

ELECTRICAL ENGINEERING®

"I NOTE A SORT OF REVERENTIAL REGARD by our members for something intangible—not for committees or boards or individuals, but for 'The Institute.' . . I've been asking myself just what really is its outstanding feature? . . It is seeing men, hearing them, meeting them, knowing them, catching their spirit, cherishing their friendships. . . I don't remember what it was that took so much time in our board meetings, but I do remember the men and their ways. . . Association has brought me friends and activities that have enriched my life."—Charles F. Scott, President 1902-03.

YOUR LIFE, TOO? When your activity is IEEE's, what accrues to you is only a token of an enrichment which is shared universally by virtue of all our members' professional work. . . Not every organization open to you to join can make that claim.

NEW READERS, GREETING! Each item in "Electrical Engineering" (E. E.) to your choosing: If it bores, skip it. If it fits, nail it.

JANUARY TURNOVER sees inevitable departures of personnel. A ne-plus-ultra resource of ability and experience resides in those not immediately reassigned—a pool of talent which should not be overlooked when there are future tasks to be performed.

To keep these erstwhile toilers up-to-date, and as a token of esteem for past service, E. E. will continue personal mailings throughout 1970 upon request. (Audrey van Dort)

CHALLENGES AND OPPORTUNITIES

IEEE COMMITTEE PERSONNEL. All units and members are invited to submit nominations for 1971 Standing Committees. The committees are listed in Bylaw 304.2; responsibilities defined in 305-310. Guidelines for "weighing" and recommending nominees appear on p. 4G and a form on 4H of this E. E. Deadline June 1. Nominators are not limited as to the number of candidates named. (Extra copies, Emily Sirjane)

BOARD MEETING SCHEDULE 1970. Schedule of meetings of the IEEE Board of Directors (BofD) and its Executive Committee (ExecCom) is incomplete and tentative at this writing: BofD: Jan. 6, New York; Mar. 26, Convention, New York; Aug. 25 (26), Los Angeles; Nov. (10) 11, New York. ExecCom: Jan. 6, New York; Feb. 9, New York; Sat., Mar. 21, prior to Convention; Aug. 24, Los Angeles.

TOP-SIDE DEVELOPMENTS

COMPOSITION OF 1970 BofD. Tabulation on last page may be compared with the one for 1969 (E. E. Feb. '69, p. 8) to trace changes occurring Jan. 6, '70. Top-side practices what it preaches in annual infusion of "new blood" (Bylaws 304.4, 5, 6). Tabulation a year hence will see replacement of the two elected Directors-at-Large 1968-70 by two Divisional Directors, one elected for 1971-72 by Group members within one Division, the other by another Division for 1971-73.

NOMINATIONS & APPOINTMENTS (N&A).

This committee has been appointed for January-March '70 only, to conform to a recent change in Bylaw 310.10. At its March '70 meeting, BofD will appoint an N&A Committee to serve until the 1971 BofD replaces it (presumably Apr. 1, '71). Purpose of the change was to have the term match N&A's annual workload.

BYLAW CHANGES, JAN. 6: Bylaw 304 All BofD and ExecCom Standing Committees are to be reviewed at 5-year intervals, looking to desirable changes in purposes, activities, duties, composition... 309.4(3) Technical Activities Board Operating Committee (TAB OpCom) to evaluate activities of each Group in 1975 and every 5 years... 405.20 TAB OpCom to monitor conduct of Groups in accord with Bylaws and TAB Manual... 304.4(4) TAB is to have Standing Committees (vice General Committees), Standards Committee being one... 304.4(5) General Manager to assign a Standards secretariat. TAB OpCom (vice ExecCom) to receive approved standards from Standards Committee for publication... 309.4(3) TAB OpCom empowered to transfer Groups among Division; to form and merge Groups; to recommend that ExecCom terminate Groups and distribute funds and assets... 407.17, on Branch/Region travel expense, was limited to satisfy budgetary conditions established by BofD. (Other Bylaw changes are reported under "Exchange Member" side heading.)

RECENTLY-REVISED BYLAWS will be included in a reprint of Bylaws to be distributed in early April.

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

SOCIAL IMPACT OF ENGINEERING.

Dr. Willenbrock will chair a Task Force on Engineering and the Public Image. Long Range Planning Committee (LRPC) will cooperate in developing a program to reverse the public's negative attitude toward engineering technology, perhaps with outside funding support.

PRESENTATION OF SOCIO-TECHNICAL MATERIAL (during drafting stage called "controversial" material—see Spectrum, Sept. '69, p. 6). A Statement of Policy (not yet numbered) has been adopted by BofD taking into account many responses received to Spectrum exposure. It is given in full on p. 4A of this E. E.

Like other Statements of Policy, it governs, as do Bylaws, operations of all units of IEEE henceforth. Note it applies to meeting programs as well as to printed material.

(Statements of Policy are in Section and TAB Manuals. Copies, Emily Sirjane or Pat Corcoran)

SHADOW-BOARD OF AND FOR YOUNG PROFESSIONALS under age 33 may be set up to advise 1970 BofD on ways IEEE can better serve its members in their first 5 or 10 years of professional life; also on optimum relationship, from their viewpoint, of the Institute to the public. Name of the unit, composition, place in organization, financing, are being considered.

NATIONAL ROLES FOR IEEE. An as-yet-unnumbered Statement of Policy was adopted by January BofD:

"When the IEEE, or any of its organizational element, engages in an activity which is specifically national in character, that is to say, an activity which by its nature reflects an intrinsic relationship to a specific national environment, the guiding policy should be that undertaking such an activity should not preclude IEEE action on the corresponding problem in any other national environment. It should be noted that this policy contemplates the possibility that the IEEE might adopt differing positions relative to a particular problem area, in its different national environments."

(Note: "Thoughts on being nonnational," Spectrum, January '70, p. 31, should be read in this context.)

UNITS' PUBLICATION ACTIVITIES.

ExecCom has asked LRPC and Publications Board (PUB) to formulate a means for establishing measures of quality for commercially-published books sponsored by IEEE units. It was noted that should units formulate publishing plans without consideration of over-all educational and publication policies of IEEE, there would be a strong possibility of a misuse of the IEEE name.

ON THE ENCOURAGEMENT OF INITIATIVE. The foregoing item is an example of interplay between the "up-and-go" which gets a bright idea off the ground and the seeming constraints of a book of rules. Note that the purpose of the interim examination is not to stop printing a book but to ensure that IEEE's reputation will be enhanced by publication.

Other instances constantly occur. Some unit asks for a stated mailing list for copy sight-unseen hence without regard to how many persons with a right-to-know are thereby bypassed... Another unit

decides to establish a prize out of all proportion to a portfolio of awards carefully built up over the years.

As these flashes of inspiration pop up, the administrative trick is to channel them without stifling them. One way is to widen the channel. This is continually being done. More units can do more things nowadays than ever; and initiative, accepting the logic of accommodation, is at an all-time high.

PUBLICATION NEWS

RECOGNITION FOR REVIEWERS. Those hard working, faithful members who meticulously review papers to prepare them for publication—in the entire IEEE organization, are they not the "most unsung?"

If your unit publishes, say thanks to them by recognizing them publicly at a meeting, describing their functions, commending their expertise without which the review process could not be carried on. See that they, along with others, get certificates for jobs well done. (Information on certificates, Audrey van Dort, Pat Corcoran, Emily Sirjane)

WITH REGRET we record the death in December of Spectrum's Staff Writer Seymour Tilson, welcomed aboard (E. E. Dec. '68, p. 7) little more than a short year ago.

MEMBERSHIP NEWS

NEW HIGH POINT REACHED. Dec. 31, '69 IEEE membership total was 166,348, compared with 162,368 at end of 1968. Included were 24,319 students (vice 23,930).

BofD is not satisfied that the slow growth marking recent years is indicative of our

potentials in industry and technology; and has taken steps, reported in E. E., to support the Membership & Transfers Committee (M&T—responsible for planning and developing methods of extending membership) and the Sections (upon which devolves the brunt of recruiting).

Figures can be had showing how many members we gain and how; how many we lose and why. Statistics may be broken down by grades, Sections, towns, company affiliations, and Groups. "Impedance mismatches" at the Student-Associate transition have been studied in depth. The functional design of application blanks, and the provision of recruiting pamphlets, kits, aids, and devices have been attended to. Even the letters we write on delinquencies and separations have been subject to scrutiny, and the replies analyzed.

M&T has worked up membership campaigns; is now engaged in publicizing every avenue of service and appeal. The attractiveness of our product—meetings, publications, educational and information services—is the concern of every Group, Section, Chapter, Branch, Board, and Committee. The Regions, alive to the difference in recruiting and member-service problems of metropolitan, large and small city, and thinly populated Sections and Subsections, assume prime responsibility for uniformly good coverage and results of membership work.

