JUN 12 1973

ELECTRICAL ENGINEER STEED BRANCHES DEPT.

TOP-SIDE DEVELOPMENTS

CANDIDATES, whose names will appear on the election ballot, are listed in the June issue of SPECTRUM. Your ballots will be mailed to you in August. These are the people who will lead your organization next year. This is the annual opportunity for IEEE members to register their choices. Urge them to cast their ballots. Please yote!

PISCATAWAY MOVE has been confirmed by the Executive Committee (ExecCom) action. The 36,000 square foot building will take approximately one year to build. Groundbreaking is scheduled for sometime this summer. Current plans call for the building to be occupied by only the Administrative Services Department. Field Services and Publications, previously announced as moving, will remain at the United Engineering Center (UEC) in New York. (See E.E., Apr., p. 1)

WASHINGTON OFFICE will be moving into the National Society of Professional Engineers (NSPE) building. The change was approved by the ExecCom following a study of proposed sites that started last September. The new facilities, which includes a meeting room, are being shared with the ASME-EJC Washington representative.

MEETING SCHEDULE. ExecCom meeting, scheduled for November 19 in San Diego, California, has been rescheduled to November 27, in Hollywood, Florida. This will coincide with the Board of Directors (BofD) meeting on November 28 and 29. (See E. E., Apr., p. 1; Feb., p. 1.) The first meeting of the 1974 BofD will be on January 9. The new ExecCom will meet on the following day.

SOCIO-ECONOMIC ISSUES

PENSION PROGRESS REPORT. Plans continue for a targeted fall announcement of an IEEE pension plan. This would be a non-qualified plan for members (paid with after-tax dollars). On the legislative front, the Williams-Javits bill (S. 4) has been favorably reported out of committee. However, no action is expected on this bill until the conclusion of hearings by a special pension committee of the Senate Finance Committee. These hearings were scheduled for late May. In addition, Frank Cummings, IEEE Counsel on pension matters, has been asked to participate in a panel discussion on pensions. This panel was also arranged by the Senate Finance Committee. (See SPEC-TRUM, May, pp. 55-58).

PENSION LEGISLATION was the topic of a speech delivered by New York Senator Jacob Javits in late February at a special legislative forum cosponsored by IEEE. The Senator said, "I know that the Engineering Societies are especially concerned and interested in pension reform legislation.

"The Williams-Javits bill will be a landmark achievement and a major breakthrough toward...eliminating many of the serious injustices that have been found to exist." The Senator went on to say, "Once this breakthrough is achieved, we can build on it in a deliberate and intelligent fashion... In pursuit of this objective, it is encouraging and valuable to have the strong support of the professional groups." (See E.E., Apr., p. 2)

GUIDELINES FOR PROFESSIONAL EM-PLOYMENT were announced at a Washington, D. C. news conference. (A complete text of the Guidelines was published in SPECTRUM, Apr., pp. 57-60.) By

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conference time, 15 organizations had endorsed them. President Harold Chestnut emphasized the need for adequate pensions for engineers. He said, "What we are after is very simple: an equitable pension plan for the professional engineer which treats him fairly, with dignity, and provides him with economic security."

Edward Slowter and Irving Leibson, cochairmen of the committee which formulated the Guidelines, noted that this was the first edition and that revisions and improvements to this document would be sought. (See E.E., Apr., p. 2; Feb., p. 1.)

ASSISTANT SECRETARY OF COMMERCE Dr. Betsy Ancker-Johnson met with President Chestnut, three IEEE staff members, and representatives of 10 other scientific and engineering societies at a round table discussion, held in Washington, D. C. The conversation centered on ways government and technical societies could improve their working relationship. Dr. Ancker-Johnson, a member of IEEE, has only recently been appointed to this position in the Federal Government.

UNITED NATIONS Economic and Social Council (ECOSOC) has granted IEEE consultative status. Listed in Category II Status, IEEE has the right to name a representative and to submit written comments on ECOSOC activities. (This status also applies to ECOSOC's subsidiary units).

VOLUNTARY PILOT EMPLOYMENT ACTIVITY EXPERIMENT is being expanded (see E.E., Apr., p. 2). The Institute, in cooperation with the American Society of Mechanical Engineers (ASME) and the American Institute of Aeronautics and Astronautics (AIAA), will hold a Mid-Career Employment Workshop. The Workshop, at the UEC in New York, may be attended on June 18, 21, or 28. Members of these societies, who are over 40 years of age and seeking employment, are urged to attend. (All members can enroll in the employment program by obtaining an employment resume form. Write, Joe Casey.)

ENGINEER-INDUSTRY EMPLOYMENT CONFERENCE, sponsored by the IEEE and eight other societies, was held in Chicago on May 7, 8, and 9. Approximately 85 industry and technical society leaders were present to discuss various problems of common interest. The "Employment Guidelines, " that were publicly announced only three days earlier (see related story on page 1), was one topic of conversation. While those leaders representing industry were reluctant to endorse the "Guidelines," they did support the need for making them well known. A session on "Pension Reform -Time for Action" was moderated by IEEE General Manager Donald Fink.

