

# ELECTRICAL ENGINEERING®

At this time every year, elections and appointments create new readers for "Electrical Engineering." Therefore, before we get to the main course, perhaps we should explain some of the ingredients. (Old hands may pass immediately to the next story.)

This newsletter, more lovingly called "E.E.," comes to you bi-monthly. It is intended to provide you with information that, as a leader in IEEE, you should know. This includes information about the Institute, as well as general items of interest to engineers. If SPECTRUM has already printed it, we will not. However, we may refer you to the article if we think you might have missed it. If either SPECTRUM or E.E. carried information about a topic at an earlier time, we will refer you to it rather than bore you with the repetition.

Space (and a desire not to put you to sleep) keeps us from telling you everything about the items we publish. If more information is available, we'll tell you where. Unless otherwise identified, all addresses are IEEE Headquarters, 345 E. 47th Street, New York, N. Y. 10017; phone (212) 752-6800. (See footnote on the last page of this issue.)

Now that we have you indoctrinated, let's join the others at the next story.

**NEW DIRECTIONS: PART III.** On May 18, 1973, a New York State Supreme Court Justice signed our amended Certificate of Consolidation (commonly referred to as the "Charter"). This completes the legal process permitting IEEE to engage in professional activities, conduct and publish surveys and reports of professional concern, and collaborate with public bodies and other societies for the benefit of the engineering profession as a whole. These new programs will supplement the technical, scientific, and educational objectives

of the Institute. (See E.E. Feb., p. 1, Dec., pp. 1, 4A-4B.)

BOARD OF DIRECTORS (BofD), acting on a member's complaint against IEEE Treasurer, Arthur P. Stern, dismissed the complaint as without merit and defamatory. The complete text of the Board's resolution absolving Mr. Stern, a Vice-President of Magnavox Company, appears on page 4C-D.

IEEE FOUNDATION, INC. has been granted tax exempt status under section 501 (c)(3) of the Internal Revenue Code. With this ruling, bequests, legacies, devises, transfers, or gifts to the Foundation are deductible for Federal estate and gift tax purposes. According to a letter received from the IRS District Director in New York, donors may also deduct contributions. Since the Institute had its tax status changed because of our recent Constitutional revisions, the IEEE Foundation was formed as a means of supporting certain educational and scientific objectives of IEEE. (Further information about the Foundation is in E.E., April, pp. 1, 4G, SPECTRUM, April, p. 10.)

## MORE TOP-SIDE DEVELOPMENTS

BYLAW AND POLICY STATEMENT revision by the BofD includes:

Bylaw 304.2 - The following committee has been added: the Public Relations Advisory Committee (PRAC), which will report to the Executive Committee (ExecCom).

Bylaw 311.14 (new) - Public Relations Advisory Committee shall be responsible for recommending public relations objectives, policies, and programs for the Institute with respect to its members, the professions, and the public.

Policy Statement 10-A (Rebates to Sections) - The following sentences have been

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**Martin Gitten, Editor**

added: "The March rebates will be issued only when the Section Financial Statements for the previous calendar year have been received. Rebates for meetings will be based on the meetings reports received in IEEE Headquarters on or before February 1."

CALIFORNIA STATE UNIVERSITY in Northridge (CSUN) had been considering the possibility of downgrading their School of Engineering from a separate school to a department of engineering. It was feared that this would lead to a trend at other campuses where the engineering enrollment is a small percentage of the total. The ExecCom expressed its concern in a letter to the school's officials and urged that the School of Engineering be represented by a Dean. In support of this action, IEEE Vice President John Guarrera appeared before the California State Board of Trustees Subcommittee in July. His appearance was supported by members of Region Six and other technical/professional societies and industry associations. Their actions have apparently been successful, and policy revisions insuring a School of Engineering at CSUN are expected to be approved at the September meeting of the full Board of Trustees.

#### CONVENTION NEWS

WESCON, scheduled for September 11-14 in the San Francisco Civic Center and Brooks Hall, is less than one month away. A complete technical session schedule has been printed on page 4-A. It is reported that all of the available floor space for exhibitors has been sold. (See SPECTRUM, August, pp. 51-56; July, pp. 89-91)

Finley Carter, Chairman of the Life Member Program at WESCON, is planning a special program for Life Members attending the show. Complete details are being mailed to Life Members.