Educational Activities Board (EAB) is helping BofD investigate additional services to engineering administrators, sales engineers, younger professionals, and the subprofessional engineering technicians; such services might generate new members.

BofD, Awards, and Fellow Committee address themselves to the prestige elements.

Billing has been simplified; instalment payment of dues arranged; even "bargain

rates" for new members devised. (See next item.) The computer is being programmed to produce useful statistics and lists of members, broken down most usefully.

Lest imperfect communications exist among all the units and staff members tackling bits of this complex, worldwide, ceaseless effort, ExecCom has asked the Internal Communications Committee (ICC) to pinpoint and suggest remedial measures for any gaps or lapses. Spectrum, E. E., direct mailings, and all publication resources are in standby posture to help, to the end of "getting the message" to the last member in position to say to his non-member associate: "Pete, will you go with me to the IEEE meeting on the 23rd?" . . . And later: "Just sign here."

MEMBERSHIP BONANZA. We repeat an observation of a year ago: In terms of new members' worth-for-the-money, a March drive for IEEE and Group members, launched in February with memberships effective April 1, is the financial inducement of the calendar year. Why? See last paragraphs of Bylaws 108.5, 405.7—nine months for the price of six.

WHY BELONG TO IEEE? The question is good, whether raised by a prospect considering joining, or by a member about to renew. It has been answered many times. An instance is in the pamphlet: "Your Future and IEEE," in the Operation G-I-T kit. (Copy, Emily Sirjane). Notably, the question was answered by 1967-President MacAdam in Spectrum, June '67, p. 49ff; E. E. Oct. '67, p. 5 and Supplement. (Copy, Audrey van Dort)

More recently the question has been answered thoughtfully in a contemporary



IEEE POLICY ON THE PRESENTATION OF SOCIO-TECHNICAL MATERIAL

The IEEE is a voluntary world-wide organization of individuals who have joined together because of a common interest in electrical and electronics engineering. The IEEE furthers these interests chiefly by providing a forum for the presentation and discussion of papers in its publications and at its meetings. In the past, these forums have served mainly to disseminate information of an exclusively technical nature. The airing of controversy, whenever it arose, has been a traditional and important part of this dissemination process, serving to speed the generation of new technical information to resolve divergent views.

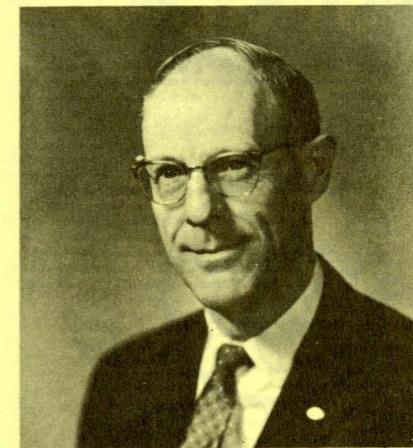
The discussion of technical matters will continue to be the primary function of the forum provided by the IEEE. However, today, with engineering developments having a profound impact on society and social conditions shaping the course of technical developments, it is essential that discussions of the social as well as the purely technical aspects of electrical and electronics engineering work be included. Since this is a new area in which factual data is somewhat limited, it is expected that controversy will be generated. It is also expected that, as in the past, the airing of such controversy will be beneficial and will speed the resolution of critical socio-technical problems throughout the world.

Therefore it is important to the aims of the Institute and the professional needs of its members that controversial papers on the impact of technology and society on one another be permitted in IEEE publications and meetings. To enable the presentation of such material in a manner appropriate to the needs of the membership, and recognizing that the IEEE membership is widely divergent politically, the following guidelines are to be implemented by the Publications Board and followed by editors and meeting organizers:

1. The subject matter should be relevant to the field of electrical and electronics engineering and to its relationship to the needs of society. If the relevance or appropriateness is not self-evident from the author's presentation, it should be made clear by the addition of a suitable introductory statement. The discussion of pertinent inter-related social, economic and technical aspects may lead to political conclusions on the part of the author. Since political conclusions ordinarily have particular relevance to a specific national environment, such limitations on the author or speaker's conclusions should be made clear if they are not self-evident.
2. Every reasonable effort should be made to provide for adequate and timely presentations of differing viewpoints. This may be accomplished either by planned simultaneous presentations or by presentation of one side of an issue, clearly identified as such, with provision for prompt, subsequent presentation of representative audience discussion and rebuttal.
3. It should be made evident to the audience that the opinions expressed are those of the author, and no endorsement by the Institute, its officials, or its members is implied.

Professional societies and the engineer

C. W. Sall



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Technical Publications Administrator
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received the AB from De Pauw University in 1935, and the AM from New York State College for Teachers in 1942. Between 1936 and 1943 he taught high school science at Saugerties and Baldwin, N.Y., coming to the RCA Industry Service Lab as a Technical Editor in 1943. Mr. Sall transferred to RCA's Industrial Electronic Products Division in Camden in 1958 to assume the duties of Manager of Technical Publications. In February 1960, he was appointed to his present position at RCA Laboratories, Princeton, N.J. Mr. Sall is a Senior Member of the IEEE and a charter member of the IEEE Group on Engineering and Speech. He was Chairman of the Group in 1963. For the past 10 years he has served as Editor of the IEEE Transactions on Broadcast and Television Receivers.

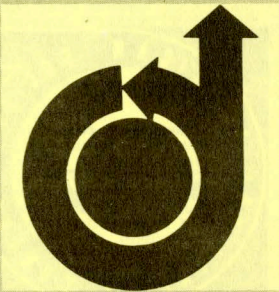
USUALLY around the time that the annual dues bills start coming in, the average engineer does a little soul searching about the value of his membership in this or that professional society. Is he getting his money's worth? Are the benefits sufficiently good to warrant his continued support of the organization? Do the journals, or proceedings, or other documentary materials, carry articles of enough interest and value to be worthy of his few hours of reading time? Do the various conferences contribute enough to make his attendance worthwhile, even if the company does pick up the tab? Does the rubbing of professional shoulders, or just the prospect of being seen at a conference, add anything to his career or his status? If he presents a technical paper, or participates in a panel discussion, or gets a paper published in the society's journal, is he any better off?

These questions and others certainly do run through an engineer's mind when he tries to assess his annual contribution against the returns he may expect or hope to receive. No matter how you size it up, whether in time, money, interest, energy, or aptitude, his budget is limited. How to parcel it out most effectively—that is the question. And that, of course, is where

the professional society comes into play. Apparently, after he has weighed all the evidence, Mr. Average Engineer has decided that he cannot afford to stay out of those organizations that speak to his particular discipline or line of work. Let us examine some typical evidence for one engineering society, the IEEE.

At latest count, better than 160,000 electrical engineers (or those in some affiliated activity) have found it to their advantage to join the IEEE. Why? Prestige certainly plays a part in this decision. Being a member of so large an international organization whose standards are reasonably high is something of an honor. But you can't eat prestige any more than you can eat the aroma from a roast. Something more substantial must be offered on the bill-of-fare. Here are some of the meatier items on the menu:

- Thirty-one interest groups (from antennas to vehicular technology);
- Forty-three electronically oriented technical journals;
- Electrical and electronics abstracts;
- The International Convention;
- WESCON, NEC, NAECON, NEREM, WINCON, SSSC, INTERMAG, SWIEECO, EASCON — and nearly 100 other major technical conferences;



Local meetings by more than 200 sections;

Miscellaneous educational programs, seminars, and colloquia;

The services of the IEEE Headquarters Staff available to all members;

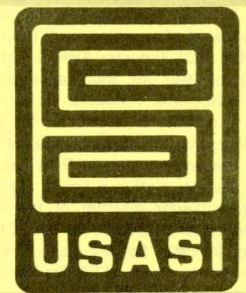
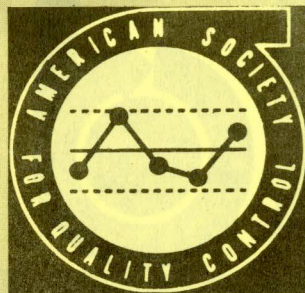
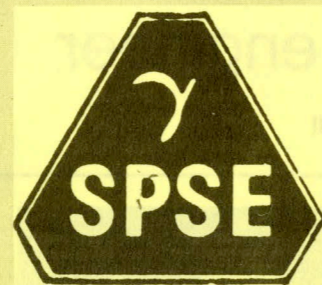
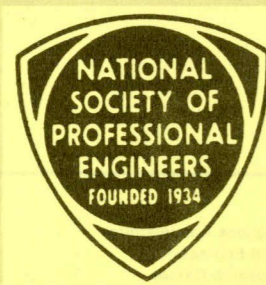
The opportunity to up-grade one's self;

The opportunity to serve on professional committees of world-wide significance; and

The opportunity to be selected as a candidate for Fellow of the IEEE.