TOOLS AND AIDS

PUBLIC AFFAIRS INVOLVEMENT WORK-SHOP was held on June 1 at Ohio State University. Organized by the Engineering Liaison Public Relations Committee (IEEE and 9 other societies), the session was designed to create a dialogue among engineers on various approaches to pressing community problems. Invited were Section leaders in Ohio, lower Michigan, Kentucky, West Virginia, Indiana, and western Pennsylvania. The Liaison Committee is discussing the possibility of holding a series of workshops throughout the United States.

FOUR CORRESPONDENCE COURSES in electrotechnology are available in the Americas through IEEE. Prepared by the Institution of Electrical Engineers (IEE), Great Britain, the courses are designed to provide an engineer with an opportunity to bring himself up-to-date in post-graduate subjects in electrical, electronics, and control engineering. The course titles are: Field-Effect Transistors, Pulse-Code Modulation, Digital Instrumentation, and Modern Control Theory. The cost for members is \$75 and \$120 for non-members. (Copy of syllabus, Emma White)

SECRETARY'S REPORT for 1972 has been issued. Released in a new streamlined

E.E. is sent without cost beyond dues to officers of IEEE Boards, Committees; Divisions, Societies, Groups, Conferences; Regions, Councils, Sections, Subsections, Chapters, and Branches. Second-class postage is paid at New York, N. Y.

format, copies were sent to Section Chairmen, Group/Society Presidents, Council and Area Chairmen, Student Counselors, and Chairman of Standing Committees and Boards. A condensed version will be published in the July issue of SPECTRUM.

SECTION NEWS

IT'S ELECTION TIME for many Sections, Subsections, Chapters, and Councils. You can aid in a smooth transition of information by reporting the election results on the forms provided for you. Over 1,000 names will have to be changed on the computer. Your help will make the job easier. These reports should be sent to Headquarters (attention: Emily Sirjane) within 20 days after the election. (Bylaw 402.5, paragraph 7)

SECTION APPOINTEES. In getting your Section ready for fall programming, you will want to immediately appoint your committee chairmen. The sooner these appointments are made, the more time they will have to organize their ideas and plan effectively. Don't forget to send IEEE the names of these appointed committee chairmen (to Emily Sirjane).

SECTION MANUAL. New Section Chairmen automatically receive this important guideline to successful Section committee's operation. Familiarity with the material is a good first step to efficient Section operation. You don't have to memorize it, just review it so that you know what support is available.

KNOW YOUR DIRECTOR. A four-page brochure is sent with the Section Manual. It contains a biographical sketch of your Regional Director and pertinent information on the structure and organization of the Region. It includes a map, makeup of the Regional Committee and important statistics. Keep this brochure handy—it can be an important communications link with your Regional Director and his Committee. Remember...he is your representative on the BofD.

REGIONAL OUTSTANDING LECTURE PROGRAM. A complete list of available

speakers, superceding and expanding previous lists, is given in the "blue sheets" (pp. 4G-4L). These need to be in the hands of program chairmen planning for fall meetings. (Copies, Peter Edmonds)

STUDENT NEWS

BENDIX AWARDS have been granted to seven Student Branches. These Awards, totaling \$2,500, help support specific projects to be completed during 1973. The winning Branches are: Louisiana Tech University, University of Southern California, Oklahoma State University, University of Alberta, University of British Columbia, University of Calgary, and the University of Mississippi. Proposals for the 1973 Bendix Awards must be postmarked no later than December 31, 1973. (Details, Bob Asdal)

PROMOTIONAL PACKAGE will be waiting for Student Branch Chairmen and Counselors when they return in the fall. The kit contains supplies, promotional material, operating manuals, etc. Copies of SPECTRUM will also be sent. Plan now to use this material for an early membership drive. Remember, the major growth of IEEE is through the Student membership.

INDIVIDUAL MEETING REPORTS (yellow sheets) are no longer required by Headquarters. However, you should record the names of speakers and films used at meetings. A list of contacts for industrial tours should also be maintained. This information is useful to other Branches and will be requested in a new Annual Report. Eventually a speakers, tours, and film directory will be published from material contained in the Annual Reports.

BRANCH COUNSELORS. If members of your Branch are having membership problems, send complete details to Headquarters. The more information that you provide, the easier it will be to solve the problem.

TAB NEWS

CONSUMER PRODUCT STANDARD Coordinating Committee is being formed. The

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first project will be to create a list of products for which technical criteria could be developed. Efforts would be made to encourage producers of these products to print, on an attached label, answers to a pre-determined set of questions. While IEEE would not rate any product, it is hoped that the information provided by these questions and answers would provide consumers with a means of matching a product to their particular needs.

COMPLETE GROUP/SOCIETY LIST is printed in the "green sheets." The listing also notes which Division each Group/Society is in. Saving this sheet for future reference is recommended.

PUBLICATION NEWS

SPECTRUM DEADLINES for issues through March 1974 are printed on page 4E for your information. These dates should be made known to the membership to facilitate their contributing material.