"IMPROVING PRODUCIBILITY" is the topic of a special two-day workshop that

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.

will run concurrently with WESCON. Further details are printed on page 4-B.

IEEE INTERCON '74 will remain under the management of the WESCON staff. This announcement was made by Carroll G. Killen, Chairman of the IEEE Conference Board. The International Convention and Exhibition will be held from March 25-29. (See SPECTRUM, August, p. 49; E. E., June, p. 4)

#### PRODS AND OPPORTUNITIES

CANDIDATES FOR 1974 IEEE OFFICES have been announced in the June issue of SPECTRUM, p. 8. Ballots will be mailed by September 1. (Additional election information is provided on page 4K.) The August issue of SPECTRUM will include a statement by each candidate for office. It will also contain maps so that members can be sure of which Region they are in. Group/Society members can also consult a table indicating which Division they are in. (Also see E. E., June, pp. 40-4P.) This should be required reading.

The elected officers will represent you and will be responsible for guiding your organization. The membership should be reminded to use their voting privilege to select their future leaders!

"1972: A 'THRESHOLD' YEAR" was published in July SPECTRUM (pp. 56-66). It's a quick but informative summary of your Institute's activities over the past year.

AWARDS NOMINATION DEADLINE is September 15th for the W. R. G. Baker and Browder J. Thompson Prize Paper Awards. Each consists of a certificate and \$1,000. The W. R. G. Baker Award is for the most outstanding paper in TRANSACTIONS. The Browder J. Thompson Award is for the best paper in any IEEE publication by an author(s) under thirty years old. (Further details and nomination forms from Una Lennon)



#### "Improving Producibility", Workshop at WESCON

"Improving Producibility," a special two-day workshop, will be offered at the San Francisco Hilton Hotel, September 12 and 13, jointly sponsored by WESCON and the IEEE Manufacturing Technology Group. Registration fee of \$100 per person includes a full-manuscript text, two luncheons, and admission to WESCON's program and exhibits.

An all-day session on Wednesday, September 12, will concentrate on "Critical Components"--the manufacture, general yields, applicable screens and cost-adders, testing methods, and reliability predicting. The second-day program (September 13) includes a morning program on "Printed Wiring Board Fabrication and Testing," and an afternoon series of presentations on "Printed Wiring Board Assembly Techniques and Testing." A faculty of 25 speakers, panelists, and discussion leaders will appear on the program, which will be supplemented by freeform "rap sessions" among speakers and attendees,

Advance registration information about this special workshop is available from Ted Shields, WESCON, 3600 Wilshire Boulevard, Los Angeles, California 90010.



August 2, 1973

WHEREAS the IEEE Board of Directors has received complaints from Irwin Feerst and four other members of the Institute instigated by his complaint, alleging conflict of interest, with respect to Treasurer Stern, in the purchase for the Institute's account in 1971 of shares of the common stock of Magnavox Company; and WHEREAS after thorough review the Secretary certifies to the following circumstances under which said shares were purchased, the Board finds that:

1. IEEE has significant assets amounting to several million dollars. To safeguard these assets and to enhance their growth, the decision was made many years ago that they should be managed professionally by organizations having records of demonstrated success in the management of large investments. This method is clearly preferable to managing investments by IEEE Headquarters or part-time volunteer personnel. Accordingly, the bulk of IEEE assets was divided into parts, and the investment management of each of these entrusted to a carefully selected investment management organization. One of these is Wright Investors' Service.
2. Each of the investment managers has full discretionary control of individual investment actions (i. e., selection of particular securities which they buy or sell, the price and time at which they buy or sell, etc.). Such discretionary control is a requirement made by reputable investment managers prior to accepting the responsibility of managing an investment portfolio. Otherwise the investment manager could not be held responsible for his management results. In no instance has any Officer or Director of IEEE given instructions or made suggestions to any of our investment managers about any specific buy or sell action.
3. From time to time, when the Institute's Officers became dissatisfied with the results produced by a particular investment manager, they have decided to switch to another investment manager. Therein lies IEEE's ultimate control. However, investing in securities in a long-range activity and switching from one investment manager to another is a serious decision which should be based on long-term performance, not on short-range dissatisfaction. The IEEE Finance and Investment Committees constantly evaluate the performance of IEEE's investment managers.
4. The investment in Magnavox common stock was made in April, 1971, by one of IEEE's investment managers, Wright Investors' Service. Wright made this selection in accordance with the full discretionary control under which they managed the account. At the time when this

