

ELECTRICAL ENGINEERING®

* * * * *

PRESIDENT HERWALD
SALUTES HIS "ACTIVE CIRCLE"
AND LOOKS TO ITS EXPANSION

"Those of you receiving Electrical Engineering are well aware of the importance of participation in getting full value from IEEE membership. Our Institute's basic purpose is to enhance communications about the profession--and that is a two-way street, requiring a maximum of individual participation.

"I look to you, as to no other instrumentality within IEEE, to 'spread the word', encouraging all members--and particularly the newer members--to engage actively in our continuing dialogues.

"You are the ones who meet most often with our 160,000 members at local meetings and conferences. You are the ones who can make our members feel the importance of actively participating--the importance both to themselves and to the profession.

"Never underestimate the power of a handshake, an introduction, or a few carefully chosen words. I look to you to bring more members into our 'active circle' at every meeting and social function we hold.

"First, make each member feel a part of the Institute. Then lead him into fuller participation.

"S. W. Herwald"

* * * * *

CHALLENGES AND OPPORTUNITIES

CHALLENGE NO. 1 this month is the one thrown down by the President to the Active Circle ($2\pi r$) in the lead-all items.

CHALLENGE NO. 2 is to widen IEEE's Sphere of Influence ($4\pi r^3/3$) by getting new members under Operation G-I-T. (See E. E. Feb. pp. 1, 2.) Members elected in April receive 2 months' services (dues, fees, subscriptions) as a free bonus in May and June - 8 months for the price of 6, and

only the entrance fee and half-a-year's dues to pay in April. (Bylaws 108.5, 405.7, 501.7 for particulars.)

CONVENTION-CALIBER SPEAKERS for your Section and Chapter meetings? Opportunists on your Meetings Committees should turn quickly to the canary-yellow Supplement here-with, showing how to turn to local account one or more of the unique tutorial, interdisciplinary, or horizon-scanning papers presented by invitation at March 1968 Convention in New York. (Chairmen, please note.)

NOMINEES FOR OFFICE, 1969—action in April. See Calendar of IEEE Elections and Appointments, page Q, Statements of Policy, blue Supplement to E. E. Aug. '67, "in your 3-ring binder."

(1) Regional Committees of even-numbered Regions except Region 10 are to present nominees (Bylaw 401.8) for Delegate-Directors by April 30. (See E. E. Feb. p. 3.)

(2) Sections and Groups invited in April to submit by June 1 recommendations for appointments to 1969 Standing Committees and Boards (not including IEEE Board of Directors (BofD)).

(3) Each chairman of a Standing Committee or Board to recommend by June 1 the succeeding chairman and members for 1969.

JUSTIFICATION FOR JUST-A-VACATION—the upcoming confluence of two titillations in Texas:

(1) HemisFair '68, San Antonio, April 6-October 6. A Texan's-world's fair.

(2) Southwestern IEEE Conference and Exhibition (SWIEEEO), Houston, April 17-19. Executive Committee of BofD (Exec-Com) meets there April 16.

"See your travel agent."

TOP-SIDE DEVELOPMENTS

EXECCOM AND BOFD met March 16 and 20. For principal actions see Stop-Press items, last page of this E. E.

IEEE CONFERENCE PUBLICATIONS.

Uniform practices have been announced for conference and symposium chairmen to follow in the assignment of catalog numbers and obtaining of copyrights for conference publications, as well as in general format and setting of prices for post-conference sales.

An IEEE Business Office program of Open-Order-Plan Subscriptions (OOPS) has been inaugurated to increase availability of all conference publications on public and institutional library shelves. The indexing techniques used in IEEE's 1967 periodicals will be applied to conference publications as well, in 1968.

"OOPS" orders, totalized, are to be added to the normal press-runs aimed at accommodating conference attendees and subsequent projected demands for copies. A feature of the program, available to persons, companies, libraries, and technical book centers, is that purchasers will receive automatically on a ship-and-bill basis, without annual fee, all ordered new prints and conference issues of Group Transactions) as they are published, and subject to a 10% discount from normal prices.

Particulars are available in a 2-page announcement entitled "Conference Publications" (copy available from Millie Smith, IEEE Subscriber Relations). It covers matters like discounts to purchasers, sales accruals to the Group sponsoring a catalogued item, identification of publications with catalog numbers, copyright procedures, member and non-member pricing, and co-sponsored conferences.

Ed MacDonald will handle the interface with conferences and Groups.

With IEEE's conference output (2,216 pages in 1967) widely available on library shelves, and adequately and uniformly indexed, the ultimate objectives of retrieval will come closer.

COMPUTER-BASED INDEXES. The author and subject indexes to all IEEE 1967 periodicals are to be made available on magnetic tape, for computer processing, according to notices at the head of each published index. (Information, Howard Tompkins)

STATEMENT OF POLICY #22-A - International Representation in IEEE Standards Activities. ExecCom in February approved the following:

1. Any technically qualified member of IEEE of any nationality who can attend a reasonable number of meetings, may be appointed a voting member of the Standards Committee, without regard for geographical or political considerations.

2. Any technically qualified member of IEEE of any nationality may be appointed a member of any Committee in a Group preparing Standards Recommendations, without regard for geographical or political considerations. Conditions for voting

membership and for attendance for meetings may be established by each Group.

STATEMENT OF POLICY #8-C - Exec-Com in February modified #8-C to name Regional officers (as well as Group treasurers) as examples of entity officials who are bonded.

MEMBERSHIP APPLICATIONS and Reference Forms for use in Regions 8, 9, 10 will hereafter carry notice that they may be filled out in a choice of 6 languages.

CONFERENCE REGISTRATION-FEES DIFFERENTIAL. ExecCom in February approved an as-yet-unnumbered Statement of Policy on the title subject: "For IEEE sponsored Conferences there shall be a member/non-member registration fee differential. The amount of the differential should be in the range of 25 to 50% of the member price; the differential should not be trivial and the exact amount should be set by each Conference Committee. There shall be no differential among members of IEEE based on membership in the sponsoring Group, Region or Section. The fees set for IEEE Student Members and Student Associates shall be at the discretion of the Conference Committee."

SECTION STUDENT BRANCHES. It was noted in E. E. June '67, p. 2, that the formation of a "Section Student Unit" had been provisionally authorized within a Section in a situation where a Student Branch on a U.S. campus was not permitted, by rules of the college, to be formed.

A proposal made later to regularize Section-sponsored off-campus Branches, through Bylaw change, met with reservations regarding applications in the United States. However, in Regions 8, 9, 10, where the problem arises in relation to other societies and where Section Student Branches would not conflict with organized Student Branches in the area, authorization is looked upon with favor by the Student Activities Committee and the new Educational Activities Board.

Comments pro and con, preferably with examples, anywhere, will be appreciated by Director-Coordinator J. N. Shive,

in care of Jack Kinn, staff secretary EAB.

PICKUP AND FEEDBACK

A NEW CENTER-HEADING is here inaugurated. Beginning with this issue, E. E. will scan Section and Group periodicals for items re-useable in "Pickup and Feedback!" Jog our elbow!

IN-FLIGHT COMMUNICATION. By metaphor-magic, look upward at IEEE as a communicating aircraft aloft—its hardware our members, meetings, conferences, speakers, authors, publications; its software the Section, Group, Chapter, Branch, Committee organizations. In this context, headquarters, including E. E., is ground-support.

The air-to-ground two-way communication link is transparently vital to summation of flight plans. . . Do you read me? . . . Over!

GROUP INCENTIVE TO CHAPTERS.

Through its newsletter the Reliability Group offers its Chapters a competitive annual financial award, payable to a Section but earmarked for the Chapter "to improve its professional status."

The point-scoring system: 1) 100 points for every Chapter meeting in excess of 4 a year (offset by a penalty of 100 points for every meeting less than 4). 2) 500 for each day-long symposium sponsored or co-sponsored. 3) 100 for each training course sponsored. 4) 100 for each paper presented at a general, Regional, or local Reliability conference. 5) 100 for submitting published Chapter information in Reliability Group newsletter. 6) 100 for each time a Chapter has as its speaker one of those on the Group's Speaker List. Awards: 1st place, \$100; 2nd, \$50; 3rd, \$25.

CHAPTERS AS LUNCHEON CLUBS. E. E.

Feb. p. 4, queried whether any Chapter had tried holding some of its meetings as noon luncheons. A. H. Sullivan, Jr., of Washington (D. C.) Chapter of Electromagnetic Compatibility Group says that it has followed that practice "very

successfully" since 1959. Turnout has been 30 to 60 persons. "It has accomplished the ends indicated" in the item cited.

SEARCHLIGHT ON SECTION/STUDENT RELATIONS. Some of the findings of a task force in Region 4 headed by W. H. Dauberman, probing all IEEE Sections, were reported in E. E. Dec., pp. 7-8. Here are some additional conclusions:

The Student Prize Papers program, it was found, enlisted wide-front Section encouragement and financial support. Sections supplied judges and contributed prize money.

Monetary backing went further in 15% of the Sections. Certificates, handbooks, plaques, banquet invitations, were some of the recognition awards for creative ability, scholarship, service to IEEE, school, or community. Scholarships of from \$200 to \$1,000 a year are not uncommon; in another form, a fund upon which Students could draw was maintained at a \$1,000 level. One Section bussed Students to a Regional conference.

Only a few Sections said that their chairmen or Student Activities chairmen scheduled visits to all Branches annually or more often. One Section distributes its newsletter to all Students, and includes Student Branch news.

CANAVERAL LOBS TWO ALOFT. Gunther Karger implies they go up woosh-woosh.

Pad 1 - Students' Affairs Committee. To establish close entente with the principal college, the head of its E. E. Department sits on the Section Executive Committee. Students are made welcome at all Section-sponsored events. At each Section meeting two Students are given a complimentary dinner and appropriately recognized in the meeting. The Section's publication is made available to the Branch; there are occasional articles in it on Branch activities.

An "IEEE Week" at the college in October was inaugurated with a required one-hour seminar in which faculty and Section representatives shared the rostrum to dramatize the interface. During the week interesting tours were offered all students and a membership drive conducted.

The week ended with a formal joint Section-Branch meeting at which each Group Chapter chairman gave a two-minute briefing and a featured speaker gave a motivational address. Result: Increase of Branch membership to 140 (from 25!).

Pad 2 - Industry Coordination Committee. Members consist of key representatives in industrial, government, organizations throughout area. These "reps" appoint in-house coordinators to provide several IEEE/industry contact points. They "talk IEEE," post bulletins, gather news of members for the Section magazine, such as promotions, transfers, accessions. Over the long term, says Karger, this selective emphasis on member news will prove to many non-member engineers that they are not IN but out, thus "motivated to get with the trend" by joining.

PORTFOLIO OF STUDENT PAPERS PRIZES? Director Oxley pointed out to November BofD that Student Associates in a growing number of junior and community colleges having IEEE Student Associate Branches are handicapped in competing for papers prizes with enrolled Students at schools granting degrees.

Additionally, it is reported, in universities where enrollments for Masters' degrees and Doctorates are heavy, it is difficult for undergraduates, no matter how capable, to compete for Student prizes with hope of success.

Should we have a portfolio of prizes, in strata? Jack Kinn would like to have field opinions, especially from Counselors, Branch officers, Regional committees, and Sections. These will be officially considered, and perhaps summarized for E. E.

COMMITTEE COMMON LORE. E. E. Oct. green Supplement on committee meetings, pp. 6, 7, and E. E. Feb. on The Motions, especially H-1, H-5, pp. 6, 8, dealt with a chairman's posture vis-a-vis committee-men 1) who are shy or inexperienced; 2) able, voluble men; 3) those responsive to logic or susceptible to being moulded; 4) those who persistently offer counsel; 5) those who supply information; 6) the loquacious, repetitious, type; 7) the know-it-all; 8) the obstreperous and the quarrelsome.

SCOPES OF IEEE GROUPS

TAB COMMITTEES

Aerospace and Electronic Systems - G-10

The field of interest shall be the study and advance of the state of the arts in equipment, procedures, and techniques applied to the organization, development, and operation of electrical-electronic functional systems designed to meet stringent performance requirements for aerospace applications, and such Earth-based applications as radar, sonar, navigation and air traffic control. A functional system is here construed to mean a complex interacting assembly of major components designed comprehensively to accomplish end functions.

*

Antennas and Propagation - G-3

The field of interest of the Group is experimental and theoretical advances in electromagnetic theory and in the radiation, propagation, scattering and diffraction of electromagnetic waves, and of the devices, media and fields of application pertinent thereto such as antennas, plasmas, and radio astronomy systems.

*

Audio and Electroacoustics - G-1

The field of interest of the Group shall be the technology of transmission, recording, reproduction processing, and measurement of audio-frequency waves by electrical, electronic, acoustic, mechanical, and optical means; the components and systems to accomplish these aims, and the environmental, psychological, and physiological factors concerned therewith.

*

Automatic Control - G-23

The field of interest of the Group shall be the theory, design and application of automatic control systems. It shall encompass components, and the integration of these components, as are necessary for such systems. The word 'systems' as used herein shall be interpreted to include physical, biological, organizational and other entities, and combinations thereof, which can be represented through a common mathematical symbolism.

Broadcast and Television Receivers - G-8

The field of interest of the Group shall be that which stems from the design of, manufacture of, and other activities related to broadcast and television receivers and components thereof.

The scope statements are reprinted from the Field of Interest article in each Group Constitution.

Broadcasting - G-2

The field of interest of the Group shall be confined to the theory, equipment, techniques of operation, and systems related to the processing and distribution of entertainment and information to the public by radio frequency signals.

*

Circuit Theory - G-4

The field of interest of the Group shall be circuit theory, which includes the fields of active circuits and system theory and the techniques of analysis, synthesis, and design.

*

Communication Technology - G-19

The scope of activities of the Group is the organization of members' meetings, papers, publications (including abstracts, translations, bibliographies and reports), and in cooperation with Region and Section activities on the technology of all telecommunications including telephone, telegraphy, facsimile, and point-to-point television, by electromagnetic propagation including radio; wire; aerial, underground coaxial, and submarine cables; waveguides, communication satellites, and lasers; in marine, aeronautical, space and fixed station services; repeaters, radio relaying, signal storage and regeneration; telecommunication error detection and correction; multiplexing, carrier techniques; communications switching systems; data communications, and communication theory.

*

Computer - G-16

The scope of the Group and its publications shall encompass the following:

All aspects of design, theory, and practice relating to systems for digital and analog computation and information processing;

Components and circuits for digital and analog systems, including techniques for accomplishing the functions of logic, arithmetic, storage, control, input, output, and external communication in such systems;

Relevant portions of supporting disciplines, including switching theory, symbolic logic, numerical analysis, codes and number representation systems, abstract machines or automata theory, life-sciences, machine learning, pattern recognition, and other extensions of logical machine capabilities;

Production, testing, operation, and reliability of digital and analog systems;

Applications, use, and programming of digital and analog computing devices and information processing systems and the use of computers in electrical and electronic engineering.

*

Education - G-25

The field of interest of the Group shall be confined to fostering improved relations between the electrical and electronic industries and the schools, colleges, and universities, to serve as a liaison between electrical engineering education and the Institute of Radio Engineers, and to provide a means of communication to and within the electrical and electronic teaching profession, thus to further their combined efforts in improvement of education in the electrical and electronic engineering profession.

*

Electrical Insulation - G-32

The Electrical Insulation Group shall be concerned with the application of electrical insulation common to the design and construction of components and equipment for use in electrical and electronic systems.

*

Electromagnetic Compatibility - G-27

The field of interest of the Group shall be the enhancement of Electromagnetic Compatibility (Electromagnetic Compatibility is defined as the capability of electronic systems or equipments to be operated in the intended operational environment at designed levels of efficiency without degradation due to unintentional electromagnetic interference), including:

1. The generation of Engineering Standards
2. Measurement Techniques and Test Procedures
3. Measuring Instruments and
4. Equipment and Systems Characteristics, such as:
 - a) susceptibility b) vulnerability c) related propagation effects d) subjective effects, frequency allocation and assignment
5. Improved (interference reduction or control) techniques and components
6. Education in Electromagnetic Compatibility
7. Studies of the origins of interference, both man-made and natural, and their classification.
8. Spectrum Conservation
9. Spectrum Utilization
10. Shielding Techniques
11. Harmful side effects of electromagnetic energy in other disciplines.
12. Scientific, technical, industrial or other activities that contribute to this field, etc.

*

Electron Devices - G-15

The field of interest of the Group shall be electron and ion devices including electron tubes, solid state and quantum devices, energy sources and converters and other devices which are related in technology and applications of such devices and the scientific, technical, and other activities which contribute to the advancement of this field.

*

Engineering in Medicine and Biology - G-18

The field of interest shall include all matters pertaining to the interaction between life sciences and engineering. Principal areas of interest shall include basic sciences, applied sciences and education in this field.

The efforts of the Group will be directed toward the broad objectives of IEEE as a whole and toward the needs of the individual member and his local section activities. The Group will strive to develop standards and to study and encourage emerging areas in the stated fields of interest.

*

Engineering Management - G-14

The field of interest of the Group shall be confined to management of organizations with a high engineering content and associated areas of interest.

The above statement appears in a proposed revision of G-EM's Constitution that has not yet been officially approved.

*

Engineering Writing and Speech - G-26

The field of interest of the Group shall be confined to the study, development, improvement, and promotion of the techniques for preparing, organizing for use, processing, editing, collecting, conserving, and disseminating any form of information in the electronics and related fields by and to individuals and groups by any method of communication.

*

Geoscience Electronics - G-29

The field of interest of the Group shall be in the Geosciences, and shall include scientific, technical, industrial or other activities that contribute to the Geoscience field.

*

Industrial Electronics and Control Instrumentation - G-13

The field of interest of the Group shall be confined to the application of Electronics and Electrical Sciences to Industrial Processes.

*

Industry and General Applications - G-34

The scope of the IGA Group is the application of electricity to the services of agriculture, commerce, the home, industry, and transportation by the selection, design, installation, operation and maintenance of electric systems, equipment, and devices for safe, reliable, and economical performance; and by the development of engineering standards and recommended practices in this field.

*

Information Theory - G-12

The field of interest of the Group shall be confined to information theory and its application in radio circuitry and systems.

*

Instrumentation and Measurement - G-9

The field of interest of the Group shall be measurements and instrumentation utilizing electrical and electronic techniques in combination with physical phenomena.

*

Magnetics - G-33

The field of interest of the Group shall be treatment of all matters in which the dominant factors are the fundamental developments, design, and certain applications of magnetic devices. This includes consideration of materials and components as used therein, standardization of definitions, nomenclature, symbols, and operating characteristics; and exchange of information as by technical papers, conference sessions, and demonstrations.

*

Man-Machine Systems - G-28

The field of interest of the Group shall include development and application of knowledge germane to the integration of the human element into man-machine systems, including: (1) man-machine system performance in normal and unusual environments, (2) models, theories, techniques and equipment for investigating man-machine systems, (3) interface problems where man serves a principal system function, a system support function, or as a user of the system, and (4) human performance, training and basic skills which pertain to the function of the human operator as a system element. The activities related to these areas shall include mathematical analysis, computer simulation, laboratory and full-scale experimentation, design, and field evaluation.

The above statement is a proposed revision of G-MMS' Field of Interest and has not yet been officially approved.

*

Microwave Theory and Techniques - G-17

The field of interest of the Group shall be Microwave Theory, Techniques and Applications; Microwave Components, Devices and Circuits; the Generation, Amplification, Transmission and Detection of Microwaves.

*

Nuclear Science - G-5

The field of interest of the Group shall be that of nuclear science, including but not limited to instrumentation for research in nuclear science and engineering, detection and measurement of radiation monitoring and safety equipment, particle accelerators, nuclear reactor controls and systems, effects of radiation on materials and systems, and applications of radiation and of nuclear power.

*

Parts, Materials and Packaging - G-21

This Group shall cover the scientific, engineering, and production aspects of Component Parts and Materials; and all of the product design and production aspects of electronic equipment and other activities that contribute to this field. This includes application of parts, and materials in equipment and the techniques of assembly generally referred to in the profession as "packaging." Emphasis shall be placed on new advances in all these areas.

*

Power - G-31

The scope of the Power Group embraces planning, research, development, design, application, construction, installation, and operation of apparatus, equipment, structures, materials, and systems for the safe reliable, and economic generation, transmission, distribution, conversion, and control of electric energy.

*

TAB COMMITTEES

Reliability-G-7

The field of interest of the Group shall be that of Reliability of electrical and electronic equipment.

*

Sonics and Ultrasonics-G-20

The field of interest of the Group shall be confined to Sonics, including ultrasonics and phonon technology.

*

Systems Science and Cybernetics-G-35

The scope of the G-SSC shall encompass the following: Treatment of the science that is common to all large collections of interacting functional units that together achieve a defined purpose. This includes analysis, simulation, synthesis, implementation, evaluation, and the consideration of the uncertainties of system parameters. Also included are matters pertaining to the theory and design of communication and control in natural and synthetic systems, including biological and behavioral systems. Areas of interest include: such interdisciplinary subjects as bionics, artificial intelligence, and self-organizing systems; and such aspects as modeling, optimization, reliability and general theory.