MEMBERSHIP DIRECTORY questionnaire, second request, has been mailed. This listing will include all current members, except Students. There is a June 30th deadline for returning the information.

COMBINED INDEX OF IEEE Publications will include conference and other special publication material in next year's edition. That edition will be published by IEEE. A Cumulative Index to PROCEEDINGS of the IEEE has been published by Nichigai Associates, Inc., and is currently available at a price of \$40. (See E.E., Apr., pp. 3-4.)

CONVENTION NEWS

IEEE INTERCON ATTENDANCE was approximately 25,000. A total of 226 exhibitor companies were represented at the Coliseum. An editorial in Electronic Engineering Times commended the exhibit management for doing a "superb job."

TRANSISTOR POSTAGE STAMP was announced as part of a four stamp "Progress in Electronics" series. The announcement



of this stamp was made by Edward V. Dorsey, Regional Postmaster General, at the IEEE INTERCON Transistor Luncheon. (Mr. Dorsey is seen on the left with Nobel Laureates Brattain, Shockley, and Bardeen.) The other stamps in the series show Marconi's spark coil, DeForest's audion, and early broadcast equipment.

Collectors desiring first day cancellations may make requests to: Electronics Stamps, Postmaster, New York, New York 10001. The request should be postmarked prior to July 10 and contain the proper remittance. (Remit 40 cents.)

IEEE INTERCON '74 will be held in New York, March 26-29. The exhibition will remain at the Coliseum, while the technical sessions will be held at the Statler-Hilton. This year's trial of opening the show on Tuesday will be continued. Plans are underway to also have the show remain open on one evening. The technical sessions and meetings will be scheduled from Monday through Thursday.

COMPLETE PAPERS from this year's convention are still available for purchase. Complete list of available material and prices are printed on page 4R.

HONORS

50th ANNIVERSARY of the Mexico Section will be celebrated this year. An extensive power oriented celebration is being planned for September.

NATIONAL ACADEMY OF ENGINEERS elected 70 U.S. engineers to membership.

JOINT ENGINEERING SOCIETIES

OPEN LETTER TO THE PRESIDENT

AND THE MEMBERS OF THE 93rd CONGRESS

ON THE OCCASION OF NATIONAL ENGINEERS WEEK

February 23, 1973

The President
The White House
Washington, D. C.

Dear Mr. President:

As the United States ushers in a new era of peace, the nation's scientists and engineers salute you and bring you greetings and reaffirm our pledge of full support on the occasion of National Engineers Week.

In addition to pledging our support, we invite your attention to a pressing national need upon which the continued health and prosperity of our country depends -- the need to develop a planned, sustained, and far-sighted policy for use of the nation's science and engineering resources.

Simultaneously, we offer our earnest cooperation and talents in helping to devise such a policy and in providing for its rational execution. Such a national policy in science should encompass the following goals:

- 1. The establishment of national programs to deal with such pressing problems as future sources of energy; providing safe, clean, efficient, economical transportation for all; improved and more economical methods of communication; delivery of adequate health care; protection of individuals and the nation from attack; and controlled use of our national and natural resources with proper regard for environmental effects and economic impact.
- 2. Effective mobilization of our scientific and engineering manpower. Improvement of technical training at the vocational and secondary school levels in order to insure opportunities to every segment of our population. Avoiding either an over abundance of technically trained manpower or, just as seriously, a severe shortage leading to crisis situations in the future. The nation must curb the gigantic pendulum swings of "feast or famine" which have so characterized our lack of policy for efficient use of our vast technological resources in the recent past.

3. Careful management and husbanding of all of our vital natural resources -- of materials, energy and manpower--so that future generations of men can share the benefits of our technological progress.

We look upon the relationship of the government and the scientific and engineering community as a mutually beneficial partnership whereby both the general public and the members of the technological community share a common interdependence for progress and benefit.

This partnership in the past has enabled our nation to be the technological leader of the world in giving to all mankind such developments as atomic energy, the transistor, manned exploration of the moon, the computer, television and Telstar, synthetic fibres, new methods of construction of homes, offices, factories, schools, churches, roads, bridges, and tunnels, the cardiac pacemaker and other life saving devices.

We have developed laboratories and research centers in our great universities, independent research laboratories, industrial complexes, and government centers, all working in partnership to provide new technologies, products and jobs.

We have also established one of the finest educational systems, from grade school through graduate school, to produce trained minds in science, engineering, basic and applied research, and management in order to conquer ignorance and turn our many discoveries to the service of man.

But this entire complex will be of no avail unless there is a nationally formulated series of goals and objectives for men, methods, and materials to maintain proper balance between supply and demand and to insure that all of our national priorities are being adequately met.

Our societies offer their services to our nation for this task. We are confident that we can work with our President and the Congress in forging the plowshares for a century of peace from the swords we have now put aside.