1973 WESCON PROFESSIONAL PROGRAM

San Francisco Civic Auditorium  
September 11 to 14, 1973

TUESDAY 10 a.m. - 12:30 p.m.		WEDNESDAY 10 a.m. - 12:30 p.m.		THURSDAY 10 a.m. - 12:30 p.m.		FRIDAY 10 a.m. - 12:30 p.m.	
Room 103	Readouts for Instrumentation and Test Equipment (Panel)	The Electronic Engineers' Contribution in Bio-Medical Research	International Markets -- Their Rising Importance and How to Tackle Them	The Medical Instrument Industry -- Fact or Fantasy?	Intelligence in Instrumentation	Calculator -- Based Systems	
Room 104	Women in Technical Industries (Panel)	Workshop -- Full Utilization of Human Resources	Bi Polar Device Modelling	Triangle for Success: Engineering, Purchasing, Marketing	Commercial Applications for Microwave Technology	Local Data Distribution	Led's and Liquid Crystal Displays -- Facts and Fancies
Room 105	Programmable Controllers -- Logic, Industrial Utility (Panel)	Recent Developments in Point-of-Sale Terminals, Systems, and Markets	Microprocessors (Computer on a Chip) and their Applications	The Impact of New Semiconductor Memories on System Design	Low Power Logic -- Today and Tomorrow (Panel)	High Speed LSI	
Room 106	Successful Marketing and New Product Introduction	Hybrid LSI Microelectronic Clinic (Panel)	Needs and Trends in Medical Electronics -- 1973	Multi-Capacity Instruments/Low Test Equipment Expense	How to Raise Capital in Northern California (Panel)	Techniques for Conversion of Technology into Corporate and Personal Wealth	
Room 321	Medical Device Standards	Computer Aided Test Design for Automatic Test Equipment	Solid State Microwave Sources for Telecommunications	Microwave Transistors and Tea Devices	Power Technology for Electronic Systems	New Devices in Ferroelectric Ceramic Electrooptic Devices	IEEE Region 6 Student Papers Competition

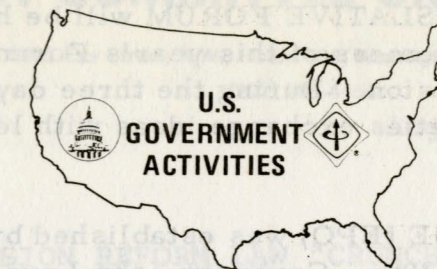
investment was made, Mr. Stern was not a member of the IEEE Finance Committee nor of the Investment Committee. Subsequently, when Mr. Stern became a member of these Committees, Mr. Stern gave no instruction or advice to Wright Investors' Service (or to any other investment manager of IEEE) concerning their investment decisions in Magnavox common stock or in any other security. The investment involved 600 shares of Magnavox common stock, out of 17 million such shares outstanding.

5. During 1971, Mr. Stern was not a member of the Board of Directors; his status was that of Observer for Division 1. In that capacity he had no involvement whatever in the management of IEEE finances.
6. Mr. Stern was elected to be Secretary of the Institute for the calendar year 1972 at the Annual Assembly of November 19, 1971. He took office in January 1972, when he became, for the first time, a member of the IEEE Executive Committee, the Finance Committee and the Investment Committee. In 1971 he was a member of none of these Committees.
7. Mr. Stern was elected Treasurer of the Institute by the Annual Assembly at its meeting of December 2, 1972, and assumed that office in January 1973. Concurrently he became Chairman of the IEEE Finance Committee.

NOW, THEREFORE, the Board finds that Mr. Stern had no influence whatever on, and was unaware of, any investment made by Wright Investors' Service in April 1971 in Magnavox common stock and that subsequently, when he became a member of Committees aware of such investments, he did not have the right to, and he did not, interfere with any investment action of our investment manager; therefore, the statements made by Mr. Feerst are erroneous and misleading; that the IEEE Executive Committee, Finance Committee, and Investment Committee include individuals who are dedicated to IEEE and who perform many duties for the benefit of the Institute without compensation; that, while the Board welcomes constructive criticism and desires to enforce the highest standards of ethics in the conduct of our Officers and committee members, the irresponsible innuendoes involved in Mr. Feerst's statements are hardly suited to advance any cause which might ultimately benefit the Institute and its membership.

