ELECTRICAL ENGINEERING

OF AN ESTEEMED COLLEAGUE it was said: "He did his homework well. Seldom at a committee meeting was he not the best-prepared member there."

Do you lock in on that carrier? If so, in this man's voluntary organization, you are hooked. You are on your way up.

Re-read—for inspiration this time—the record of candidates' attainments that came with your election ballot in September. To these men, too, homework has been a way of life.

CHALLENGES AND OPPORTUNITIES

WITHOUT FAIL, SEE Spectrum, Sept. '69, p. 6, unfolding the IEEE Board of Directors' (BofD) policy-in-the-making on the presentation of controversial material in IEEE publications and at meetings. There you will find also a personal invitation from President Willenbrock for you to say whether you feel the proposed Policy Statement is appropriate for IEEE.

Nota Bene, all editors of Transactions, newsletters, other printed matter; all organizers and moderators of meetings of Sections, Chapters, Conferences! When and as adopted, this policy will become your guide.

IEEE ELECTED OFFICERS, 1971. On pp. 4-A, 4-B, will be found nomination forms for candidates for IEEE President, elected-Vice President, and Directors-at-Large, to be voted upon in 1970 and to take office in 1971. Nominees must be Fellows or Senior Members. Other qualifications

should square with the Guidelines on the back of the forms. These nominations are solicited by Nominations & Appointments Committee (N&A) from individual members and IEEE units. Deadline for receipt: Feb. 1, 1970.

1970 IEEE MEMBERSHIP DIRECTORY.
"Thank you, thank you," says Bill Keyes in appreciation of members' support of the Directory publication schedule, content, and quiz. A full 85% response to date is an augury that this massive, valuable compilation will be mailed on time in January.

From data furnished, each member's employer is being taken into the member's computer record, coded according to the employer's Dun & Bradstreet designation. Early next year Section rosters can be pulled down by employer's number, readily decoded into employers' names. Thus there will come into being a new, useful tool for membership development in the Sections during most of 1970. Later, by successive steps, the coding will be bypassed and the Sections furnished member-rosters alphabetically by employers' names.

Following 1968 practice, one copy of the 1970 Directory will be mailed without charge to the chairman of each Section, Group, and Standing Committee. Additional copies may be purchased by IEEE units for administrative purposes at the IEEE member \$7 rate.

TOP-SIDE DEVELOPMENTS

PROFESSION IDEALLY OPEN TO ALL. BofD, August, approved this Resolution:



ELECTRICAL ENGINEERING® is published bi-monthly by IEEE, 345 East 47 Street, New York, N.Y. 10017

"The engineering profession has ideally been open to all, with opportunities for entrance and advancement limited only by ability and training. However, it is clear that educationally disadvantaged individuals and members of some minority groups have found it difficult to gain access to the profession. Therefore the IEEE Board of Directors will seek means to increase the opportunities for professional education for such individuals in the field of electrical and electronics engineering. The Board also asks all organizational units of the Institute to make widely known the opportunities for a rewarding career in our profession for any member of a minority group with education and ability. "

Since "Electrical Engineering" (E. E.) reaches most units of IEEE, it has been asked to transmit this Resolution as information and for guidance. BofD is seen to be desirous of correcting any anomolies which may exist, in the U.S. and elsewhere, in a way that will not patronize those who are assisted and will not compromise professional standards of excellence.

"WRITE-IN" VOTING. To give additional voice to individual voters' preferences, BofD in August adopted this new Bylaw: "312.10. Effective January 1, 1970, ballots for all Institute elections (including those for Section, Chapter, Subsection, Branch, Council, Region, Group and Institute offices) shall include and identify for each office in said election, space in which the voter may write the name of any person he desires to elect to that office. For such names to be counted in the election, each person so indicated shall meet such qualifications as may be specified for the office by the Constitution or Bylaws of the organizational unit conducting the election. The number of votes so cast for any such person shall have the same effect on the outcome of the election as the number of votes cast for any other candidate. The tally of such votes shall be included in the election report whenever the number of votes is

sufficient to affect the order of preference of the candidates for the office. When the election is conducted by a voice vote of those present at a meeting of the organizational unit, the voters present shall have the opportunity to submit qualified nominations from the floor prior to the vote."