*

Vehicular Technology-G-6

The field of interest of the Group shall concern itself with vehicular communications and electrical and electronic engineering, defined as follows:

(a) Vehicular communications shall include all land, airborne, and maritime mobile services as well as personal paging and citizen's communication services when used as an adjunct to a vehicular system;

(b) Vehicular electrical and electronic engineering shall include equipment and systems ordinarily identified with the automotive industry, excluding systems associated with public transit.

Standards Committee

The Standards Committee is responsible on an Institute-wide basis for encouraging and coordinating the work of formulating and revising IEEE Standards. The Committee gives final approval to IEEE Standards prior to submission to the Executive Committee for publication. It considers and investigates all matters relating to units and standards in the fields of electrical engineering, electronics, radio, allied branches of engineering or the related arts and sciences. It represents the IEEE in cooperation with other standardizing bodies in matters relating to units and standards.

*

New Technical and Scientific Activities Committee

The New Technical and Scientific Activities Committee shall be particularly concerned with the seeking out at an early stage and the promotion of IEEE interests in new developments in the broad field of electrical engineering and those areas of other branches of the sciences and engineering in which applications of interest or importance to the electrical field are developing. It shall perform a staff function for TAB OpCom, investigate and promote through its own members activities in these fields until the areas of technical interest crystallize into recognizable scopes, then recommend to TAB OpCom an appropriate permanent technical organization for the new activity in existing, modified, or new Groups. The Committee by itself or in cooperation with existing Groups or other societies shall, keeping TAB OpCom informed, encourage and promote reports, publications, sessions, conferences and meetings as may seem most appropriate for developing the position of IEEE in the new fields.

*

Computer Aided Design, Analysis, and Realizability

The Computer Aided Design, Analysis, and Realizability Committee (CADAR) shall consist of not more than 20 Institute members including a Chairman, Vice Chairman-Administration and Local Committees, Vice Chairman-Publications and Programs, and a Secretary-Treasurer. The members shall be appointed by the TAB Chairman and in doing so he shall give due consideration to the interests of the various Groups and Committees of the Technical Activities Board.

The function of the CADAR Committee is to promote the effective utilization of computers in the design, analysis, and realization of electrical and electronic systems, devices, and circuits. It shall identify, collect, and disseminate periodically to the members of the Institute through a newsletter, information concerning computer programs, meetings, seminars, and training courses, book reviews, abstracts and similar material. The CADAR Committee shall not only aid in coordinating and promoting close cooperation and exchange of technical information in this technical area among members of the Institute, but shall also assist in establishing and maintaining communication channels for exchanging and sharing such information with other engineering and scientific societies.

*

E. E. No. 16
April 1968

THE IEEE ORGANIZATION

Descriptions of slides presented by Donald G. Fink, General Manager, to the Student Convocation, IEEE International Convention, New York Hilton Hotel, March 18, 1968.

Members of the Student Convocation: My task is to describe the IEEE organization. IEEE, with its many Sections, Subsections, Group Chapters, Student Branches, Groups, Boards and Committees, and its publications and conferences, is, of course, actually many organizations in one. To operate effectively it must be organized in several dimensions. Among these are the geographical organization, the technical (Group) organization, the organization of the Institute's government (Boards and Committees), its publications, awards and, last but not by any means least, the dimension of recognition accorded by the several grades of membership. The dimension of particular concern to Chapter officers is that based on geography, as evidenced by the fact that IEEE now possesses no fewer than 300 Student Branches.

In the next half hour I will show you 16 slides that I hope will illuminate this many-faceted Institute of ours. At the end of the meeting, copies of the slides and these remarks will be available for you to take with you. So, as I rush along, please take notes of questions you have and bring them up during the discussion period later in this meeting.

SLIDE #1 - This slide shows the Regions of the IEEE throughout the world and the membership in each. The overall membership of the Institute as of December 31, 1967 was 158,217. We are the largest engineering society in the world by a factor better than two-to-one.

SLIDE #2 - This slide shows the boundaries of the Regions in the United States and Canada with the individual member totals. The membership changes in 1967 were:

Region 1 - 1 percent loss	Region 6 - 2 percent loss
Region 2 - 2 percent loss	Region 7 - 5 percent gain
Region 3 - 3.5 percent loss	Region 8 - 1 percent gain
Region 4 - 1 percent gain	Region 9 - 23 percent gain
Region 5 - 1 percent loss	Region 10 - 3 percent loss

The total number of memberships lost in 1967, net, was 1,853, or 1.5 percent. The loss (which has since been made up) was due to the increase in dues which became effective in 1967.

SLIDE #3 - This slide illustrates the dimension of membership according to grade. The backbone of IEEE membership is the Member grade, constituting 60 percent of the total. Next comes Senior Member - 16 percent, followed by Students - 14 percent, Associates - 8 percent, and Fellows - 2 percent. We also have five Honorary members.

The election of Officers and Directors is in the hands of the voting members, that is those who occupy the Honorary, Fellow, Senior Member and Member grades. These constitute 78 percent as indicated at the bottom of the slide.

It is of interest to note that the Associate grade, admission to which does not require an engineering degree or its equivalent, is less than 10 percent of the total membership.

SLIDE #4 - This slide combines the dimension of geography, the Regions, with the dimension of Membership grade. Each bar represents one hundred percent of the membership in each Region. The colors in each bar indicate the respective grades of membership from Student to Fellow, in ascending order. Notable is the rather wide variation in the percentage of Student members in the various Regions. To a considerable extent that is explained by the concentrations of Universities and Technical Institutes within the boundaries of the respective Regions, but it is also explained to a lesser extent by the degree of development of Student activity within each Region.

SLIDE #5 - We now come to the dimension of the IEEE organization by Membership Units. These comprise not only units organized by geography, but also those organized by technical specialty.

Reading from left to right, the basic geographical organization rests with the Sections, of which we have 197 at present from Cairo to Tokyo and from Oslo to Buenos Aires. Many of these Sections have Subsections, totalling 51, and many more Sections have Group Chapters, now totalling 483. We have one Council of Sections, in the Los Angeles area, and one Affiliation of Sections in North Carolina.

Supporting these units are the Sections Committee chaired by the Vice President elected by the voting members and the Regional Committees chaired by the respective Regional Directors.

The basic underpinning of the Institute's future, also organized on a geographical basis, are the Student Branches and the Student Associate Branches, of which we had, at the end of 1967, 299 (plus one in Tokyo just formed). These are supported by the Student Counselors in the individual institutions, by the Educational Activities Board and by the Educational Activities Coordinator of the Executive Committee, as well as by the Student Activities Committees of the Regions.

The Technical Activities dimension is represented by the Groups, of which we have 31. These in turn have Subgroups, Divisions, Technical Committees which take up specific technical and administrative tasks within each Group. We also have Councils of Groups in the field of Solid State Circuits, Systems, and Communications Technology.

The members of the Groups, as you know, pay fees which are set by each Group individually. The majority of the Groups elect their governing bodies, the Group Administrative Committee, by ballots cast by the respective members. Each Group has its own Treasury and its Administrative Committee is responsible for Group operations. Each publishes its own Transactions on a frequency of from once a year to 12 times a year. The Group system is supported by the Technical Activities Board and the Operating Committee of that Board under the Chairmanship of the Vice President - Technical Activities.

SLIDE #6 - This shows the number of Student Branches in the various Regions. When compared with Slide #3 (the Member-Grade distribution in the Regions), this tends to explain the rather wide variations among the Regions concerning the number of Student members.

SLIDE #7 - The IEEE is governed by the organization shown in this slide. At the top is the source of all authority in IEEE, its Constitution. This was adopted by the voting members of IRE and AIEE in 1962. Approximately two-thirds of the eligible voting members in the two Societies voted on this issue (this was almost double the number of voters in a typical annual election for officers and directors). Among those voting 87 percent were in favor of the merger, and of the Constitution which implemented it. The votes in IRE and AIEE differed by less than two-tenths of one percent.

The Constitution provides annual elections by the voting members. These elect, as indicated by the arrows shown immediately below the annual elections box, the Annual Assembly which is enclosed in the dashed line. This consists of the President and the Vice President elected in the current year plus two Past Presidents who have been elected in the two previous years. It also includes the Regional Directors who are elected for two-year terms on alternate years, except the Director of Region 10 who is appointed because the Region is so large that an election apparatus has not proved feasible. In addition, Directors-at-Large are elected by the voters producing an Annual Assembly of 19 delegates.

The Annual Assembly in turn elects the remaining officers, the Vice President - Technical Activities, the Vice President-Publication Activities, the Treasurer, the Secretary, the Chairman of the Educational Activities Board, the Director of Region 10 and additional Directors-at-Large. The Board of Directors consists of the members of the Annual Assembly, and these additional men, totalling 27 Directors.

The Board of Directors as a whole then appoints an Executive Committee, consisting of 9 Directors. The Executive Committee in turn hires the General Manager who in turn hires the Headquarters Staff.

As we shall see in a later slide, the Board of Directors and the Executive Committee appoint the Standing Committees and Boards of the Institute through which most of the Institute's business is conducted.

SLIDE #8 - This is a rather simplified version of the IEEE organization chart relating the Board of Directors and Executive Committee to the other units.

SLIDE #9 - Slide #9 illustrates the functions of the Board of Directors, which meets four times per year. Its basic function is shown in the center, that is, policy making. Policies are implemented primarily in the Bylaws, which are adopted and revised only by the Board of Directors. Ancillary directives are sometimes issued, especially if insufficient experience has been accumulated to justify a Bylaw change. These directives go to the Executive Committee or to the other Standing Committees and Boards.

The Board of Directors also takes administrative actions, primarily by the approval of actions of the Committees subordinate to it. It also appoints the auditor, legal counsel, and financial counsel and supervises elections.

The final function is Institute government. The geographic dimension of government is represented by the Regional Directors who report for their respective constituents at each meeting and make recommendations on which the Board acts. The Standing Committees and Boards, which we will examine in the later slide, carry out their respective duties, send reports and recommendations to the Board, on which it acts. The Board also approves Awards and Fellowships and approves the nominations for each annual election.

SLIDE # 10 - The operating arm of the Institute, which carries out the policies of the Board of Directors and the provisions of the Bylaws on a month-by-month basis, is the Executive Committee. This Committee not only acts as the immediate boss of the General Manager and through him of the Headquarters Staff, but must take action on an enormous variety of detailed matters. Its meetings usually last eight to ten hours each month (sometimes as much as 16 hours on two separate days).

Some indication of the variety of its duties is indicated in this Slide which lists the Coordinators. The Coordinator functions are based primarily on the Standing Committees and Boards of the Institute which are listed on the left. The incumbent Coordinator on this year's Executive Committee is listed at the right. You will note that several members of the Executive Committee have two assignments, and one of them (your hard working Vice President in charge of Section affairs, Mr. Holmes) has three assignments.

It should be pointed out that the Executive Committee Coordinators are not necessarily "advocates" of the recommendations of the Committees for which they function. They are responsible for maintaining open and transparent lines of communication, and for thorough understanding of the activities, recommendations, problems and roadblocks experienced by the Committees. However, on rare occasions, a Coordinator may advise the Executive Committee not to take an action recommended by the Standing Committee or Board he "coordinates." At all times he wears his "overall Institute hat," and makes his recommendations and casts his vote in accordance with his idea of the best interests of the Institute at large. The Coordinator system, which was instituted some years ago, has worked extraordinarily well.

SLIDE # 11 - Slide #11 lists the Standing Boards and Committees previously mentioned in connection with the Executive Committee Coordinators. This Slide shows the Staff Secretary of each Committee under the dashed line in

each box. Adjacent to each box is a short description of the major activities. If you will look over the short titles of these jobs, for the 17 Boards and Committees, I think you will recognize the totality of a professional society's involvement with its members, with the profession and with the public.

Incidentally, business of interest to any of the Standing Committees and Boards may always be addressed to it through the respective Staff Secretary at Headquarters. These names are listed every month in the organization page of IEEE SPECTRUM.

SLIDE #12 - The Institute has four Standing Boards: for Technical Activities, Publications, Educational Activities, and Awards. The organization of the first two of these is shown on this Slide. Although there is only one dashed line between boxes on this Slide, at least a dozen of them could be drawn in if the actual coordination between Technical Activities and Publications were to be illustrated.

The Technical Activities Board, chaired by the Vice President-Technical Activities, operates through the TAB Operating Committee. The IEEE Groups are very largely self-operating and autonomous but they do receive guidance both from TAB itself and from its Operating Committee. The TAB General Committees, on Safety, Standards, and new Technical and Scientific Activities also receive guidance from the TAB and the Operating Committee.

The Groups produce the Transactions and Journals, "Journals" being the title used for a Group publication which is produced jointly by more than one Group. The General Committees also produce publications, of which the Standards are the principal ones.

The Groups and the General Committees are active in participation, sponsorship, and administration of major IEEE Conferences and the Conference Record publications which preserve the presentations at these Conferences.

On the publication side, the Publications Board, operating under the Chairmanship of the Vice President-Publication Activities, in turn has three Editorial Boards for SPECTRUM, PROCEEDINGS and STUDENT JOURNAL each presided over by the respective Editor. In addition, there are three subcommittees on Information Services, Translated Journals, and a panel of Technical Publication Editors. This Panel is composed

primarily of the editors of the Group Transactions and the Group Journals and for this reason the dashed line is drawn between Transactions and Journals and this Panel.

The small boxes labeled TAB Headquarters Staff and Publication Headquarters Staff should be outlined in gold. In my opinion, these operations rank among the very best of their kind among all professional societies. In a later slide we will show some of the details they attend to, in perspective against the other Headquarters functions.

SLIDE #13 - The Awards Board requires a separate slide because of the large number of major awards conferred by the IEEE. The Awards Board, reporting to the Board of Directors, is supported by the Executive Committee Awards Coordinator who this year happens to be also the Chairman of the Awards Board, Dr. Edwin L. Harder. The Staff Secretary of the Awards Board is Una B. Lennon. The Awards Board itself decides the nominee for the Medal of Honor, which is the highest award of the Institute, (ordinarily not conferred every year) for exceptional contributions of a technical or scientific nature. The other awards are handled by Committees of the Awards Board, eight in number, listed across the center of the slide. The Edison Medal, the principal annual award, is awarded for a career of meritorious achievement. The Education Medal, also annual, is for an outstanding contribution to Education. The Lamme Medal, annual, is for meritorious achievement in apparatus or systems. The Founders Award, annual, is for contributions to leadership, planning and administration in the profession.

The Field Awards Committee has a particularly big job. The word "field" represents different fields of activities and background of the recipients. The Harry Diamond Award is for contributions by engineers and scientists in government service; the Habirshaw Award for contributions in the field of power; the International Communications Award in that field; the Kelly Award in telecommunications; the Leeds Award for measurement; the Liebmann Award for radio; the Sarnoff Award for electronics; and the Zworykin Award for television. All of these are, of course, extraordinarily short titles. Anyone interested in greater detail can get it from a copy of the Awards Manual of the Institute.

There are three prize paper awards: the W. R. G. Baker Award for the best paper in the IEEE Transactions and Journals; the Browder J. Thompson Award for young authors, and the Student Prize Paper Award which is the best of the Regional contest winners. Scholarships are given to meritorious candidates under the Fortescue and Volta Deeds of Gift.

The External Awards Committee operates among the many awards in engineering to which IEEE is a joint sponsor. Also, there are awards, not made by IEEE, but for which nominations are asked by others. Among these are the National Medal of Science, presented by the President of the United States each year. You will be interested to know that of 11 Medals of Science presented by the President in 1967, two of them were to engineers, the rest to scientists, and the engineers were both electrical!

SLIDE #14 - I now want to turn to the principal ways in which individual IEEE members can become involved in Institute activities, aside from Section meetings. The first is by contributing to and reading IEEE publications. This Slide shows the total editorial output of AIEE and IRE combined in 1946. This consisted of one bound volume of the IRE Proceedings, two bound volumes of AIEE's Electrical Engineering, and one bound volume of the AIEE Transactions. The total content was 3,000 editorial pages. For comparison, on the right, there were in 1967, 42 separate and distinct technical publications published by the IEEE, including 31 Group Transactions, 2 Joint Group Journals, SPECTRUM, PROCEEDINGS, STUDENT JOURNAL, the International Convention Digest and five Translated Journals from Russian and Japanese sources. The Editorial content for this year alone was 30,000 pages, an increase of 10 times in 22 years.

SLIDE #15 - This Slide contains so much information that I doubt if it can be read from the projected image. Nevertheless, Vice President Holmes suggested that I include all this information, because he felt it would be particularly helpful to you. Later you can read from the printed copy of this slide which will be distributed to you.

This slide illustrates the inner mystery of Headquarters Staff functions. The Executive Committee bosses the General Manager; the President is his chief boss and the Executive Committee Coordinators take turns according to their special responsibilities. The General Manager has two Staff Consultants which are on roving assignments, and an Administrative Assistant.

The General Manager's job, so far as responsibilities upward is concerned, is to support the Board and the Executive Committee in all their doings. His job in the downward direction is to manage the six Staff Directors whose names are listed in the six boxes. The jobs have titles which are reasonably self-explanatory: Administrative Services, Editorial Services, Educational

Services, Information Services, Publication Services and Technical Services. Under each is a listing of the principal activities of each Staff Director. I will not attempt to go into these at this point, but I do ask that you study this chart on your way back from the Convention. It may help you to get to the right party at Headquarters to deal with a particular problem. It may also help to explain how complex the Staff operation has to be for a complex Institute like ours.

SLIDE #16 - I have put this slide at the end because it illustrates what has happened to IEEE and its predecessors over the past 22 years. Our membership has increased four-fold in that period, from 40,000 in 1946 (counting as one each those who belonged both to IRE and AIEE). As of December 31, 1967, the figure was 158,217.

As an earlier slide has illustrated, the publications of the Institute, through which it exercises its greatest function for the advancement of the profession both to its membership and through libraries and offices to the world at large, has increased ten times, in the number of editorial pages published. Of equal significance is the fact that the detail into which the publication is broken down has been increasing by leaps and bounds. In 1946 three publications sufficed. In 1967 it took 42, an increase of 14 times.

The progress over the past 22 years has, of course, not been so smooth as these curves suggest. If anything, the rate has increased in the later years of this 22-year period.

I am sure there are many questions on these slides. If you will let me know what slide you have in mind, we will have it thrown back on the screen during the discussion period later in this meeting.

Thank you very much.