From so impressive and varied a list of selections, practically any appetite or taste can be satisfied.

Thus far we have considered only a rather one-sided argument for technical society membership—the personal benefit to the engineer. But by its very definition, a society is made up of more than one individual, hence the benefits multiply enormously through the interplay of one member's contributions to the whole. As each one gives or participates, hundreds or thousands become the benefactors. This transillumination or cross fertilization works both ways, thus making each individual member the recipient of a vast outpouring of ideas and information even as he adds his contributions to the common lot for others to share.



Another angle should be mentioned. Most members of professional societies are employees of engineering organizations that invest considerable time and money in supporting employee participation in society activities. RCA is such an organization.

"It is a long-standing RCA Corporate policy to encourage our engineers and scientists to participate in professional societies and to write and present technical papers," according to Dr. James Hillier, Executive Vice President, Research and Engineering.

"We do this," he maintains, "not because attending professional meetings makes our engineers and scientists feel better, but because such activities make them better engineers and scientists."

Enlightened management, in RCA and throughout the electronics industry,

realizing the mutual benefits that accrue to man and company encourages its technical staff to write papers for conference presentation and journal publications. It provides the time and the money for committee and conference attendance. It buys reprints of employee-authored articles. It publicizes the achievements of its people in society affairs, which often leads to special honors being settled on outstanding individuals. What we are really saying here is that what is good for the member is also good for his company—and for the whole society.

We have chosen the IEEE as a representative society because it most directly ties in with the general interests of electrical engineers. For the more specific disciplines we might have cited a host of similar, although smaller professional groups that serve a vast total membership to advantage.

A sizable list of those societies and organizations of interest to our readers appears at the end of this article.

Keeping abreast of the many activities sponsored or promoted by these many societies is a sizable chore of itself. Even to scan the notices, flyers, announcements, calls for papers, and similar literature can be somewhat burdensome for the busy engineer. To help him, at least for IEEE events, each issue of the *IEEE Spectrum* carries a summary listing of special conferences, special issues of journals forthcoming, calls for papers, and similar information. Other journals carry similar data of interest to their readers. So—keeping yourself informed isn't too difficult after all. And in keeping informed you will be able to take advantage of the many excellent activities and services offered you by these professional societies.

Some scientific and technical societies of interest

Included herein are about 30 professional societies and a similar number of IEEE groups. Names and addresses of the secretaries and group chairmen and list of society publications are given as a convenient reference; contact these sources for membership and program information.

The societies included are associated with many of the branches of engineering found at RCA. Most of these societies hold annual meetings and local chapter meetings. Nearly all of them publish professional society journals for the benefit of society members. This list was compiled from the *Directory of Engineering Societies and Related Organizations—1966 Edition*.

Acoustical Society of America
335 East 45th Street, New York, New York 10017
Secretary: Wallace Waterfall
Purpose: To increase and diffuse the knowledge of acoustics and to promote its practical applications.
Meetings: Semi-annual
Publications: *Journal*, monthly; *Noise Control*, bi-monthly.

American Ceramic Society, Inc.
4055 North High Street, Columbus, Ohio 43214
General Secretary: Frank P. Reid
Purpose: To promote the art, science, and technology of ceramics.
Meetings: Annual in spring; division meetings also annual in fall.
Publications: *Journal*, monthly; *Ceramic Abstracts*, monthly; *Ceramic Bulletin*, monthly.

American Chemical Society
1155 16th Street, N.W., Washington, D.C. 20036
Executive Secretary: B. P. Stanerson
Purpose: To encourage in the broadest and most liberal manner the advancement of chemistry in all its branches; to promote research in chemical science and industry... etc.
Meeting: Semi-annual
Publications: *Chemical and Engineering News*, weekly; *Chemical Abstracts*, semi-monthly; *Journal of Physical Chemistry*, monthly; *Journal of Agriculture and Food Chemistry*, bi-monthly; *Journal of American Chemical Society*, monthly.

American Institute of Aeronautics and Astronautics, Inc.
1290 6th Avenue, New York, New York 10019
Executive Secretary: James J. Hartford
Purpose: To encourage original research; foster dissemination of new knowledge; improve public understanding of the profession; and stimulate outstanding professional achievement.
Publications: *Astronautics and Aeronautics*, monthly; *AIAA Bulletin*; *AIAA Journal*; *Journal of Aircraft*; *Journal of Spacecraft and Rockets*; *International Aerospace Abstracts*.

American Institute of Chemical Engineers
45 E. 47th Street, New York, New York 10017
Secretary: F. J. Van Antwerpen
Purpose: The advancement of chemical engineering in theory and practice and the maintenance of a high professional standard among its members.
Meetings: Annual
Publications: *Chemical Engineering Progress*, monthly; *Journal*, quarterly; *International Chemical Engineering*, quarterly; *Monograph and Symposium Series*.

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.
345 E. 47th Street, New York, New York 10017
Purpose: To promote the arts and sciences connected with the economic production of the useful minerals and metals; to hold meetings for the reading and discussion of professional papers and to circulate by means of publication among its members the information thus obtained.
Meetings: Annual
Publications: *Mining Engineering*, monthly; *Journal of Metals*, monthly; *Journal of Petroleum Technology*, monthly; *Transactions of the Metallurgical Society*,

monthly; *Quarterly Transactions of the Society of Mining Engineers*, *Journal of the Society of Petroleum Engineers*, quarterly.

American Institute of Physics
335 East 45th Street, New York, New York 10017
Director: Van Zandt Williams
Purpose: Advancement and diffusion of knowledge of the science of physics and its applications to human welfare.
Publications: *Journal of Applied Physics*, monthly; *The Review of Scientific Instruments*, monthly; *Journal of Mathematical Physics*, monthly; *Physics Today*, monthly; *Applied Physics Letters*, semi-monthly; *Applied Optics*.

American Management Association
135 West 50th Street, New York, New York 10020
President: L. A. Appley
Purpose: To provide the training, research publications, and information services required by managers to do a better job. To organize and encourage exchanges of management thinking and experience with the profession.
Meeting: 1100 meetings annually
Publications: Books, reviews, and pamphlets, etc., *Management Letter*, *Management News*, *Management Review*, etc.

American Mathematical Society
Box 6246, Providence, Rhode Island 02904
Executive Director: Gordon L. Walker
Purpose: The encouragement and advancement of mathematical scholarship.
Publications: *Bulletin*, *Transactions*; *Mathematics of Computations*; *Chinese Mathematics*; *Mathematical Review*; *Proceedings*.

American Nuclear Society
244 East Ogden Ave., Hinsdale, Ill. 60521
Executive Secretary: O. J. DuTemple
Purpose: The integration and advancement of nuclear science and technology.
Meeting: Semi-annual
Publications: *Nuclear Science and Engineering Journal*, monthly; *Transactions of American Nuclear Society*, semi-annual; *Nuclear News*, monthly; *Nuclear App.*, bi-monthly.

American Physical Society
Columbia University, New York, New York 10027
Executive Secretary: K. K. Darrow
Purpose: The advancement and diffusion of the knowledge of physics.
Meetings: Annual meeting in January in New York; six to eight other meetings each year.
Publications: *Bulletin*, six to eight per year; *Physical Review*, semi-monthly; *Reviews of Modern Physics*, quarterly.

American Radio Relay League, Inc.
38 LaSalle Road, Hartford, Conn. 06111
Secretary and General Manager: John Huntoon
Purpose: Promotion of interest in amateur radio communication and experimentation; relaying of messages by radio; advancement of the radio art.
Meetings: No meetings of League as a whole; Board of Directors meets annually.
Publications: *QST*, monthly.

American Society of Mechanical Engineers
345 E. 47th Street, New York, New York 10017
Executive Secretary: O. B. Schier II

Purpose: To promote the art and science of mechanical engineering and the allied arts and sciences; to encourage original research; to foster engineering education, to advance the standards of engineering; and, in cooperation with other engineering and technical societies, to broaden the usefulness of the engineering profession.

Meetings: Twice a year
Publications: *Mechanical Engineering*, monthly; *Journal of Applied Mathematics and Mechanics*, bi-monthly; *Applied Mechanics Review*, monthly; *Basic Engineering Quarterly*; *Engineering for Industry*, monthly; *Engineering for Power*, monthly.