INVESTMENT OF GROUP FUNDS. BofD in August approved modification of Bylaw 405.15, so as to read: "The officially constituted officers of a Group shall have the sole authority to obligate the funds and assets of the Group to promote the Group's activities, provided that no Group officer or representative shall have authority to contract debts for, pledge the credit of, or otherwise bind the Institute for activities prohibited by the Bylaws of the Institute, the Constitution and Bylaws of the Group, or by regulations published in the Technical Activities Manual. Returns from investment of Group funds shall be credited to the Group. "

ELECTIONS & APPOINTMENTS CALENDAR. (In Section and TAB Manuals, see Statements of Policy, page S.) Subject to ratification by 1970 BofD or Executive Committee (ExecCom) in January, chairmen of 1970 Standing Committees (Bylaw 304) have been notified of their selection by the August '69 BofD, and have recommended their slates of officers and committeemen.

ELECTION OF FELLOWS. At the suggestion of August BofD, President Willenbrock has formed a "blue-ribbon" panel to re-examine the nature of Fellow recognition in the broad context of IEEE, and the mechanisms employed in the conduct of this recognition function; and to make appropriate recommendations to BofD.

PRODUCTION OF PUBLICATIONS
ELECTRONICALLY. Under August BofD
Resolution, President Willenbrock has
been requested to appoint an ad hoc

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

committee of ExecCom on Electronic Production Methods. "While maintaining effective liaison with the Publications Board, the Publication Committee of the Technical Activities Board (TAB), the BofD's Electronic Printing ad hoc committee, and with senior members of the Institute staff," this ExecCom ad hoc committee "shall have as its objective the discovery, investigation, and encouragement of new electronic production methods appropriate to the composition, printing, and distribution of our technical journals and other publications."

IEEE STATEMENTS OF POLICY. Certain pages of that document are being reprinted to reflect changes since last printing. (See E.E. Aug., pp. 5, 6.) Revisions included but heretofore unreported in E.E. are:

#2-H (5)—IEEE Identification in Conference Titles: Whenever a conference is sponsored solely by an IEEE entity or entities, the conference title must include "IEEE" for identification purposes.

#7—Insurance. Under this head the coverage per accident has been raised to \$1,000,000, from \$750,000.

PUBLICATION NEWS

NEW EDUCATIVE SERVICE. Spectrum, (beginning Sept. '69, pp. 87-92), is to carry a "new product applications" section, having unique features: 1) It steers away from ad-writer's singsong about product characteristics. 2) It gives practical, how-to-use-it, application information. (Cf. BofD-directed change-ofcourse for Spectrum, E.E. Oct. '68, p. 1). 3) It is IEEE staff-written with members' needs in mind; the applications are picked objectively. 4) Photos and diagrams aid succinctness. 5) Only enough space is alloted the product itself to afford a general idea of its features. 6) Nevertheless the treatment is keyed to the now-familiar Reader Service Card addressed to IEEE, which invites the manufacturer to "shoot the works."

Worth an appraising glance.

EDUCATION NEWS

FIRST CASSETTE IS LAUNCHED. Harbinger of future audio complements of the printed page among IEEE "publications," IPL-69, on Industrial Programming Language, is now available at \$6 for IEEE members. (Flyer, Jack Kinn)

A creature of the IEEE Group on Industrial Electronics & Control Implementation (IECI), this release is an epitomization of the 1969 Convention Workshop on Computer Language for Process Control. The billing sums it up: "Now you can listen to the leaders in technological thought as they discuss the current status of their discipline." The panelists' presentations are electronically compressed in time; the Q-and-A part is recorded in normal time. Total, 80 minutes.