The IEEE Organization - Presentation by D. G. Fink, General Manager

Slide List

1. World map showing Regions and membership total in each
2. Map showing Regions 1 through 7, with membership total of each
3. IEEE membership by grade, December 31, 1967
4. Membership grades by Regions, in percent
5. IEEE membership units
6. Map showing numbers of Student Branches in various Regions
7. IEEE representative government
8. General organization chart - IEEE
9. Functions of the Boards of Directors
10. IEEE Executive Committee Coordinators
11. Standing Committees and Boards
12. Technical Activities and Publications
13. IEEE Awards Board's Functions
14. Photograph comparing editorial output, 1946 vs. 1967
15. Headquarters staff functions
16. IEEE growth curves - membership and publications

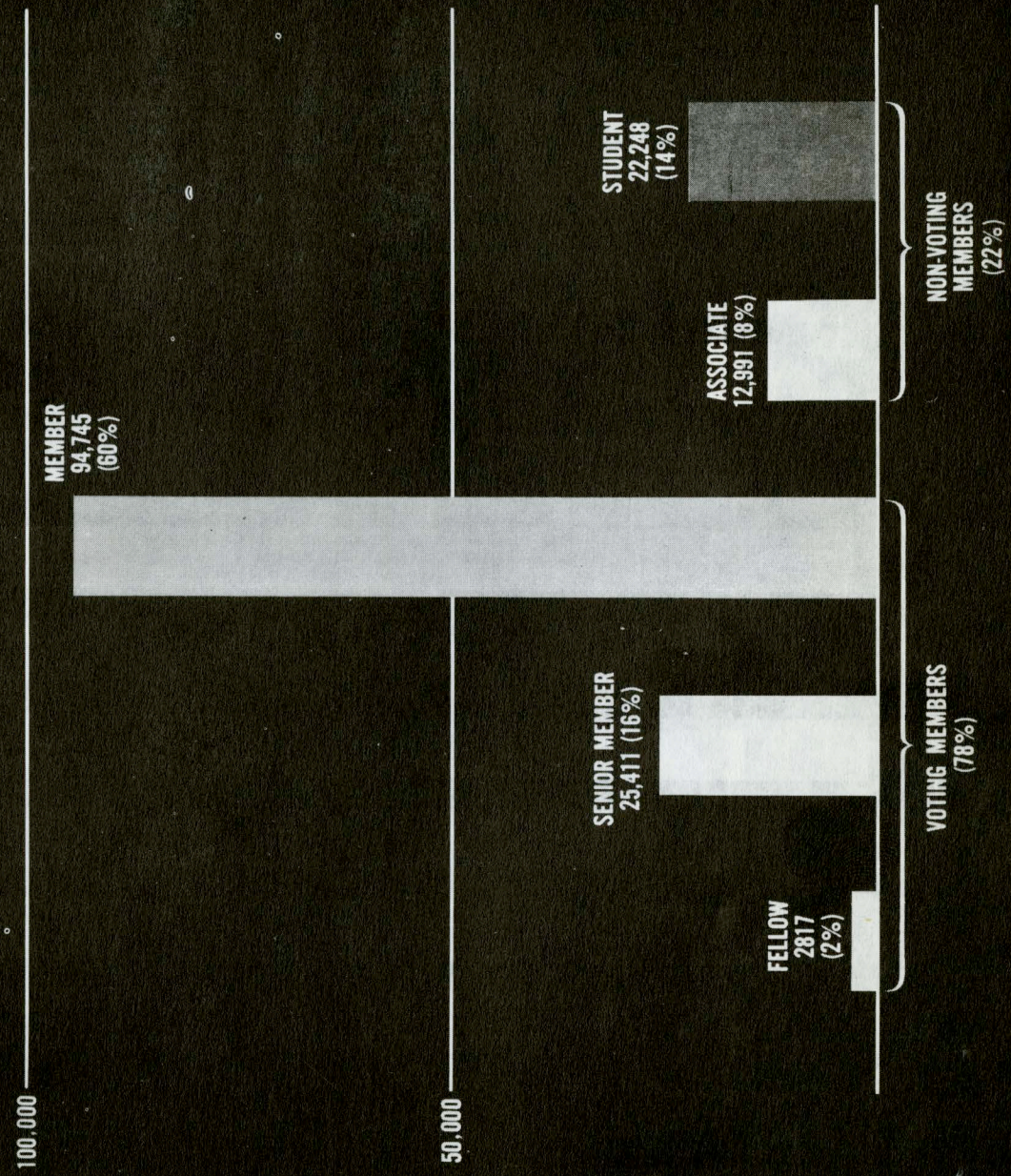




IEEE Membership By Region

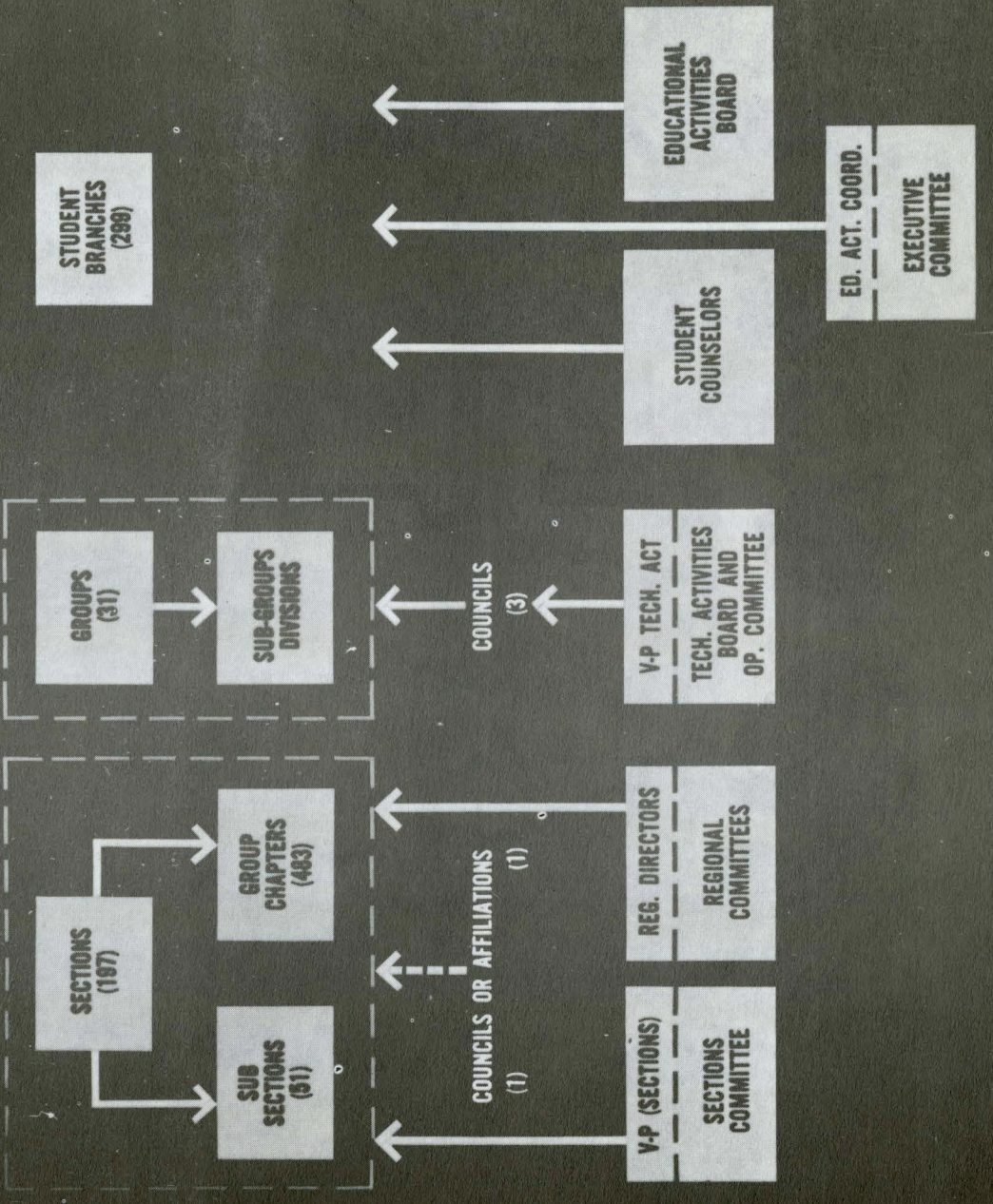
IEEE Membership By Grade

DECEMBER 31, 1967
TOTAL — 158,217
HONORARY — 5



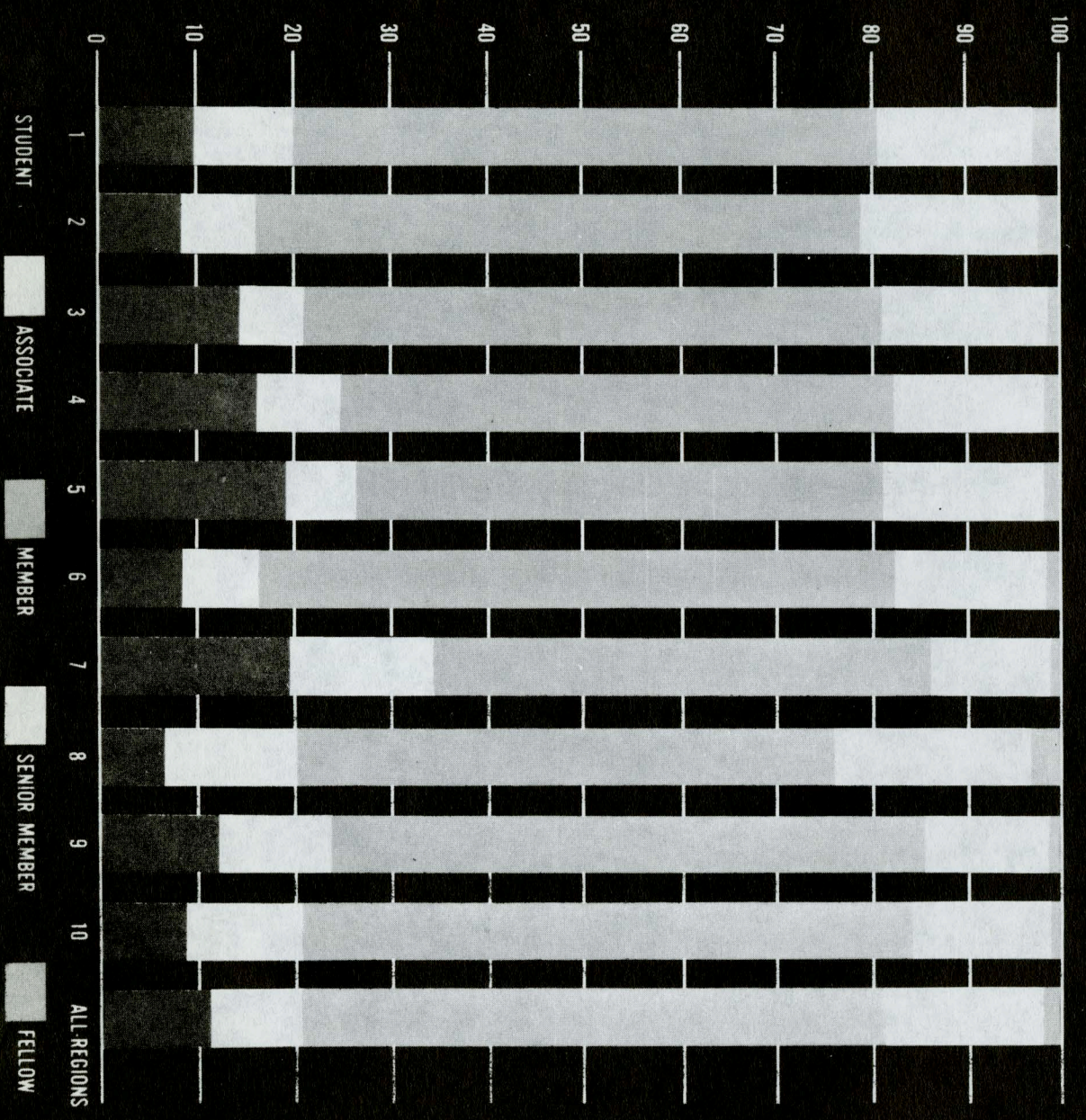
IEEE Membership Units

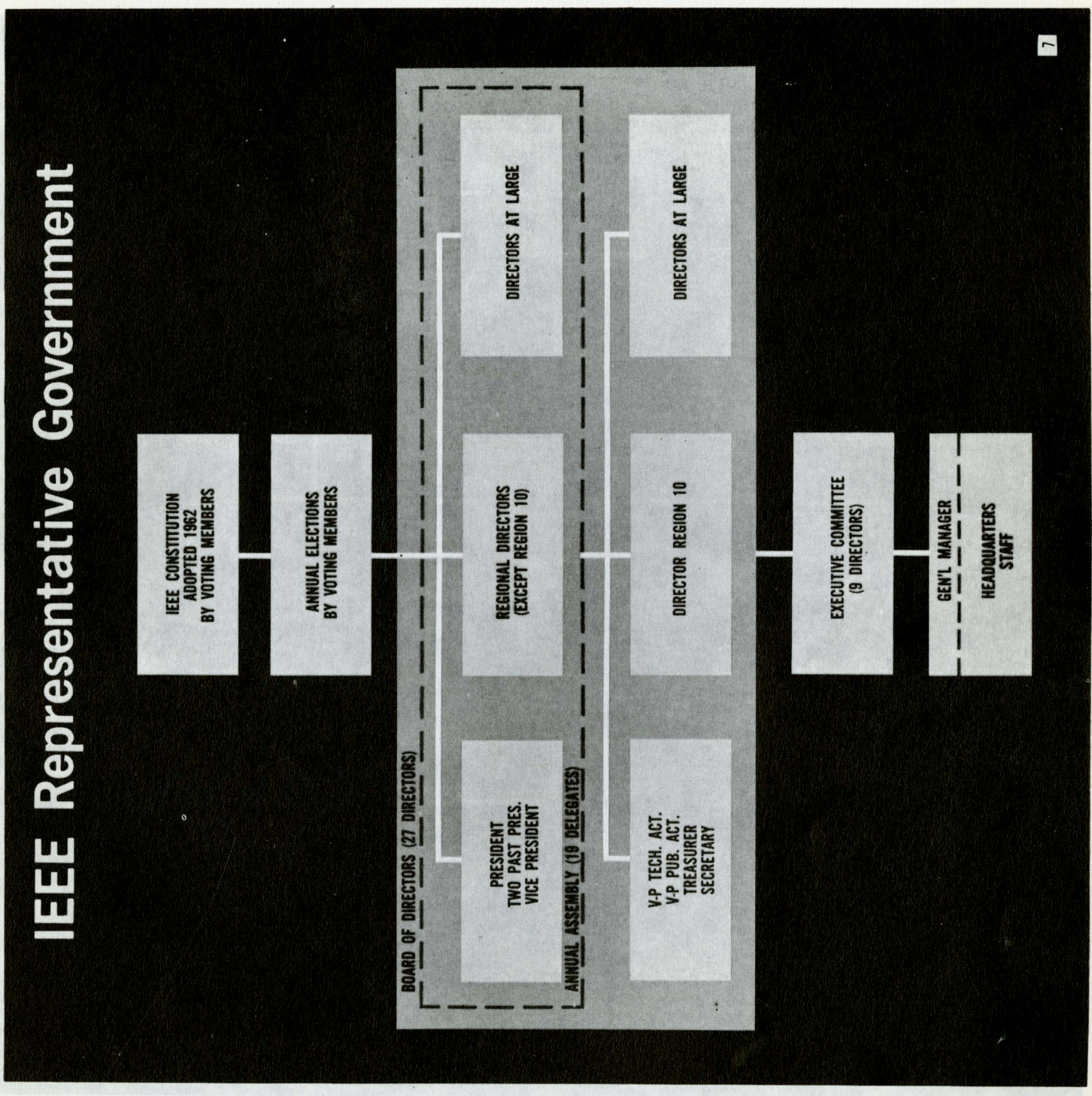
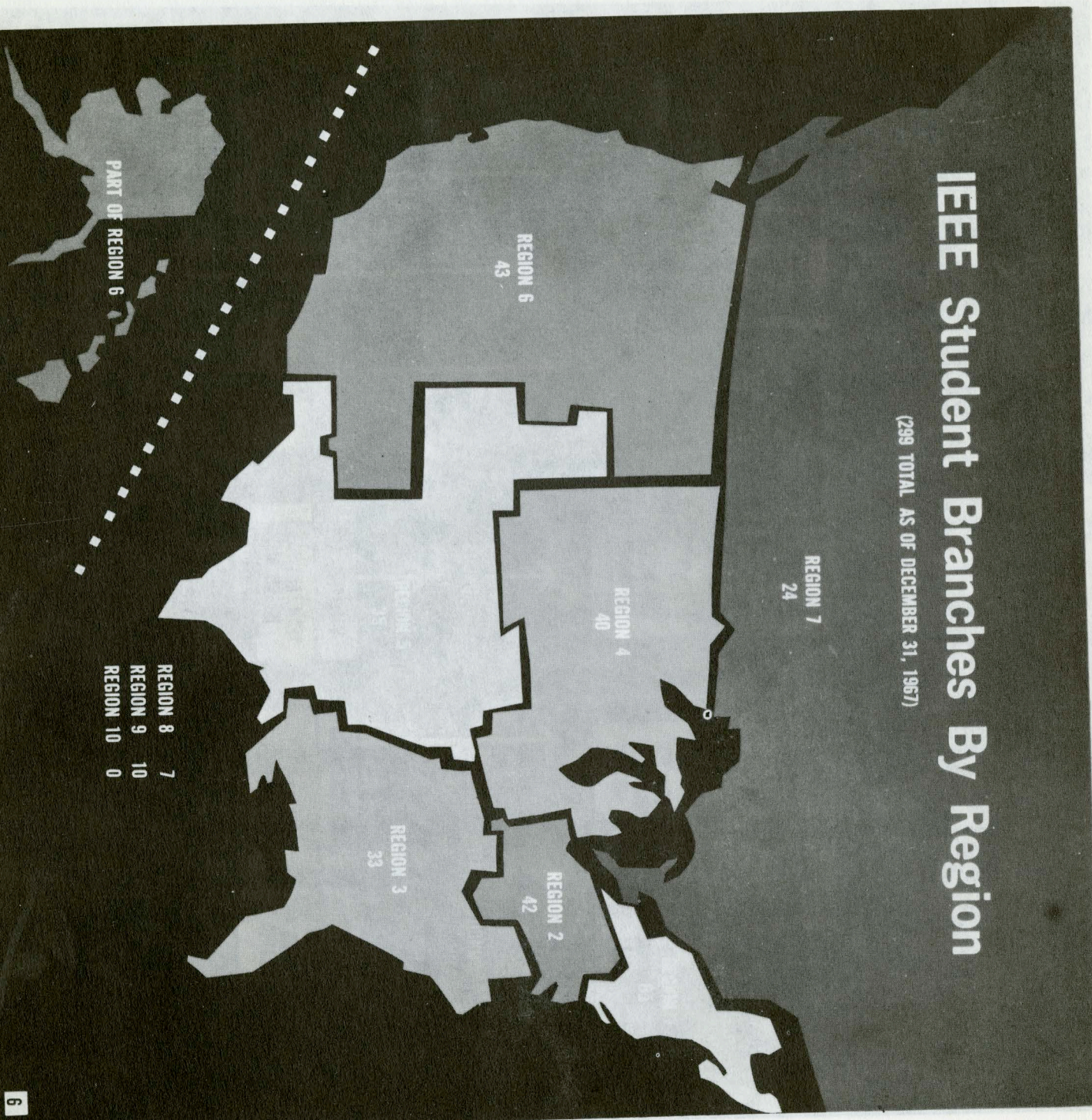
(AS OF DECEMBER 31, 1967)



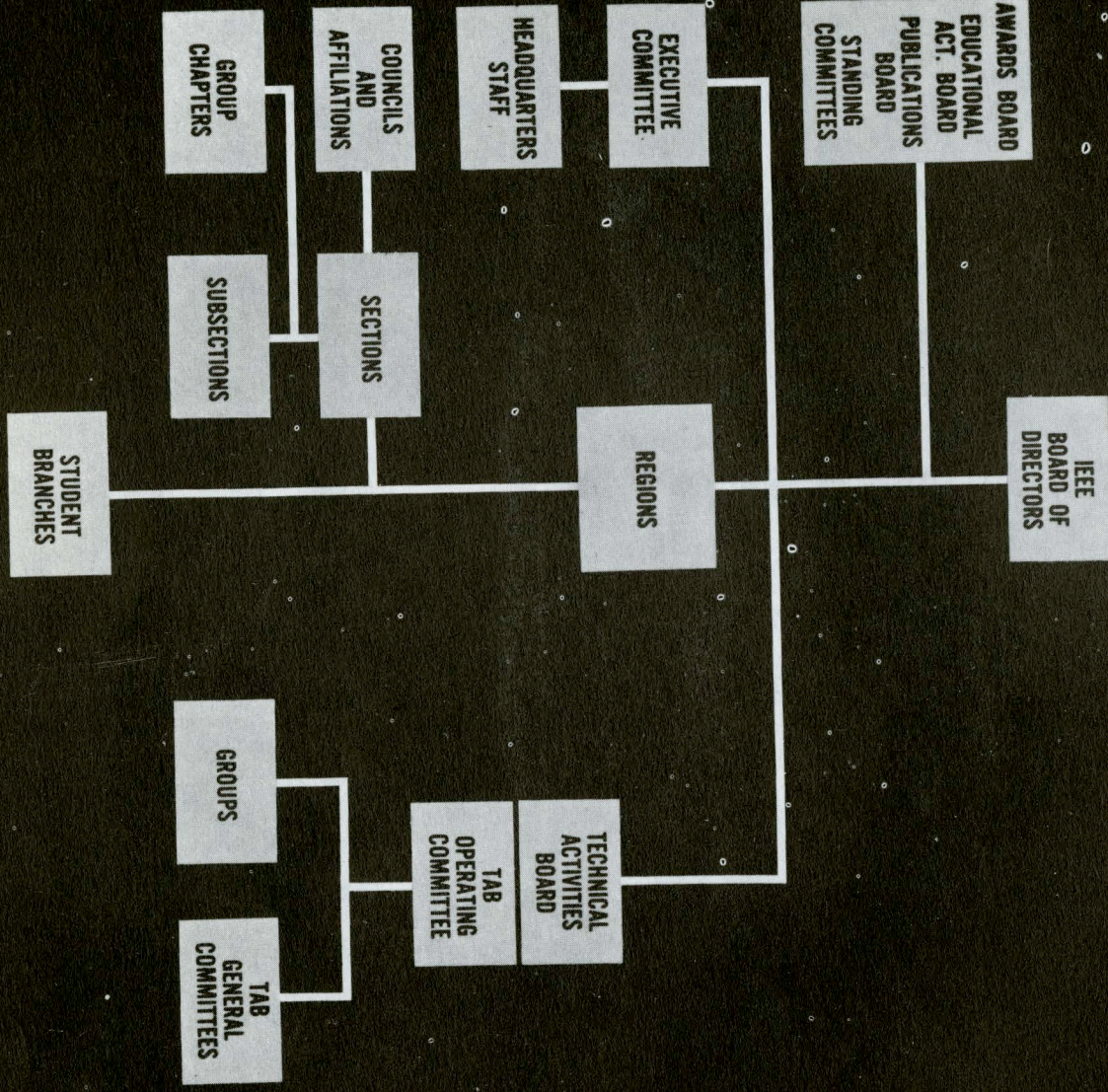
IEEE Membership Grades By Regions

(In Percent)

