

**Report to the Board of Directors
of the Special Committee for
Organization and Policy
Study**

The Special Committee for Organization and Policy Study was authorized by the AIEE Board of Directors on February 3, 1961 in response to a lucid presentation of society problems by Past President Clarence Linder. It was appointed by President Warren Chase on September 11, and reconfirmed by the Board at its meeting October 20, 1961. It met in AIEE Headquarters on October 13, November 10, and December 1, 1961 and conducted extensive correspondence between meetings and subsequent to the last meeting.

The charge to the committee as presented by Past President Clarence Linder and approved by the Board of Directors of AIEE was as follows:

"To restate and define the Institute's objectives in detail in the light of limitations and opportunities presented by its environment; to evaluate present policies and program in relation to these objectives; and to propose a set of policy statements in detail designed for testing programs and activities for their orientation with respect to these objectives of the Institute."

In discussion, the committee members agreed unanimously that present AIEE activities did not do justice to the scope and objectives stated in the constitution. Inasmuch as previous reports had apparently not fully faced the real issues from the broad point of view of the profession, it was agreed to concentrate at once upon three and only three basic questions, namely:

1. What are the realistic and realizable objectives of AIEE as a professional society; what are its resulting functions?
2. How can the necessary flexibility be provided to permit rapid ingestion of new areas and ready adaptation to new environment?
3. What are the current and future areas of science and technology or foci of topical interest which ideally lie within the framework of AIEE?

2.9.92

The replies to the first two questions are given below in final form after proceeding through several draft stages and arriving at unanimous agreement as to form and substance.

Consideration of the third question took on special significance in view of the discussions of merger between AIEE and IRE which had been initiated by the passing of identical resolutions by the two Boards to agree to exploration in principle. Without hesitation and with emphasis, the committee agreed unanimously that a merger of the two societies would be in the best interests of the profession.

Viewing as the major problem the weaving together of the technical committee structure of the AIEE and of the professional group system of the IRE, the committee decided to substitute for the third question the urgently important "Technical Structure of the New Society."

The discussion then compared the present AIEE structure, particularly the organization of TOD reporting directly to the Board of Directors; the present IRE structure, particularly the parallel Professional Groups Committee and the Standards Committee, both of which report to the IRE Executive Committee of the Board of Directors; and the projected technical structure of the new society in which a professional-technical group coordinating body would report to the Executive Committee of the Board of Directors, and in which the individual professional-technical groups would appoint technical standards committees reporting to a separate standards committee, which in turn would also report to the Executive Committee of the Board of Directors.

It was agreed that the projected technical structure of the new society combined desirable elements of AIEE and IRE and that the key to successful operation lay in the acceptance of a framework of about twenty to thirty professional-technical groups, each with its own autonomous transaction publication, and with the possibility to permit subgroups or divisions within the accepted groups in order to allow wider management participation by interested members without further increase in the number of separate transactions.

The committee then set about to evolve a system of professional-technical groups based upon "community of interest." The result is the appended "Proposed Grouping of Technical Committees (AIEE) and Professional Groups (IRE) Within Six Broad Areas," achieving a total of 24 professional-technical groups of reasonable compatibilities. The grouping

into six broad areas was considered helpful and suggestive of a possible divisional structure but not mandatory. It must be realized that this grouping can only be taken as demonstrating a feasibility and must not be considered as a final proposal in any sense whatsoever.

Respectfully submitted

Pier A. Abetti
Harold Chestnut
Seymour W. Herwald
Gerhard L. Hollander
Morris D. Hooven
John G. Trump
Ernst Weber, Chairman

January 26, 1962

Question 1: What are the realistic and realizable objectives of AIEE as professional society, what are its resulting functions?

Statement:

Objectives

1. To provide for the effective interchange of technical information between qualified members in the field of electrical engineering and allied subjects at local, intermediate, and national levels.
2. To provide opportunities for broadening and deepening the intellectual and engineering competence of its membership.
3. To hold the interest of the qualified member from his entry (preferably as a student) through his entire career.
4. To facilitate the voluntary participation of qualified members in promoting the purposes of the society and in cooperating with other technical societies at all levels.