(Signed by Presidents of AIAA, AIChE, ASCE, ASME, IEEE and NSPE)

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Responses to the Joint Engineers Letter to the Congress and the President

White House

George Shultz, Assistant to the President and Secretary of the Treasury

House of Representatives

Carl Albert, The Speaker - Oklahoma Charles E. Bennett - Florida - Michigan John Convers, Jr. James C. Corman - California - Massachusetts Harold D. Donohue Guy Vander Jagt - Michigan Patsy T. Mink - Hawaii Richardson Preyer - N. Carolina - Montana Dick Shoup Fortney H. Stark, Jr. - California Roy A. Taylor - N. Carolina Charles Thone - Nebraska

U.S. Senate

J. Glenn Beall, Jr. - Maryland Frank Church - Idaho Peter H. Dominick - Colorado Vance Hartke - Indiana - N. Carolina Jesse Helms Ernest F. Hollings - S. Carolina Daniel K. Inouye - Hawaii Warren G. Magnuson - Washington John L. McClellan - Arkansas Charles H. Percy - Illinois William Proxmire - Wisconsin John Sparkman - Alabama Strom Thurmond - S. Carolina

(Editor's note - The Government Relations and Public Relations Advisory Committees recommend that you check the list of Congressmen who have responded to this letter. If yours has responded, send him a letter saying "thank you." If not, mail him a note reminding him of the letter and include the copy printed in E.E. Let your Congressman take note that you are concerned about legislative matters that effect the engineering profession.)



FURTHER DEVELOPMENTS ON THE PENSION FRONT Frank Cummings, IEEE Special Counsel

In the Senate Labor Committee. The Williams-Javits pension reform bill, S. 4, has been reported out of the Senate Labor Committee and is now on the Senate Floor Calendar awaiting action. The bill now contains two engineering amendments: a provision for government procurement regulations guaranteeing against pension forfeiture by engineers working under government contracts; and a requirement for a study, report and recommendations within one year after enactment looking toward further changes in the law to protect the pension rights of "high-mobility" employees.

The language in the Committee Report commenting on this special study to be performed by the Secretary of Labor is as follows:

"He (the Secretary of Labor) is further required to study the sufficiency of vesting provisions as applicable to workers who are engaged in high mobility services or professions such as scientists, engineers, teachers, architects and similar occupations. The innovative provisions of this bill require close observation to assure fulfillment of the legislative intent and accordingly, appropriate revisions or other necessary changes shall be incumbent upon the Secretary to initiate. The Secretary shall give high priority to recommendations regarding further legislation. "

In the House Labor Committee. The companion bills pending in the House Labor Committee are still undergoing hearings, but Subcommittee Chairman John Dent is reported to have promised an Executive Session soon to begin "marking up" those bills.

At the White House. In the meantime, President Nixon has sent a special pension message to the Congress urging enactment of minimum standards of vesting, funding and fiduciary standards for pension plans, which will, hopefully, give further momentum to the pension reform movement.

The timetable for final enactment of pension legislation is still somewhat uncertain, but the 93rd Congress seems, more and more, to be the pension reform Congress.

IEEE REGIONAL OUTSTANDING LECTURES TOURS

These sheets contain a complete, updated list of available speakers. Section and Chapter officers are encouraged to request visits by them or to describe a topic of interest; then a matching speaker will be sought. IEEE general funds pay travel expenses in full and other expenses as necessary within constraints of the guidelines (EE. Feb. '73, pp. 4G and 4H).

To request a speaker or for other information, contact IEEE Headquarters (Peter Edmonds, 212/752-6800 - Ext. 333). Prospective hosts should not contact the chosen speaker directly because he has been advised to expect invitations under this program from Headquarters, where itineraries will be coordinated to ensure best cost/ effective use of IEEE funds. As soon as an itinerary has been set, all arrangements are turned over to host Sections. Sections outside North America receive additional notices advising them when speakers are planning to travel to their Region. After (but only after) receipt of such additional notices, prospective hosts may and should invite speakers directly.

| SPEAKER | INSTITUTION | TOPIC |
|------------------------|--|--|
| David Allen | National Bureau of Standards | NBS atomic time scale Statistics of atomic frequency standards. |
| Richard J. Backe | Sperry Rand | Pension plans for engineers |
| J. Malvern Benjamin | Bionic Instruments | "How does company loyalty affect engineering design"? |
| Roger W. Bolz | Consultant | Automation - management, technology and popular mythology |
| Joseph E. Casey | IEEE (staff) | Manpower planning, salaries and fringe benefits and career development. |
| Seville Chapman | N.Y. State Assembly Scientific Staff | Application of science and technology to the solution of social problems. |
| Ralph I. Cole | American University | Technology Forecasting & Assessment |
| Joel S. Engel | Bell Telephone Labs. | A high-capacity mobile tele- communications system |
| Arthur Goldsmith | Department of Transportation | Telecommunication aspects of transportation - air, sea and land applications. |
| Mark Grove | Walter Reed Hospital | Biological effects of microwave radiation. |
| William H. Higinbotham | Brookhaven National Lab. | Arms control Non-nuclear-proliferation treaty Nuclear material diversion safeguards. |
| John M. Kinn | IEEE (staff) | Employment issues for Electrical Engineers |
| Bernard H. Manheimer | Department of Housing & Urban Development | Technology and governance; in general and |

