NOVEMBER

Final arrears notices will be mailed by MD/NY in November to members in all grades in all Regions who have not renewed their 1979 dues. Sections and Chapters may wish to make a coordinated effort in encouraging these members to renew and grow with IEEE. Contact MD/NY for assistance with your local arrears efforts.

IMPROVED M/SM APPLICATION AND ELEVATION KITS AVAILABLE

The Member/Senior Member application and elevation kit (B-5) has been simplified so that the forms reduce the impression of difficulty. MDC is also developing an accompanying brochure to explain the advantages of seeking the higher grade of membership.

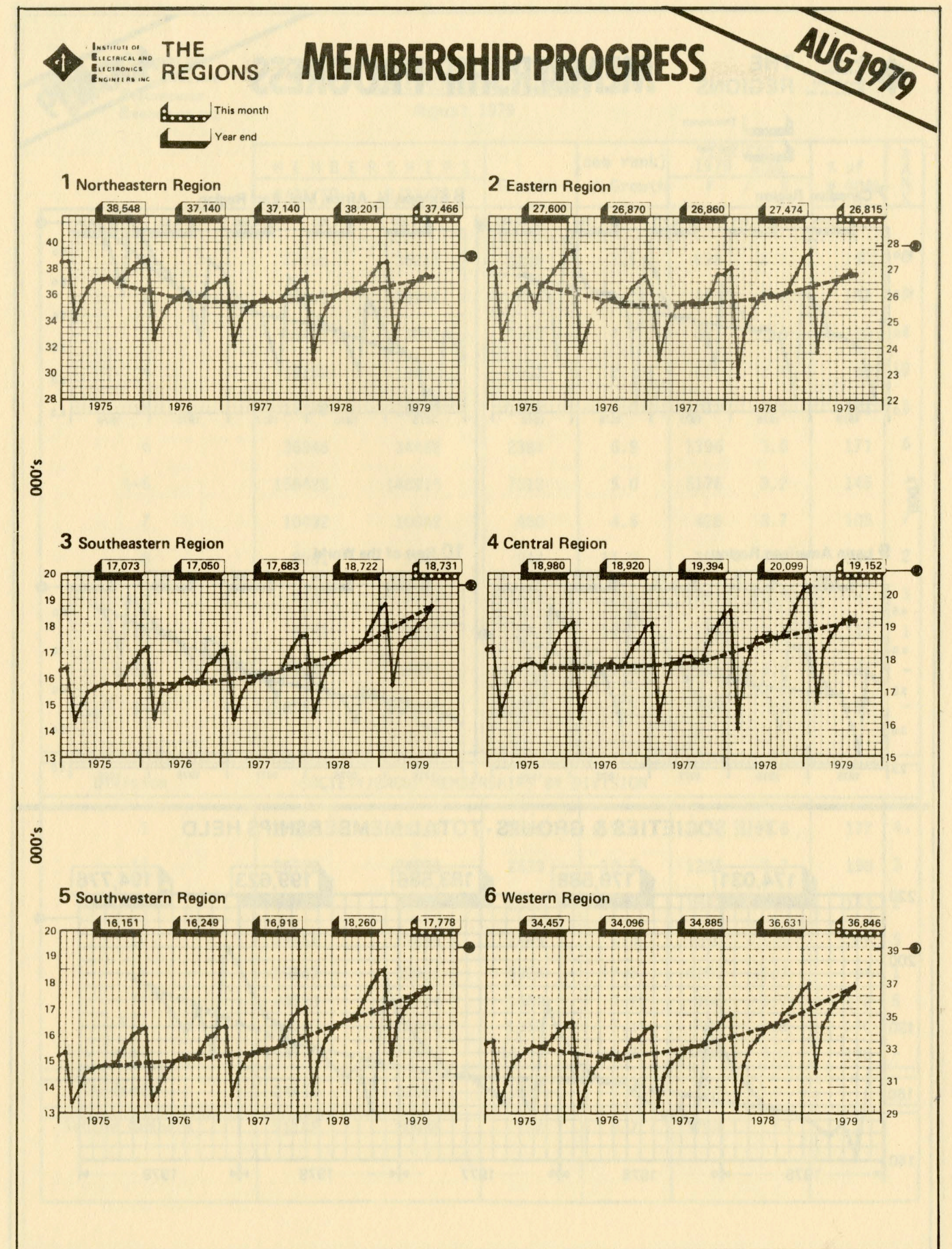
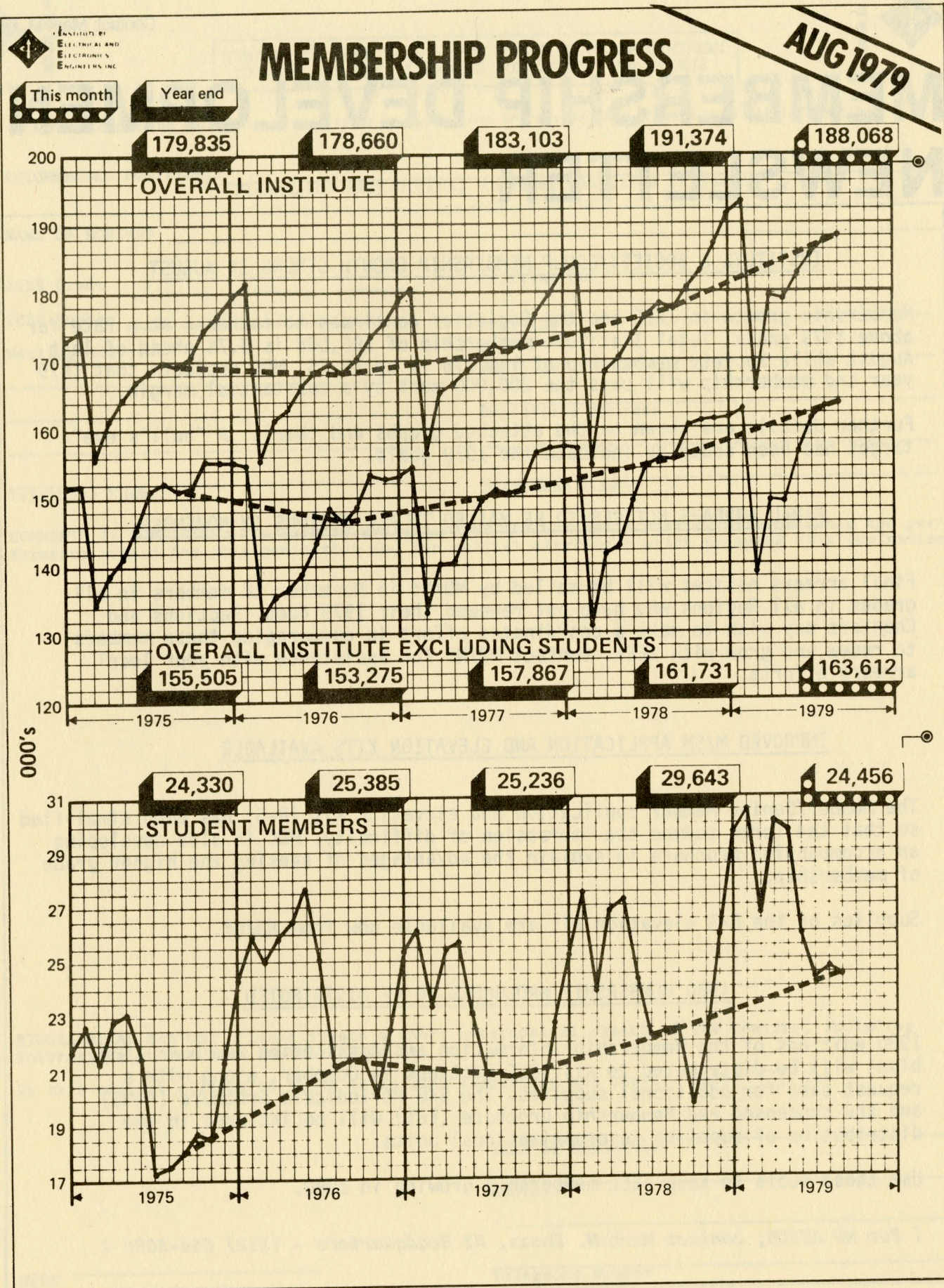
Supplies of the B-5 elevation kit are available now from MD/NY.