THE BOARD THEREFORE concludes that there was no violation of Article X of the IEEE Constitution and hereby dismisses the complaints made by Mr. Feerst et al. as without merit and defamatory, and hereby reaffirms the confidence and esteem with which it holds Mr. Stern.

SPECIAL



ADDENDUM

#### DELAY IN NATIONAL SCIENCE POLICY ACT

Pending before Congress is the National Science Policy and Priorities Act (S. 32). This bill was introduced and passed by the Senate last year, but failed to get out of Committee in the House.

This bill would establish as national policy that federal support of civil science research and engineering should be expanded to equal the support of defense research and engineering. Civil science is considered to be research and development to meet America's human needs.

The proposed legislation would charge the National Science Foundation (NSF) with creating a new Civil Science Systems Administration to administer these programs. It would also establish an Advisory Council to review the programs in support of civil science objectives. It would provide for retraining engineers idled by changes in government space and defense priorities and get them back into civil science programs.

The bill was introduced by Senator Edward Kennedy and 29 other Senators. Hearings were scheduled to begin in June before the Labor and Public Welfare Committee. It received the support of ranking Republican committee member Senator Peter Dominick, after he introduced his own version (S. 1686). Dominick's bill called for giving each state \$100,000 to pay for a Governor's Science and Technology Advisor. However, a call to Senator Kennedy's office revealed that the hearings were postponed and no new date was picked.

The companion bill in the House is H. R. 178, introduced by John Davis (D-Ga.). That bill has been assigned to the Science and Astronautics Committee. (See E. E., June, pp. 4S-V for list of committee members.)

LEGISLATION OF INTEREST TO ENGINEERS, introduced by the 93rd Congress, has been compiled by the Washington offices of IEEE and ASME. The proposed legislation has been divided into 11 topics of interest. In each group, the bills are printed in numerical order. Contained in each listing is the name of the bill, its sponsor(s), a brief description, and the committee to which the bill was referred. A copy of this booklet was mailed to every Section Chairman in the United States. Additional copies are available. (Contact Emma White)

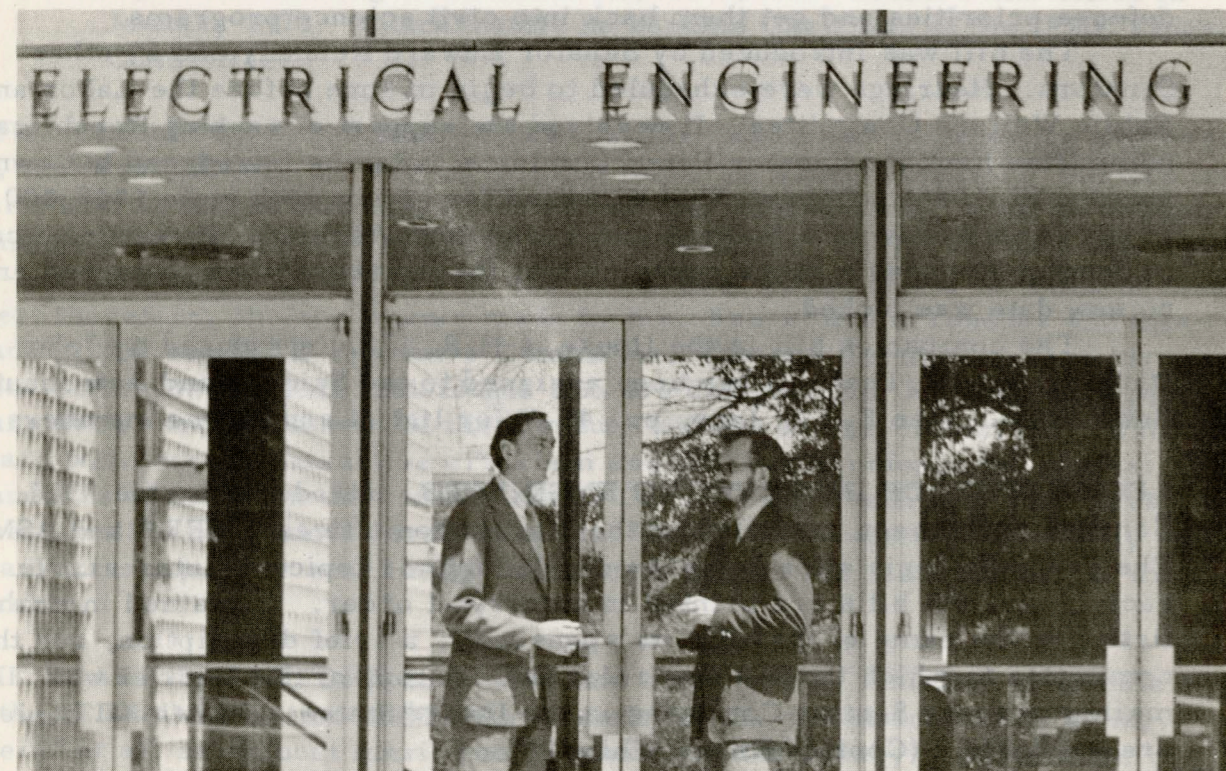
Other items of interest...