environmental aspects

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| F. H. Reder | U.S. Army Electronics Command | Interpretation of VLF Phase and Amplitude Data and their applications. |
|------------------------------------|---|---|
| John A. Robinson | Syracuse University | Artificial intelligence, the problem of making computers prove theorems. |
| Chen-To Tai | University of Michigan | Presentation of Maxwell's equations. Diffraction; radiation in moving media. |
| Murray Turoff | Office of Emergency Prepardness and Newark College of Engineering | Technology, Forecasting & Assessment Delphi methods Computerized Conferencing Systems Management Information Systems |
| Andries van Dam (1 day trips only) | Brown University | Computer graphics and microprogramming. |
| Raymond M. Wilmotte | Consultant | Risk management; Technology Forecasting & Assessment |
| D. Weiner | Syracuse University | Mathematical modelling of non-linear systems. |

The following speakers have been listed during 1972. This version supersedes previous announcements. They continue to be available in 1973-74.

| SPEAKER | INSTITUTION | TOPIC |
|--------------------------|--|--|
| Prof. Norman Abramson | University of Hawaii | The ALOHA System - another alternative for computer communications. |
| Dr. John J. Allan | University of Texas | Digital computer control of machines. Interactive graphics for design and/or control of physical devices. Use of computers in undergraduate education. |
| Dr. Michael Athans | Massachusetts Institute of Technology | Optimal Control Theory and Applications. Non-linear filtering and Stochastic Control. Large scale systems |
| Dr. Joseph M. Biedenbach | Hershey Medical Center | Continuing Education for Engineers, utilizing multimedia presentations. |
| Prof. Robert R. Boorstyn | Polytechnic Institute of Brooklyn | Finite Memory Communications. |
| Dr. Russell Carpenter | N.E. Radiological Health Lab. USPHS | Biological effects of electromagnetic radiation. |
| Dr. Liborio Castriota | PRD Electronics Incorporated | Networks - current theory |
| Dr. Kan Chen | University of Michigan | Systems Sciences, applied to environmental and social systems |
| Dr. Lewis Claibourne | Texas Instruments | Applications of surface wave acoustic wave devices to communications equipment (radar, VHF, UHF, bandpass filters). Systems applications. |
| Mr. Warren F. Clement | Systems Technology Inc. | Theory of Manual Vehicular Control. Measuring and Control System Requirements for low visibility landing. Theory for Displays in Manual Control. |
| Dr. L. Stephen Coles | Stanford Research Institute | Speech Understanding Systems |
| Dr. Nabil Farhat | University of Pennsulvania | Microwave holography |
| Dr. Curt F. Fey | Xerox Corporation | National Goals, Priorities & Technology. Decision Analysis for Societal Problems. |
| Mr. Harold S. Field | Omni Tech Corp | Oil-well instrumentation. Instrumentation for petroleum production. |
| Dr. Michael Flynn | Johns Hopkins University | Micro-programming. |

| Dr. John Freehafer | General Railway Signal Co. | Modern Trends in Mass Transit and Personal Rapid Transit. | |
|--|--|--|---|
| Prof. Herbert Freeman | New York University | Computer graphics. Interactive computer graphics. Computer animation. | C |
| Dr. Gunter Geiss | Consultant | Theory optimization - Control Theory - Ecological Systems. | |
| Dr. F. E. Glave | Bell Northern Research | Digital Microwave transmission systems. | |
| Dr. Paul Green | IBM Research Laboratories | Data Communications and networks. | |
| Mr. William E. Harper Mr. William Moffett | Allis-Chalmers Company I-T-E Imperial Corporation | Compact, high-voltage electric power switching stations. | |
| Dr. William P. Harris (psychologist) | MIT Lincoln Lab | Automated instruction systems | |
| Dr. Albert S. Hoagland | IBM Corporation | Computers, Memory and Storage Peripheral Equipment and Magnetic Recording. | |
| Mr. Ivar M. Holliday | Raytheon | General Writing Practices - Technical and Business Reports, Proposals and Brochures, Specifications and Standards, Oral Presenta- tions. | C |
| Dr. Floyd B. Humphrey | CalTech | Flux Reversal in Magnetic Thin Films Education and Laboratory Practice - application to Solid State Labs. | |
| Dr. Alan R. Kahn | Medtronic Inc. | Biomedical Instrumentation | |
| Dr. Stephen J. Kahne | University of Minnesota | Trends in Automatic Control Education - Systems Engineer- ing applied to Environmental Design. | |
| Mr. James N. Kilpatrick | Westinghouse | General Writing and Editing Practices Oral Presentations. | |
| Dr. Richard T. Lacoss | Massachusetts Institute of Technology | Seismic Data Processing | |
| Dr. Emmett Leith | University of Michigan | Holography | |
| Dr. Benjamin J. Leon | Purdue University | Digital Filtering. | 0 |
| Dr. Samuel Levine | Consultant | CRT display systems for computers. On-line computing systems, for stock market applications. | |
| Mr. Peter Lloyd | Bell Telephone Labs | Piezoelectric devices: Monolithic crystal filters. | C |