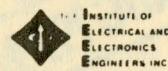
1980 MEMBERSHIP BROCHURES TO BE DISTRIBUTED

1980 editions of the Membership Information and Application brochure (F69, blue) will be distributed to all IEEE Sections in October, along with a request card for additional supplies. The S/G Periodicals brochure (F40S) and the condensed red Membership brochure (F81) will be included in the distribution of supplies to organizational units.

Use these tools to keep IEEE membership growing in 1980.

(For MD ACTION, contact Mark M. Lucas, NY Headquarters - (212) 644-8080)





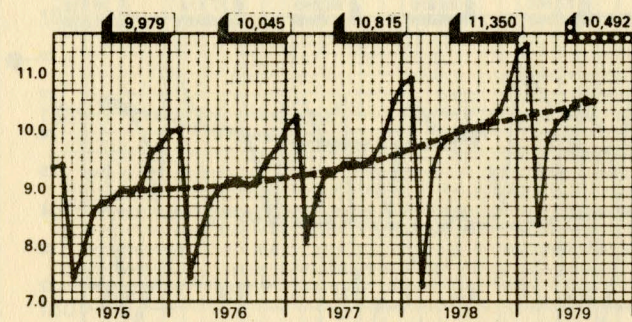
THE REGIONS

MEMBERSHIP PROGRESS

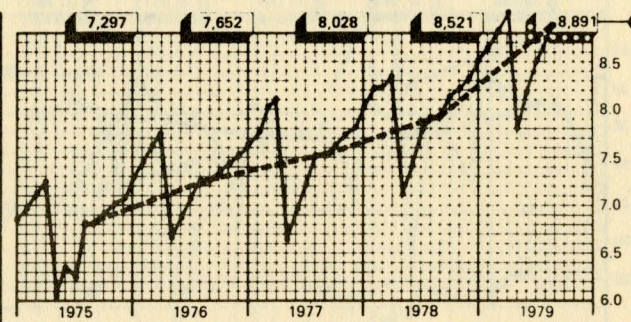
AUG 1979

This month
Year end

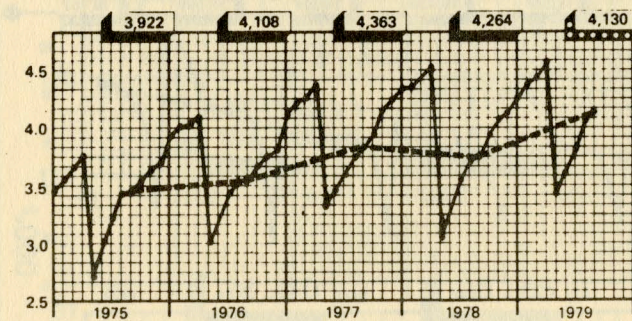
7 Canadian Region



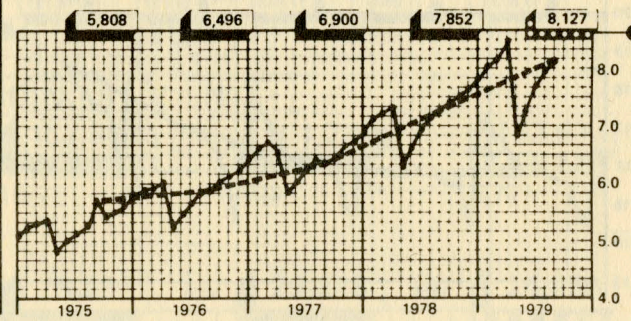
8 Europe, N. Africa, Mid. East Region



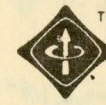
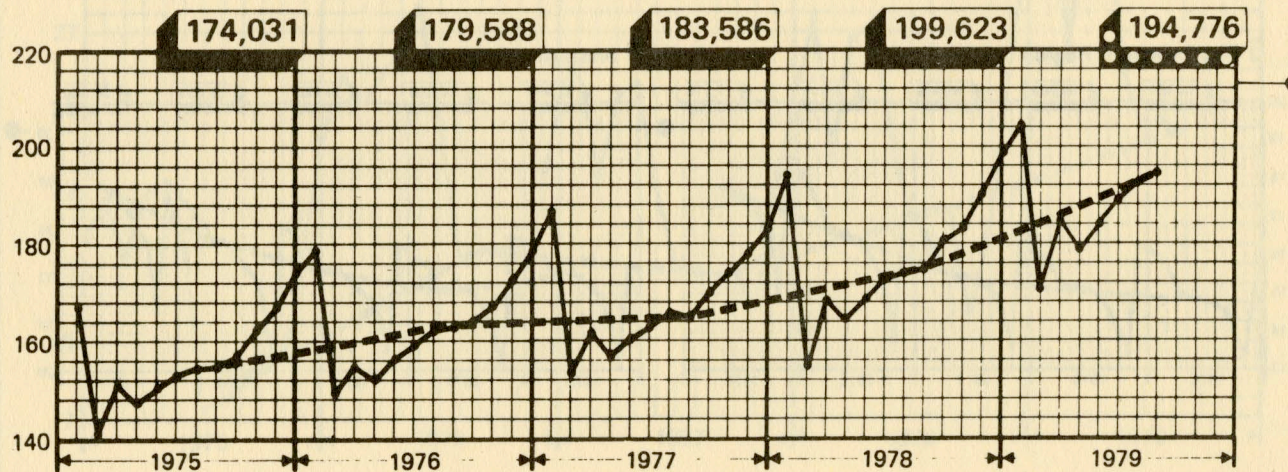
9 Latin American Region



10 Rest of the World



THE SOCIETIES & GROUPS - TOTAL MEMBERSHIPS HELD



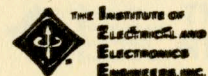
THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

IEEE MEMBERSHIP SUMMARY

August 1979

| Region | MEMBERSHIPS | | Growth | (see rank) % Growth | YEAR END GOAL | | % of # GOAL | RANK |
|------------|-------------|---------|--------|------------------------|---------------|-------|-------------|------|
| | 8/31/79 | 8/31/78 | | | # | % | | |
| 1 | 37466 | 36211 | 1255 | 3.5 | 898 | 2.2 | 140 | 8 |
| 2 | 26815 | 25949 | 866 | 3.3 | 464 | 1.6 | 187 | 9 |
| 3 | 18371 | 17053 | 1318 | 7.7 | 831 | 4.4 | 160 | 4 |
| 4 | 19152 | 18650 | 502 | 2.7 | 564 | 2.8 | 89 | 10 |
| 5 | 17778 | 16590 | 1188 | 7.2 | 1073 | 5.8 | 111 | 5 |
| 6 | 36846 | 34462 | 2384 | 6.9 | 1396 | 3.8 | 171 | 6 |
| 1-6 | 156428 | 148915 | 7513 | 5.0 | 5176 | 3.2 | 145 | - |
| 7 | 10492 | 10042 | 450 | 4.5 | 428 | 3.7 | 105 | 7 |
| 8 | 8891 | 7947 | 944 | 11.9 | 394 | 4.6 | 240 | 2 |
| 9 | 4130 | 3787 | 343 | 9.1 | (79) | (1.8) | - | 3 |
| 10 | 8127 | 7237 | 890 | 12.3 | 761 | 9.6 | 117 | 1 |
| 8-10 | 21148 | 18971 | 2177 | 11.5 | 1076 | 5.2 | 197 | - |
| Total 1-10 | 188068 | 177928 | 10140 | 5.7 | 6668 | 3.5 | 152 | - |