American Society for Metals
Metals Park, Ohio 44073
Managing Director: Allan Ray Putnam
Purpose: Service of members in the metal producing and consuming industries through dissemination of technical information on the manufacture, treatment and use of metals.
Meetings: Annual; monthly chapter meetings
Publications: *Metal Progress*, monthly; *Metals Review*, monthly; *Transactions*, annual; *Review of Metal Literature*, monthly; *Metals Engineering*, quarterly.

American Society for Quality Control, Inc.
161 West Wisconsin Avenue, Milwaukee, Wisconsin 53203
Managing Editor: George R. Foster
Purpose: To create, promote, and stimulate interest in the advancement and diffusion of knowledge of the science of quality control and of its application to industrial processes.
Publications: *Quality Progress*, monthly; *Journal of the Electronics Division*, quarterly; *Technometrics Quarterly Journal*.

American Standards Association, Inc.
10 East 40th Street, New York, New York 10016
Managing Director: Roger E. Gay
Purpose: To provide systematic means by which organizations concerned with standardization work may cooperate in establishing American standards in those fields in which engineering methods apply to avoid duplication of work and promulgation of conflicting standards.
Meetings: Annual
Publications: *Magazine of Standards*.

American Society for Testing and Materials
1916 Race Street, Philadelphia, Pennsylvania 19103
Executive Secretary: T. A. Marshall, Jr.
Purpose: The promotion of knowledge of the materials of engineering and the standardization of specifications and methods of testing.
Meetings: Annual
Publications: *Book of ASTM Standards*, annual; *Proceedings*, annual; *Year Book*, distributed to members only; *Materials Research of Standards*, monthly.

Association for Computing Machinery
211 East 43rd Street, New York, New York 10017
Executive Secretary: Mrs. Irene Hollister
Executive Director: J. D. Madden
Purpose: To advance the sciences, study, design, development, construction, and application of modern machinery, computing techniques, and appropriate languages for general information processing, for scientific computation, for the recognition, storage, retrieval, and processing of data of all kinds; to promote free interchange of information about the sciences and art of information processing, both among specialists and the public.
Meetings: Annual
Publications: *Journal*, quarterly; *Communications*, monthly; *Computive Reviews*.

Audio Engineering Society
P.O. Box 383, Madison Sq. Gardens, New York 10010
Editor in Chief: Mrs. Jacqueline Harvey
Purpose: The advancement of the

theory and practice of audio engineering and its closely related arts and the dissemination of important information in that field.

Meetings: Semi-annual
Publications: *Journal*, quarterly.
Data Processing Management Association
505 Busse Highway, Park Ridge, Illinois 60068
Executive Director: R. Calvin Elliot
Purpose: To foster, promote and develop education and scientific interest in the fields of data processing and management.
Meetings: Monthly
Publications: *Journal of Data Management*

Electrochemical Society, Inc.
30 E. 42nd St., New York, New York 10017
Executive Secretary: Ernest G. Enck
Purpose: The advancement of the theory and practice of electrochemistry, electrometallurgy, electrothermics, and allied subjects.
Meetings: Semi-annual
Publications: *Journal*, monthly; *Electro-Chemical Technology*, bi-monthly.

Electronic Industries Association
1721 De Sales Street, N.W., Washington, D.C.
Secretary: James D. Secrest
Purpose: To support and strive to advance the defense of our country, the growth of our economy, the progress of technology, and all interest of the electronics industry compatible with the public welfare. To operate at all times within the framework of law, ethics, and the national interest.
Meetings: Annual conventions and section meetings.
Publications: *Bulletins and Standards*.

Electron Microscopy Soc. of America
Olin Hall, Cornell Univ., Ithaca, New York 14850
Executive Secretary: Dr. George C. Cocks
Meetings: Annual

Institute of Environmental Sciences
34 S. Main Street, Mt. Prospect, Illinois 60057
Executive Secretary: Henry F. Sander
Publications: *Journal of Environmental Sciences*; *Annual Proceedings*, *Technical*; *Annual Proceedings*, *Tutorial*.

Institute of Management Sciences (Th)
Box 273, Pleasantville, New York 10570
Executive Director: Harold M. Cauvet
Purpose: To identify, extend, and unify scientific knowledge that contributes to the understanding and practice of management.
Meetings: One general meeting per year.
Publications: *Management Science*, *Bulletin*, and *Monographs*.

Instrument Society of America
530 Wm. Penn Place, Pittsburgh, Pa. 15219
Purpose: To advance the arts and sciences connected with theory, design, manufacture and use of instruments in the various sciences and technologies.
Meetings: Annual
Publications: *Journal*, monthly.

Mathematical Association of America
University of Buffalo, Buffalo, New York 14214.
Secretary: H. L. Alder, Univ. of Calif.
Executive Director: Harry M. Fiellman
Purpose: The promotion of collegiate mathematics.
Meeting: Semi-annual
Publications: *American Mathematical Monthly*, 10 issues a year; *Mathematical Magazine*, 5 issues a year.

National Association of Broadcasters
1771 N. Street, N.W., Washington, D.C. 20036
Secretary-Treasurer: Everett E. Revercomb
Purpose: A non-profit organization, to foster and promote the development of the arts of aural and visual broadcasting in all its



**RECOMMENDED NOMINEE
FOR IEEE SERVICE**

NOMINEE RECOMMENDED FOR: (indicate office,
committee, board)

Before filling in, please read Guidelines on reverse side.

NOMINEE _____
First Name Middle Initial(s) Last Name

MAILING ADDRESS _____

BUSINESS AFFILIATION _____
Name of Company

Company Address Telephone Number

Title or Position in Company

Indicate present type of work: research, development, sales, teaching, etc.

IEEE RECORD: Present Membership Grade _____

*Offices Held (with dates) _____

*Medals, Prizes, Awards _____

Other _____

* If available to nominator.

OTHER INSTITUTE AND SOCIETY MEMBERSHIPS AND GRADES _____

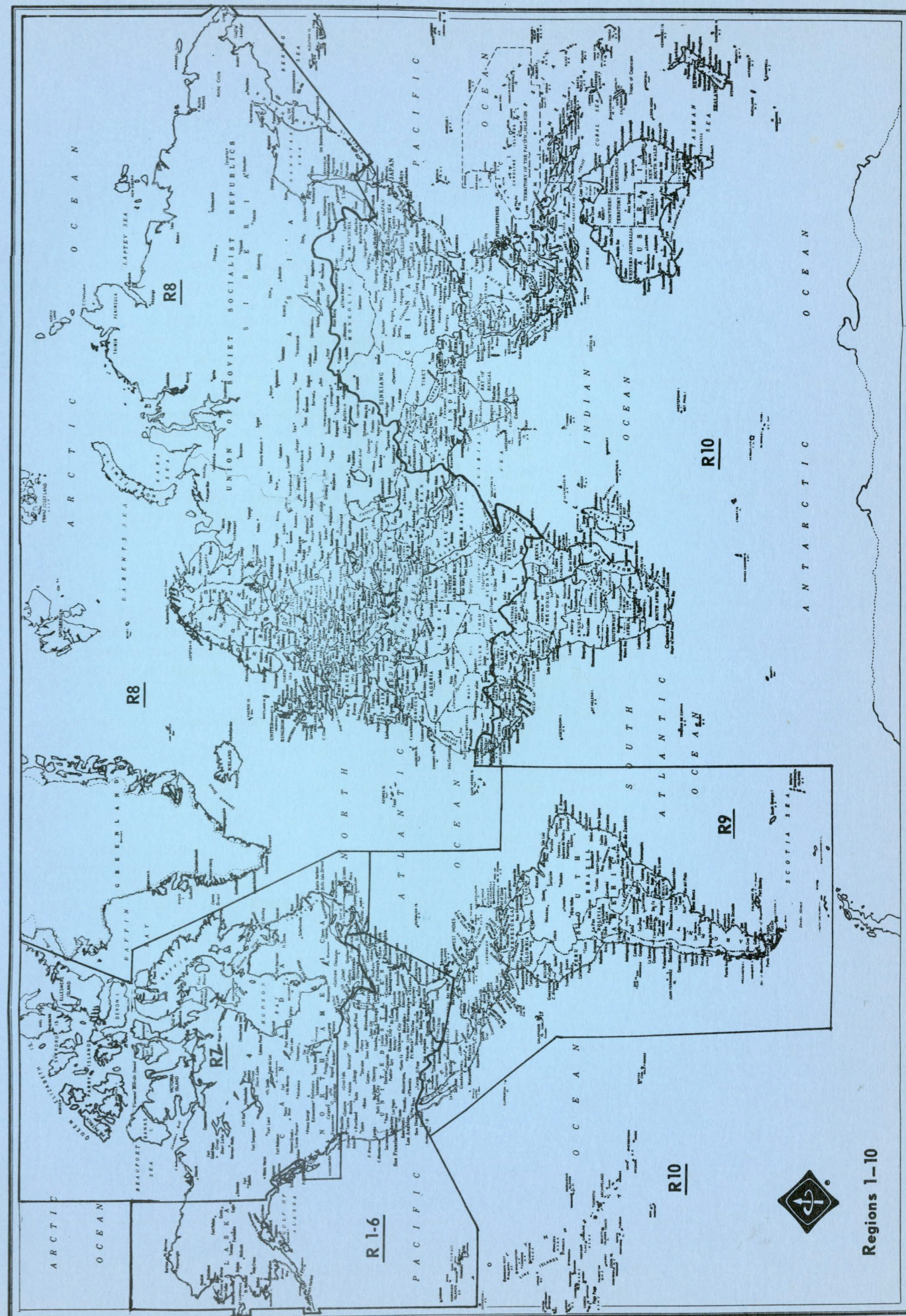
COMMENTS BY NOMINATOR: Give an outline of the nominee's specific qualifications for the nomination or appointment here (use separate sheet if necessary).