COMMITTEE NEWS

APPROVALS OF STANDARDS. To conform to recently-amended Bylaw 503, a change has been made in Bylaw 309.4 (4), para. 2, line 5, making TAB OpCom, rather than ExecCom, the body to which IEEE Standards will be submitted for publication authorization.

AMERICAN STANDARDS INSTITUTE (ASI) is the new name of former United States of America Standards Institute (USASI). References: E.E. Dec. '66, p. 5; Spectrum, Nov. '66, p. 114. (Particulars, John Anderson)

GROUP NEWS

"CLUSTERING" OF IEEE GROUPS.
ExecCom has recommended to BofD that Bylaws be adopted authorizing, without any increase in the present total number of 27 Directors, identification of 7 with technical activities, to be known as Technical Directors. August BofD, Ottawa, approved; ExecCom and TAB will draft the Bylaws.

IEEE Groups constituting TAB may be "clustered" to improve inter-Group capabilities. The clusters will nominate and elect Technical Directors after the manner of Regional Directors. The composition of the 1970 TAB OpCom, to bring it into accord with the "cluster" idea, may also be modified by Bylaw. See TAB green pages 4A-4F; watch Spectrum, Nov. '69. (For background, see E.E. June, pp. 2, 4H.)

CONFERENCE NEWS

MARCH 1970 CONVENTION. As in recent years, no call for papers will be made. Speakers are being chosen and presentations prepared to fit the educational purpose of each of about 60 sessions.

About 52 of the sessions are being built within 19 subject areas: 1) microwave circuits; 2) semiconductor devices & circuits; 3) optics, lasers, holography; 4) basic science & radioastronomy; 5) computer & computer applications; 6) communication & communication theory; 7) physical design, manufacturing technology & reliability. 8-11) people-oriented topics: 8) students; 9) education; 10) management; 11) biology & medicine. 12-15) socially oriented topics: 12) transportation; 13) traffic control; 14) space technology; 15) pollution. Also 16) control; 17) oceanography; 18) power; 19) circuit theory; 20) miscellaneous.

There will be the usual popular night Highlight Session; and, at the Coliseum, 7 or more technical-application (How To) sessions.

Don Larson, General Manager of the WESCON staff, has been engaged as professional consultant to review the IEEE International Convention & Exhibition, with the purpose of enhancing the value of the exhibits to IEEE members and to advise on planning and public relations coverage. (See Spectrum, Sept. '69, p. 115).

REGION NEWS

REGIONAL ACTIVITIES BOARD (RAB) has formed 5 committees: Finance,

D. C. Ports, chairman; Policy and Planning, R. G. Elliott; Member Services, H. P. Bruncke; Student Activities, H. R. Mimno; Technical Activities, R. P. Wellinger. These chairmen are developing scopes for RAB action in November.

BOUNDARIES BETWEEN REGIONS are established by BofD under Bylaw 401.1. Region 8 comprehends "Europe and certain portions of the Near East and Northern Africa."

Effective Jan. 1, 1970, new lines of demarcation will be drawn across Africa, in the Near East, and in U.S.S.R., between Regions 8 and 10. When the new boundaries have been fixed, report will appear in E.E. A map showing present Regional boundaries will be found in Section Manual, Part 8.

SECTION NEWS

SECTION CONSTITUTIONS. Sections abide by a standard IEEE Section Constitution and local Bylaws consistent with it. (Bylaws 402.5, 402.6.) The standard Constitution will be found in the Section Manual, Part 2.

RAB has recommended to BofD that the Section Constitution be eliminated as such, and that its provisions be put in the IEEE Bylaws. BofD has not yet acted. Section Bylaws would not be affected: thereafter they need be consistent only with the IEEE Constitution and Bylaws. (Cf. Section Manual, Part 1, Introduction, para. 2.)