| Division | SOCIETY/GROUP MEMBERSHIPS BY DIVISION | | | | | | | |
|----------------|---------------------------------------|--------|-------|------|-------|------|-----|----|
| I | 27585 | 25216 | 2369 | 9.4 | 1333 | 4.6 | 177 | 4. |
| II | 26772 | 24233 | 2539 | 10.5 | 1285 | 4.7 | 198 | 3 |
| III | 28008 | 25411 | 2597 | 10.2 | 1841 | 6.3 | 141 | 2 |
| IV | 27654 | 25285 | 2369 | 9.4 | 1050 | 3.7 | 226 | 5 |
| V | 39847 | 33922 | 5925 | 17.5 | 6299 | 16.7 | 94 | 1 |
| VI | 24713 | 23044 | 1669 | 7.2 | 968 | 3.7 | 172 | 5 |
| VII | 20197 | 18865 | 1332 | 7.1 | 782 | 3.8 | 170 | 7 |
| G/S Total | 194776 | 175977 | 18799 | 10.7 | 13488 | 6.8 | 139 | - |
| Students | 24456 | 22469 | 1987 | 8.8 | TBA | - | - | - |
| Senior Members | 21148 | 20996 | 152 | 0.7 | TBA | - | - | - |



SOCIETY/GROUP/DIVISION MEMBERSHIPS

| Division | MEMBERSHIPS HELD | | GROWTH | % GROWTH | 1979 Year End Goal | | % of Goal | Rank |
|--------------|------------------|---------|--------|----------|--------------------|-------|-----------|------|
| | 8/31/79 | 8/31/78 | | | # | % | | |
| I ASSP 01 | 6751 | 5918 | 833 | 14.1 | 655 | 9.5 | 127 | 3 |
| CAS 04 | 9328 | 8668 | 660 | 7.6 | 183 | 1.8 | 360 | 20 |
| IT 12 | 4500 | 4260 | 240 | 5.6 | 220 | 4.6 | 109 | 28 |
| CS 23 | 7006 | 6370 | 636 | 10.0 | 275 | 3.7 | 231 | 13 |
| I Subtotal | 27585 | 25216 | 2369 | 9.4 | 1333 | 4.6 | 177 | |
| II NPS 05 | 2805 | 2598 | 207 | 8.0 | 194 | 6.5 | 107 | 19 |
| VT 06 | 2463 | 2315 | 148 | 6.4 | 257 | 10.0 | 57 | 26 |
| IM 09 | 4843 | 4461 | 382 | 8.6 | 100 | 3.9 | 382 | 18 |
| IECI 13 | 5168 | 4546 | 622 | 13.7 | 129 | 2.4 | 482 | 5 |
| EI 32 | 1444 | 1316 | 128 | 9.7 | 26 | 1.8 | 492 | 14 |
| IA 34 | 10049 | 8997 | 1052 | 11.7 | 579 | 5.8 | 182 | 9 |
| II Subtotal | 26772 | 24233 | 2539 | 10.5 | 1285 | 4.7 | 198 | |
| III BCCE 02 | 6293 | 5788 | 505 | 8.7 | 457 | 6.8 | 110 | 17 |
| AES 10 | 6518 | 6165 | 353 | 5.7 | 255 | 3.7 | 138 | 27 |
| COM 19 | 12108 | 10694 | 1414 | 13.2 | 923 | 7.5 | 153 | 6 |
| EMC 27 | 1747 | 1552 | 195 | 12.6 | 118 | 6.8 | 165 | 8 |
| GEO 29 | 1342 | 1212 | 130 | 10.7 | 88 | 6.3 | 148 | 11 |
| III Subtotal | 28008 | 25411 | 2597 | 10.2 | 1841 | 6.3 | 141 | |
| IV AP 03 | 4307 | 4013 | 294 | 7.3 | 58 | 1.3 | 507 | 21 |
| ED 15 | 7908 | 7162 | 746 | 10.4 | 344 | 4.3 | 217 | 12 |
| MTT 17 | 5487 | 5124 | 363 | 7.1 | 106 | 1.9 | 342 | 22 |
| SU 20 | 2006 | 1836 | 170 | 9.3 | 112 | 5.4 | 152 | 15 |
| CHMT 21 | 2701 | 2524 | 178 | 7.1 | 145 | 5.1 | 123 | 22 |
| MAG 33 | 2258 | 1982 | 276 | 13.9 | 158 | 7.0 | 175 | 4 |
| QE 36 | 2986 | 2645 | 341 | 12.9 | 127 | 4.1 | 269 | 7 |
| IV Subtotal | 27654 | 25286 | 2368 | 9.4 | 1050 | 3.7 | 226 | |
| V COMP 16 | 39847 | 33922 | 5925 | 17.5 | 6299 | 16.7 | 94 | 2 |
| VI R 07 | 2723 | 2494 | 229 | 9.2 | 189 | 6.7 | 121 | 16 |
| EM 14 | 7134 | 6415 | 719 | 11.2 | 481 | 6.5 | 149 | 10 |
| EMB 18 | 6727 | 6549 | 178 | 2.7 | (73) | (1.0) | - | 29 |
| E 25 | 2103 | 1968 | 135 | 6.8 | 71 | 3.2 | 190 | 25 |
| PC 26 | 1740 | 1433 | 307 | 21.4 | 395 | 22.6 | 78 | 1 |
| SMC 28 | 4286 | 4185 | 101 | 2.4 | (39) | (0.8) | - | 30 |
| VI Subtotal | 24713 | 23044 | 1669 | 7.2 | 968 | 3.7 | 172 | |
| VII PE 31 | 20197 | 18865 | 1332 | 7.1 | 782 | 3.8 | 170 | 22 |
| Total G/S | 194776 | 175977 | 18799 | 10.7 | 13488 | 6.8 | 139 | |