NEW ADDRESS for IEEE's Washington office is 2029 "K" Street, N. W., Washington, D. C. 20006. The telephone number has remained the same: 202-785-0017

JOINT ENGINEERS LEGISLATIVE FORUM will be held on February 25, 26, and 27, 1974. The success of this year's Forum has prompted the scheduling of another session. During the three days, members of various engineering societies exchange ideas with legislative leaders. (See E. E., Apr., p. 1).

ENERGY POLICY OFFICE (EPO) was established by executive order of President Nixon on June 29th. Governor John Love of Colorado was appointed Director. The EPO is charged with making recommendations to the President with respect to energy matters, insure that executive branch agencies develop plans for dealing with energy matters, and for monitoring the implementation of approved energy policies.

NATIONAL BUREAU OF STANDARDS has begun its Technology Incentives program for which it had \$7 million in fiscal 1973. The agency's first experiments will focus on testing alternative federal procurement procedures as well as the use of federal regulations that control goods and services offered to the public as ways of stimulating technological innovation. NBS will also test what "cost effective" federal actions can be taken to facilitate "commercialization of technical inventions of inventors and small R&D firms."



IEEE CONGRESSIONAL FELLOW Ronal Larson (r) is discussing his new assignment with Georgia Tech Electrical Engineering Department Chairman Dr. D. T. Paris. Larson, currently an Associate Professor at Georgia Tech, will begin his Washington duties in September. (See E. E., June, p. 5)

## JOINT COMMITTEE ON PENSIONS

1625 Eye Street, N.W., Room 606, Washington, D. C. 20006

(202) 785-4454

August 1, 1973

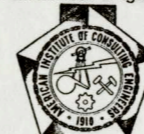
### MEMBERS



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of Aeronautics and  
Astronautics



American Institute  
of Chemical Engineers



American Institute of  
Consulting Engineers



American Society of  
Civil Engineers



American Society of  
Mechanical Engineers



Institute of  
Electrical and  
Electronics Engineers

### PENSION REFORM LAW "CRUNCH" EXPECTED

IN EARLY SEPTEMBER

### ENGINEERS' PROTECTION HANGS IN THE BALANCE

#### I. PARLIAMENTARY MANEUVERS

There are now two pension reform bills on the U.S. Senate floor calendar--the "Williams-Javits Bill" from the Labor Committee, and a pension tax reform bill from the Finance Committee. Each has some good features, and some glaring omissions. The Senate will recess during August, and the members of the two committees will be trying to work out their differences to permit a merger of the two bills, by agreement, before the Senate reconvenes in September. If they can agree, the plan is to attach the features of the merged bill to another bill which has already passed the House of Representatives, so that the matter can be sent directly to a Senate-House conference in which Wilbur Mills and the House Ways and Means Committee would represent the House, and the two Senate Committees would represent the Senate. That would result in resubmitting the result to both Houses for a final vote, and probably enactment into law this year. If there is no compromise reached, then there may very well be a "showdown" on the Senate floor in early September. Either way, engineers have a great stake in the outcome.