A professional society of the type of AIEE is a voluntary association and therefore must impress with its dynamic nature and its obvious service in order to attract continuously members qualified to contribute substantially to its growth in stature.

To achieve these goals, a society must provide attractive and effective communication channels between the members through meetings and publications. It must properly disseminate professionally interesting information, and must offer tutorial material in new areas of science and technology. As a voluntary organization of professional people, the society must give abundant opportunities for the participation of its members in all its activities, locally as well as nationally.

In national meetings, new developments should be viewed receptively and new interest groups should often receive favoured places in the program. Assistance should be given to local meetings by the circulation of outstanding speakers and by the presentation of selected papers heard at national meetings.

The publication policy should provide a general journal of broad interest and a number of transactions in special technical areas with delegation of control to the groups most interested in these areas. The general journal, in addition to bringing informational matter about the society, the profession, and science and technology in general, should also fulfill an educational mission through tutorial papers to assist the members in keeping up to date with new developments. The specialized transactions should be the leading publications in their specific areas, attracting the very best contributions from the members rather than let these be offered elsewhere.

To provide maximum participation by members in the society activities, organization into committees or special groups must be kept flexible and responsive to membership wishes. Because of the voluntary nature of all membership services, considerable freedom must prevail as to types of meetings, of committee activities, requirements for publications. "Most members are concerned with the technical aspects; some join to keep abreast of developments through publications; some like socializing on a professional level; others seek the advancement of the engineering profession. It is not essential that all members take part in every activity. It is, however, very important for each member to recognize and utilize the opportunities for collective effort to which he is entitled by virtue of his membership in the Institute."*

*Hickernell, L.F. "The Institute and Its Operations, II, Electrical Engineering, July 1959

1/26/62

Question 2: How can the necessary flexibility be provided to permit rapid ingestion of new areas and ready adaptation to new environment?

Statement:

One of the most important factors is a clear separation of the policy-forming function and the active administration of society activities within the approved policy. It is therefore recommended that at the Board level, the Executive Committee approach be greatly strengthened. The Executive Committee should meet frequently and be empowered to act and render decisions subject to subsequent report to and approval by the Board; the Board should meet less frequently and concern itself primarily with matters of policy and long range Institute planning.

As a concomitant of the separation of policy-forming and of operation, the execution and administration of the policies formulated by the Board should be supervised by an efficient manager, reporting to the Executive Committee and supported by an alert and responsive headquarters staff.

To assist in the rapid incorporation of new areas with ready adaptation to new environment, a committee such as the New Activity Committee must be on continuous search for developing technical areas and must advise on changes in environment. This committee should evaluate new developments, stimulate new committees or groups.

In addition, there should be a review at suitable intervals of the grouping and activities of technical committees and special groups to provide critical evaluations of their scientific contributions and their membership service and to make recommendations for changes and possible discontinuance of activities which have lost their original significance.

One of the most important factors is a clear separation of the policy-forming function and the active administration of society activities within the approved policy. It is therefore recommended that at the Board level, the Executive Committee approach be greatly strengthened. The Executive Committee should meet frequently and be empowered to act and render decisions subject to subsequent report to and approval by the Board; the Board should meet less frequently and concern itself primarily with matters of policy and long range Institute planning.

An important factor in the operation of Institute activities would be the rapid expansion of the appropriate technical committees into Institute Technical Groups with a considerable degree of autonomy in management. Each ITG should have authority to project the publications of transactions with its own review procedure and financial management, even though, for legal purposes, all funds be handled centrally with individual accounts for each group.

The existence of the ITGs with management or administrative committees would permit the demonstration of genuine leadership qualities by many younger members of the Institute. The proven leaders of ITGs could well be considered desirable nominees for service on the Board, thus injecting active technical talent into the executive body of the Institute.