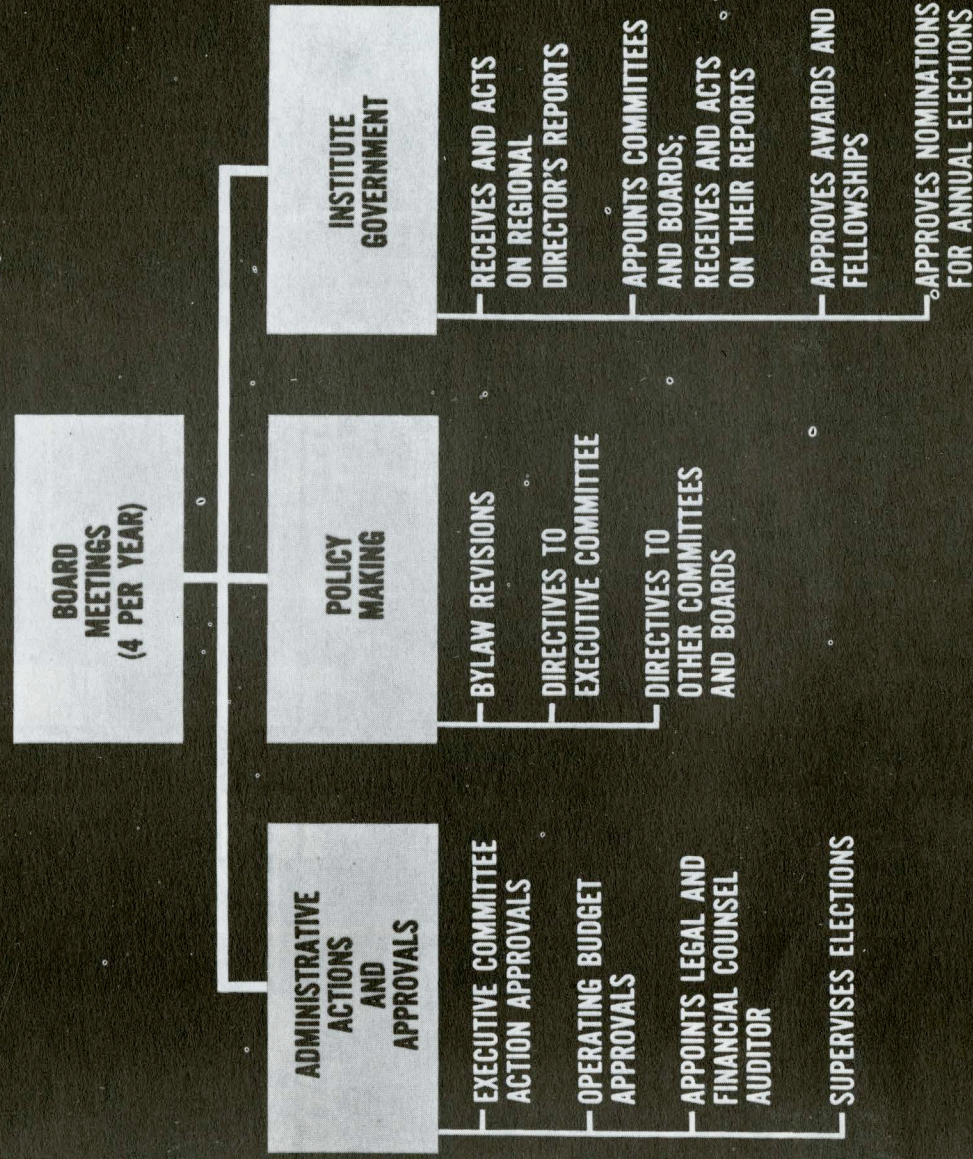




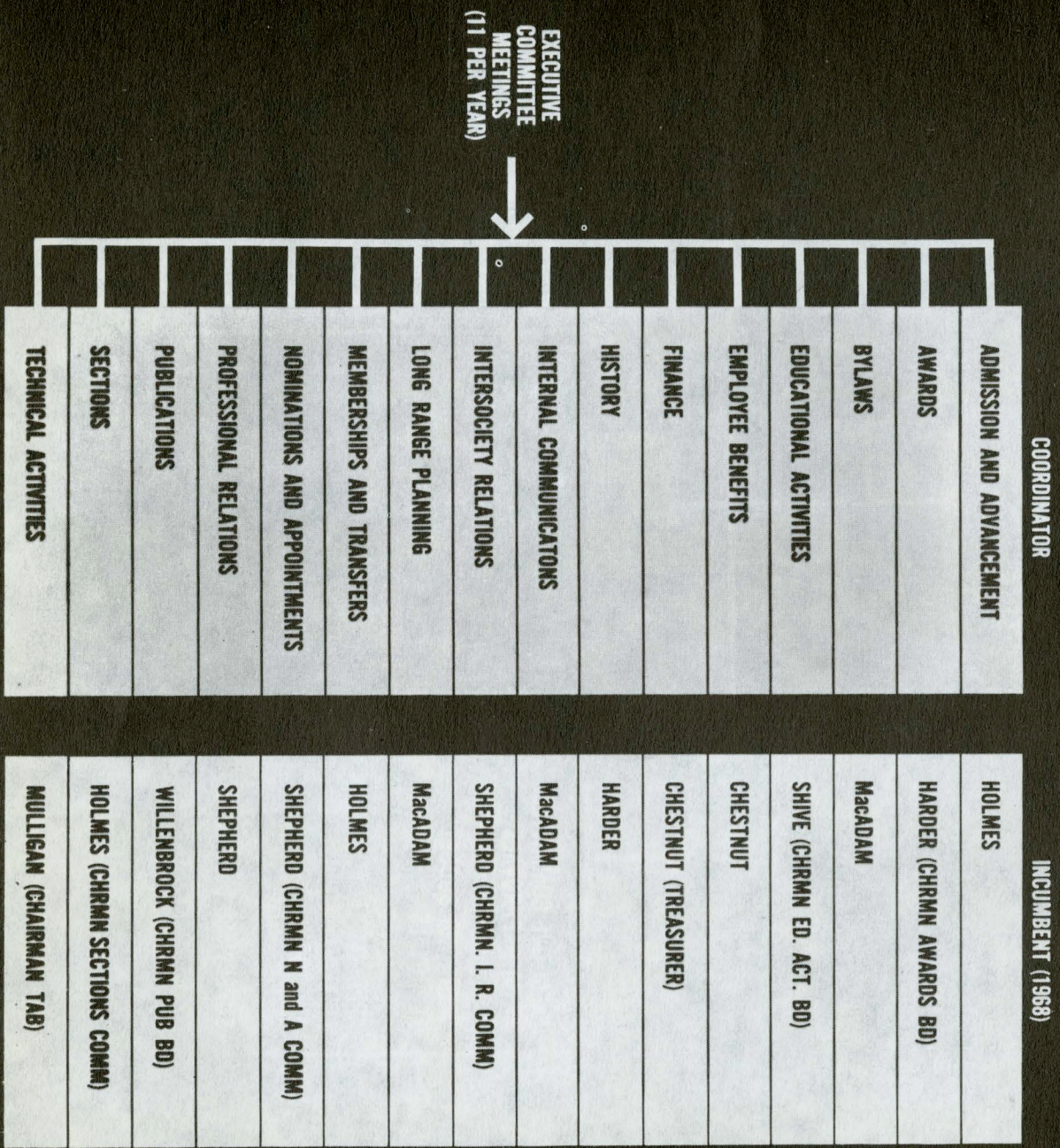
IEEE Organization



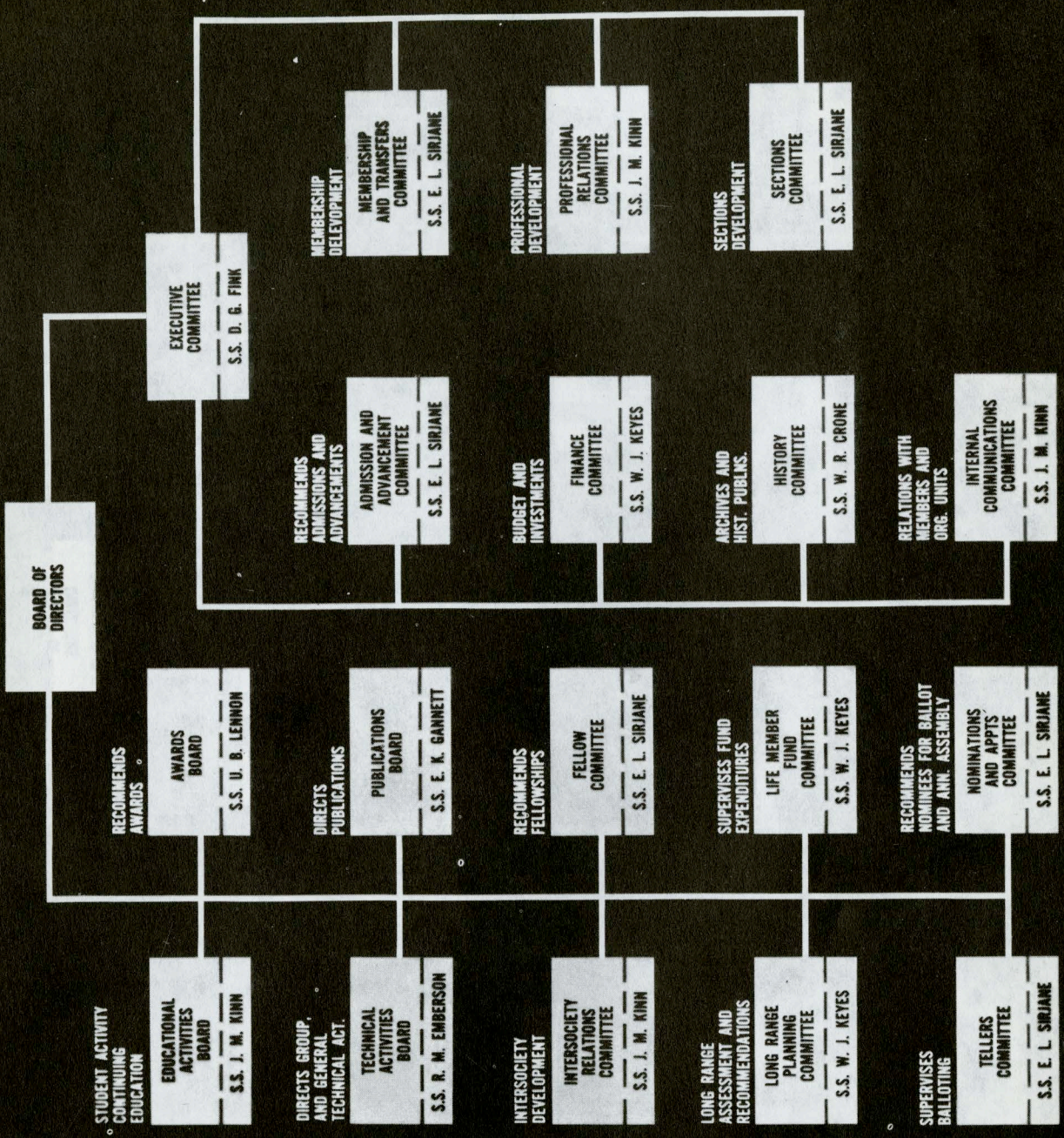
Functions of the Board of Directors

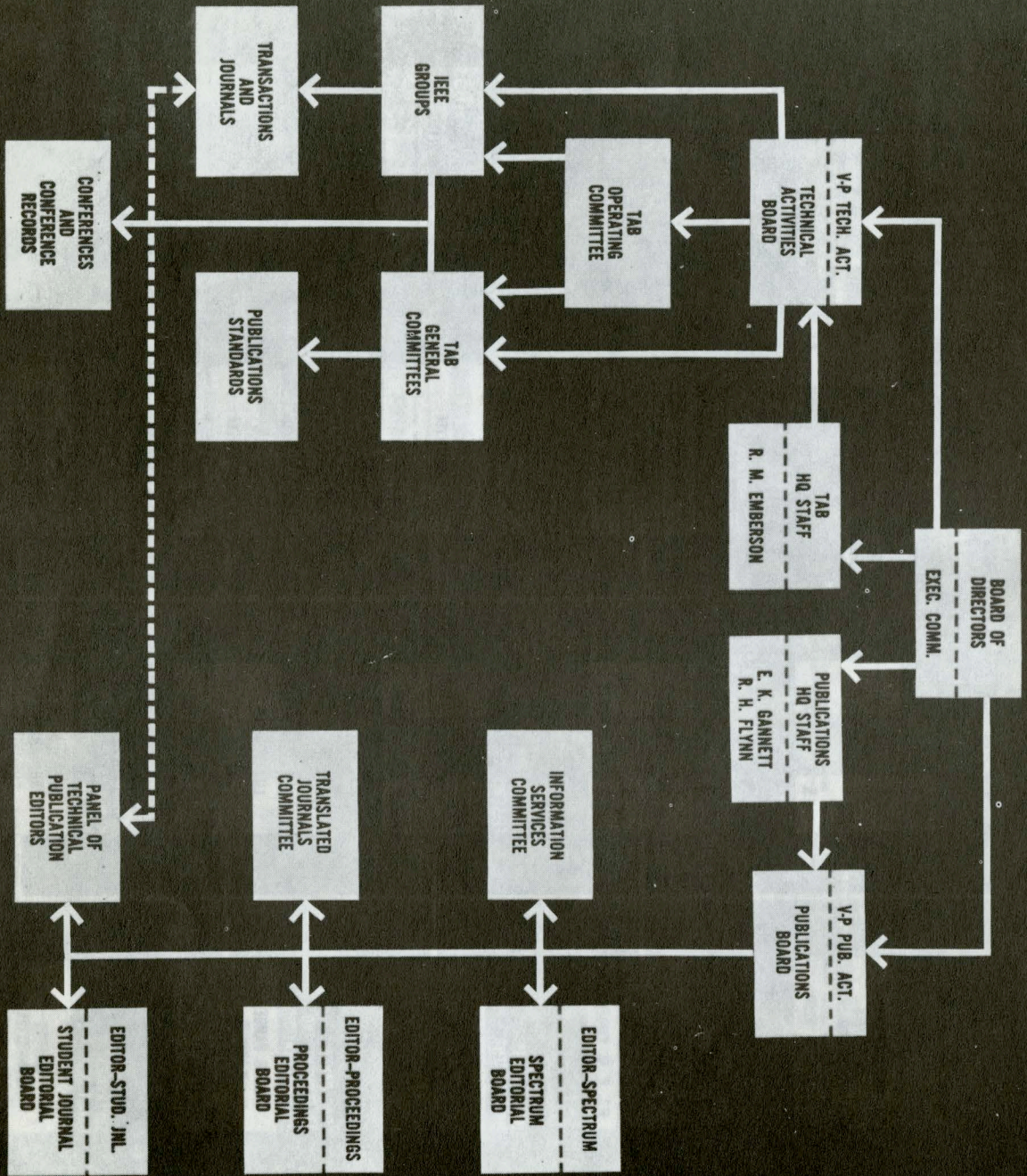


Executive Committee Coordinators



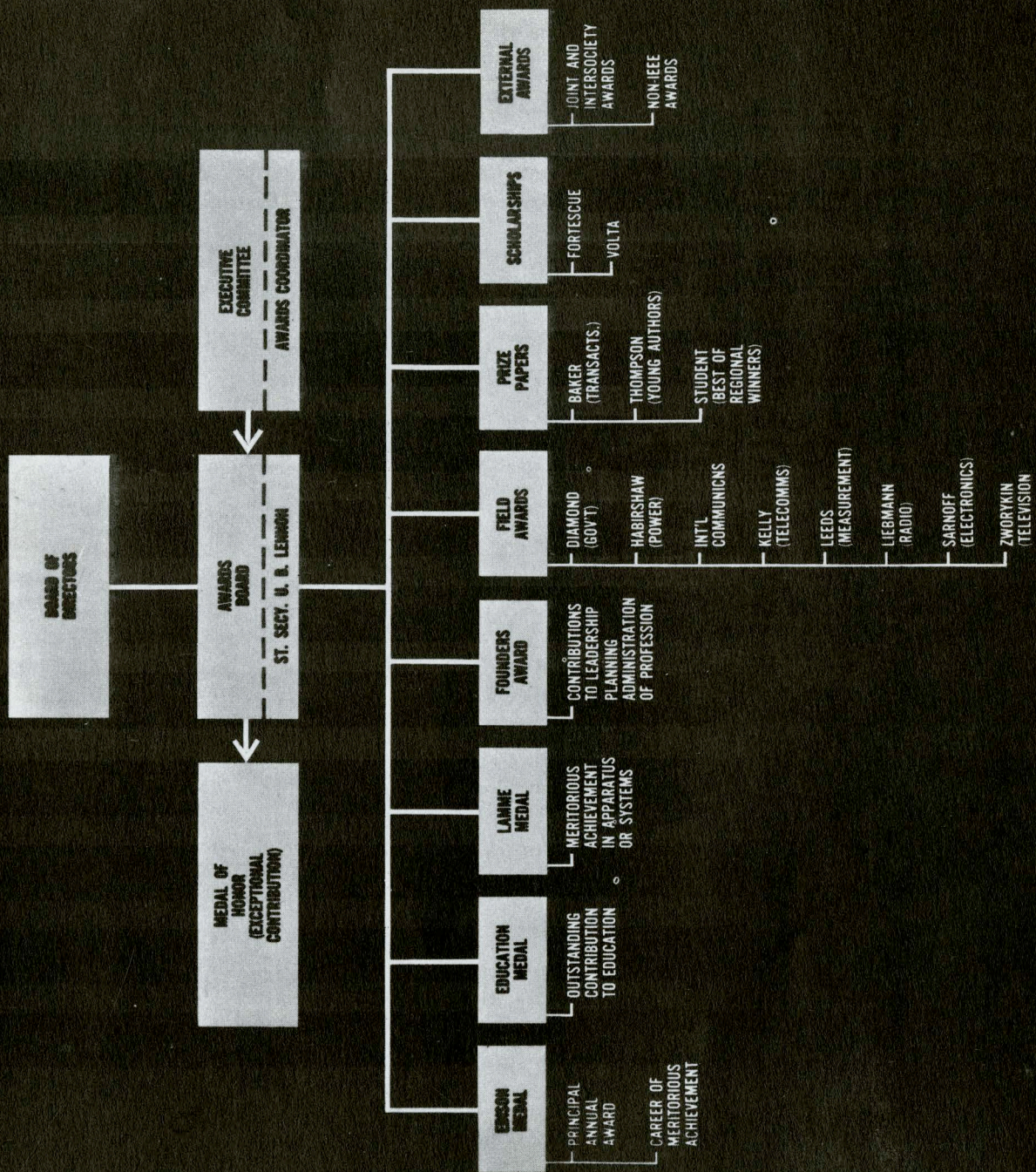
Standing Boards and Committee

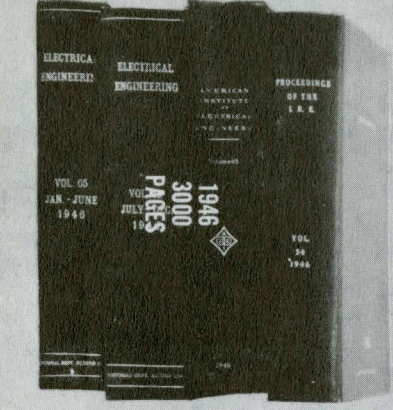




Technical and Publication Activities

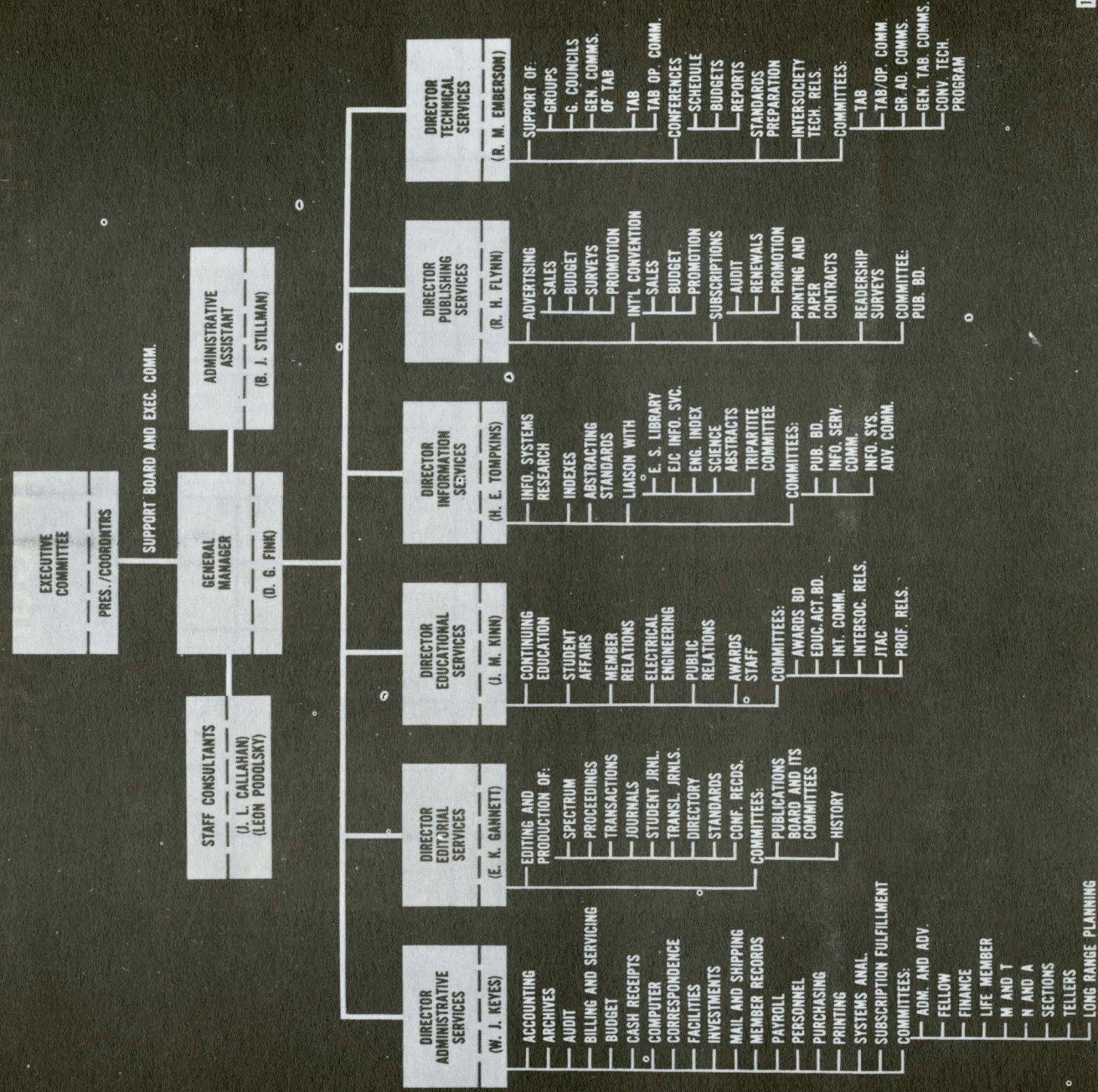
IEEE Awards Board Functions





Editorial Output

Headquarters Staff Functions



especially in the interdisciplinary areas. Write instead from outside (IF500) for Emily Striano or Howard Schumacher help you. IF500 page to Area 214 - 734-5400; address, 345 East 47 Street, New York, N. Y. 10017.