_____ Date

_____ Name of Nominator

_____ Telephone Number

_____ Address





Technical Activities Board

ORGANIZATION OF IEEE TECHNICAL ACTIVITIES

The IEEE Board of Directors at its meeting on November 13-14, 1969 approved the recommendation of the IEEE Technical Activities Board on the Organization of IEEE Technical Activities. This report recommended the formation of clusters of the present Groups into what will be identified as Divisions, and the assignment of a Divisional Director for each. Appropriate Bylaws to implement this reorganization were approved by the Board of Directors at their January 6, 1970 meeting.

The cluster arrangement of the Groups is as follows, with the indicated Divisional Director assigned to each:

Division 1

Mr. Arthur P. Stern
Magnavox Research Labs.
2829 Maricopa Street
Torrance, California 90503

- G-1 Audio and Electroacoustics
- G-4 Circuit Theory
- G-12 Information Theory
- G-23 Automatic Control

Division 2

Mr. Samuel Levine
Bunker Ramo Corp.
445 Fairfield Avenue
Stamford, Connecticut 06904

- G-16 Computer

Division 3

Mr. David M. Hodgin
Collins Radio Co.
5225 "C" Avenue, N. E.
Mail Station 106-21
Cedar Rapids, Iowa 52406

- G-2 Broadcasting
- G-8 Broadcast and TV Receivers
- G-10 Aerospace & Electronic Systems
- G-19 Communication Technology
- G-27 Electromagnetic Compatibility

Division 4

Dr. William W. Lang
IBM Acoustics Lab.
Bldg. 704
P. O. Box 390
Poughkeepsie, New York 12602

- G-3 Antennas & Propagation
- G-15 Electron Devices
- G-17 Microwave Theory & Techniques
- G-20 Sonics & Ultrasonics
- G-21 Parts Materials & Packaging
- G-33 Magnetics

Division 5

Mr. J. K. Dillard
Westinghouse Electric Corp.
700 Braddock Avenue
East Pittsburgh, Pennsylvania 15112

- G-5 Nuclear Science
- G-6 Vehicular Technology
- G-9 Instrumentation & Measurement
- G-13 Industrial Electronics & Control Instrumentation
- G-31 Power
- G-32 Electrical Insulation
- G-34 Industry & General Applications

Division 6

Prof. G. A. Richardson
Worcester Tech. Institute
Department of Electrical Engrg.
Worcester, Massachusetts 01609

- G-7 Reliability
- G-14 Engineering Management
- G-18 Engineering in Medicine & Biology
- G-25 Education
- G-26 Engineering Writing & Speech
- G-28 Man Machine Systems
- G-29 Geoscience Electronics
- G-35 Systems Science & Cybernetics

NOMINATION AND ELECTION OF TWO

DIVISIONAL DIRECTORS

As provided in IEEE Bylaw 201.2, two Group Divisions have been designated to nominate and elect Directors in 1970.

Division 3

Broadcasting
Broadcast and TV Receivers
Aerospace and Electronic Systems
Communication Technology
Electromagnetic Compatibility

is to elect a Director for a three year term, (1971-1973) so as to be properly phased at the end of the transition period with odd-numbered Divisions nominating and electing in odd years.

Division 4

Antennas and Propagation
Electron Devices
Microwave Theory and Techniques
Sonics and Ultrasonics
Parts Materials and Packaging
Magnetics

is to elect a Director for a two year term, (1971-1972) and will be properly phased to hold subsequent nominations and elections in even years.

Subsequent to the adoption of the above provision in Bylaw 201.2, the IEEE Board amended the Bylaw pertaining to the IEEE Nominations and Appointments Committee; the Nominations and Appointments Committee that was appointed effective January 1970 will complete its term in March, when the IEEE Board meets during the Convention; a new Nominations and Appointments Committee then takes office and it is this new Committee that will be responsible for acting on the nominations for the Divisional Directors. The Nominations and Appointments Committee may meet in May or June and it is, therefore, necessary to advance the deadline from July 1 to April 30 for the submission of nominations.

We anticipate that the IEEE Board at its March 26 meeting will formally amend the Bylaws to specify the April 30 deadline.

Each Group listed above is expected to submit not less than two nominations. In addition, petitions may be submitted by individual members; to be valid, each petition must have the signatures of not less than 100 members of any of the Groups in the Division. But no member should sign more than one petition, for to do so would invalidate that members' name on all petitions.

A member nominated for Divisional Director must be of Fellow or Senior Member grade, as stipulated in Bylaw 301.5. It is important to give name and address, education and employment summary, and details of IEEE activities. IEEE Form B-50 may be used with either Group nominations or with petitions. Copies of this form may be obtained from, and all nominations and petitions should be sent to: Staff Secretary, IEEE Nominations and Appointments Committee, 345 East 47th Street, New York, N. Y. 10017.

The Bylaws require the Nominations and Appointments Committee to prepare a slate of not less than two candidates for each Divisional Director position to be filled. On or before September 1, a Division ballot is to be sent to each individual holding at least one Group membership in that Division and to no other IEEE members; these members elect the Director. (It is possible that the ballots for the two Divisional Director elections will be combined with the ballots for the election of Regional Directors by the even-numbered Regions.)



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THE IEEE AND STANDARDS

W. T. Wintringham

Extract from a paper on that subject prepared for Technical Activities Board

Persons interested should request copies of the entire paper from:
R. M. Emberson, IEEE, 345 East 47th Street, New York, N. Y. 10017

As the year 1969 draws to a close, the era during which the Standards Boards of the American National Standards Institute (ANSI) approved American National (AN) also is ending. Beginning with the new year, the right of approval of AN Standards will be vested in a Standards Review Board. This Board will be appointed by the President of ANSI in consultation with the chairmen of the three Councils (Member Body, Company Member, and Consumer), and with the approval of the Board of Directors. It is evident that this new Board is responsible to the whole of the Standards Institute, as contrasted with the present Standards Boards which are the creations of and are responsible to the Member Body Council only. The present Standards Boards will become Technical Advisory Boards, and the details of their new functions as well as a revision of the Procedures of the Member Body Council are under review at the present time. It is not expected that there will be any significant changes in the steps to be followed in the approval of an AN Standard, although the introduction of a published notice of intention of approving a Proposed AN Standard, with a waiting period (not to exceed 120 days) will allow public comment on the proposal.

IEEE STANDARDIZING PROCEDURES

This occasion is most timely for this discussion with you of the standardizing procedures within the IEEE. About six months ago, the Technical Activities Board (TAB) received a report from Ivan Easton which contained the recommendations of your Task Force on Standards. Implementation of these recommendations will require extensive changes from the procedures which have been followed in the past. It is expected, however, that before the end of 1970, the IEEE Standards Committee will have been converted from a review committee to an administrative committee with the freedom to meet fully its responsibilities as set forth in the IEEE Bylaws. In anticipation of this change of character of the Committee, provision has been made for enlargement of the headquarters staff that supports its activities. It is important to this change that a new IEEE Standards Manual be prepared; and in addition, a style manual for standards, or a guide for the preparation of IEEE Standards probably should be written.

The IEEE Groups have an important role in this transition period. Your recommendations for improvement of the IEEE standardizing procedures should be made available to the IEEE Standards Committee for its assistance in revising the present procedures. We would welcome, too, any advice you can offer on ways of improving communications between the IEEE Groups and the IEEE Standards Committee. The present system of Liaison Representatives from your Technical Committees to the Standards Committee all too often has proved slow, clumsy, and at times, unworkable. We should be able to set up more direct, two-way communication channels; and I hope that "clustering" system will make this possible.