| ır. | Robert Lucky | Bell Telephone Labs. | Data Communication. |
|-----|-----------------------------|------------------------------------|---|
| r. | Herbert Matthews | Sperry Rand | Surface acoustic waves. Magnetoelastic phenomena. |
| r. | Roy H. Mattson | University of Arizona | Solid State Electronics - Biomedical Engineering - Technical Education - Education |
| r. | Ivars Melngailis | MIT Lincoln Labs. | Diode Lasers. |
| r. | G. Lorimer Miller | Bell Telephone Labs. | Application of accelerator techniques to device physics: nuclear instrumentation. |
| ır. | John J. Miller | The Bonligny Co. | General Editing Practices Editing Practices Oral Presentations. |
| r. | Eugene Mittelmann | Consultant | Transducers - reduction from research to application. |
| r. | Hans Oestreicher | Wright Patterson Air Force Base | Cybernetics, adaptive and learning systems. |
| lr. | James B. Owens | I-T-E Imperial Corp. | Development in high voltage compact, electric power switching stations (not 1973) |
| lr. | John C. Redmond | General Dynamics | Federal Air Pollution - Law and Effects on Electronics Industry. |
| r. | Daniel M. Rosen | Consultant | Patents and licencing |
| r. | Joseph E. Rowe | University of Michigan | Microwave solid-state devices - Computer Simulation of beam plasma systems, Microwave tubes. |
| r. | Raphael J. Salamon | Rutgers University | Health Care Delivery. |
| r. | Heinz M. Schlicke | Allen Bradley Company | Filtering for Electromagnetic Compatibility-Mismatching - Realistic Filtering perform- ance for highly mismatched system - Power line trans- mission, D.C. to microwave. |
| ro | fessor William P. Schneider | University of Houston | Deep Ocean Exploration (Glomar Challenger) |
| ro | f. Mischa Schwartz | Polytechnic Institute of Brooklyn | Digital Data Network - Urban Systems Analysis - Adaptive techniques for Equalization. |

| Dr. H. J. Shaw | Stanford University | Surface acoustic wave devices for communication and data processing |
|-------------------------|---|--|
| Dr. James Snodgrass | Scripps Institute for Oceanography | Oceanographic Instrumentation data gathering, satelite navigation frequency allocation for oceanography, engineering aspects -biomedical instrumentation. |
| W. D. Spencer, M.D. | Texas Institute for Rehabilitation and Research | Information systems in hospitals - Technology and Health Services - Hardware and Software Electronic Applications for prosthetics. |
| Prof. George Szentirmai | Cornell University | Computer-aided Design of Circuits and Filters. |
| Prof. Gabor C. Temes | University of California | Computer-aided Synthesis of Filters - Recent results in Sensitivity analysis and Optimization of Circuits - New results in the Time-Domain Design of Circuits. |
| Mr. William von Alven | Consultant | General Systems Technology, General Applications. |
| Dr. C. G. Walter | Ohio State Research Foundation | New developments in antennas |
| Dr. John Zaborsky | Washington University | Control Systems - Controllability and Observability of Bilinear Systems - Inductive Approach to Estimation and Filtering-Singular Arcs in Discrete Systems. |

TRANSNATIONAL ASPECTS

There is a continuing need for advance information on travel plans of potential speakers going to or coming from other countries, so that IEEE Sections can be notified in sufficient time to schedule a meeting compatible with the speaker's itinerary, announce it and assemble an audience. Information (even if tentative) should be sent to Peter Edmonds three months in advance of departure. A proven mechanism exists for arranging engagements in Europe. Interest in receiving speakers has been expressed by IEEE Sections in Hong Kong, India, New Zealand, Australia, Japan and South America.



To: Readers of Electrical Engineering

From: Robert M. Saunders, Chairman

IEEE Educational Activities Committee

A special ad hoc committee of technicians and technologists is being formed at the request of the Executive Committee of IEEE. The charge to the committee is as follows:

Identify the issues with respect to technicians and technologists, examine possible solutions to problems identified, and make recommendations for implementation by the IEEE in the following areas:

- 1. Membership
- 2. Services provided by entities of the Technical Activities Board, the Regional Activities Board, and the Publications Board of the Institute
- 3. Identify the economic status, employment patterns, and opportunities for the future in the economy
- 4. Education related service.

To properly identify all of the issues involving technicians and technologists, the committee must have members from a wide variety of backgrounds (i. e. industry, educational, etc.). If you have an involvement with this issue and are willing to serve on this committee, please contact Mr. Jack Kinn, IEEE Headquarters, 345 East 47th Street, New York, N. Y. 10017. Please call him if you have any further questions with regard to the functions of this committee.

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June 1973

Recognition of IEEE Service

We have available for recognition presentations the IEEE certificates or heavy bronze plaques.