Contact: Vincent Giardina

Continuing Education Services

TIPS FOR DEVELOPING A SHORT-COURSE PROGRAM

Each year at this time, we remind Section, Chapter, Council and Society/Group leaders that now is the time to plan for your 1980 educational activity. Developing a topical educational program that will receive total local support can at times be a "mind-boggling" experience, especially if you have never been exposed to the intricacies that make up the total operation.

Our "old timers" who have scheduled with us before, or who have coordinated their own programs are "tuned in" to pre-course activities and course scheduling requirements. Our prime consideration, therefore, is directed to those new leaders who have recently taken office.

If you identify with the latter group, we ask that you read on and see how we can, provide you with a top-level continuing education activity--for your constituents and at the same time put dollars into your Section treasury.

The two items you should consider before any planning gets underway are:

1. A five-month lead period is a must.
2. Polling the membership is important to the success of your program.

To encourage you to start building your unit's continuing education program and to learn the degree of support you can expect from your members, we advise you to use the first month of the five month lead period to poll your membership. We encourage you to route the polling form reprinted below to your Newsletter Editor advising that it be included with appropriate modification in the next issue. In short, the quicker you can get started, the sooner we can help you activate your continuing education plans.

SECTION PLANNING COURSES

Dear Member:

Your Section Executive Committee anticipates offering short courses on a variety of subjects. These courses can be one-day overviews, two-day or more detailed courses, or longer in-depth reviews. The choice of both the subject matter and course length is up to you, but only if you fill out and return this questionnaire.

Experience in other Sections has shown that about 20 percent of such courses fail solely because of a poor choice of subject. We want to avoid that problem by presenting courses that you, the practicing engineer, will find useful and interesting. This pre-addressed form will help us do just that, and we are counting on your help. It will only take a few minutes and will greatly help in organizing future courses.

Questions about these short courses can be directed to:

(Education Chairpersons' Address)

Please return your completed questionnaire to your Education Chairperson or to your Editor. Thank you.

EDUCATIONAL PLANNING QUESTIONNAIRE

(Check any and all that apply)

| Subject | Business Aspects | Applications | Theory | Overall Review | Specific Area |
|-----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------|
| Microprocessors | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Computer and Information Sciences | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Controls | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Solid State and Microelectronics | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Power | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Business Management | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Communications | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Other _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |

Schedule
 Weekdays
 Weekend

Course Length
 1 Day
 2 Days
 3 or More

Will your Company assist with registration fees? Yes No

Optional:

Name _____

Phone _____



IEEE

Contact: Richard Aseltine

Student Activities News

FACULTY SIGN-UP PROJECT

Membership Development is challenging the student branches to increase IEEE membership among their faculty. In the promotional packages sent to student branches, a starter supply of membership information brochures and a "Join IEEE" poster were included. Branch counselors and student branch members were asked to review the brochures to reacquaint themselves with the many activities, services, and publications available, and use this information to recruit faculty who are not currently members of the IEEE. Membership Development will endeavor to keep track of each branch's success for 1979.

MORE 1979 STUDENT PAPER CONTEST RESULTS

The Region 6 Student Paper Contest was held in conjunction with WESCON. The participants were: Brooks Leman, University of Santa Clara; Nancy A. Sanford, Washington State University; Kent D. Heyborne, University of Utah; and Daniel Mericle, University of New Mexico.

The Region 7 Student Paper Contest winners are: first place; Gregory Gajda, University of Ottawa; second place, Philip Richardson, Connestoga College of Applied Arts and Technology; third place, Mercel Tutt, University of Waterloo.