#### II. WHAT'S AT STAKE FOR ENGINEERS

Here is what is in it for engineers. Both bills require minimum pension "vesting" (non-forfeitability) on a sliding scale. The Labor Committee bill starts the scale at 30% after 8 years, and the Finance bill starts at 25% after 5 years; both reach 100% after 15 years. Both bills provide for funding, voluntary portability, federal "reinsurance" against the risk of plan collapse and fiduciary standards. As to all of these matters, the Labor bill is stronger, and the enforcement mechanisms in the Labor bill are stronger. Also the Labor bill includes two specific "engineers amendments"--one requiring improvement in government procurement regulations to protect engineers' pensions, and another requiring a one-year study and recommendations for further law changes to protect engineers' pensions. These amendments are not in the Finance Committee bill. The Finance bill, on the

other hand, does provide a rather weak allowance for a tax deductible "individual retirement account"-- a maximum of \$1,000 contribution per year per person available only to those who have no other private pension coverage at all.

### III. POSSIBLE ENABLING AMENDMENT TO ALLOW AN ENGINEERS-ONLY QUALIFIED PLAN

The Finance Committee was asked to adopt a specific "engineers amendment" which would have permitted engineering societies to set up an "engineers only" qualified pension plan with immediate vesting, but there were some objections in committee and the amendment was never brought to a vote. This amendment is expected to be offered again, either as part of the "compromise" or during consideration of the matter on the Senate floor in September.

### IV. WHAT WE NEED

Ideally, whatever compromise is reached, or whatever results from the showdown in the Senate in September, should include the following from the engineers' point-of-view (the first three are most important):

- A. Inclusion in the final bill of both of the engineers amendments which are now part of the Senate Labor Committee bill (S.4) - the procurement regulations protection (Section S.220-223) and the special study of engineers' pension problems (Section 101(c)(1)(B));
- B. Inclusion of an amendment expected to be offered to allow tax qualification of an engineers-only immediately-vested pension plan run by professional societies;
- C. Liberalization of the "individual retirement account" to raise the limit and to make it available not only to those who have no pension plan but to everyone, or at least to those who have no vested pension coverage;
- D. The earliest possible vesting;
- E. The strongest provisions on funding, reinsurance, portability, and fiduciary standards;
- F. Effective enforcement; and finally
- G. Fast and decisive action to get these reforms enacted this year.

We will keep you informed of further developments over the next few months.

Frank Cummings  
IEEE Special Counsel



# TECHNICAL ACTIVITIES BOARD

## Technology Forecasting and Assessment

The TF&A Project was established for the purpose of making a systematic determination of the future of those technologies which lie within the areas of our members' interest. The task involves preparing forecasts of those technologies and the assessment of their impacts on the economy, the environment and on society generally. The Project will fulfill a number of objectives - -

- . It will provide IEEE members with information for career planning, opportunities for using their skills which they should anticipate, and the training needs which are implied.
- . It will develop a conceptual framework for reviewing activities of IEEE entities and for indicating appropriate areas for new IEEE programs.
- . It will establish for the IEEE a role in the development and evaluation of public policies which may affect, or be affected by, trends in electrotechnology.

The most important objective, perhaps, is that of opening the way for IEEE's members to participate effectively in shaping some of the policies which affect their profession. To achieve this, we will seek to involve the total membership in the full cycle of forecast preparation and assessment of technology impact.

The Project is organized, and all phases of the work will be done, along Group/Society lines. The three principal phases of the Project are (a) preparation of a "tree," (b) forecasts, and (c) assessment of impacts. The purpose of the "tree" is to provide a systematic -- and hopefully exhaustive -- structuring of the various G/S total spans of interest into manageable subunits for forecasting. Extensive detailing will provide some assurance that we are not overlooking significant subtechnologies.

The second phase is the preparation of detailed forecasts for each technology branch of the "tree." Organizationally we will be assigning these branches, through the G/S Ad Coms, to individual committees to make the forecasts. Finally, in the third phase, IEEE members will have an opportunity to develop, with the joint participation of professionals from the soft sciences, their assessment of the potential impact of electrotechnology on society, the economy, and the environment. To assume that our



members will be able to participate fully in each phase, the TF&A Project, will conduct day-and-a-half training workshops in the techniques of forecasting and assessment. These workshops, to be given wherever and whenever there is sufficient interest, will provide attendees with the necessary tools for analyzing the future technology and potential impacts in their own areas of specialization.