FORUM FOR SECTION CHAIRMEN—YES!
The high-flying, precedent-breaking announcement in E.E. June, p. 7, that there would be no Forum at WESCON in August, encountered a barrage of ground flak. In a quick tactical "accomodation" to things-as-they-are, the Forum was scheduled and held, Vice President Granger presiding.

Attendance was not large but enthusiasm ran high in the hour-long Q-and-A period. President Willenbrock participated; Jack Kinn unfolded IEEE's Continuing Education program.

Dr. Granger brought news of the new RAB, its challenges and prospects.

RECOMMENDED NOMINEE FOR IEEE SERVICE

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

Before filling in, please read Guidelines on reverse side.

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The general qualifications for service to IEEE are not different from those in any position of responsibility and trust: competence, experience, willingness to take on the task, availability of time to participate, enthusiasm, and vigor. In the absence of such qualities, it is unwise to recommend a candidate merely as a reward for past service. In fact, if past service indicates that the candidate does not have the competence suitable to the task, he should not be proposed.

Competence implies knowledge and ability to serve creatively and actively, not merely passively. The responsibilities of the IEEE Directors and the tasks of the various Standing Committees and Boards are described in the IEEE Bylaws, and these should be consulted if the nominator is not certain of the tasks to be performed. Two types of competence are involved, technical and administrative. Few candidates possess both in equal measure, but every nominee should be strong in at least one of these, depending on the task he will be called on to perform. The technical tasks require knowledge of one or more engineering or scientific fields and the ability to make sound judgments. Administrative tasks involve the judgment of men and organizational operations, and the ability to develop appropriate Institute policies and objectives.

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

Willingness to serve is, of course, essential. There is no rule against a nominee being consulted by the nominator to ascertain this. However, since candidates are proposed from many sources, the Executive Committee and Board may have more candidates than there are open positions. When consulting nominees, therefore, it should be made clear that he cannot be assured of appointment.

Availability of time to participate is, usually, an important consideration in the candidate's willingness to serve. Committee service is so vital to the welfare of the Institute, that most industrial, academic and governmental organizations recognize its importance and the comparatively small time required (compared with the working year) can be justified. A perfect attendance record at Committee meetings is seldom achieved, even by the Chairman. Moreover, specially gifted Committee workers can contribute far more ideas and wisdom in a few meetings than does the less able member who makes attendance a fetish.

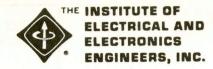
Enthusiasm, vigor and creativity are, we believe, among the most important considerations. One of the troubles experienced by all professional societies is the tendency to populate committees with senior statesmen who, however distinguished, are out of touch with present challenges and opportunities. Electrical and electronics engineering is a fast-moving profession, and the Institute needs a continual infusion of new ideas. Much of this must come from younger men, although chronological age is not necessarily an indicator of a youthful attitude of mind, nor of current involvement in the affairs of the profession.

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E. E. No. 25-4B

Technical Activities Board

A PLAN TO REORGANIZE THE STRUCTURE SUPPORTING IEEE TECHNICAL ACTIVITIES

One of IEEE's greatest strengths, the Group system, has also been a source of weakness. Years ago, the IRE and the AIEE each covered a very broad technical area, each had a single major publication and their conferences and meetings usually covered the entire field of electrical and electronic engineering. Today, we have 31 specialized Groups, every one with its own publication which now covers a specific narrow area of interest. It is almost inevitable with such a structure that there will be gaps between these areas of interest. Also, extensions of coverage may no longer have a single point of contact. To use an analogy, our original organizations covered the technical field in the way a large single piece of plywood would cover an area of ground. Enlargement of the area was readily possible by extension of the periphery of the board. Today, we have cut our board into 31 planks, and there are gaps between the planks. In addition, the peripheral planks have no greater responsibility for extending coverage than any of the others.

The continued vitality of IEEE, and its usefulness to its members as the best professional engineering society, depends on adaptation to change and on incorporation of new technologies and new engineering occupations into the technical structure. Since the Group system, as originally set up, had certain weaknesses pointed out above, it is essential that, in an improved technical organization, something be done to overcome this weakness without interfering with the strengths.