IEEE certificates (with IEEE seal & heading) \$3.50 + \$1.00 per line lettering, \$25.00 maximum

Bronze plaques (mounted on walnut)
10 x 13-inch - \$125.00, 10 x 26-inch - \$175.00

It has seemed desirable to increase the number of choices for recognition presentations at this time. Through the good offices of the AES Society, we now offer a transparent plastic slab. It is $4 \times 6 \times 3/4$ -inch, with a 1/8-inch black backing base. This becomes a personalized paper weight by means of a suitably inscribed paper insert, such as the following, shown actual size:

| THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC. | | | | |
|---|---|--|--|--|
| ТО | X H in grateful appreciation for services as Chairperson of the Tours Committee 1973 IEEE Conference on | | | |
| | Conference Chairperson | | | |

The paper weight set, with mounting pins, blank insert, and gift box is priced:

With inscription.....\$12.00 + postage Without inscription.... 5.00 + postage

(Note: First class postage in USA - \$0.96; the set, ready for mailing, weighs 12 oz., in the event you wish to use air-mail rather than first class postage.)

The paper weight kit may be purchased by sending your order to the following address:

The Institute of Electrical and Electronics Engineers
Technical Activities Department
345 East 47th Street
New York, New York 10017

E. E. No. 47-40 June 1973





1973 IEEE INTERCON

ECHNICAL PROGRAM PAPERS

For the first time copies of complete papers are now available in three forms: individual session preprints, (eight) subject area volumes, and a case bound volume of all papers.

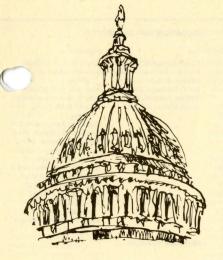
1. Individual Session Preprints.

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A LETTERWRITER'S GUIDE TO CONGRESS

93rd Congress 1st Session

Today's Congressional work schedule no longer permits the frequent and extended visits back home that used to keep Members of Congress in close personal touch with their constituents. As a result, letters from back home have come to be the main form of voter contact with their legislators—and the prime source of constituency views.

Writing an effective letter to your Senators or Representative is easy. Here are a few guidelines:

Write on your personal or business letterhead, if possible, and sign your name over your typed signature at the end of your message.

Be sure your exact return address is on the letter, not just the envelope. Envelopes sometimes get thrown away before the letter is answered.

Identify your subject clearly. State the name of the legislation you're writing about. Give the House or Senate bill number, if you know it.

State your reason for writing. Your own personal experience is your best supporting evidence. Explain how the issue would affect you, or your family, your business or profession—or what effect it could have on your state or community.

Avoid stereotyped phrases and sentences that give the appearance of "form" letters. They tend to identify your message as part of an organized pressure campaign—and produce little or no impact.

Be reasonable. Don't ask for the impossible.

Don't threaten. Don't say, "I'll never vote for you unless you do such and such." That won't help your cause, but may harm it.

Ask him to state his position in his reply. As his constituent, you're entitled to know.

The **timing** of your letter is **important.** Begin to encourage approval or disapproval of a bill, or to recommend that it be amended favorably, while it is in committee. Your Representative and Senators usually can be more responsive to your appeal at that time, than after a bill has already been approved by a committee. Of course, this isn't always the case. Sometimes your legislator may reserve his judgment—and his vote—until the sentiment of his constituency has crystallized.

Thank him, if he pleases you with his vote on an issue. Everybody appreciates a complimentary letter, and remembers it. Congressmen are no exception. But if he votes contrary to your position, don't hesitate to let him know. He will remember that, too.

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(Oreg.) William V. Roth, Jr.

(Wyo.)

(Del.)

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Clifford P. Case, (N.J.)

Jacob K. Javits (N Y

Charles H. Percy. (III.)

Charles H. Percy, (III.)

Jacob K. Javits, (N.Y.)

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Bill Brock, (Tenn.)

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Paul J. Fannin, (Ariz.) Clifford P. Hansen, (Wyo.) Mark O. Hatfield (Oreg James L. Buckley, (N.Y.) James A. McClure (Idaho Dewey F. Bartlett, (Okla.)

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Roman L. Hruska, (Neb.) Hiram L. Fong, (Hawaii) Hugh Scott, (Pa.) Strom Thurmond, (S.C.) Marlow W. Cook. (Kv.) Charles McC. Mati (Md.) Edward J. Gurney,

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John V. Tunney, (Calif.)

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Republicans Hiram L. Fong, (Hawaii) Ted Stevens, (Alaska) Henry Bellmon, (Okla.) William B. Saxbe, (Ohio)

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Howard H. Baker, Jr., (Tenn.) James L. Buckley, (N.Y.) Robert T. Stafford, (Vt.) James A. McClure. Pete V. Domenici (N. Mex.)

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Marlow W. Cook. (Kv.) Hugh Scott, (Pa.) Robert P. Griffin, (Oreg.)

Of this group, over one-third belongs to IEEE. The Academy is a private organization designed to advise the Federal Government on engineering matters. (Further details, SPECTRUM, June, p. 93)

SPECTRUM was given the Award of Merit for excellence from the American Society of Association Executives (ASAE). The Society represents 4,500 executives who manage leading trade, professional, educational, and technical associations and societies in the United States and Canada. ASAE annually recognizes outstanding association magazines, newsletters, and journals.