Predominantly the TF&A Project will rely on our Groups and Societies to bring members into the Project. To assist them in this task the TF&A Project office is seeking to establish a number (hopefully two dozen or more) of Associate TF&A Committees in various geographical areas. The purpose of these Committees is to provide an opportunity for local groups, whose members' areas of interest might well cut across several Groups and Societies, to get together on problems of methodology in technology forecasting. In addition, these informal groups will ordinarily recruit members for participation in TF&A Training Workshops. Any IEEE unit may, of course, sponsor a Training Workshop by getting 20 interested participants together.

The TF&A Project is designed both to use and to enhance the capabilities of IEEE members. But it depends on our getting information to members through the many and varied organizational units of the Institute, and upon their being able to get back to us. The former is a function of the IEEE infrastructure's enthusiasm for TF&A. For the latter, the appointment of Dr. William Morsch as TF&A Project Manager means there will be a focus and continuity to the Project which was heretofore difficult to maintain. Morsch is based in IEEE's Washington office, 2029 K St. NW, Washington, D. C. 20006, 202/785-0017.

Constitution Article XII

Sec. 4. On or before September first, the Board of Directors shall submit to all voting members as of August first a ballot listing all nominees for the offices named in Section 1 of this article, in accordance with the Bylaws.

Bylaw 313.9-

Voting members shall vote for the candidates whose names appear on the list of nominees, by written ballots within mailing envelopes marked "Ballot" and bearing the member's written signature. No ballots within unsigned envelopes shall be counted. Only ballots arriving at IEEE Headquarters, or received by a qualified organization delegated by the IEEE Board of Directors, before twelve o'clock noon on the first working day following October 31st shall be counted.

Policy #11-A-2(c)-

Money on hand in the IEEE Sections, Groups and Societies is the property of the IEEE. Funds of any IEEE Section, Group, or Society, wherever held, may not be used for electioneering of any kind for any IEEE Section, Group, or Society office.

Policy #20-

Partisan electioneering under the auspices of any IEEE entity is not permitted. IEEE units are requested to refrain from activities such as the publication of brochures or the holding of meetings for this purpose and no funds of any IEEE organizational units may be used in support of such activities.

The use of funds of any IEEE entity for electioneering purposes for any office, including both IEEE offices and municipal, county, state or federal offices, is strictly prohibited. (See Statement of Policy #11-A-2(c) and (d).)

In order to provide information to members on issues facing the IEEE, the editor of any IEEE publication is not prohibited from accepting the following, so long as the usual standards of accuracy, space limitation and quality are maintained:

(1) Statements by those candidates for IEEE offices whose names will be printed on the ballots in accordance with the Constitution and Bylaws, giving their programs and views on issues facing the IEEE, provided that all such candidates for a given office are given equal opportunity to present their views;

(2) Letters to the Editor stating an intention to seek candidacy for a given position with reasons.

training has traditionally been and is today a key requirement for many of the upper level professional and managerial positions to be found in business and government. The current participation rate of minorities in the engineering field, however, is shamefully and distressingly inadequate.

"I don't have any quick and easy solutions to offer. I wish I did! I do have a couple of ideas, however. First, it seems to me that a series of regional consortia for minority engineering education might be established. Second, a 'blue ribbon' task force could be established with leaders of industry, government, and education to focus public attention on the minority engineering problem. Third, this National Academy of Engineering group could establish direct contact with guidance counselors in secondary schools in areas with large minority populations. Finally, it seems to me that the best way for industry to get more minority engineers into their drafting rooms is by putting more minorities in their board rooms."

WOMEN IN ENGINEERING and science was the topic of an article written by Roberta Nichols in the June issue of Technology Review. She stated that "while there has been a steady increase during the last several decades in the number of college degrees awarded to women, the number of women seeking education and careers in the sciences and engineering remains pitifully small... The best known area of discrimination against the female sex is in respect to earnings. There is one notable exception. In 1971 the average starting salary being offered to women engineering graduates at the bachelor's level was \$885 per month, while the starting salary being offered to men was \$877."