In the proposed "clustering" of a number of Groups into a single division, there is now a potential that these divisions can view their area of interest more broadly than that of the component Groups comprising them. For this reason, one of the very important responsibilities of the elected director representing each division is to see to it that the Groups in his division overlap as much as possible in technical interest, so as not to leave unfilled gaps. This will be easier to do in a cluster of a half dozen related Groups than it has been with 31 independent ones.

A second safeguard, which has been put into the proposed structuring, is designation of a single individual (presumably a Director, or the Vice Chairman of TAB) who is given primary responsibility for attention to new and interdisciplinary technologies. This director is to be given the financial resources, the editorial and staff support, and the conference organization responsibilities, sufficient to achieve the goal of IEEE involvement. At the same time, he will be asked to coordinate and oversee existing interdisciplinary activities which cover more than one cluster or division. This administrator must also advise on such actions on new technology within clusters or divisions which are necessary for the best interest of IEEE as a whole.

As another responsibility for this "new technology" administrator, the proposed technical organization suggests that he improve technical services for many IEEE members who are not affiliated with any Group. For example, there are many professionally active non-Group members who are either exceptionally broad in their technical interests, or who are involved in technologies which are not covered in any of our present 31 Groups. These people are, today, not well taken care of by the present Group structure. Under the proposed improvement, support for publications, conferences, and related technical services will be made available.

Also envisioned in the improved technical organization is enhanced potential for affiliating or merging with already established outside professional societies which are pertinent to IEEE interests. We have all seen formation of new societies because they failed initially to get support or encouragement from IEEE; many of them, today, can clearly be seen to include professional activities in which our members are now, or eventually will be, strongly involved.

Although the continued life of a professional society primarily depends on the birth of new technologies, the system as a whole must also be

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able to dispose of dead or dying engineering topics. There has been a tendency in most professional organizations to continue publications, conferences, etc. long after they have begun to lose pertinence and effectiveness. Under the proposed organization, the Executive Committee of TAB, and its individual members, must take responsibility for proper sick-bed nursing, and also for disposal of remains of dying or dead subject matter. Because each such case will probably be unique, the methods to be employed cannot be described in general terms. Each individual member of IEEE, however, must recognize that one of the services his professional society should provide him is the recognition of an end to a road, and a guide to a new road toward progress.

TAB TECHNICAL PLANNING COMMITTEE

During 1969, the Technical Activities Board appointed a Technical Planning Committee, which was given responsibility for new technologies, i.e., those which properly belong within IEEE, but might be overlooked by our present 31 specific technical Groups. The new Committee, under TAB's Vice Chairman, Edward W. Herold, includes John R. Whinnery, Hubert Heffner, David M. Hodgin, Ralph E. Armington, and William O. Fleckenstein. Two meetings have now been held, with objectives a) to identify the most important new technologies, b) to act on those in which delay is inadvisable, and c) to propose a permanent and effective mechanism by which IEEE will exercise continuous leadership in new subject matter. The word "new" in this context is intended to include both the scientifically new, and that which is new to IEEE, but might have a substantial past history.

Among the topics considered were the following:

Computer Aided Design Cable TV Electric Printing Holography and Electro-Optical Systems Plasmas and MHD Oceanography Acoustic Waves and Filtering Manufacturing Technology Cryogenics Applied Mathematics History of Electrical Engineering Social Systems (transportation, education, pollution, crime detection, date networks, urban planning, hospital systems)

E. E. NO. 25 - 4D

In several of these, activity was already underway before the Committee was formed. For Cable TV and for Electric Printing, two Ad Hoc Committees were formed to undertake specific publication and conference actions and to recommend a permanent home for the technology in the IEEE structure.