IEEE INTERCON '74 technical program chairman will be J. A. A. "Jack" Raper. He accepted re-appointment to the position after having done such a fine job with this year's program.

FIRST IEEE CONGRESSIONAL FELLOW will be Dr. Ronal W. Larson of Georgia Institute of Technology. Dr. Larson will serve in Washington, D. C. for approximately nine months beginning this September. The aim of the Congressional Fellow Program is to assist the legislative process by making technical expertise available to the U. S. Congress.

EXECUTIVE STANDARDS COUNCIL of the American National Standards Institute (ANSI) has elected Sava Sherr as its Vice Chairman. Mr. Sherr, Manager of IEEE's Standards Operation, is also Chairman of ANSI's Electrical and Electronics Technical Advisory Board.

FOR YOUR INFORMATION

IN MEMORIUM Knox Charlton Black, who died at the age of 67. General Manager of the Northeast Electronics Research and Engineering Meeting (NEREM) from 1962 to 1971, Mr. Black was Chairman of the Board of Scientific Analysis Corp. He was a Fellow of IEEE as well as the Institute of Aeronautical Science, the American Association for the Advancement of Science, the American Acoustical Society, and the American Physical Society.

HISTORY COMMITTEE has started a pilot project to tape record interviews with living pioneers in the electrical/electronics field. The idea is to record remembrances about important contributions to our field of interest before this source material is no longer available. Distribution of the tapes, once recorded, has not been determined. The use of volunteers for most of the work has kept the costs at a minimal level. The project is being supported by the Life Member Fund.

MEMBERSHIP SURVEY will be conducted during the month of June. A sample population of 20% of our membership will receive a questionnaire. The three main topics to be surveyed are: a follow-up to the U. S. Salary and Fringe Benefits Survey, an evaluation of Technical Services, and membership interest in an IEEE Educational Certification program. Urge the membership to promptly return this questionnaire, if they receive one, so that the answer can be quickly tabulated. The results will be published in SPECTRUM before the end of the year.

ACCIDENTAL DISCRIMINATION? Many IEEE members are women, which means that their husbands might be interested in auxiliary activities during IEEE events. Meeting Chairmen should keep this in mind when planning "ladies" programs.

A GRANT from the National Science Foundation (NSF) of \$3,000 was awarded to IEEE for a "Delphi Study to Forecast the Implications of Artificial Intelligence Research for Society." The project will be conducted by the San Francisco Chapter of the Systems, Man and Cybernetics Society, as part of IEEE's Technology Forecasting and Assessment Program. Sixty participants, derived primarily from the International Joint Council on Artificial Intelligence, will try to develop an operational understanding of the limitations of machine intelligence and forecast its impact on society. A questionnaire, that will be mailed to each participant, will include items on possible uses of various machines as well as their effect on functions currently performed by human labor.

E.E. No. 47-5 June 1973 ENGINEERS AND SCIENTISTS, holding doctorates, may receive a questionnaire from NSF. They are currently conducting a survey to assay the nation's human resources in these fields. Approximately 60,000 questionnaires are being mailed. The results will be used to guide national policies and programs.

LIMITS TO GROWTH. Public Service Newsletter (January 1973) covered a speech given by Arthur Kantrowitz of AVCO Corporation. The talk was given at a meeting of the American Association for the Advancement of Science (AAAS).

"We are on the threshold of a new age,"
Kantrowitz asserted, "and we have lost our
nerve to use technology as a problem solver.
Technology is not an evil in itself and the
secondary effects of its use can be controlled... The problem seems not to be
one of limiting growth but distributing the
effects of that growth."

ELECTRIC POWER FROM GARBAGE. A \$6 million, five-year pilot program is being funded by the Environmental Protection Agency. The proposed garbage-power plant would consume 80 tons of garbage a day to produce a million watts of electrical power. (Any connection between this item and the increased size of E. E. will be denied by the Editor.)

WELCOME ABOARD!

New Section:

New Brunswick Section. Formerly Subsection of the Canadian Atlantic Section

New Subsection:

Guatemala Subsection of the Central
America Section

Redesigned Sections:

Rio de Janiero: Territory expanded to include the following States in the Country of Brazil-Guanabara, Minas Gerais, Rio de Janeiro, and the Federal District of Brasilia

Calumet Section: Porter County, Indiana added to territory (Formerly part of South Bend Section)

New Group/Society Chapters in Sections:

Seattle Section: Communications Society
Chapter

New Student Branches:

University of Alabama at Birmingham Birmingham, Alabama

Ecole Nationale Superieure des Telecommunications Paris, France

Regional Engineering College

Warangal, Andhra Pradesh, India Technion-Israel Institute of Technology

Haifa, Israel Tel-Aviv University

Tel-Aviv, Israel

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| White | - Washington Report | 4D |
| Canary | - Spectrum Deadlines | 4E |
| Blue | - Outstanding Lecture Tours | 4G-4L |
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