With this preamble, let me describe the standardizing activities of the IEEE - as I understand them.

One person, a group of persons, or a formally constituted committee may recognize the need for an IEEE Standard in an area where there is no existing Standard. In addition, a formally organized group outside the IEEE may uncover the need for a Standard and may recognize that the Institute is the body best qualified to prepare and issue the Standard. In either case, the question of a new standard is brought to the attention of the cognizant committee in one of the IEEE Groups, or it is brought to the attention of the IEEE Standards Committee. Either way, the proponent's reasons for the preparation of a Standard are reviewed, and a decision is reached either to accept or to refuse the task. If the question had been submitted first to the IEEE Standards Committee, that body also must decide which organization within the IEEE is best qualified to work on the project.

If the decision to go ahead with the preparation of an IEEE Standard has been reached within the organization of an IEEE Group, it is desirable at this stage of the process to refer the project to the IEEE Standards Committee for its consideration. (This step is called for in the IEEE Standards Manual, but often it is honored only in the breach). There are several important reasons why this step is useful to the Institute. One reason is to ensure that a closely related project is not already under way in another organizational unit of the IEEE. The time and effort required to draft an IEEE Standard is so great that it is almost criminal waste of manpower to duplicate efforts within the Institute.

Another important reason for this exposure of a project at an early stage is to allow other concerned Groups to contribute material and manpower if they so desire. Such cooperation is desirable from the point of view of the IEEE because it ensures that the resulting Standard represents the very best of the skills and knowledge that the IEEE can marshal on the subject.

Another important reason for consideration of a projected IEEE Standard by the Standards Committee at this early stage often is misunderstood. This reason is that the IEEE Standards Committee can make an independent and impartial judgment of the proposed project with relation to the scope of activities of the IEEE. Since the Institute is a professional society, composed entirely of individual members, there are a number of areas of standardization in which we should not operate. Some of these, such as the dimensions or ratings of manufactured units, are clearly within the sole purview of trade associations, since the concurrence of manufacturers as contrasted with the concurrence of individual experts, is required for the preparation of a useful standard. The case is by no means so clearly evident for standards proposals in some other areas.

The topic of the suitability of subjects for IEEE standardization has been discussed many times since the formation of the Institute. These discussions have taken place in the AdComs of Groups, in the IEEE Standards Committee, in the Operating Committee of TAB, and in the IEEE Executive Committee. The most recent statement of policy on this subject is found in the Minutes of the July 16, 1969 Meeting of the TAB OpCom:

"OpCom discussed at length the character of materials that had been processed by the IEEE Standards committee in recent years. OpCom formally voted to endorse the concept that IEEE, as a scientific, engineering, and educational Society encourages and supports the development and publication of Standards in such categories as definitions and terminology; methods of measurement and test; and technical reports on recommended practices and safety. IEEE does not, and will not, develop Standards on specific devices or hardware which characterize their commercial sizes, ratings, usage requirements, or performance associated with warranties."

There is no need to labor the point that since the TAB/OpCom gives final approval for publication of IEEE Standards, the Standards Committee feels impelled to pay careful attention to this statement of policy.

I can see no useful purpose in elaborating on the subject, but there are good legal reasons why the IEEE should not encroach on the fields of standardization which are more properly covered by the trade associations.

After the initial steps have been taken, a Task Force, or Writing

Group, or Subcommittee is formed by a Technical Committee, or by several Technical Committees acting jointly, for the purpose of drafting a standard. This Task Force should be composed of skilled experts, knowledgeable in the field of the project, and dedicated to its aims. The selection of the members of the Task Force probably is the most difficult single step in the handling of a standards project. But the time spent in drafting a standard, and the quality of the document both are highly dependent on the characteristics of the members of the Task Force.

After a draft standard has been prepared, it is reviewed by the interested Technical Committee or Committees. Upon Committee approval, the document is transmitted to the IEEE Standards Committee for review, along with certain information which is called for in the Standards Manual.

I shall not repeat the list from Division II, Section 7 of the IEEE STANDARDS MANUAL where the required items of information are tabulated. The fundamental purpose for these requirements is giving assurance to the IEEE Standards Committee that the Proposed Standard is truly representative of the best thinking of the experts in the organizational body of the Institute responsible for its preparation. One of the requirements has a different goal.

This is the requirement, in the case of proposals intended to become IEEE Standards, that the proponent body advise the IEEE Standards Committee of the consideration it has given to relevant Recommendations or Standards of the international standardizing bodies to which the Institute gives support. These recommendations reflect the considered judgment, not only of our peers around the World, but also, in many cases, the position of other standardizing organizations in the USA. It clearly is highly desirable that, if the IEEE position is different, that difference and the reasons for it should be brought out into the open. The IEEE Standards Committee can, and already has, transmitted such differences of opinion to the USA Technical Advisors to International Technical Committees for consideration as revisions of international Recommendations.

When a Proposed Standard and the accompanying information is considered by the IEEE Standards Committee, its first concerns are that the weight has been given to minority opinions, and that all of the concerned organizational bodies within the Institute have had the opportunity of voicing their positions with respect to the proposal. It is an unfortunate fact that the limitations of the present Staff supporting the IEEE standards activities are such that the IEEE Standards Committee feels the necessity of reviewing Proposed Standards to be certain that their editorial style is in agreement with the rules established by the Committee over the years. It is my hope that the proposed increase of size of the Staff will relieve the IEEE Standards Committee of this task, especially after some sort of manual of style has been issued.

The IEEE Standards Committee may take one of three possible actions on a Proposed Standard. It may be rejected for good cause - this happens very rarely. It may be approved, subject to recommended revision - this is the most usual action. Or, it may be approved as submitted. The approved IEEE Standard in final form, is submitted to TAB OpCom for approval for publication. It has been my experience that the major question raised by the TAB OpCom has been that of the suitability of the subject matter of the standard for standardization by the IEEE.

DISPOSITION OF IEEE STANDARDS

Publication of an IEEE Standard follows naturally after the TAB OpCom has given its approval. During the past year, as you know, arrangements have been completed for the IEEE Standards to be published in your Group Transactions, with the expense being carried as a special item in the TAB Budget. It is expected that reprints from the Transactions will be made available for the specialized users of standards.

If, at the time of submission to the IEEE Standards Committee, its proponent expressed the desire that a Proposed Standard also become an ANSI Standard, it is submitted to ANSI after it has received final

approval as an IEEE Standard. If the subject matter of the IEEE Standard is within the scope of an AN Standards Committee sponsored by the IEEE, the submission is made through that Standards Committee. If the IEEE does not sponsor an AN Standards Committee in the field of the IEEE Standard, it is desirable that it be submitted to ANSI through the Existing Standard Method.

It is my personal opinion that, in the future, all IEEE Standards should become AN Standards. Despite the exposure that IEEE Standards will receive from publication in your Transactions, there are many organizations that look to ANSI as the source of standards. The IEEE can increase the recognition of its Standards if they are reissued as AN Standards.

In the past, there has been a strong tendency within IEEE to consider that approving and publishing an IEEE Standard is the end of the process. This is not a tenable point of view. Standards must reflect the changing technology of the field in which they are used. Consequently, we can consider IEEE Standards as current only at the time that they are issued. Continuous review procedures must be instituted. I believe we should require that every IEEE Standard be considered for reaffirmation, revision, or withdrawal at 5 year, or at most 10 year, intervals following its publication.

RELATIONS BETWEEN IEEE STANDARDS AND INTERNATIONAL RECOMMENDATIONS

It is difficult to dispute the point of view that IEEE Standards should be given high consideration in the preparation of International Recommendations and Standards. However, there is little likelihood that our Standards will receive consideration unless we make a conscious effort to bring them to the attention of the persons drafting the Recommendations. It is for this reason that I suggest that IEEE should make known to the National Member Bodies of the International Standardizing Organizations its willingness, indeed its eagerness, to suggest experts from its membership to serve on International Working Groups.

IEEE Standards must be considered in the preparation of International Recommendations if they are issued as American National Standards. Issued AN Standards represent the formal USA position, and must be given priority by the US National Member Body of an International Standardizing organization. In this fact, we find a further reason for the submission of IEEE Standards to ANSI.

The reverse situation also is true. We in the IEEE can find much useful information, suitable for embodiment in our Standards, in International Recommendations. If we lift this useful material, we can save significant time and effort in the drafting of our own Standards.

There is a further advantage in making the fullest use of material from International Recommendations in drafting IEEE Standards. Knowledgeable experts, most likely IEEE members, have reviewed and have influenced the National votes through which these documents became International Recommendations. By adopting as IEEE Standards the meat of these Recommendations, we would be doing no more than demonstrating the consistent thinking that is expected to pervade the scientific and engineering community.