#### HONORS

MR. ROBERT H. TANNER, the first Canadian ever to be elected President of the IEEE, will be honored at the International Electrical and Electronics Conference and Exposition in Toronto. A special evening lecture given by a leading world figure in the electronics industry has been added to

the program and entitled the "R. H. Tanner Lecture." The first speaker in this series, to be held October 1, will be Mr. Masaru Ibuka, Chairman of the Board, Sony Corporation. (Details, SPECTRUM, June, p. 88)

W. R. G. BAKER PRIZE PAPER AWARD specifications are being expanded to include papers written for PROCEEDINGS. Formerly this award was limited to authors of material appearing in any of the IEEE TRANSACTIONS. The Board of Directors approved this change at their March meeting. This new rule will apply for the 1975 award. (See SPECTRUM, July, p. 9)

COMPUTER SOCIETY'S Math and Computers contest was won by H. Britton Sanderford, a student of St. John Vianney Preparatory High School, New Orleans, Louisiana. He won \$100. Second prize (\$75) winner was Kenneth Dean Housley of Pocatello High School, Pocatello, Idaho. Richard J. Kinch of Southwood High School, Shreveport, Louisiana won the \$50 third prize. (See SPECTRUM, August, p. 48)

#### FOR YOUR INFORMATION

ENVIRONMENTAL ENGINEERING PROBLEMS in industrial and developing countries will be the subject of a two-day conference on September 19-20. Sponsored by the World Federation of Engineering Organizations (WFEO), the conference will be held at the United Engineering Center (UEC) in New York. IEEE General Manager and Executive Director Donald Fink is Correspondent for the U. S. National Members in WFEO.

ENGINEERING SOCIETIES LIBRARY (ESL) located in the UEC in New York City, has announced that they will no longer be open on Saturdays. Their current hours are from 9:00 A. M. to 5:00 P. M., Monday through Friday. Starting the week after Labor day, their hours extend from 9:00 A. M. to 7:00 P. M., Monday through Thursday, and from 9:00 A. M. to 5:00 P. M. on Friday.

ELECTRONIC SECURITY SYSTEMS SEMINAR, originally scheduled for June.



has been rescheduled for September 25-26 at the Statler Hilton in New York City. Mr. Howard Schumacher, chairman of the Steering Committee, said that the principle objective of the seminar will be to provide an open discussion and exchange of information between users and the manufacturers of electronic security systems. The seminar is sponsored by the IEEE Conference Board. (Program available from H. Schumacher)

THIRD SYMPOSIUM ON RELIABILITY IN ELECTRONICS will be held in Budapest, Hungary on November 13-16, 1973. Sponsored by the Hungarian Academy of Sciences, it will feature over 80 papers in the areas of reliability theory, reliability of integrated circuits, and systems reliability. (For information, cable Relectronic '73 Budapest)

WATTS IN A NAME? University of Alabama Professor Harold Mott writes, "As we study the (1970 IEEE) Directory names it becomes clear that the profession is in good condition. There are 15 Brights and 1 Brilliant, as compared to 4 Dulls. Win (1) and Winner (5) outnumber Loser (1) and Unwin (1). It is interesting to note that the Directory lists 35 Wises, 7 Wisemans, and 3 Wisdoms but only 9 Lucks and 2 Luckys. Perhaps this shows that, contrary to present belief, wisdom is a more useful survival trait than luck."

#### WELCOME ABOARD

ALL NEW OFFICERS and officials in the Sections.

#### New Section:

Finland Section. To encompass the country of Finland, part of Region 8.

#### New Subsection:

Mysore State Subsection of the India Section. Formerly called Bangalore Subsection.

#### New Group/Society Chapters in Sections:

Cincinnati Section: Engineering in Medicine and Biology Group Chapter  
Nashville Section: Engineering in Medicine and Biology Group Chapter  
New Orleans Section: Computer Society Chapter  
Philadelphia Section: Magnetics Society Chapter  
Seattle Section: Computer Society Chapter  
Twin Cities Section: Systems, Man, and Cybernetics Society Chapter

#### New Student Branches:

Foothill College  
Los Altos, California  
Gateway Technical Institute at Racine  
Racine, Wisconsin

#### New Staff:

F. Crampton "Cram" Frost joins the Standards Department. Known for his work with American National Standards Institute (ANSI), Mr. Frost was their Technical Director when he left there in 1969. He came to IEEE from the American Waterworks Association and has also taught Standards courses at Columbia University. Mr. Frost has a C. E. degree from Cornell University.

William C. Morsch as Manager of the Technology Forecasting and Assessment Project. Dr. Morsch has an M. A. and Ph. D. in economics from Harvard. He headed his own consulting firm prior to joining IEEE. Dr. Morsch will be working from IEEE's Washington office and reports through the Technical Services Department, New York

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