PREPARE EARLY FOR THE 1980 STUDENT PAPER CONTEST

The 1980 Student Paper Contest, funded again by IEEE's Life Members, is a valuable way by which you can have your own work recognized, rewarded, and published. Contact your student branch counselor for details on rules and submission deadlines. This contest is open to IEEE Student Members only.

Free copies of the "1978 Student Papers" are available upon request to all IEEE student branches. Contact Student Services in New York if you would like a copy for your student branch. Copies can be purchased from the Publication Services Dept. in New York. The price for IEEE members is \$8, and \$14 for all others. Request product number TT0113-1.

PUBLICATIONS AVAILABLE TO STUDENT BRANCHES AT DISCOUNT PRICES

All IEEE student branches qualify to receive group/society publications at a substantial savings. A year's subscription to a full set of transactions is available for \$86. Individual transaction subscriptions are \$3 each. For further details please contact IEEE Student Services.

Correction: The July 1979 issue of the IEEE Student Newspaper reproduced the "IEEE Code of Ethics for Engineers." The board of directors, at its February 1979 meeting changed the title to: "IEEE Code of Ethics." In Articles I, II, III, and IV, the word "Engineers" has been replaced with the word "Members."

Reprinted from the Student News Page of IEEE SPECTRUM.

Please send completed form to V. J. Giardina, 445 Hoes Lane, Piscataway, N.J. 08876.

City _____ State _____ Zip _____ Tel. No. _____

Name _____ Address _____

_____ for future use. I am chairperson of _____ course in _____

We are not planning educational programs at this time, but are seriously considering a

_____ Our Education Coordinator is _____ Tel. No. _____

_____ The dates we prefer are _____

We have decided to program _____

J. F. Wilhelm, Staff Director
Educational Services

Can you afford the time to think about it now? Remember that a good program requires good planning and that proper timing is important. We hope you take this opportunity by using the coupon below to let us know your 1980 educational plans.

We have developed an excellent way to provide you and your members low-cost continuing education. We ask that you take full advantage of this opportunity by planning a sound educational activity for your organization in 1980.

engineers. of content, outstanding instruction, and a synergistic effect through interaction with other to skills improvement not otherwise readily available. IEEE programs offer variety, excellence excellent means to augment and amplify other learning experiences. For others, it is a pathway please bear in mind that Educational Activities is one of the cornerstones of the IEEE and that

| | | | | | |
|---|-----|-----|-----|-----|-----|
| 1 | A-B | OCT | NOV | DEC | JAN |
| 2 | A-B | C-D | C-D | JAN | FEB |
| 3 | A-B | E-F | E-F | JAN | FEB |
| 4 | A-B | F | F | MAR | APR |
| 5 | A-B | G | G | MAR | APR |

- A - Develop education organization
- B - Poll membership
- C - Analyze poll returns
- D - Call Vince Giardina at (201) 981-0060 ext. 174/175 to schedule date
- E - Form local committee to assist you
- F - Activate local promotion program
- G - Run course

table scheduling period. Furthermore, we've illustrated four typical start periods to convey the concept of a comfort

activities. must be satisfied while the numerals represent the start time (in months) for these pre-course closely the importance of an early start. In the legend, the letters signify the items that

We've developed the tabular schedule below to ease your task and to show you clearly and con-

enrollments. And your Newsletter Editor should be included in your plans for the

the course. We will guide your chairperson every step of the way. Most importantly,

3. A FACILITIES chairperson - for hotel, lecture hall, meals, and audio visual properties

4. A FINANCE chairperson - for registration on the course day.

5. A PUBLIC RELATIONS chairperson - to spearhead and generate an active local interest in

1. An EDUCATION chairperson - for general coordination of the program.

2. A FINANCE chairperson - for income and expense responsibility on the local scene. We

are prepared to assist you in all other financial activities from the payment of pre-

course arrangements, to the posting of pre-registration checks, to the final

As your program gets underway, you'll soon see that teamwork is all-important. Don't try to

BRANCH AWARD COMPETITION PROVIDES GRANTS OF \$500

The IEEE Vincent Bendix Award Competition provides grants of up to \$500 to student branches for the support of projects undertaken by branch members. Over \$40 000 has been given to 97 projects since the program's inception in 1965. Projects funded have ranged from technical research on state-of-the-art technology to community service programs.

Proposals for the 1979-80 competition should be sent to the IEEE Student Services Department such that they are received no later than Nov. 15. IEEE student members interested in entering should contact their branch counselor for further details or write to the address given below.

PAMPHLETS ON CAREER PLANNING AND GUIDELINES FOR EMPLOYMENT AVAILABLE

Helpful publications for every student are available to student members on request at no charge while the supply lasts. A 16 page booklet, entitled "Career and Life Planning for Students," published by IEEE was prepared to help individuals assess their own needs and abilities, articulate career and life goals, and formulate plans of action to achieve those goals. Another publication, "Guidelines to Professional Employment for Engineers and Scientists," published by the Engineers Joint Council, is given to students as a summary of what has been described as mutually satisfying relationships between employers and professional employees. To request copies of these pamphlets, send your name, address and membership number to IEEE Student Services. Requests not accompanied by a valid membership number cannot be fulfilled.