RELATIONS BETWEEN THE IEEE AND ANSI

The IEEE and its predecessor organizations have been an active participant in the affairs of ANSI for more than 40 years. Our participation today is as complete as it has ever been.

The IEEE has one representative on the Board of Directors of ANSI. We are dues-paying member of the Member Body Council, and we are represented on that Council. The Institute has representatives on 6 AN Standards Boards, and on nearly 100 AN Standards Committees.

Officially, the IEEE is the sponsor, or a cosponsor, of more than 20 AN Standards Committees. At the present time, however, the Institute does not bear any of the expenses which arise from sponsorship,

so that we may claim only that we are sponsors in name, rather than sponsors in fact. It is my hope that in the years to come, the IEEE's financial and Staff situations change to the extent that we can really sponsor AN Standards Committees.

In light of its own financial situation, ANSI has suggested that IEEE assume the sponsorship of several more AN Standards Committees. This topic will be studied carefully by the IEEE Standards Committee during 1970.

FUTURE IEEE STANDARDIZATION ACTIVITIES

I believe it is apparent to each of you that the plan for the clustering of Groups will have a reaction on the standardizing activities of the IEEE. Certainly, any revision of the activities and procedures of the IEEE Standards Committee must be made with the possibilities of reactions in mind. For this reason, therefore, I shall not offer you a 10-year or even a 5-year plan. On the contrary, I shall discuss some of the pressing problems to which the IEEE Standards Committee must address itself in the year 1970.

Earlier, I have mentioned the recommendation of the Easton Committee that the IEEE Standards Committee divest itself of the task of reviewing the content and wording of Proposed Standards, and assume the posture of an administrative committee. Since funds for an enlarged supporting Staff have been included in the IEEE Budget for 1970, the IEEE Standards Committee is free to plan for this change. I will be necessary to draft completely new operating procedures, both for the guidance of the IEEE Standards Committee and for your assistance in your job of drafting IEEE Standards. As I have mentioned before in this talk, the Chairman of the 1970 Committee (Bruce B. Barrow) will welcome your advice on the material that should be included in these procedures.

Another problem for study is the position of the existing Standards Coordinating Committees, which are a part of the structure of the IEEE Standards Committee. Not only do these Committees act in an advisory capacity to the IEEE Standards Committee on Proposed IEEE Standards under review, but they draft Proposed IEEE Standards in their several general fields. It may be possible that the duties of these Committees could be performed more effectively if they were assigned to specific Division of Groups. This is another question, the resolution of which will require your advice.

Another matter of mutual concern is the relations between the Groups and the IEEE Standards Committee. I suspect that the problem here

is one of establishing effective two-way communication channels. But whatever may be the cause, there is no doubt in my mind that hard feelings do exist and we must eliminate any reason for them.

There is no doubt that the size of the IEEE Standards Committee should be reduced when it does become an administrative or advisory Committee. I have considered at length the possibility that the majority of the membership consist of the Chairmen of the as yet not-considered Division Standards Coordinating Committees on an ex officio basis. It should be evident to you that the assistance of the Groups is needed in our search for a solution to this problem.

Another area for study by the IEEE Standards Committee in 1970 is the relation of the IEEE to ANSI. I have mentioned earlier that the IEEE is a Member Body of the Standards Institute. I have mentioned also, that we are represented on the Board of Directors, several Standards Boards, on a large number of Standards Committees, and that we sponsor or cosponsor several of these Committees. It is an important question, however, whether the representation we have is all in the best interests of the members of the IEEE. We must examine the scopes and the activities of all of the AN Standards Committees, not only those in which we are involved now, but all of those in which we might be interested. The results of this study will allow the IEEE to cooperate in a more meaningful fashion with ANSI.

After we have aligned IEEE support with AN Standards Committees to which we can and should make significant technical contributions, we will be in a position to examine our own mechanisms for the designation of IEEE representatives to these Committees. It turns out that all too often, the IEEE Standards Committee has suggested the selection of the wrong person to represent the Institute on the wrong AN Standards Committee. In part, this has been the results of poor communications between the Groups and the Standards Committee - which I mentioned a little earlier.

It is customary, and I believe, good practice, to summarize a talk in a series of concluding remarks. I hope that you will agree with me that any further condensation of this discussion of the standardization process and the relation between the IEEE and standardization would be a futile effort.

In closing, I would like to make a final plea for close cooperation between the Groups and the Standards Committee in the years ahead of us.

house organ by Chester W. Sall, whose article: "Professional societies and the engineer" is reprinted, by permission of RCA Corporation, as a yellow insert, on pp. 4C to 4F of this E. E. The author refers in general terms to an array of societies, which he lists, but singles out IEEE, perhaps reflecting his high level of activity in our affairs. (Copies, Audrey van Dort)

(Note: This article is worth preserving for its listing of societies, alone. E. E. would be pleased to have its attention drawn, from time to time, to equally meritorious articles bearing so directly upon IEEE's broad interests. —Ed.)

LIFE MEMBERS have received personal invitations to accept certain privileges at the March Convention. (Information, John Callahan)

Without any "package" tie-in, they have also received their routine annual reminder that many among them do voluntarily contribute to the Life Member Fund (Cf. E. E. Dec., p. 7.) (Contribution cards, Bill Keyes)

EXCHANGE MEMBER (Exch. Mem. IEEE), a new grade of membership, was established by BofD in January by new Bylaws 104.7, 105.12, 108.6. Applicant must be certified to be in good standing in a technical society recognized by ExecCom for this purpose, with proviso for reciprocity. Rights, privileges, dues, fees, are those of Member Grade IEEE; no right to vote or hold any IEEE office; term limit 3 years... Bylaws 101.1, 104.11, were editorially modified to conform... ExecCom, January, recognized Nigerian Institute of Engineers for Exchange Members.

OVERSEARS REMITTANCES TO IEEE. Spain has been added to England, France, Germany, Italy, Japan, as a country where

IEEE has an account with a correspondent of Chase Manhattan Bank, to the credit of which IEEE members or membership applicants may deposit personal checks in local funds at prevailing exchange, accompanied by an IEEE bill or membership form. Formerly U.S. dollars had to be bought from a bank before a postal money order could be obtained to remit. (Inquiries, Bill Keyes)

TAB AND GROUP NEWS

SEE green insert, pp. 4K-4L.

"THE IEEE AND STANDARDS." A thorough treatment of this subject—timely, too, in view of the Easton Report (E. E. Dec. '68, p. 4)—by W. T. Wintringham, past-chairman Standards Committee, is available on request. (Copy, Dick Emberson)... Addressed particularly to IEEE Groups, it deals with voluntary and mandatory, national and international standards, criteria, interlocking organizations, procedures, approvals, publication. A substantial extract of the last third of the treatment, pertaining to U.S. practices, is printed in centerfold pages 4M to 4P.

CONFERENCE NEWS

1970 PRE-CONVENTION PROSPECTUS will receive earlier than normal coverage in Spectrum. The full technical and special events programs will be found in February, pp. 21-37; while the complete list of exhibitors, products, locations, will appear in March issue. The usual post-Convention report will follow in May.

IEEE CONFERENCE BOARD, a major departure, is in the making. ExecCom has endorsed a proposal of its Ad Hoc Commit-

tee on Convention Policy that BofD appoint a standing 6-member Conference Board. A primary assignment would be to guide the International Convention and Exposition beginning in 1971. Suitable Bylaws are being drafted. Intent is to operate the International Convention like an independent wholly-owned subsidiary. There would be a permanent staff for specialized assignment under Bill Hilty (E. E. Dec., pp. 5, 8).

Nominees for the 6-man board would be widely distributed geographically, would include some recommended by the chairmen of RAB and TAB, and would be processed by N&A Committee for BofD 3-year appointments, paired each year. The TAB chairman would be ExecCom's assigned coordinator.

Of the two annual appointees to the board, one would be selected for his knowledge of technical, educational, and informational needs of engineers; and in his second year would be Meetings Director. The other would be selected for his familiarity with equipment trends, marketing problems, and exhibition techniques; during his second year he would be Exposition Director. The first year of both appointees would be as board members; the third year either as chairman of the board or as chairman of a 3-man Conference Executive Committee.

CONFERENCE APPROVALS. ExecCom in December reassigned its responsibility for conference names, dates, etc., to TAB and RAB within their respective areas of operation, beginning in January '70. Conference approvals will hereafter not be required of ExecCom unless there is a conflict it must resolve.