The most important action of the Technical Planning Committee was to cooperate with TAB to see that the future technical organization of the IEEE would be flexible enough, alert enough, and resourceful enough to absorb new technologies. Language has been put in the general principles of organization of the Group structure, and detailed responsibility is to be developed, whereby it becomes possible for IEEE to remain the leading professional society in electrical and electronic fields. Whether it actually does will depend on the enthusiasm and participation of present members in adapting to change.

In many cases, responsibility for action ultimately lies within the Group. IEEE Groups are expected to energetically and actively alter and/or enlarge their technical sphere of influence as conditions change. However, it is quite common in talking to Group administrators about a new field to get a reaction such as "we're watching this new field with interest", or "we're already saturated with more material than we can handle---let's not expand even more", or "this belongs in IEEE but not with us", or "we're actively pursuing the subject" (when in fact, little or no activity exists). These reactions are hardly conductive to attracting new members who work in a new field, and show far too much love of the status quo. In summary, the Technical Planning Committee urges Group members to take a broad view of their technology and, when appropriate, to stretch or change their definitions of scope so that IEEE can best serve the engineer and his future welfare.

Notes on the Forum were mailed Section chairmen in September. (Copy, Emily Sirjane)

The vitality of "The Forum" on the West Coast, as well as at the March Convention, seems to have been well tested by the device of trying to skip one.

MORE INTERNAL COMMUNICATION? Comment on possible use, by Sections, of cassettes in the training of new officers and committeemen was invited by Jack Kinn in E. E. Aug., pp. 4,5.

President-nominee Granger has suggested to BofD that tape cassettes be used to bring information to Sections, as an extension of the written word in E. E. Comment on this idea should be sent to Dr. Granger at IEEE, copy to the appropriate Regional Director.

How do you visualize play-back? By public address system at regular meetings of the Section or Chapters? Around the table for discussion at Section Executive Committee meetings? At meetings of other committees of the Section or Chapters? At meetings of Regional committees? For individual play-back by a Section officer, commettee chairman, other interested Section member?

Content of cassette recordings has to be adapted to the auditors and befit the medium of transmission. Fear not that it would be a mouthing of E.E.

Here is a chance to contribute ideas, at an initial stage, for enlarging the number of IEEE members who know what goes on currently in the broader eschelons of their society. Ordinarily, E.E. reaches only officers of the Sections, Subsections, Chapters, and Student Branches.

SCHOLARSHIPS OVERSEAS. ExecCom in June was pleased to approve request of United Kingdom and Republic of Ireland Section (UKRI) to contribute Stlg-300 of the Section surplus as a travel and research scholarship for a postgraduate Student. (Policy Statement #11-D, q. v., governs such requests.)

FIRE-EXTINGUISHING SYSTEMS for electrical fires. The National Fire

E.E. No. 25-5

Protection Association (NFPA), 60 Batterymarch St., Boston, Mass. 02110, attention James M. Hammack, offers IEEE units in U. S. a speaker for "any convention where 50 or more people are present." "Nothing to sell but fire and life safety. "

IEEE is represented on 4 electrical committees of NFPA; see Organization Roster, p. 79.

BYLAWS OF CHAPTERS. Q. - Do Chapters need to prepare Bylaws? A. - Chapters wishing to do so may prepare Bylaws; they require approval of the Section Executive Committee, only.

SECTION STUDENT ACTIVITIES COM-MITTEE MANUAL is being added to the list of Manuals prepared for Section use. Drafted by the former Sections Committee, reviewed by RAB and approved for release, it is now being edited for printing and mailing. It stresses the important relationships of Sections to Student and Student Branches (all classes) in Section territory. (Copy, Emily Sirjane)

STUDENT NEWS

STUDENT ASSOCIATE MEMBERS & BRANCHES. Bylaw 105.6 (b) requires a Student Associate member to be registered in "an institutional course of study related to IEEE fields of interest." Q. - How is the existence of the required relationship determined? A. - In Regions 1 to 6 (U.S.) by Engineers' Council for Professional Development (ECPD) certification of the school's curricula in Engineering Technology, whatever their objectives and specific content. Schools and curricula are listed in the Annual Reports of ECPD. IEEE staff (Bob Loftus) is prepared to furnish up-to-date information on accred-