BRANCH PROMOTIONAL MATERIALS

The months of September through December are the highpoint of the membership recruitment year. Students who join IEEE during this period may receive up to a 16 month membership for one year's dues.

All student branches with membership greater than 10 were sent promotional supplies in August. If additional materials are needed, contact Student Services at the address given below.

The "Student Branch Survival Kit" is a new product available upon request at no charge from Student Services after Oct. 1. Included will be colorful posters, the 1979 Branch Operations Guide, and the necessary forms for reporting branch activities. The package was designed to aid branch officers in running a successful and well organized branch in the 1979-80 academic year.

WHO TO CONTACT AT IEEE

The IEEE maintains offices at a number of locations in the United States and Canada. To receive materials referenced above, contact IEEE Student Services at the Headquarters address (345 E. 47th St. New York, N.Y. 10017). Questions or inquiries regarding special student programs should also be directed to the Student Services Department. Questions regarding the status of an individual member's status or magazine subscription should be sent to the IEEE Member Services Department at the Service Center (445 Hoes Lane, Piscataway, N.J. 08854).

Reprinted from the Student News Page of IEEE SPECTRUM.

TAB NEWS

COMMITTEE ON LARGE-SCALE SYSTEMS

The Technical Activities Board (TAB) voted unanimously to endorse the formation of a technical Committee on Large-Scale Systems.

The committee is under the chairmanship of James D. Palmer, president, Systems, Man, Cybernetics Society. Those interested in joining should contact Irving Engelsen.

TAB CHANGES APPROACH TO FINANCING

The 1980 Technical Activities Board (TAB) Department budget will require fewer contribution from the societies, groups, and councils than in the past, as reported by Lawrence K. Anderson, chairman of the TAB Administration operations committee, in TAB NEWSBRIEFS.

For 1979 the societies, groups, and councils had been "taxed" a total of \$225 000 to help support the activities of the Technical Activities Department.

In 1980 this "tax" may well be zero, and in any case should not exceed \$137 000.

The exact amount is uncertain, because of the following: The IEEE General Fund is currently budgeted for a 1980 deficit of over \$1 million. If a deficit of this magnitude actually occurs, TAB has pledged to provide support to the TAB Department of \$137 000, this amount representing that part of the TAB Department expenses that can fairly be claimed to be in direct administrative support of the societies, groups, and councils. In the likely event that the actual deficit in the General Operating Fund is less than \$1 million, the General Fund will bear this expense itself.

TAB NEWSBRIEFS INTRODUCED

The Technical Activities Department has introduced a newsletter entitled "Technical Activities NEWSBRIEFS," designed to consolidate important TAB and Institute-wide information in a bi-monthly publication.

A comprehensive IEEE Administrative Meetings Calendar is also included with each edition.

NEWSBRIEFS is distributed on a complimentary basis. If you would like to add your name to the mailing list, write to Audrey R. Bickel at Headquarters.

EAB NEWS

MICROPROCESSOR COURSE COST INCREASES

IEEE members are asked to note the following price increase for the Heath microprocessor course: Effective Oct. 1, 1979 the course, consisting of course materials and easy-to-assemble trainer kit, will be increased to \$279.95 plus \$6.55 for handling and shipping.

IEEE members who satisfactorily complete the course will be entitled to a \$35 rebate. Details of the course may be obtained by writing the IEEE Education Registrar at Headquarters.

EAB ANNOUNCES NEW HOME-STUDY COURSE

Soon to be available to IEEE members is a new Heathkit home-study course—"Digital Techniques."

Consisting of course materials, an easy-to-assemble trainer kit, and course cassettes, the course will be an introduction or supplement to the popular ETS-3400 microprocessor course.

Cost to IEEE members will be \$145 plus \$5.75 shipping and handling with a \$35 rebate upon satisfactory completion of the course. For details contact the IEEE Education Registrar at Headquarters.

STANDARDS NEWS

"STANDARD METRIC PRACTICE" REVISED

A revised edition of IEEE Standard Metric Practice is now in print and is being canvassed for approval as an American National Standard.

The revised standard changes the letter symbol for the liter and introduces a new unit for dose equivalent—the sievert. It urges the use of the International System of Units (SI) plus a limited group of non-SI units.

STANDARD TESTS FOR ANTENNAS REVISED

New IEEE standard test procedures for antennas, developed by a working group in the Antennas and Propagation Society, will be published this month.

These procedures are a greatly expanded revision of IEEE's Standard 149, published in 1965.

A special prepublication offer is being made to members of the Antennas and Propagation Society.

RAB NEWS

OCTOBER ORGANIZATION ROSTER TO BE ISSUED

The October supplement to the March organization roster will be issued by the Field Services Department later this month. The roster will provide an up-to-date listing of all newly elected section officers, as reported through September.

Reporting forms for submission of additional officer information are available from the Field Services Department. Section Secretaries should submit complete section officer, committee, and chapter records if this has not already been done.