REGIONAL AND SECTION NEWS

RAB'S ORGANIZATION EXPANDED. RAB's members initially were solely the Regional Directors, under chairmanship of the elected Vice President. Recently RAB and TAB selected a liaison member, not a Director,

sitting on both boards... As noted in E. E. Oct., p. 4, five of the Regional Directors were named to form and chair RAB committees of persons not Regional Directors... A 6th, Non-National Activities, has been added... A 7th, National Activities, is contemplated... Bill Keyes has been designated staff secretary of RAB.

SECTION WORKSHOPS. (Cf. E. E. Dec., p. 6.) To increase the exposure of Section officers to even broader IEEE affairs than they receive locally or in single Regions, the Member Services Committee of RAB is organizing a Section Workshop at the upcoming March Convention. This will be an annual affair... The Regional Directors will select principal conferences as locales of similar workshops to reach more of the "working contingent" than can be accommodated in New York.

REGIONAL BOUNDARIES. Changes were recently made in boundaries of Region 8 (E. E. Dec., p. 3). The end-effect is made clear on the map, p. 4I, this issue.

This map is run as a convenience to readers in following frequent references in E. E. to all 10 Regions by number. Organization Roster Sept. '68, pp. 17-59, names the Sections in each Region; and pp. 68-73 the college Branches. Counties, states, provinces, countries, in each Section and Region are named in Section Manual, Sec. 8, pp. 1-27. (Information, Emily Sirjane)

SECTION MEETINGS REPORTS. The requirement of reporting names of speakers and titles of papers after every meeting has been dropped. All 1970 Section and Chapter meetings will be caught up in a single report due next December... Secretaries will be well advised, though, to maintain records currently, against "that day."

DENMARK SECTION inspected a satellite observatory during the passage of a weather satellite, witnessed the actual tracking,

inspected the received photos. Sixty IEEE members attended... Sounds good! Commended to other Sections... (Item lifted from Region 8 Newsletter. Editors are urged to steal each other's stuff... All one uninhibited family. —Ed.)

MAN BITES DOG. Ordinarily, engineers in IEEE's higher grades do what they can for Students. University of Waterloo (Ontario) Branch turns the compliment around: organizes for practicing engineers an 8-lecture course-for-fee on semiconductors... Signed up over 100 registrants of the local technical community to expand, update, refresh, or consolidate their knowledge, under a team of consulting experts from local industry to teach and coordinate the lectures... Certificates of Completion will be issued by the boys to their elders who qualify.

Director Tanner, Region 7 (Canada) cries "Commendable!" For originality and initiative, E. E. bestows its February Blue Ribbon on this news item as *** "Best in Show."***

HOMETOWN PUBLICITY. Election of a member of the Section as Fellow, IEEE Director, officer, official, committee chairman, board member, is prime local newspaper copy. Its appearance in type benefits the Section, the Institute, the man, his co-workers, his wife, parents, children; is of various degrees of interest to his neighbors, boss, secretary, letter carrier, the man in the street, photographers, and purveyors of aluminum siding.

Is your Section equipped to spot such items and place copy and glossies with the newspapers? Consult "Section Public Relations and Publicity Guide." (Copy, Lee Nicol)

STUDENT NEWS

CONVENTION FEES FOR STUDENTS. IEEE Student and Student Associate mem-

bers will be allowed to attend 1970 Convention with no entrance fee. There has been a minor change in advance plans (E. E. Dec., p. 6). Each Student member in Regions 1 to 7 (U.S. and Canada) will receive a registration card by mail about mid-February. This card will be exchanged at the Hilton or Coliseum for an appropriate entrance card. Without it, the normal \$4 must be paid.

Students will find of special attraction: the technical-application sessions on the 4th floor of the Coliseum, dealing with microstrip circuits, microwave semi-conductor devices, interference problems, infrared radiation, time-shared computer circuits, and small computers.

STUDENT BRANCH COUNSELORS will meet at the March Convention to discuss the provocative topic: "Environment—the engineer's responsibilities to society."

R.E.S.I.S.T.O.R.S is a "radically emphatic" group of high school students interested in science, technology, and other research studies, being encouraged to organize by IEEE Computer Group members. A call for papers has gone out (copy, Bob Loftus), which, if followed up, gives high school boys and girls, this May, a chance to mount a podium in Atlantic City convention hall and spout into its mikes all that's new in algorithms, peripherals, interfaces, control processors; and the languages, arts, and systems of computers... The wherewithal to attend is looked for from local professional societies, fraternities, and industries... Computer Group is to be applauded for initiative and imagination. We can do with our fair share of whiz kids.

(Note—IEEE officially supports, particularly in the Sections, installations of the Junior Engineering Technical Society—JETS.)

COMPOSITION OF THE 1970 IEEE BOARD OF DIRECTORS
(Only Present Terms Shown)

DIRECTORS-AT-LARGE
Elected by members

1 John V. N. Granger	1970-72
President	1970 †
2 James H. Mulligan, Jr.	1970
Vice President	1970 †
Chm. Regional	
Activities Board	1970
3 Seymour W. Herwald	1968-70
Senior Past President	1970
4 F. Karl Willenbrock	1969-71
Junior Past President	1970
5 Hubert Heffner	1968-70
6 Charles F. Savage	1968-70
7 David M. Hodgins	1969-71
8 John R. Whinnery	1969-71
Vice Chm. Technical	
Activities Board	1970 *
9 Joseph K. Dillard	1970-72
10 Glen A. Richardson	1970-72

DIRECTORS-AT-LARGE
Elected by Assembly

1 Harold Chestnut	1970
Vice President	
Technical Activities	1970 *†
2 M. E. Van Valkenburg	1970
Vice President	
Publications Activities	1970 *†
3 Raymond W. Sears	1970
Treasurer	1970 *†
4 Robert H. Tanner	1970
Secretary	1970 *†
5 Douglas G. Lampard	1969-70
Director Region 10	1970 *
6 Werner Buchholz	1970
7 George Sinclair	1970
Chm. Awards Board	1970 *
8 John G. Truxal	1970
Chm. Educational	
Activities Board	1970 *

REGIONAL DIRECTORS
Elected by Regional members

1 James E. Storer	1970-71
2 Delmer C. Ports	1969-70
3 Seymour Cambias, Jr.	1970-71
4 Harry P. Bruncke	1969-70
5 Lloyd B. Cherry	1970-71
6 Langdon C. Hedrick	1969-70
7 William H. Thompson	1970-71
8 Roger P. Wellinger	1969-70
9 Carlos J. Lohmann	1970-71

EXECUTIVE COMMITTEE

Granger	(Chairman)
Mulligan	(Vice Chairman)
	Regional Activities
	Membership & Transfers
	Admission & Advancement
Chestnut	Technical Activities
Van Valkenburg	Publication Activities
	History
Willenbrock	Nominations & Appointments
	Intersociety Relations
	Long Range Planning
Sears	(Treasurer)
	Finance
	Life Member Fund
	Employee Benefits
Tanner	(Secretary)
	Bylaws
	Board Meetings
	Public Relations
	Internal Communications
Truxal	Educational Activities
Buchholz	Awards
	Fellows

DIRECTORS EMERITUS

Alfred N. Goldsmith
also Editor Emeritus
Elgin B. Robertson

*Elected by the 1970 Assembly to these positions
†Corporate Officers

"FOR YOUR INFORMATION!"

AN ORGANIZATION the size of IEEE can function effectively only when many channels of communication are established and used. Section and Group chairmen should make full use of informal channels, correspondence, and telephone, to create common awareness of the activities presently in progress in their respective units. Many of the programs developed by Groups and Sections can be of extreme value to others who, unfortunately, are not aware of their existence!

E. E. 's mission is to inform. Read it. Contribute to it. Write: Editor.

EDITORS: WATCH your Latin plurals (Spectrum, Nov. '69, pp. 39, 16; Dec. '69, p. 19) lest your new-decade data-bases become datums-bases, and your fondest desiderata desideratums.

Hep we've been. Groovy we remain.

WELCOME ABOARD!

Quarter-deck: Flourishes, side-boys, for seven new Directors; Cambias, Cherry, Dillard, Lohmann, Richardson, Storer, Thompson.

Chairmen, Members of IEEE Units, taking up new duties, wherever you are!

Staff: Gordon Friedlander, Staff Writer, "Spectrum;" L'Enfant Prodigue, Lost & Found Dep't.

* * *

Centerfold Pages:

	<u>Pages</u>
White - Socio-technical Policy	4A-4B
Yellow - Societies & Engineer	4C-4F
Ivory - Committee Nominees	4G-4H
Blue - Map of Regions	4I -4J
Green - TAB News	4K-4L
Green - Standards	4M-4P