Good going!

Back Run

A SPEAKER FOR YOUR SECTION OR CHAPTER

?

This is a gamble, but it's worth a try.

You are looking, not for one who is well-intended, but for a Mainliner - a man who has been chosen to talk in fast company.

One who has demonstrated capability of treating a broad subject in survey fashion, so as to be of value to listeners who may not be specialists in his subject.

Or one whose subject, while specialized, perhaps, spans the territory of two or more Groups.

Or, one who can handle a topic relatively new to IEEE - that is, a stimulating "Horizons" paper.

Down Your Alley?

Would a speaker like one of those appeal to your Section or Chapter? If so, you may be able to "nail" one - for your June meeting or September or October.

The IEEE Convention in New York this March pioneered sessions made memorable by speakers like that, chosen by experts. Each speaker went out of his way, in preparing his talk, to meet the exacting criteria described.

Yet, his paper may never appear in print, as he knew, when he prepared it to meet the challenge of oral delivery. It does appear - briefed - in the Convention Digest. Wouldn't he be pleased to be asked to "do it again," perhaps nearer home? In your Section? In your Chapter? With his visual aids?

Here's How

In IEEE Spectrum, March '68, pp. 62-69, read the preview article on the Convention by Herold and Eleccion. Then have your Meetings Committee go into bull session with the Convention Program, pp. 16-36, same issue. Tick off all speakers having addresses within "reasonable striking distance" of your Section. Then correlate them with the subject matter which would appeal most to your listeners. Narrow the list down to two, three. Pick your date and go after them by direct means.

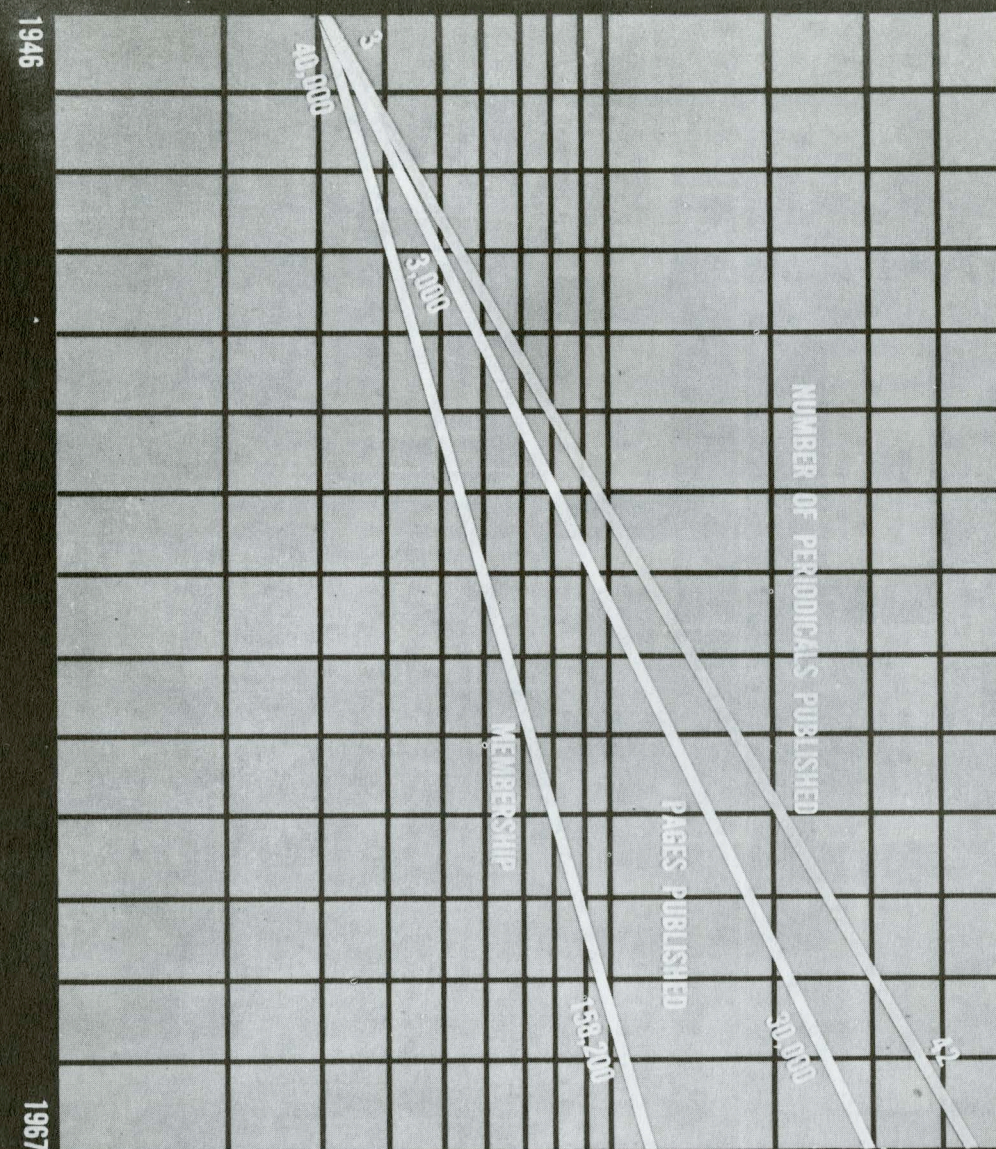
Further Help. The Convention Advance Program, which everyone got by mail, contains a resume of each session, as a whole; and in one of them your prospect played a part. In negotiating with him, ask if he'd be willing to give you a report of the whole session as well as repeating his part in it. If he's willing to, he might even borrow some of his associates' slides. That would be up to him.

To "talk his language," in the process of inducing him to accept your invitation (and to clinch your judgment in asking him), get hold of a copy of Convention Digest and read his stuff. Page 3 of the Advance Program shows how to spend to advantage the Section's or Chapter's funds to get one.

If you can't find out how to make contact with your "target" speaker (some, especially in the interdisciplinary areas, were invited from outside IEEE), let Emily Sirjane or Howard Schumacher help you. IEEE phone is Area 212 - 752-6800; address, IEEE, 345 East 47 Street, New York, N. Y. 10017.

Good going!

Jack Kinn



IEEE Growth Curves

WHERE TO FIND IT

WHERE DID I SEE IT?

HOW CAN I GET IT?

See Key and Notes at end of Part 3

* * * * *

PART 1 - CATALOG OF MATERIAL CURRENTLY AVAILABLE

- A -

1. Accredited curricula, ECPD. Lists 4-year, degree-granting schools in U. S. Included in Section Membership and Transfers Manual (67). An ECPD publication; Oct. '67, 6 pp. (Copy, Emma White)
- *Administrative IEEE advertisements. Notices in form of Spectrum ads. Get page numbers under "IEEE" in last 3 pages each issue and look up. Sometimes only place material appears.
- *"Advance Abstracts." Monthly in Spectrum; see Contents. Abstracts of articles and letters in Proceedings, various Group Transactions and IEEE Journals. . . Comment, Spectrum's "Forum," Mar. 67, p. 13.
2. Annual Index, Proceedings of the IEEE. Entries by authors, co-authors, correspondents; titles of papers; subject index by multi-entry keywords, with first-named author. Last pages December Proceedings annually; 1967, 53 pp; available as reprint; Subscribers Service Dep't. Also in magnetic tape, beginning 1967 (Inquiries, Howard Tompkins)
- *Annual Index, IEEE Spectrum. Multi-entries by titles and subject of papers; by authors; news index; IEEE people; necrology. About 22 pp. December Spectrum, at end.
3. IEEE Annual Publications Bulletin. Price list and ordering directions, covering most IEEE publications, current or in stock; instructions how to obtain others. All periodicals; conference, Student, special publications. Standards. Binders. Order blank. New, 1968. Booklet, 18 pp., page size 20 x 23 cm, folded once, vertically. Orders from Bulletin, IEEE Subscriber Relations. (Inquiries, Woody Gannett). . . Cf. 62, 63.
- *Appointments of officers, chairmen, etc. Calendar. . 19
- *Authors (contributors) of articles. Biographies, photos. In Spectrum, see Contents: "Authors." In Proceedings, see Contents: "Contributors."
- *An Authors' Guide to IEEE Publications. General information on submission of manuscripts. For each publication (except Translated Journals): name and frequency of publication, sponsorship, purpose, contents; name of editor, his affiliation, address. 2pp., annually, in January issue of Spectrum. See under "News of the IEEE." Not otherwise available. . . Notice: E.E. 15, Feb., p. 7 In Spectrum, January '68, p. 29.
5. Awards Board brochure: "An Invitation to Nominate." Procedure required to nominate an individual for an award. Purpose of awards, description, categories, features; eligibility to nominate and be nominated; presentation. Includes Medal of Honor; Major and Field awards; Prize Paper and Scholarship awards. Lists of recipients, past years. Brochure, 12 pp., Nov. '67. Epitomized annually in November Spectrum (Nov. '67, p. 17). . . E.E. Dec. '67, p. 3; E.E. Feb. '68, p. 2.

- B -

6. Biographies of nominees, mailed with ballots to voting members annually. 2-page leaflet. Save. Copies not available. Inquiries, Betty Stillman.
- *IEEE Board of Directors, current. Names in Spectrum, monthly, 2nd page following Content. . . Names, terms of office, how elected; assignments as officers, corporate

- officers, to Executive Committee, as function-coordinators: in E.E. annually, February and December issues, box, p. 2; information on elections, E.E. each February. . . Story in Spectrum, March (Mar. '68, p. 38). . . In E.E.9, Feb. '67, p. 3; E.E.15, Feb. '68, p. 4.
- *Book Reviews. In Spectrum's table of contents, monthly, see "Book Reviews;" "New Library Books" (Engineering Societies Library acquisitions, described); "Recent Books" (name, author, publisher, price).
- *Boundaries of Regions, Sections, Subsections. In Section Manual, Jan. '68 (66): two maps showing Regions; county boundaries (etc) of Sections; 33 pp. For maps only, see "The IEEE Organization" (58); E.E. Apr. '68 Supplement; copy, Don Fink.
- *Brochures: On Membership - "Your Future and IEEE" (98); on Awards - "An Invitation to Nominate" (5); on Student Membership - "Your Challenge in Electrical Engineering" (97)
- *Bulletins: Annual Publications Bulletin (3)
- *Bylaws: IEEE (7); Section (66); Group Chapter (66). Group Bylaws (combined with Constitution) (86). Student Branch and Student Associate Branch Bylaws - see Constitution; IEEE Bylaws govern (81) (7).
7. IEEE Bylaws. Should be consulted on nearly every administrative topic. Frequently revised; latest, to Jan. 4, '68; watch E.E. for notices of proposed and voted revisions. 23 pp., 3-p. index. Ex-officio distribution. (Copy, Betty Stillman)

- C -

- *Calendars. Master IEEE Meetings Schedule (54). Conferences, Conventions (q.v.) Calendar of IEEE Joint Meetings, etc. (next entry, q.v.) Calendar, Elections and Appointments (19).
- *Calendar of IEEE and Joint Meetings and Conferences; Meetings of Other Societies. In Spectrum, monthly, under "News of the IEEE" and "Focal Points" (see Contents). . . Name, sponsors, date, place, hotel; deadlines for abstracts, papers; name, address, to obtain program information.
- *Calls for papers; papers wanted. For topics, see "News of the IEEE" in Spectrum. For deadlines, closing dates, see Calendar of IEEE and Joint Meetings, above.
- *Career Guidance (High Schools). Brochure: "Your Challenge in Electrical Engineering" (97).; see E.E., Oct. '66, p. 4; E.E., Aug. '67, p. 2. Four IEEE Sections have other material available; see E.E., Aug. '67, p. 2.
9. "Committee Common Lore." Issued by editor as 5 green Supplements to E.E., June '67 to Feb. '68, inc. June - Purposes of committees; fields of interest; Check-Chart for Committee Chairmen (introspective items - Blackmon), 5 pp. August - Choice of people for committeemen and chairmen, 6 pp. October - Committee meetings, 11 pp. Dec. '67 and Feb. '68 - Rules of Order, 31 pp. Total, 53 pp.; individual Supplements available (copy, Audrey van Dort). References in E.E.: June '67, p. 4; Aug., p. 5; Oct., pp 6, 7; Dec. p. 5; Feb. '68, p. 7.
- *"Committee Manual" - Bylaw 304.8 - E. E. June '67, p. 4.
- *Committee-member qualifications questionnaires: Guidelines for Selection of Nominees to Standing Committees and Boards (37). Committee Common Lore - II, E.E. Aug.

- *Conferences, Conventions, Meetings. Calendar, monthly in Spectrum; see Contents, under "News of the IEEE." Organizing conferences: Steps to Be Taken in Organizing a Conference (79); Organizing a Conference (61); Group Guide-Sheets on Conferences (27). For local Meetings, see Meetings, below.
- *Conferences, scheduled and held. Scheduled: Master IEEE Meetings Schedule (54); Calendar of IEEE and Joint Meetings (q.v.); Calls for papers (q.v.). Conferences held: In Spectrum: "News of the IEEE" and "Focal Points." Conferences with exhibits; see Exhibits, Meetings with. For Group-sponsored conferences, see Group Transactions. For post-conference sale of papers, see Annual Publications Bulletin, above.
- *Constitutions: IEEE (10); Sections, in Section Manual (66); Student Branch and Student Associate Branches, in Student Branch Manual (81). (Chapters are governed by IEEE Bylaws and Section Manual.) Groups: Constitution and Bylaws, combined; see Technical Activities ("TAB") Manual (86). Model Charter for Intersociety Conferences - (q.v.) Constitution of USA Standards Institute (95).
- 10. IEEE Constitution. Name, purpose, territory; membership, dues, fees; groups of members; annual Assembly; Board of Directors; President; Delegates-Directors; Corporate officers; vacancies, nominations, elections; management. Amendment. Bylaws. Revised to Nov. 4, '65. 3 pp. (Copy, Betty Stillman)
- 11. IEEE Convention - Advance program. Information; "what where, when"; registration; exhibition; technical program; social events; ladies' program. Scope and philosophy. By sessions: name of organizer and presiding officer; titles of papers; names of authors or panelists, their organization and city; session chart. Ticket order blanks; hotel reservations, names street addresses, phone numbers, rates. Convention committeemen. 46 pp. pocket sized booklet. Mailed all members annually, late January. (Copy, Emily Sirjane)
- *Convention news. 1967 Convention, Wrap-Up. E.E. June '67, p. 4 and white Supplement. 1968 Convention: ads slanted to registrants and exhibitors, Spectrum, Dec. '67, p. 12; Feb. '68, p. 36; philosophy of technical program, Spectrum: Dec. '67, p. 18; Mar. '68, p. 62; E.E.: see Part 3. Complete technical and social program in Spectrum, Mar. '67, pp. 33-98; Mar. '68, pp. 13-36.
- 13. Counselors, Manual for IEEE. Objectives, duties; liaison with headquarters, Region, Section, Branch officers; calendar; Branch finances; Student publications; awards; papers contests; Regional student activities; membership, promotion, endorsements; speakers; transfers upon graduation; IEEE publications for Students; Constitution for Branches; IEEE Constitution and Bylaws; 40 pp., indexed, July '64. Limited supply. (Copy, Emily Sirjane)

- D - E -

- 14. Definition of Roles of (IEEE) Publications. 1p. Sent as Supplement to E.E., Aug. '67, p. 4 (buff). (Copy, Woody Gannett)
- *Delegates. See Board of Directors.
- 15. Dictionary of Electrical and Electronic Terms. In course of preparation. See E.E. Aug. '67, p. 1; E.E. Oct. '67, p. 6.
- *Directories: Engineering Societies, etc. (17); Headquarters staff (18); Membership (55); Telephone, Headquarters IEEE (89); Telephone, United Engineering Center (90)
- 17. Directory of Engineering Societies and Related Organizations. U.S. and Canadian engineering societies; joint bodies and federations; regional bodies; international organizations; Registration Boards; State societies of professional engineers. Gives name, abbreviation used, date of founding, mail address, annual budget, size of staff, annual dues, Secretary's name, number of members, publication, and objective. 88pp. paper cover booklet 14 x 22 cm, September '65. On sale, Engineers Joint Council.
- 18. Directory of Headquarters Staff, IEEE. Personnel, by Departments and Services; photos; functions, responsibilities; staff organization chart; names and phone extensions associated with specific information groupings; photo of United Engineering Center; small map of United Nations Plaza. Pocket-size booklet, 20 pp., Feb. '68. Distributed with E.E. Feb. '68 as Supplement (see p. 7 that issue). (Copy, Audrey van Dort)
- *Dues payments in local currency. Spectrum, ad., Oct. '67, p. 37. E.E. Oct. '67, p. 6. Also in Sections Manual 1968.
- *Education. Courses available: in Spectrum, monthly, un-

- 22. Engineering Societies Library (ESL). Use of library and reading room. Hours. Eligibility to use, rules for book loans. Services, prices. "Engineering Index" as an adjunct to ESL. 6 pp. pocket size ESL folder, 1967. ESL ads in Spectrum, frequently (e.g. Aug. '67, p. 19).
- 23. "The Engineering Society - A Study in Values," by IEEE President MacAdam. Special values explained for various kinds of engineer and for Industry and Institutions. Part of G-I-T membership campaign kit (57). 4-page pamphlet, Dec. '67 (copy, Emily Sirjane). Pre-printed as Message from the President, Spectrum, June '67, p. 49. See E.E.: June '67, p. 1; Oct., p. 5; Feb. '68, p. 1.
- *Engineering Technicians (sub-professional). Spectrum, Oct. '67, p. 9. E.E. Oct. '67, p. 1 and white Supplement.
- *Engineers in Uniform. How many, etc.; Engineering Manpower Report. Spectrum, Feb. '68, p. 11.
- 25. Engineers Joint Council (EJC) - Statement by W. G. Shepherd to EJC General Assembly, Mar. 30, '67, forecasting IEEE's withdrawal from EJC on Dec. 31, '67. 2 pp. (copy, Don Fink). Development: E.E. Apr. '67, pp. 5, 6; June, p. 4; Dec., pp. 6, 7; Spectrum, Nov. '67, p. 20.
- *Executive Committee of IEEE Board (ExecCom). Appointment; assignment as Coordinators of IEEE functions: annually in E.E., February, in Box, p. 2.
- *Exhibits, meetings having. Name, dates, places of conference, name and address of person handling exhibits. In Proceedings of IEEE, monthly; see Contents.
- *Expense Report: Form, directions. Used when reimbursement for travel is authorized. Rail, air, automobile travel; hotel, other, authorized expense; approvals; submittal. Includes Report Form covering one week. (Copy, Bill Keyes)
- der "Focal Points," (see Contents). Tutorial courses at 1968 Convention: Spectrum, Nov. 67, p. 22; E.E. Dec. '67, p. 4; E.E. Feb. '68, p. 3. Also see: Counselors (15); Students (81, 83).
- 19. Elections and Appointments, Calendar. By months, gives sequences of nomination, review, recommendations for and election of members of Board of Directors and Delegates to annual Assembly. Also by months, gives sequences of nomination and recommendation of chairmen and members of Standing Committees and Boards reporting to BofD and the Executive Committee. 1 p. Page Q (last page) of IEEE Statements of Policy (78). (Copy, Pat Corcoran or Emily Sirjane). In Sections Manual (66) and Technical Activities Manual (86). See E.E. Apr. '67, p. 1; Aug., p. 2; Oct., p. 6; Feb. '68, p. 3.
- *"Electrical Engineering" - newsletter. See Part 3 for index.
- *IEEE "Electrolatina." Spectrum, Apr. '67, p. 26; E.E. Apr. '67, p. 5.
- *IEEE Emblem Pins. Types, prices, how to order - see frequent IEEE ads in Spectrum (e.g. Oct. '67, p. 24). Tie Clips: see E.E. June '67, p. 5. See also Recognition Awards (being established) E.E., Dec. '67, p. 3.
- 21. IEEE Employee's Handbook. Addressed to staff employees only. Describes Department services, office procedures, working conditions, benefits, etc. 16 pp., booklet 14 x 22 cm.
- *Employment. See Positions Open, Wanted.