Q. - Under Bylaw 407.4, may 10 or more enrolled Student Associates form a Student Associate Branch? A. - They may start the petition, but an IEEEmember Counselor (Bylaw 407.1) has

to join with them, and approval of both the Regional Director and IEEE ExecComis needed. ExecCom doesn't approve if the EPCD engineering Technology certification has lapsed, nor, perhaps, if there is no curriculum coinciding with an IEEE field of interest, nor if the Regional Director has not recommended.

"FOR YOUR INFORMATION"

NEW HOLIDAY SCHEDULE, U.S. In scheduling a conference or committee meeting, or even in making a long distance phone call, it is frustrating or worse to run into an unsuspected holiday. Beware, then, 1970 and thereafter in the U.S., where the "Holidayson-Monday" movement has been approved by 36 states and is pending in all but 2 of the remaining 14.

By next issue, E.E. may be able to give the headquarters holiday schedule for 1970. Meantime, here are the 1970 dates the states, including New York, are affirming: New Year's, Thurs, Jan. 1; Washington's Birthday, Feb. 16 (3rd Mon. vice 22); Good Friday, Mar. 27; Memorial Day, May 25 (last Mon., vice 30); Sat., 4th of July; Labor Day, Sept. 7 (first Mon.); Columbus, Oct. 12 (2nd Mon.); Veterans, Oct. 26 (4th Mon. Oct., vice Nov. 11); Election, Nov. 3 (Tues. after 1st Mon.); Thanksgiving, Nov. 26 (4th Thurs.); Christmas, Fri., Dec. 25. (Underlines denote new formula.)

MORE ON IEEE COMPUTER. (See E.E. Aug., pp. 4A-4D, 6; E.E. Feb. '68, p. 2.) Originally programmed in COBOL (Common Business-Oriented Language), capabilities were expanded to include BAL routine (Basic Assembley Language). Running time required for selections and printouts created problems; they have now been minimized.

A reader asks: "Why 'Third Generation'?" A. — That is computer patois for this age of integrated electronic circuitry, and has no reference to IEEE's predecessor equipment. For explicit information on the three generations (1950-57, 1958-63, 1964 to now) see N. Nisenoff, PRODEEDINGS, IEEE, vol. 54, Dec., '66, pp. 1820-35.

INSTITUTE ANNUAL REPORTS, 1968, were printed in June '69 Spectrum, pp. 85-98. To anyone interested in viewing IEEE as a whole, this is the best single source of information about our 160,000-member, \$7,000,000-a-year operation.

New readers will find in current issues of E.E. and Spectrum what amounts to an extrapolation of 1968 experience. Save 12 back issues of Spectrum and 6 of E.E. at all times for easy reference. We do constantly print references to them.

IEEE NECKTIES FOR MEMBERS. Spectrum, Feb. '69, p. 99, pictured, and E.E. Feb., p. 7, described, men's four-in-hand (slipknot) neckties, originated and first worn by members of UKRI Section, and now available for direct purchase from England by any U.S. member for \$4, personal check. The IEEE symbol is in the weave.

Christmas is coming. The test of affluence in e/e-engrg is to induce your wife, unbeknown to you, to send her check for \$20, for a rainbow of 5 ties: maroon, navy blue, green, gray, black. Why settle for less?

Write: IEEE, County Secretarial Services, 8 The Flower Walk, Guilford, Surrey, England, for flyer with description, illustrations, order blank.

WELCOME ABOARD!

Eastern Canada Council, Region 7. Sections included: Canadian Atlantic, Montreal, Ottawa, Quebec, St. Maurice.

New Group Chapters in Sections
Section Chapter

Joint:

Cincinnati)
Dayton

Vehicular Technology

Toronto Industry & General Applications

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