EDUCATIONAL ACTIVITIES REPORT REQUESTED

Local educational programs have seen a dramatic rise in the past few years. The Field and Educational Services departments would like to know the level and type of this activity in 1979.

A new reporting form requesting this information will be included with the meeting report forms to be mailed to section secretaries in November.

STUDENT BRANCH ACTIVITIES RESUMING

September and October are the months for the start-up of activities at 430 student branches. Sections are encouraged to help branches in their membership promotion campaigns and setting up joint meetings and field trips. Over 1000 students will join IEEE in the next several months contributing to the continued growth and strength of the IEEE student program-worldwide.

PUB NEWS

IEEE TO JOIN PUBLISHERS' ASSOCIATION

The Publications Board has approved IEEE joining the Association of American Publishers to give IEEE a voice in the most influential publishing body in the United States.

ELECTRON DEVICE JOURNAL BEGUN

IEEE Electron Device Letters will be IEEE's first fast letter journal.

All Electron Devices Society members will receive the new journal as part of their fee, starting in 1980. Nonmembers will be able to subscribe at \$20.

MANAGEMENT REVIEW AVAILABLE

IEEE *Engineering Management Review*, a quarterly reprint journal formerly for members of the Engineering Management Society, will be available in 1980 to other IEEE members at \$6.00 per year. Engineering Management Society members will still receive the review as well as the *EM Transactions* as a part of their dues.

PUB and TAB have approved this expanded availability of *Engineering Management Review* as a two-year experiment.

THE FUTURE OF NUCLEAR POWER

Within hours after it became clear that a major nuclear-power accident was in the offing at Three Mile Island, *Spectrum's* editors began planning a special edition on the accident and on the future of nuclear power itself.

The report will be presented in four sections: Three Mile Island and U.S. nuclear power today; the factors in nuclear risk and nuclear power's future; the nuclear power decision-makers; and nuclear power throughout the world.

The result is a unique perspective that will appear in the November issue in terms understandable not only to the technical community but to concerned citizens as well.

AWARDS

IEEE PRIZE PAPER AWARD ESTABLISHED

The board of directors established a new IEEE prize-paper award, the Donald G. Fink Award, "for the outstanding survey, review, or tutorial paper in any of the IEEE *Transactions*, journals, magazines, or *Proceedings*," issued between Jan. 1 and Dec. 31. The award, consisting of a certificate and \$1000, will be funded by the Life Member Fund Committee.

CHAPTER/SECTION NEWS

The Systems, Man and Cybernetics/Control Systems Chapter of the Pittsburgh Section was dissolved.

The Vehicular Technology Chapter of the Tokyo Section was established.

The Acoustics, Speech, & Signal Processing Chapter of the Northern Virginia Section was established.

The Computer Chapter of the Atlanta Section was established.

The Magnetics Chapter of the Washington Section was established.

The Engineering Management Chapter of the New York/North Jersey Section was established.

The Engineering in Medicine and Biology Chapter of the Nebraska Section was dissolved.

The Electromagnetic Compatibility Chapter of the Dayton Section was established.

The Missouri Slope Subsection of the Twin Cities Section in Region 4 was established. The territorial limits of this new subsection are: All area in North Dakota west of a line starting at the Canadian border, then south on the Bottineau County east boundary, then west on the Pierce County north border, then south on the Pierce County west border to the Sheridan County line, then going east along the north of Wells County to the east border, then south to the Stutsman County border, west to Kidder County, then south on the Kidder County east border to Logan County, then east to the Logan County east border, then south to the McIntosh County east border, and then south to the South Dakota border.

CONSOLIDATED INVESTMENT OPTIONS

The recent performance of the cash management investment options available to IEEE's organizational units is reported below. All units are urged to examine their available cash for optimum returns.

Investment Option 1—Short-Term Bank Deposits* :

| | |
|------------|-------------------|
| June | 8.91% |
| July | 9.12% |
| August | 9.93% |
| Sept./Nov. | 9.75% (estimated) |

Investment Option 2—Long-Term Bank Deposits (over 6 months)†:

| | |
|------------|--------------------|
| June | 9.45% |
| July | 9.95% |
| August | 10.43% |
| Sept./Nov. | 10.50% (estimated) |

Investment Option 3—Bond Plan†:

| | |
|------------|-------------------|
| June | 9.20% |
| July | 9.35% |
| August | 9.25% |
| Sept./Nov. | 9.40% (estimated) |

* Percentages refer to amounts actually earned by all depositors in that month.

† Percentages are estimated average return over total period of the investment on funds deposited during the respective months.

For additional information, contact Michael J. Sosa or Thomas W. Bartlett.

Quick-Reference Telephone Roster

(for information referenced in this issue)

HEADQUARTERS (212-644...): Audrey R. Bickel 2123, Reed Crone 7557, Irving Engelson 2150, Dolores Wright-Riker 7750, Thomas W. Bartlett 7748.

PISCATAWAY SERVICE CENTER (201-981-0060): Vince Giardina 174, Michael J. Sosa 123.

WASHINGTON OFFICE (202-785-0017): Jill Gerstenzang.