- F -

- *Fellow Grade Nomination Form, FC-1. Spaces for education and other particulars of candidate; chronological professional history; technical papers, patents; IEEE and other professional activities; proposed citation. Accompanied by Guide for Fellow Grade Nominations, and Fellow Grade Reference Form. 4 pp. (Copies, Emily Sirjane.)
- 26. Fellows Manual. Prepared for use of Fellow Committee as a guide in task of judging among nominees. Not for general distribution. Inquiries, General Manager.
- *Fellow elections. Names, citations, annually in Spectrum. Jan. '67, p. 20; Jan. '68, p. 16. See Awards.
- *"Focal Points." Monthly, in Spectrum; see Contents. Industrial developments; education; government; outside organization news; conferences scheduled and held.
- *Forms: Affiliate application (42). See also these unnumbered items in this list: Expense report; Fellow grade nomination; membership application; membership reinstatement; nomination forms; forms for petition; recommended candidates for IEEE service.
- *Forums (for expression of opinion): Forum of Section Chairmen - see Part 3. "Forum" of IEEE Spectrum; letters to editor of Spectrum on administrative and other matters; monthly, with exceptions; see Contents.

- *General Committees of TAB (Technical Activities Board). Listed, Organization Roster (59)
- *IEEE General Membership Brochure: "Your Future and IEEE" (98)
- *Graduates, placement of. Engineering Manpower Survey, Spectrum, January '68, p. 11.
- 27. Group Guide-Sheets on How to Organize an IEEE Conference. Contains IEEE Constitution and Bylaws. In Technical Activities Manual (86). 28 pp. (Copy, Bill Layton)
- 29. IEEE Groups: List of dates of formation; effects of IEEE merger. Research project conducted by and notes available from Pat Corcoran. 7 pp.
- 30. IEEE Groups and Publications. List of Groups; Group numbers, names, abbreviations; condensed version of purpose, field of interest or scope (cf. pink Supplement, E.E. Apr. '68); name(s) of publication, Transactions, Journal, frequency; annual Group fee. Translated Journals; Abstracts. 10 pp. folder, pocket size. (Copy, Pat Corcoran. See also Part 2, this Supplement.)
- 31. Group Chapters Manual (Manual for Chapters). Part of Technical Activities Manual (86). 12 pp. (Copy, Dick Emberson)
- *IEEE Group Chapters - Meetings Held. Where, date, subject; speaker, affiliation; films shown; inspection tours. In Proceedings, monthly; see Contents. (Note—Speakers may have copies of talks given; correspond directly.)
- 33. Group Membership folders. 22 of the 35 Groups have individual, pocket-size folders describing their operations, publications, Chapters, meetings, conferences. Most are 4 pp. with self-mailing application forms. Available at conferences, or from Pat Corcoran (name the Group). Dated 1965-1967, mostly 1967.
- 34. Group Scopes (Areas of Interest). In full, for 35 Groups. Cf. (30). Pink Supplement to E.E., Apr. '68. (Copy, Pat Corcoran)
- *Guide, Guidelines, Guide-Sheets: Authors' Guide to Publications, q.v. Fellow Grade Nominations (35). Group Guide-Sheets on How to Organize a Conference (27). Information for Authors (43). Section Public Relations and Publicity (71). Terms for Dictionary (38). Selection of nominees for committees (37).
- 35. Guide for Fellow Grade Nominations. Accompanies Fellow Grade nomination form FC-1 and reference forms. Bylaws applicable to Fellow, including those for pre-requisite Senior Member grade. Interpretations and statement by Fellow Committee. References; deadlines; policy on making contact with nominees. 2 pp. (Copy, Emily Sirjane)
- 37. Guidelines for Selection of Nominees to Standing Committees and Boards. Sent out with IEEE Secretary's annual call for nominations. Also in Technical Activities Manual. 2 pp., April '67. (Copy, Dick Emberson)
- 38. Guidelines for submitting terms for the IEEE Dictionary of Electrical and Electronics Terms. 5 pp. Distributed as required. (Copy, John Anderson)

- H - I -

- *Handbook, IEEE Employees' (21)
- 39. "IEEE Headquarters"—People, Facilities, and Functions. Black-and-white reprinted brochure of article by the General Manager, illustrated in color, in Spectrum, Dec. '67, pp. 92-99. Noted in E.E. Feb. '68, p. 7. (Copy, Don Fink)
- 41. How to Join the IEEE Groups. Fields of interest (a-bridged), activities, Group-code, fees: for Groups and their Transactions, etc. 6 pp., pocket size, with self-mailer, Nov. 1967. (Copy, Pat Corcoran)
- *Index to Spectrum, Annual (2) Selections, Part 2.
- *Index to Electrical Engineering, Part 3.
- 42. Information and Application Form (F-14) for affiliation with IEEE Groups. Group activities; Transactions; conferences; Chapters; Group Affiliates. Advantages of affiliation; how to affiliate. Groups, by name and code, which admit Affiliates; fields of interest. Annual fee. 2 pp., Nov. '67 (copies, Pat Corcoran)
- 43. Information for IEEE Authors. Publications covered. Preparation of text, illustrations, captions. Symbols, prefixes, abbreviations, units, mathematical notation. Material included, outlines, arrangement, order, references. Title, abstract. Where, how, to submit. 12 pp. (Copy, Woody Gannett)
- *Institution of Electrical Engineers (IEE-London). Co-operation with IEEE in publishing abstracts. Spectrum: Nov. '67, p. 22; Dec. '67, p. 17; Jan. '68, p. 43.

- 45. Introducing the USA Standards Institute. Councils: Member Body, Company Member, Consumer. Function of engineering societies and others in preparation of their own standards, for submittal to USASI as USA Standards. 12 pp. pocket-size booklet, USASI (Copy, John Anderson)
- *"Invitation to Nominate"—Awards Board brochure (5)

J - K - L

- *IEEE and Joint Conferences. See: Calendar of IEEE and Joint Meetings and Conferences, above; also Master IEEE Meetings Schedule (54)
- 46. Joint Technical Activities Committee (JTAC). "JTAC Through the Years," Audrey van Dort, Secretary, July '66. History of combined forces of IRE/IEEE and Electronic Industries Association (EIA) in advisory services to Government's management of the electronic spectrum. 26 pp. (Copy, Audrey van Dort)
- *Kits. Student Membership, Mrs. Emma White. Following from Emily Sirjane: Membership Kit: Your Future and IEEE (99); Operation G-I-T (57); Membership Display Kit (purchase or loan - see Section Manual - inquire).
- *Lapel Cards. For identification of members and guests at meetings. (Inquiries, Emily Sirjane)
- *Letters to Editor of Spectrum. In Contents, each issue, see "IEEE Forum" and "Technical Correspondence."
- 47. Life Member Fund. Origin and purposes. 1 p. (Copy, Bill Keyes)
- *Life Members. Correspondence, Spectrum, Jan. '68, p. 14.
- *Lists. (Look up alphabetically here those not bearing numbers.) Accredited curricula, ECPD (1); Board of Directors; Conferences, Conventions, Meetings; Dates of Formation of Groups (29); Fellow elections; Executive Committee; Exhibits, meetings having; Groups, areas of interest (30, 34); Group publications (30, 35, 41); Group Chapter meetings held; Materials, Supplies, Available to Sections; ditto, to Student Branches; IEEE Publications (3, 62); Section Publications (69); Societies whose members may become Group Affiliates (49); Speakers at local meetings (73); Staff Directors and Secretaries; Standing Committees, IEEE; TAB Operating Committee. See also Schedules; Publication, General.
- 49. List of Societies Whose Members May Individually Affiliate with IEEE Groups. Name of society; for each one the Group code of Groups admitting Affiliates. 4 pp. Feb. '67. Available to Sections (Emily Sirjane) and to Groups (Pat Corcoran) on a need-to-know basis.
- 50. A Look to Your Future (or, IEEE Looks to Your Future). Addressed to students in colleges and technical schools; benefits of Student membership; Student Branch activities, officers, committees; Prize Paper contests; worldwide contacts; publications; Student membership in Groups at reduced fee; Groups named and briefly described; aims and strength of IEEE; how to join IEEE and Branch. 10 pp. folder, pocket-size. Aug. '67. (Copy, Mrs. Emma White)

- M -

- *Mail, Classes of. In Section Publications Manual (70)
- *Manuals. Counselors (15). Editors, Groups (prospective) (53). Fellow (26). Group Chapters (31). Section (66). Section Membership and Transfers (67). Section Publications (70). Standards (75). Student Branch (81). Technical Activities (86).
- 53. Manual for Editors of Group Newsletters (contemplated)
- *Maps, IEEE Regions. In "The IEEE Organization" (58); Section Manual (66). See also Boundaries of Regions.
- 54. Master IEEE Meeting Schedule of IEEE and Jointly Sponsored Meetings. Quarterly, date January, etc. 4-year advance schedule approved by Executive Committee. Name, date, place, sponsors of each conference. Information on exhibits, publicity, technical program, and publications; in each case with name and address of person to whom to write. In some cases gives deadline dates for program information. About 10 pp. Distributed. (Copy, Ed MacDonald.) See E.E. Feb. '68, p. 7.
- *Materials, Supplies, Available to Sections. Letterheads and envelopes, other stationery, posters, banners, etc. In Section Manual (66). 2 pp. (Inquiries, Emily Sirjane)
- *Materials Available to Student Branches. In Student Branch Manual (81). (Inquiries, Mrs. Emma White)
- Meetings, local—Section and Chapter. See Section Manual (66). Under "Chapter," see references in E.E., Part 3. Meetings held: see Group Chapters—Meetings Held; also Speakers Directory (73).
- *Meetings Schedule. Called Master IEEE Meeting Schedule (54). See also Calendar of IEEE and Joint Meetings.
- *Member's Choice of Section. See Section membership, member's option.

*Members' visits to Sections while traveling. Spectrum, Sept. '67, p. 28. E.E. Oct. '66, p. 4.

*Membership application forms. For admission as Student, copies, Mrs. Emma White. For Group memberships, Pat Corcoran. For other grades, Emily Sirjane: admission to Associate grade, admission or transfer to Member and Senior Member grades. Non-member Affiliates, Pat Corcoran.

*Membership Applications simplified—Bylaw change. Spectrum, Oct. '67, p. 27; ad., p. 37. E.E.: Proposal, June '67, p. 2; Bylaw, Oct., p. 3.

*Membership Campaigns. Operation G-I-T (57); "MASER": E.E. June '67, p. 1; Aug., p. 1.

55. Membership Directory 1966; corrected to Aug. 31, '65; Directory 1968 being prepared. Alphabetic listing of members, present grade, occupation, address for mail. Life Members identified. Additional list of Fellows and Honorary Members, alphabetically by name only. List of Major Annual and Field Awards; descriptions; lists of recipients and year of award. 828pp. On sale, Order Department. References, E.E. Apr. '67, p. 4; June '67, p. 5; Aug., p. 4; Dec., p. 4.

*Membership Fliers, Groups. See Group Membership Folders.

*Membership Reinstatement Form. E.E. June '67, p. 4 and Manila Supplement. (Copies, Emily Sirjane)

*Membership Rosters. Computer-generated 15" fanfold print-outs, on Section order. See E.E. Aug. '67, p. 4.

*IEEE membership statistics, annual. Three-year comparison by grades, by Regions. See Secretary's Report (65).

*Model Charter for Intersociety Conferences. Part of Technical Activities Manual; 4 pp.; Aug. '64; copy, Dick Emberson.

- N - O -

*"News of the IEEE." Administrative notices; monthly, in Spectrum; see Contents.

*"News" of the profession, industry, etc.; monthly, in Spectrum; in Contents, look up Transients and Trends, News of the IEEE, Calendar, People, Focal Points, Recent Books. Also, in Proceedings, monthly; in Contents look up News—New Products.

*Nominations, nominees. Elections and Appointments Calendar (19); Selection of Nominees for Committees (37); Committee Common Lore, E.E. Aug. '67, green Supplement (9); Recommended Candidates for IEEE Service; An Invitation to Nominate for Awards (5); Fellow Grade Nomination FC-1 and Guide.

*Nomination for Awards Forms. 15 different Forms, each one applicable to a specified award. Nov. '67. Write Una Lennon, naming the award-of-interest.

*IEEE Objectives, Policies. Constitution (10); Bylaws (7); Statements of Policy (78). Presidents' statements in Spectrum: W. G. Shepherd, June '66, p. 100, and Dec. '66, p. 35; W. K. MacAdam, June '67, p. 49 (23); S. W. Herwald, Jan. '68, p. 46 (E.E. Feb. '68, p. 1; Apr. '68, p. 1.)

57. Operation G-I-T. Membership drive 1968. G-I-T = Growth-Improvement-Transfers. 8-page brochure plus kit: "Your Future and IEEE" (98); "The Engineering Society—A Study in Values" (23); application forms, envelopes. Jan. '68. (Kits, or contents separately, Emily Sirjane). Mentioned in E.E. Apr. '67, p. 2; Dec., p. 1; Feb. '68, p. 1.

58. "The IEEE Organization." Black-and-white print-out of 16 slides, with explanations: a lecture by General Manager Don Fink at Student Convocation, Mar. '68. 9 functional organization charts, 4 statistical charts, 3 maps of worldwide Regions. 25 pp. Distributed as Manila Supplement, E.E. Apr. '68; announcement E.E. Dec. '67, p. 7. (Copy, Don Fink) Available with slides for Section re-use. (Note—Out-of-print predecessor, offered in E.E. Apr. '67, p. 4; given at Section Forum, Mar. '67.)

*IEEE Organization, keyed to Bylaws. In Technical Activities Manual. 1p. (Inquiries, Pat Corcoran)

59. Organization Roster, Jan. '68. Issued semiannually, Jan. and Sept. IEEE organization chart; IEEE Boards and Standing Committees; headquarters staff; TAB General Committees; Regional organization; Sections, Sub-Sections, Chapters (U.S. and other); Groups; Student and Student Associate Branches, Counselors; IEEE representatives to Outside Organizations; Standards Organization. 78 pp., indexed. Limited supply (copy Emily Sirjane)

61. Organizing a Conference. Resumé of important points. 3 pp. Part of Technical Activities Manual (86). (Copies, Bill Layton). Cf. Group Guidesheets on How to Organize, etc. (27)-(28 pp.)

*Outside Organizations. Organization Roster: IEEE Representatives (59). Directory of Engineering Societies (17)

Telephone Directory, United Engineering Center (90). Calendar of meetings, in Spectrum, monthly; in Contents look up "Calendare" and "Focal Points."

- P - Q - R -

*Paper calls; see Calls for papers.

*Payments, international, in local currency. See Dues payments in local currency.

*"People." Appointments, promotions, retirements; some with biographies, photos. In Spectrum, monthly; in Contents look up "People" and "News of the IEEE."

*Personnel changes. See "People."

*Petitions, Forms for. Formation of a Section or Sub-section (copies, Emily Sirjane). Formation of a Student Branch, Joint Student Branch, Student Associate Branch (copies, Mrs. Emma White)

*IEEE Policies. See Objectives. Statements of Policy (78).

*Positions Open; Positions Wanted. In Spectrum, monthly; see classified ads; not in Contents. In Proceedings, monthly; see Contents, under "Departments."

*Posters, membership. (Inquiries, Emily Sirjane)

*Presidents' Messages to membership. See IEEE Objectives.

*Price Lists. Annual Publications Bulletin 1968 (3). Emblem pins, q.v. Recognition awards, q.v. Standards Publications (77)

62. IEEE Publications. Spectrum, Proceedings; Transactions related to Groups by code, prices; Student publication; Translated Journals, names, prices; Convention Record (no longer published); Standards; Special Publications; binders; order blank. In two forms: 6 pp., 22 x 26 cm folder; 12 pp. pocket size pamphlet 1967. Cf. both to "Annual Publications Bulletin 1968 (3).

*"IEEE Publications." In Spectrum, monthly; see Contents: "Scanning the Issues," "Advance Abstracts," "Translated Journals," "Special Publications."

*IEEE publications, general. Publication policy; June '65, 1 p.; in Section Publications Manual (70). Definition of Roles of Publications (14). "An Authors' Guide to IEEE Publications," q.v.; general information and directory of editors; Spectrum, annually, January.

*Recognition Awards. Program being formulated. See Part 3.

*Recommended candidates for IEEE Service. Forms, with Guidelines (37) and letter of transmittal from Secretary IEEE (Nov. 28, '66 and annually), asking for nominees for IEEE elected officers and Directors. Form includes spaces for job- and IEEE-records and evaluation of potentials. 4 pp. (Copy, Betty Stillman)

*Report Forms. See Section Manual (66) for Section, Sub-section, Group Chapter, and Section Financial Reports. Conference Reports: see under How to Organize a Conference, in Group Guide-Sheets (27). Travel and other expenses in Expense Report, q.v. Student and Student Associate Branch reports: Bylaw 407.9: General year-end tickler in E.E. Dec. '67, p. 2; Feb. '67, p. 2.

*IEEE Reports. In June Spectrum, annually, for previous calendar year. Secretary's, Treasurer's, and Auditors' Reports. 1966—Foreword by President MacAdam, p. 93.

*Roles of IEEE Publications. See Definition of Roles, etc. (14)

*Rosters. Organization Roster (59). Membership Rosters, Sections, etc. (q.v.)

- S -

*"Scanning the Issues." Highlights of broad-appeal articles appearing in Groups' Transactions. Monthly, in Spectrum; see Contents.

*Schedules. Master Meeting (Conference) (54). Prices of IEEE Publications (63). Standards Publications Sold by IEEE (77). Translated Journals, price list (91). See also categories: "Lists;" "Calendars."

63. Schedule of Prices of IEEE Publications. E.E. Aug. '67, p. 5. 3 pp. (Copy, Ralph Flynn)

65. IEEE Secretary's Report, Annual. In Spectrum, June. (June '67, p. 94). Preview: E.E. Apr. '67, p. 3. Membership statistics. Technical activities; publications; Standards; meetings; Group membership; organization changes; finances; planning. Publication statistics; information services; Proceedings, other publications. (Copy, Betty Stillman)

6. Section Manual. Purposes. Constitution for Sections. IEEE organization; headquarters personnel. Suggestions for Section organization and operations (24 pp., much of it new); detailed work of Section committees. Chapter operations (7 pp.); Chapter Bylaws; form of petition. Section calendar. Remitting foreign funds. "Helpful Hints" (8 pp., new). Sample correspondence. IEEE Statements of Policy. Group Guide-Sheets on How to org-

anize a Conference. Services and materials available, from manuals and brochures to stationery, kits, posters, and banners. Codes used on IEEE's business machines. IEEE Constitution, Bylaws. Maps of Regions; boundaries of Sections, Subsections. About 153 pp. Thumb-indexed for Section addenda. Cross-indexed; keyed to IEEE and Section Constitutions and to IEEE Bylaws. Major revision, January 1968. Distributed. Copies limited in supply. Requests, Emily Sirjane. E.E. references: Dec. '67, p. 5; Feb. '68, p. 7.

67. Section Membership and Transfers Manual. Organization. Supplies; displays at meetings and conferences. Membership Committee objectives; operations; campaigns, incentives; hospitality at meetings; Student members, Group members; membership requirements, dues; recruitment aids; reinstatements. Transfers Committee objectives; Grade requirements; admission and advancement policies; list of accredited schools. 22 pp., indexed. Dec. '66. Limited supply (Requests, Emily Sirjane)

*Section membership, transfer of, at member's option. Spectrum, Mar. '67, p. 12; June, p. 11. E.E. Aug. '67, p. 3; Oct., p. 4. Inquiries, Emily Sirjane.

*"Section Operating Guide." Once contemplated as a separate aid; made part of Section Manual 1968 (66).

69. Section Publications. Names of newsletters, etc., listed alphabetically by Section names; editor's name and address. 2 pp., June '67. (Copy of list, Emily Sirjane)

70. Section Publications Manual. General IEEE publication policy, objectives. Editorial and managerial staff; duties. Professional assistance, contracts, Size, layout, cuts. Schedules; costs. Advertising policies. Rates. Mailing, lists, classes of postage. Table of Section publications: Names, policies, deadlines, mailing practices. 21 pp., indexed. March '67. E.E. Feb. '68, p. 4.

71. Section Public Relations and Publicity Guide. Public Relations program, opportunities, problems. Media available to Sections. News releases, stories; construction, reproduction, pictures. "Fact Sheets." Six sample releases. 12 pp., new; Jan. '68. (Copy, Jack Kinn) E.E. Dec. '67, p. 4; Feb. '68, p. 7.

72. Speakers Directory. Titles of papers. Names, affiliations, addresses of authors. Papers presented before named Sections or Chapters, chiefly in early 1967. In some cases coded by Groups, or names and addresses of Section or program chairmen given. Total, 152 pp. Issued as 5 yellow Supplements to E.E., Feb. '67 to Oct. '67; October listed "most outstanding of year" in opinion of reporting Section. E.E. references: Feb., p. 10; Aug., p. 5; Dec., p. 5. August and October Supplements still considered useful. (Copies, Emily Sirjane.)

*"Special Publications." Monthly feature of Spectrum; see Contents. Recently issued records or proceedings of various conferences and symposiums. Standards issued. Prices, ordering information.

*"Spectral Lines." Lead article in each issue of Spectrum, of editorial, administrative, or informational nature.

*IEEE Spectrum." For index, see December issues. For index to administrative matters handled, 1967, see Part 2 of this listing. E.E. refers to Spectrum in most issues and does not duplicate Spectrum's coverage. See publication notice, monthly, at bottom of 2nd page following Contents: How to handle address changes or enter subscriptions. Correspondence. Editorial and advertising information. Responsibility of authors. Copyright notice; re-publication rights; trade-mark, postal status.

*Staff Directors and secretaries of committees, headquarters. Names, titles. Kept up to date in Spectrum, monthly, 2nd page following Contents.

74. Proposed Standard Definitions of Fundamental and Derived Electrical and Electronic Terms. Published for trial use in connection with preparation of Dictionary (15). Booklet, 58 pp. IEEE No. 270. Distributed as required. (Inquiries, John Anderson)

*Standards Inquired by Electronic Industries Association. Published from time to time in Spectrum (e.g., Sept. '67, p. 139).

75. IEEE Standards Manual. Guide to standardization activities. Objectives. Generation of standards; procedures, approvals; publication. Interaction with USA Standards Institute (USASI) (95); Sectional Committees. Liaison with IEEE Groups and with outside bodies. Bylaws of Standards Committee; title and scope of Standards Coordinating Committees. Guide for formulation of definitions. Chart of channels of development of IEEE Standards publications. 19 pp., Jan. 1967. Distributed to those having Standards interests. (Copy, John Anderson)

77. Standards publications sold by IEEE. Serial number, title, of IEEE and American Standards. Price, order form. Cross-reference sheet to former AIEE and IRE Standards still current as IEEE Standards. 9 pp. (Copy, John Anderson)

*IEEE Standing Committees. Names of committee, chairman, members; (responsibilities - in IEEE Bylaws; see index), shown on organization chart; in Organization Roster (59). Staff Secretaries listed in Spectrum, monthly, 2nd page following Contents. Scopes, in Technical Activities Manual (86).

78. Statements of Policy, IEEE. Tax status, procedures, exemptions, returns. Representatives to, association with, Outside Organizations. Conferences, sole and joint; conference publications. Expositions; recruiting. Section, Group, publications. Trade-mark, copyright, emblem. Mailing lists. Insurance, bonding. Section, Conference rebates. Section, Group, financial operations, reports, contributions. Region-Section-Group-Chapter relations. Ladies' auxiliaries. Travel reimbursement. Awards. Outside support. Nominations, calendar. Electioneering. International activities, policies. Registration of engineers. 17 pp. lettered A to Q; indexed. June '67; occasionally revised. In Section Manual (66) and Technical Activities Manual (86). (Copy, Betty Stillman) E.E. notations: June '67, p. 4; Aug., p. 4 and blue Supplement.

79. Steps to be Taken in Organizing an IEEE-sponsored Conference. Short complementary piece to "Organizing a Conference" (61) and Guide-Sheets on Organizing a Conference (27). 2 pp. (Copies, Bill Layton)

81. Student Branch Manual. Privileges, Operations, Supplies, Prizes, Constitution, applicable IEEE Bylaws (7), IEEE Constitution (10). 43 pp., indexed, July '64. Limited supply (Emily Sirjane)

82. Student Membership Kits. (Mrs. Emma White)

*Student Membership Leaflet "IEEE Looks to Your Future," (50).

83. IEEE Student Paper Contests. Why compete? How to compete. Rewards for prize papers. Suggestions for subjects and titles. How to prepare, deliver, paper. How paper will be judged. 8 pp., 2 cartoons, pocket-size folder. Fall, '66. (Copies, Mrs. Emma White)

*Students' choice of periodical: Student Journal or Spectrum. Spectrum, Oct. '67, p. 27. E.E. Oct. '67, p. 4.

- T -

85. TAB Operating Committee. Names, terms of service, affiliations, addresses, phone numbers. (Not shown in Organization Manual.) 1 p. (Copy, Dick Emberson)

*Tape-Slide talks. Availability: E.E. Aug. '67, p. 2. (Inquiries, Jack Kinn)

*Taxes, Convention income. Spectrum, June '67, p. 94. E.E. 12 Aug. '67, p. 3.

86. Technical Activities Manual ("TAB" Manual). TAB and TAB OpCom organization; operations. Groups; Group Administrative Committees (AdCom). Intersociety activities. TAB General Committees; functions. Establishing Groups. Group members; Affiliates. Group model constitution, Bylaws. Manual for Chapters; Chapter Bylaws. Functional committees of Groups. Group activities, sole and joint. Group publications, Transactions, Newsletters. Organizing a Conference (27). Group awards. Model charter for intersociety conferences. Guidelines for selection of nominees to Standing Committees and Boards. Group formation petition. Information for authors. IEEE Constitution; Bylaws; Statements of Policy. Calendar of Elections and Appointments. 137 pp. July '65. Thumb-indexed. Limited supply. (Inquiries, Dick Emberson)

*"Technical Correspondence." Letters to Spectrum Editor. Monthly. In Contents, look up "IEEE Forum" and "Technical Correspondence."

*Technical press. Resumé of new developments. In Spectrum each month. In Contents, look up "Transients and Trends" and "Focal Points."

87. Techniques for Better Talks (at IEEE Convention and elsewhere). Speaker's obligation to audience. Sessions, length, organization. Preparing presentations. Visual Aids. Oral do-and-don't. Revised 1967. 8 pp. pocket-size booklet; also 8pp. booklet 14 x 22 cm with cartoons. (Copies, as available, Dick Emberson). Note in E.E. Dec. '67, p. 4.

89. IEEE Telephone Directory—headquarters. Listing by names of personnel. Also arranged by departments and functions. 12 pp. Aug. '66. Not generally available. (Inquiries, Bill Keyes)

90. Telephone Directory, United Engineering Center. Part 1: Names alphabetically throughout building, extension, Society abbreviation, floor. Part 2: By Societies: name of function alphabetically, extension to call, floor.

IEEE'S NEWSLETTER: "ELECTRICAL ENGINEERING"

by
Ivan S. Coggeshall*

Essential Content of Address Presented to
Section Publication Editors

at the
IEEE International Convention, New York, New York
March 18, 1968

On the chance that you are more-or-less-avid readers of "Electrical Engineering," Vice President Lynn Holmes asked me, as its editor, to talk with you.

He thought that, first, you would like to hear of the methods used to gather and present the material; and last, whether E. E. is serving as an effective means of communication among people, like yourselves, up to their necks in Institute operations.

There is virtue in a simple outline—A, B, sit down and shut up.

I'll buy it. But before I start, maybe I ought to say something.

Compared with the editors of the Sections' and Groups' publications, we sit in an ivory tower. With no advertising, we duck all those headaches. And because the 3,500 copies of E. E. are photo-offset from typed pages in our own printshop, there are no galley-or page-proofs to be jackassed back and forth with a printer.

So, in a way, you should be up here. I should be sitting at your feet.

A. HOW "ELECTRICAL ENGINEERING" IS PUT TOGETHER

Documentary Source Material. E. E.'s tapestry is woven from hay which drops

right from the horse's mouth. The editor is privy to certain Agenda and all the Minutes of the Board of Directors and the Executive Committee. In the exigencies of meeting press deadlines, if Betty Stillman won't let us see the Minutes before she writes them, there is only one thing to do--dream up our own.

With Minutes of the Technical Activities Board and the TAB Operating Committee (OpCom), it's the same. I haunt Dick Emberson.

All this source material is packed with vitality and brimming with nourishment. Also it is so dry that 95% of it would float on water. The other 5% is a fruity precipitate of Bylaws, policies, adopted and rejected recommendations, organization changes, budget unbalances. This we scrape off the bottom. Distilled, it gives E. E. its sparkle.

Collaborating with Headquarters Staff. Another ever-flowing source resides in the staff. Some of them cover Standing Committees as secretaries. Importantly, they steer E. E. to items, not in Minutes, to be noted or emphasized. Regularly I talk with perhaps 20 of them on the first of three Fridays, about 19 days before mailing date, bringing with me, at least in topical form, the grist from unreported Minutes. On these, they set me straight.

*The speaker, in 1951, was President of the IRE, and from 1955 to 1962 was Secretary and Manager of AIEE's Technical Operations Department. He is now Editor of IEEE's ELECTRICAL ENGINEERING.

"MASER" = Membership Activity—Stimulated Early Responses 11p1 12p1. See also Membership campaigns (39) in Part 1, above.
Member, Encouragement of the new -15p2
Membership - Significance of size of - 15p1
Membership - "Bargains" (calendar values) in dues, fees, and subscriptions (Cf. "Annualization," q.v.) - 11p1 12p1 13p1 15p2.
Membership Continuity, Changes in Grades - 12p4
Memberships, Corporate, in IEEE. None available - 11p5
Membership Desks at Conferences - 15p7
Membership Grades - Dangers of improperly applying criterion of longevity - 10p2
Merger (AIEE/IRE/IEEE), History of - Contemplated, 14p3. Historian appointed, 15p8.
Named Awards. See Awards, Name.
National Electronics Conference - Effect of fire at McCormick Place, Chicago - 10p5
Necrology, staff - L. D. Leonard - 13p6
Nomination machinery. 1968 officers - 10p1. 1969 officers - 14p2.
Oliver Report (Cf. Educational Activities Board). Synopsis - 13p1 and white Supplement.
Operation G-I-T. 14p1, 15p1. Also see Membership campaigns, Part 1.
Opinion Research study - 11p5
Organization charts, availability - 15p7
Outside Organizations - TAB-unit dues - 14p7
Participation in IEEE affairs, S. W. Herwald - 15p1
Permission to re-print E.E. items - 14 p 5
Postal; postage. See Mail.

- R - Z -

Recognition - Award of emblems in special pins - 14p3
Records, Administrative Turn-Over of - 13p5
Recruitment, electrical engineering students from high schools - 15p3
Repetitions in E.E. - 12p5

Scholarships, Section or Group - Requirement of Executive Committee approval - 7p5 12p2
Section/Chapter relationships - 15p5
Section Committee, IEEE - Activities, 1967 - 11p5
Section finances, Study of - 12p3
Section membership, member's option - 13p4
Section Publication Editors, meeting at 1968 Convention-15p3
Section/Student Branch relationships - 11p2 13p2 14p7
Section Student Branches (Units) - proposed, 11p2
Speakers Directory (72). Speakers sponsored by colleges and by industry - 15p3
Student Associate Branches - 11p2 13p2 14p7 Correction, 15p5
Student Branches, Annual Reports - 12p2
Student Branch/Section relationship. See Section/Student Branch
Student Convocation, a Convention activity - 11p5 14p4 15p3
Student members, enrollment up - 14p7
Students, Holding graduates in IEEE - 11p1
Supplements to E.E. - Since E.E.11, June '67, listed at end of E.E. with which enclosed. Supplements included in this catalog and index, all 3 Parts.
Tables in E.E. (Boxes) - December and February, p. 2. Team-Theme - 13p1
Technical Activities Board (TAB) and TAB OpCom - Organizational changes - 13p4
"Three-ring Binder" - 13 p5
Tie-Clips with emblem - 11p5
Transfer of Funds to U.S. from elsewhere - 13p6
"Units" of IEEE. Frequently named categorically in E.E. Since E.E.14 Dec. '67, carried in footnote on last page. . Better name than "unit"? 13p7
Upgrading of memberships. Danger of 10-years' service-in-grade as criterion - 15p6
Visits to Sections abroad - 13p6
"Welcome Aboard!" E.E. regular feature, last page of E.E. New officers, Directors, staff, Group Chapters. (Omitted, E.E.16 Feb. '68)
Year-End. Stock-taking, 14p1. Returns due, 14p2.

* * * * *

KEY AND NOTES

PART 1—the "Catalog"—contains four listings in a single alphabetical sequence: (1) most documents available separately from IEEE (distinguished by serial numbers); (2) many administrative articles appearing in recent back issues of "Spectrum" and "Electrical Engineering" newsletter (E.E.); (3) certain available Forms, supplies, and services; and (4) a few cross-references. Items in these categories (2) to (4) carry an asterisk * merely for ease in reference.

In alphabetizing, initial words "A", "An", and "IEEE" have been ignored.

In serially numbering the documents, the figures 4, 8, 12 ... etc. have been skipped, to permit of more ready insertion of new items in later editions.

Serial numbers have been assigned to a few non-IEEE documents (such as ECPD, EJC, ESL), useful to IEEE's working members.

Dates given, as to documents, are those of the issue now current.

Size of all documents are 22 x 28 cm (8½" x 11") unless otherwise shown.

"Folders" contain no staples. "Pamphlets" contain a few stapled pages. "Pocket size" is roughly 9 x 22 cm or 10 x 23 cm, unopened, (4" x 9"). "Booklets" contain more pages than Pamphlets. "Brochures" are more "dressed up" than Booklets—often addressed to promotion, sales, or persuasion. "Manuals" in IEEE parlance are rule-books, usually assembled between covers adequate to meet expected wear-and-tear. Foregoing are rough definitions, with borderline cases and exceptions.

Names of persons given are IEEE headquarters employees, for initial contact by mail or phone. Address:

IEEE, 345 East 47 Street, New York, N. Y. 10017 (USA). Phone: Area 212 - 752-6800. Women named are "Miss" unless shown "Mrs." (Pat = Patricia). In phoning, if busy "Emily Sirjane" is busy, consult with confidence her assistant, Ronnie Lewis.

PART 2 is an "IEEE Spectrum" index covering 12 issues of calendar 1967. Month of issue and beginning-page number of article are entered in right-hand column. There is a limited number of references to early 1968 issues; also to E.E. where pertinent. There is a limited amount of cross-references within the Part 2 list, and to items in Part 1.

PART 3 is an "Electrical Engineering" newsletter (E.E.) indec covering one year—the six bimonthly issues in E.E.'s present format: No. 10, April 1967, to No. 15, February 1968, inclusive. The compressed, somewhat cryptic, references to E.E. are to be read: 12p5 = E.E. no. 12, page 5. The center-heading shows that No. 12 appeared in August 1967. Similarly, 11p1 = E.E. No. 11 (June 1967), page 1.

- - -

This Blue Supplement to E.E. 16, April '68, is experimental. Please report errors and make suggestions to Editor E.E. in anticipation of more useful, up-dated, re-issues in future.

end

In the ensuing 6 calendar days, the editor produces the first draft of E. E. —at home, in the suburbs, maintaining touch by telephone. I'm retired. I'm a volunteer—one of President Herwald's annointed. IEEE picks up the tab for necessary and appropriate out-of-pocket expense. I like this job.

In its initial draft, E. E. is over-written. The copy is typed on my portable, margins fitted to E. E.'s printed columns. Writing continues until everything has been covered, regardless of length. From experience it can be foretold there'll be bits carved out. There is no need for "filler."

The Reviewers' Function. Come 2nd Friday, I hand over my copy to Xerox when I reach the office, having added marginally the names of staff who ought to pass on each item. Seven reviewers, including General Manager and the Staff Directors, have four working days to dictate changes. Each circulates the copy to his people concerned, then accepts responsibility for the accuracy of items in areas he supervises. Additionally, he may comment or raise a question on any item.

By reviewers the editor is warned of pitfalls in running an item too soon. Composing in solitude, he does not always detect nuances of office operations. Minutes are not always "approved as read." Defects give rise to apt descriptions: "Can't live with it, as is;" "Won't work without a proviso;" "Not cooked yet." Staff advice leading to postponement of an item to a subsequent E. E. issue has prevented retractions, apologies, general confusion in the field.

On the third Friday the reviews are picked up, consolidated, the reviewers consulted, differences reconciled, and changes incorporated in the "Master Xerox." Follows the usual scissors-and-paste job of fitting lines to printed-page capacities. If it runs "over," an item or items must be killed, to appear later. After final editing, the typist takes it up for page copy, thence to printshop and mailroom. The job is punched for

binding, pages assembled, Supplements collated, and enveloped. Y& Ed. has bowed out after the 11th of 19 days and for six weeks can go fishin'. (or writin' speeches.)

Editorial Assistance and Direction.

Assisting me on the office staff is Audrey van Dort, assigned also as staff secretary of IEEE's Internal Communications Committee (ICC), the "holding committee" for E. E. and the one which sets its policies. She is my alter ego in the office, normally caring for the mechanics of production and proofreading, and meeting the inevitable crises of publication. Audrey reports to Jack Kinn, Staff Director, Educational Services. He is my headquarters Mentor. He and I sit ex-officio on ICC.

ICC controls E. E.'s contents, format, schedule, and circulation. An appointed IEEE Executive Committee Coordinator (Past President MacAdam in 1968) attends its meetings. Within ICC, E. E. is treated with a scalpel, not a backscratcher. As homework, its members will have read E. E. critically, and will have judged it against its purposes to inform, stimulate, encourage.

J. C. ("Joe") Bregar, chairman, is the man to tell if E. E. falls short of its opportunities. He can deal with the editor, staff, General Manager, IEEE officers, or whomever it takes to ferret out facts and make adjustments. Within our capacities, Jack, Audrey, and I are also happy to help.

An "Image" for E. E. In October 1966 E. E. was changed from now-and-then publication by the staff to an ICC bimonthly appearing around the first of the month, beginning each year in February. The schedule bears optimum news relationship to scheduled Directors' meetings and dates of organizational turnover. In behalf of ICC, Jack Kinn asked me to come aboard, saying they hoped to accomplish three things: 1) get the newsletter out on time; 2) keep the items short; 3) put a little of the breath of life into the news, by which he implied that the necessarily heavy, compact fare could stand lighten-

ing a little, say like blowing holes in Swiss cheese.

Accordingly, an announcement in E. E. said ICC had "appointed an editor, cut him down to size, told him to use 1/2 the words, 50% of those to be short ones he knew the meaning of."

It hasn't been a pushover to avoid long words in pseudoscience text but we've tried. And as for blowing bubbles in the curd, we haven't come to a joke page (yet), nor do we go for belly-laugh—just a bit of informality, use of the vernacular, a wry twist, maybe a transient widening of the nostrils, here and there, to keep from going mad.

Arrangement of the Items. The deck is cut, the cards shuffled, but instead of their being played off the top, as they look, they are laid down in rows as in solitaire, red on black. E. E.'s aggregate is like a legislative docket or a school budget—a loose collection of items without rhyme or reason, with side-headings that defy either alphabetical arrangement or a sequence wherein one item leads approximately to the next. Resort has been taken to grouping items under a few center-heads.

The lead items are usually calendar-based or "hot." Next come "Needles and Prods," often placed there to preclude missing the boat, or in response to staff reports that essential information is slow coming in. "Challenges and Opportunities" are items on which Sections, Groups, or Committees could work to their advantage. "Tools and Aids" follow, because as new tools become available their use helps get things done. But for good reason "Top-Side and Other Developments" may be put ahead, to reveal actions by the governing boards by which all other Institute operations must be squared. "For Your Information" has to be the catch-all. We usually end with "Hail and Farewell" or a "Welcome Aboard!" to signalize personnel and organizational changes.

Catering to the Readership. As the editor writes he tries to keep in mind the

interests of our units—our Sections, Groups, Chapters, Branches, Committees—the people in them, the meetings they hold, the papers they write, what their aims are; and, within practical limits, to give them "equal time."

Ours is a happy ship, manned with optimists working with the dedication of volunteers, hence our appellation "rolled-up shirtsleeves brigade." They believe in IEEE's and their units' goals, know they can be reached, are helping to reach them. Their stance is informal. They get things done.

They are busy people, so we try to motor-pace our copy in the spirit of read-and-run. Words are underlined to help readers read fast, retain what they see; other words as eye-catchers to help them retrieve an item on a subsequent still-hunt. We've sought telegraphic brevity, use self-imposed rules to get it. . . . As in SSB transmission, we aim to drop redundant sidebands and kill the carrier . . . We omit thes, ands. . . We use contractions, abbreviations, phrase-saving hyphenated adjectives, "sentences" without verbs. . . Whenever possible, convenient, we gather connected items . . . gun them like bullets . . . rat-a-tat . . . staccato-pizzicato.

Also because our readers are busy people, we give them the bare-bone facts and tell them where they can get the rest. Readers are also reminded of documents broadcast nearly simultaneously with E. E. so that their import will be understood and the documents themselves possibly rescued from neglected attention or loss. A staff member is named who will send inquirers "the works."

Matters requiring treatment too long for E. E.'s news columns are handled by many-hued Supplements, readily identified in the files. If an item is a continuation of one in an E. E. issue of the recent past, we'll refer back, to save repeating and to present the development in its context. We put three holes through every issue to fit a ring binder. If a reader doesn't save E. E., he's out of luck.

As he writes, the editor also has to bear in mind the ceaseless turnover in personnel

throughout IEEE. He visualizes those who are seeing E. E. for the first time; others whose initial appointments as chairmen find them with new needs; others who, in shifting from this committee to that, discover that their interests have shifted, too. So, on an annual basis, E. E. repeats itself on still-pertinent items.

The editor continuously shares others' exasperation in having seen something but unable to recall where. As a memory jogger we occasionally run items on "Where to Find It" knowing full well that the fingernail-biting reader's mood is "Where-in-hell Is It?" Beginning with E. E. 16, April '68, we are going to systematize our response to this need by issuing a semi-annual Supplement cataloging all current Tools and Aids, and indexing E. E. items and Spectrum administrative articles and IEEE ads for a year back.

E. E.'s Basic Policies Little Changed. With the June '67 issue, at the President's request, the first major change since E. E.'s inception in 1964 was made: to print the gist of prospective Bylaws in addition to the text of enacted ones. Accepted as a calculated risk was the possibility of confusion in the memories of readers as to whether what they had seen in E. E. was a change or a proposal for change. The argument in favor of the new policy (which, by the way, seems to have been taken in stride) is: "There is a need for giving the organization leaders of the Institute advance indication that a major and substantive change in our Bylaws is under consideration . . . We owe readers of E. E. some information on the scope and direction of major changes the Board has in mind, so that if any serious groundswell of comment emerges, it will come to the attention of the Board before final action is taken."

So much for Part A. Izzard is going to be shorter.

B. HOW EFFECTIVE IS "ELECTRICAL ENGINEERING?"

It Depends Upon Whom You Ask. Newspaper editors and letter carriers agree

it's Junk Mail. The classification 3rd Class Bulk postage argues in their favor.

But that it's being delivered nonetheless, opened, and read is vouched for by a satisfactorily heavy direct response to our invitations to send in for additional information, forms, and copies of documents. We have had several field inquiries as to how more copies of E. E. could be obtained for officers', members', and units' use. The Management Group was a unit so to ask, saying not only that E. E. regularly contained items of interest to that Group's members but also that our newsletter was a good example for management to copy when the purpose is to communicate with and inform a supervisory staff.

A satisfied customer from West Virginia wrote: "I don't know why I get E. E., but it's the best thing since apple strudel. (He got it because the computer nailed him as a "member of a Standing Committee.")

Director-Coordinator MacAdam is among E. E.'s most enthusiastic supporters. That he finds time to ponder what's been chosen to go in it is shown by a string of comments and suggestions sent the editor during the year of Walter MacAdam's Presidency and before.

Another reader and helpful critic is the General Manager, Don Fink, originator of "Electrical Engineering" as a newsletter in October 1964. From his vantage-point no facet of our operations is hidden. He attests the power of E. E. to draw the working contingent together on schedule six times a year—as useful in its way as an administrative notice in Spectrum's "News of the IEEE", or an IEEE advertisement there, is in reaching a large number of concerned members.

The IEEE staff read E. E., they swear. For them it affords a means of "letting the left hand know what the right hand doeth." Absorbed, as they must be, in their own projects, in E. E. they see them in the larger setting, and have the satisfaction of knowing that their associates are being made cognizant of theirs. While frequent staff conferences keep the men at the top currently informed, in lower echelons E. E. carries out an educational role which leavens the whole staff.

This process spills over into the Standing

Committees, of many of which staff members are secretaries upon whom the chairmen heavily rely. A broadly informed secretariat is an asset. E. E. helps.

Attempts to Encourage Communication Up and Across. But is E. E. satisfactory to the vast bulk of its readership? Frankly, we do not know. We wish we did. Reactive feedback concerning E. E.'s content and policies (as distinguished from our offering of aids) is meager indeed, considering the newsletter's wide distribution. Generally speaking, all that we have received from the field is the pervasive silence which gives consent.

Communications down is the easiest thing E. E. does. But that is a one-way street. ICC's ambition is that "E. E. carry communications relating to Institute management up, down, and across—that's what 'among' in the masthead means," reading: "A management newsletter on IEEE operations . . . to encourage communications among committees, Groups, Sections, and staff." The objective was first enunciated by Don Fink when he established E. E.: "To provide a direct channel vertically and horizontally" among principal officers of all major IEEE Units," to keep "the core of members who have the job of running the nearly 1,200 units . . . better informed of what is going on in IEEE."

Stratagems have been used in the past, more will have to be used in the future, to complete E. E.'s service by transmitting communications up (from the Groups, Sections, Chapters, Branches) to the administration; and across, from Section to Sections, Group to Groups, Committee to Committees, Committee to Groups, Section to Committees, and so on.

Other effective lines of communication exist, of course. The Regional Directors who sit on the Board are in constant, lively touch with the Sections. The Groups report to TAB and TAB to the Board. Under a new setup the TAB OpCom Coordinators additionally will have specific group contacts to make; ideas can flow

through that route right into Executive Committee.

But these arrangements are tailored for "point-to-point" communication. E. E.'s is an "broadcasting" facility, through which one Section or one Group can tell all Sections, Groups, Committees, what it has learned that could be of general value to many units, raising the questions as it gives the answers: "What's the other fellow doing?" "Can others share my triumphs?" "How can we help each other?"

If At First You Don't Succeed . . . A year ago I tried cajolery in the form of serially-numbered "Ideas," throwing No. 1,234 out as bait, in the expectation of enticing others to seek fame by joining in rapidly successive contributions . . . After one year, one taker! No. 1,236 was sent in by United Kingdom and Ireland Section and run in E. E. 13. Bully for John Bull! . . . But the others I had to devise more by crook than by hook.

So now we're off on a new tack. Beginning with this April's issue there'll be an occasional new center-heading "PICKUP and FEED BACK." Pat Corcoran has shown me where I can sit down in the middle of a stream of Section and Group newsletters at headquarters; and I've sat there long enough to learn that more bright ideas can be jiggged through the ribs with a hook than lured out from under a rock with a shoehorn, dangling.

Up and across are as vital as down. In one way or another this little problem just has to be solved.

Blanket Permission to Reprint E. E. Material. Originally enunciated in 1966, editors of all IEEE periodicals are granted blanket permission to lift, reprint, digest, paraphrase, or expand any item in E. E. Request is made to remove quotation marks if quoted matter is changed. A local slant is suggested for maximum appeal to readers. I personally renew now this invitation. Good luck, all you Editors! May news and views pour in upon you, and give you pause--to wonder, that is.

R. C. Winton, United Kingdom and Republic of Ireland Section, sends in a cartoon in which 5 of the 8 types are Animals around the Council Table—and with 4 more, each linked with the appropriate treatment by the ringmaster: 9) The per-sistent questioner who tries to trip the chairman: "Deflect his questions back to the committee." 10) The highbrow: "Don't criticize him—use the yes-but technique." 11) The sleepy, coundn't care less type: "Get him to talk about his work; relate it to the committee's." 12) The uncooperative sob who rejects everything: "Play on his ambitions, recognize his knowledge and experience, and use them."

TOOLS AND AIDS

"WHERE TO FIND IT." To increase information readily available to readers, E. E. initiates with this issue a Blue Supplement, listing, as completely as possible, all regularly-issued material distributed by headquarters, references to regular features and selected administrative articles in Spectrum, and an index to E. E.

Save the "Blue Supplement" until another comes out (in August or February, to give maximum help to influxes of new people). The one herewith is a "dry-run," to gain experience. (Comments, editor)

SCOPES (AREAS OF INTEREST) OF THE GROUPS. Group publicity material usually offers scopes in abridgment. Pink Supplement to this E. E. gives them in full, for all 31 Groups.

THE IEEE ORGANIZATION—A LECTURE by General Manager Don Fink, presented to Student Convocation, 1968 Convention, is reproduced as White Supplement herewith. (Copies, Jack Kinn. 16 slides with explanatory copy also available for representation locally.)

The material supersedes that offered in E. E. 10, Apr. '67, p. 4, no longer in stock. It is complementary to Don's article in Spectrum, Dec. '67, p. 92, with minimal repetition.

IMPROVED COMMUNICATIONS AT CONFERENCES. Closer relationships between

staff people who attend principal conferences, and the Regional and Section officers and other parties to common problems, are the subject of a new program. Headquarters membership desks are being set up by Emily Sirjane or assistant at 19 major conferences in the U.S. and one in Canada in 1968. Plans have been finalized for conferences held through May; plans for 13 more, June to December, are going forward with conference chairmen.

Personnel manning the desks will be familiar with the areas of special competence of the Staff Directors and other headquarters people present, hence can direct inquiries properly. Attendants will be kept informed of the whereabouts, hotel room numbers, conference rooms, and phone locations at which Staff Directors may be found; their appointments, session, conference schedules; times of availability for discussion of specific problems. Similar data proffered Miss Sirjane by Region, Section, conference people wishing to discuss matters will help bring all parties together quickly.

"FOR YOUR INFORMATION"

EDUCATIONAL ACTIVITIES BOARD organized February 16; met again March 17. Organization Roster January 1968, p. 7, lists EAB membership, and the chart facing p. 1 shows EAB's committees in dotted lines but on p. 7 does not show the following recent appointments of chairmen: Pre-college Guidance Committee - C. F. Horne. ECPD Accreditation Committee - H. W. Farris. Goals Report Committee - E. E. David. Student Activities Committee - W. T. Kittinger.

P. P. Biringner was assigned to Coordination of Educational Activities in Regions 8, 9, 10. R. B. Russ and R. E. Nolte were appointed to represent IEEE on ECPD's Student Development Committee. (Correction, Roster, p. 75.) Appointments to ECPD's Guidance Committee were deferred.

NEWSLETTERS ARE IN THE NEWS. Group newsletters are currently a subject of questionnaire on cost-vs. -lead-time, by Publications Committee of Technical

Activities Board (TAB). A Group Newsletter-Editors' Manual is a possible outcome. . . At the Convention, Section Publication Editors met at luncheon; Group Newsletter Editors also met to mix experience and thresh out some problems. . . The Ivory Supplement to this issue of E. E. tells how this newsletter is compiled, and with what reception in the field.

TREND OF GROUP MEMBERSHIPS continues up. In round thousands, there were 96M memberships (not discrete members) at end of 1963, 105M in '64, 115M in '65, 127M in '66, 139M at end of '67. Of IEEE's 158M members, 76M (or 48%) held these 139M memberships in one or more Groups; average, 1.8 Groups per "joiner." The figure 1.8 is down from a high of 2.5.

STUDENT APPLICATION—GROWTH. It is fitting that enrollment of Students and Student Associates is going up faster than accessions in other grades. E. E. Dec. p.7 noted heavy initial Fall '67 returns. At year-end there were 3,144 more Students enrolled than 12 months before, to reach a high of 22,248. January '68 pushed the mark up another 666.

Students also join Groups, taking advantage of a low \$1/yr. rate for first Group joined. Of 22M Students, 12M (or 55%) held 15M memberships in one or more Groups; average 1.26 Groups per Student—"joiner."

GROUP AFFILIATES. Bylaws 103, 104.8, 405.18 permit Groups to enroll "Group Affiliates," described there as individuals who are not members of IEEE but who have been admitted by a Group to participate in certain Group activities. "In general, a Group Affiliate must be a person whose technological activities do not justify full membership in the IEEE, but who may be helped by participation in Group activities and who may contribute benefits to Group members by his participation in their activities."

At the end of January '68, there were 829 Affiliates, stemming from 173 different societies (including 41 outside U.S.) named in "List of Societies whose Members May Individually Affiliate with IEEE

Groups." (List and Application Form F-14 available through Pat Corcoran)

WHAT IS A WORKSHOP? "A treadmill for the work-horses?"

IEEE Policy Statement 2-K says: "IEEE recognizes the scientific and educational value of small non-geographic research conferences or workshops of limited attendance, at which an interchange of information takes place among workers at the forefront of a specialized technical area. Such meetings are consonant with IEEE objectives and constitute a proper IEEE activity provided . . ." etc.

The 6 provisos, all of them important, (including announcing a meeting to all IEEE members who have identified themselves as being interested in the workshop topic), should be consulted by anyone contemplating an invitational or off-the-record experience meeting, large or small.

If a workshop can be classified as a "symposium that associates itself with a previously approved conference," it comes under Statement of Policy 2-C, requiring approval by the conference for it to be held, and approval by the General Manager, of its budget.

DIFFERENTIATION/INTEGRATION. More and more, engineers admit to having split personalities—interested both in (A) a highly technical, narrow specialty, and (B) a broad interest in the whole gamut of specialties of electrical/electronics engineering, spilling over into other engineering disciplines and into the various branches of science. IEEE caters to both types of interest, on all fronts.

In publications, the A side is fed by the Group Transactions and Journals; the B side by Spectrum and Proceedings. In local meetings, Chapters and "courses" cater to the A side, Sections meetings to the B. Among conferences, the typical IEEE Group conference serves A interests; joint and Regional conferences the broader B interests.

Time was (still is) when the big Donnybrook Fair-type of convention attempted an A/B mixture. The 1967 IEEE Convention broke with tradition by inviting 90% of its papers, thereby putting their content

under control of session organizers for purposes of unity in programming. The 1968 Convention not only invited all papers but cast the sessions entirely on the B side. This not only put a brand-new complexion on the March technical program but should have the effect of strengthening many of our A-type conferences through papers reallocations.

ADD: "THE INFORMAL TOUCH," E. E. Feb. p.7). President S. W. Herwald is signing some of his letters "Sy," as his predecessor, W. K. MacAdam, signed his "Walt." It may all have started with Franklin Delano Roosevelt, another President, who subscribed his "Frank." . . Who knows?

All one happy family—Coggie.

STOP PRESS CONVENTION NEWS

"E. E."-Observed, and by permission, "E. E."-Cogitated

New York, Friday, March 22—Only yesterday were we in the middle of the 4th and final day of IEEE's annual equinoctial foregathering, yet already had TAB OpCom met with the 1968 Convention Technical Program Committee to assess the strengths of this convocation in terms of next year's plans.

Vindicated beyond doubt is the Board's wisdom of putting the technical programming in the collective hands of the Groups through their TAB organization. Sustained also, in its initial trial, was the philosophy adopted of placing the sessions in command of organizers of invited, complementary presentations amenable to tutorial, interdisciplinary, or future-oriented treatment.

If any shortcoming were apparent, it could be attributed to uneven acceptance by the Groups, this first year, of the challenge laid down by the unaccustomed ground-rules. Those Groups which did identify themselves with the new type of session, either at the Hilton or the Coliseum, gained by appealing to audiences which soaked up valuable collateral information in support of their specialties; and at the same time they placed their Groups squarely in the mainstream of membership-appeal characteristic of every convention.

A Convention "first" was the fee-supported tutorial courses. On the showing made they will probably be continued. Amply demonstrated was IEEE's ability to corral industrial expertise as well as to hail academe for instructors.

THE KEYNOTE WAS ENTHUSIASM. The men with the veeder counters at the Hilton technical sessions turned in tallies lower than in 1967. Analysis of the reasons will require time. One obvious contributing cause was 32% fewer sessions, offset, by design, by booking them in larger rooms. A more likely cause was the "tally-languor" that set in once the meeting rooms were filled. Conspicuous this year was the absence of the "session-hoppers" of former years who had to flit in and out among overlapping sessions to catch wanted papers on the fly. The 1968 audiences assembled and were content to stay the sessions out. They filled the seats. Outside, they watched closed-circuit TV in overflow groups. Or they chose to go in and line the darkened walls, to be where the action was, even at the price of discomfort.

INSTRUCTION PERVADED THE COLISEUM, TOO. The exposition was better than ever keyed to the technical needs of members, who milled up and down four-floors-and-a-mezzanine of aisles. Exhibits strained area capacity. The acreage needed by this greatest of technical exhibits is fantastic.

The Technical Film Theater was continuously patronized. (N.B.—Sections, Chapters, and Conferences will find in the Convention Guide, pp. 32-35, a list of film titles available

to them as they were to the IEEE Group on Education which sponsored the New York showings. Correspond directly with the producers. In case of difficulty, ask Jack Kinn.) The microwave lectures went over well; they were specifically designed to interpret the technical significance of the segregated floor exhibits on that subject. (N. B. —Groups wishing similar services from the exhibition management of the 1969 affair should lose no time getting in touch with Ralph Flynn.)

"Sell-out" demonstration, because it was one fraught with broad future promise, was that using techniques of compressed speech for slide-lecture presentations. Delivered at a speaking rate of 1.6-times normal, intelligibility was high enough to leave little doubt that a factor of 2 (say 350-400 words per minute) would have been tolerable. Principal audience difficulty seemed to be not oral, but in visually deducing the significance of diagrams and curves before slides changed. . . Offered by the Group on Engineering Writing and Speech, the demonstration vied with the same Group's dramatization of the right-and-wrong of technical talks.

THEY WERE THERE IN DROVES. Subject to final audit, the total attendance figure was 63,898. Last year's was 58,688 (Spectrum, May '67, p. 14; E. E. 10, Apr. '67, p. 4.) . . . Members came from hither and yon, in all age-groups. . . The "non-national" image of IEEE was projected by impressive national-bloc exhibits of overseas manufacturers; by delegates hailing from Regions beyond North America; by the introduction at the banquet of an exchange representation from the Popoff Society of USSR. . . At the extremes of age, there was a global convocation of Students whose careers have hardly begun; and a colloquium of Life Members, many of whom, by show of hands, recalled having met in the flesh, or having dealt with or been taught by associates of, Edison, Bruch, Sprague, Thomson, Stanley, Tesla, Westinghouse, Steinmetz, Bell, Helmholtz, Heaviside, or Marconi. Dynamo to laser—in one room!

NOMINEES FOR 1969. BofD met during the Convention and approved officer-nominees to appear on the ballot in September: For President, F. Karl Willenbrock; for the Vice President elected by voting members, John V. N. Granger; for two Delegates/Directors-at-Large: Bruce S. Angwin, Werner Buchholz, David M. Hodgin, John R. Whinnery.

HIRSUIT AND SARTORIAL. United Kingdom and Republic of Ireland Section reported that Bond Street is coming out with a man's neckpiece emblazoned with IEEE insignia. When it's available, can All the Queen's Horses restrain Princeton and Stanford from adopting London's Old School Tie?

In Coliseum's peopled aisles, pulchritudinous models wore hemlines not far below their middles, according with dictates of Vogue and what seemed meet for electronics interest. Among the young engineers, some with trimmed beards, there was only an occasional quasi-masculine hairdo; no unwashed necks, bizarre jewelry, or boudoir parfum. The consensus among IEEE's comely, observant, younger distaff manning the Convention desks was: "More than enough squares, no hippies at all." — I. S. C.

Supplements:

Pink: Group Areas of Interest
White: IEEE Organization—Fink

Canary: Convention Speakers for Sections
Blue: "Where to Find It"
Ivory: How "E. E." is Produced

E. E. No. 16—8

IEEE's "family" of Units includes Groups, Committees, Boards, Councils, Conferences, Regions, Sections, Subsections, Chapters, Branches, and Headquarters. "Electrical Engineering" (E. E.) helps bring them together.

When E. E. refers to staff members, get full name, assignments, etc., from "IEEE Spectrum"; listed monthly on second page after table of contents. Address them: IEEE, 345 East 47 Street, New York, N.Y. 10017. Or phone Area 212 - 752-6800.