To assist in the rapid incorporation of new areas with ready adaptation to new environment, a committee such as the New Activity Committee must be on continuous search for developing technical areas and must advise on changes in environment. This committee should evaluate new developments, stimulate new committees or groups.

Question 2: How can the necessary flexibility be provided to permit rapid ingestion of new areas and ready adaptation to new environment?

In addition, there should be a review at suitable intervals of the grouping and activities of technical committees and special groups to provide critical evaluations of their scientific contributions and their membership service and to make recommendations for changes and possible discontinuance of activities which have lost their original significance.

1/26/62

POSSIBLE GROUPING OF TECHNICAL COMMITTEES
(or corresponding Institute Technical Groups) of AIEE and Professional Groups
of IRE into "Professional-Technical Groups" within six broad areas:

<u>"Professional-Technical Group"</u>	<u>Technical Committees AIEE (1)</u>	<u>Professional Groups IRE</u>
<u>A. COMMUNICATIONS</u>		
Antennas and Propagation		G-3 Antennas and Propagation
Broadcasting	<i>Broadcasting Com.</i>	G-1 Audio G-2 Broadcasting G-8 Broadcast and TV Receivers
Communication Theory	9c Communication Theory	G-4 Circuit Theory G-12 Information Theory
Microwave Theory and Techniques		G-17 Microwave Theory and Techniques
Radio Communication Systems	9b Communication Switching 9e Mobile Radio (Subc.) <i>Radio Communications Systems</i>	G-19 Communication Systems G-6 Vehicular Communication G-27 Radio Frequency Interference
Wire Communications	9g Telegraph 9h Wire Communication Systems	

(1) For code designation see list at end of Tabulation.

"Professional-Technical
Group"

Technical Committees
AIEE

Professional Groups
IRE

B. ELECTRONIC SYSTEMS

Military Electronics

Aerospace Electronics

Electronic Computers

9e Military Radio (Subc.)

10a Aerospace Transportation

9f Space Communications

12h Telemetering

12a Aerospace Instrumentation

14b Computing Devices

9d Data Communications

G-24 Military Electronics

G-10 Space Electronics
and Telemetry

G-11 Aerospace and
Navigational
Electronics

G-16 Electronic Computers

C. POWER

Electric Power Generation

Electric Power Systems

Electric Substations

13b Power Generation

13f Rotating Machinery

13i Transmission and Distribution

13i Systems Engineering

13d Protective Devices

13e Relays

13a Insulated Conductors

13g Substation

13h Switchgear

13j Transformers

"Professional-Technical
Group"

Technical Committees
AIEE

Professional Groups
IRE

D. INDUSTRIAL POWER AND CONTROL

Electric Power in Industry

11a Chemical Industry
11e General Industry Applications
11i Machine Tool Industry
11j Metal Industry
11k Mining Industry
11l Petroleum Industry
11m Rubber and Plastics Industry
11n Textile Industry
11o Cement Industry
10c Land Transportation
10d Marine Transportation

Industrial Applications of
Electricity

11b Electric Heating
11e Electric Welding
11f Industrial and Commercial
Power Systems
11h Industrial Power Rectifiers
10e Production and Application
of Light
14e Electronics Application

G-13 Industrial
Electronics
G-20 Ultrasonics
Engineering

Automatic Control

11g Industrial Control
11d Feedback Control
12f Recording and Controlling
Instrumentation
f4 Man-Machine Integration

G-23 Automatic Control
G-28 Human Factors in
Electronics

**"Professional-Technical
Group"**

Instrumentation

Production

**Technical Committees
AIEE**

12b Electronic & High
Frequency Instruments
12c Fundamental Electrical
Standards
12d Indicating & Integrating
Instruments
12g Special Instrumentation &
Auxiliary Apparatus

**Professional Groups
IRE**

G-9 Instrumentation

G-7 Reliability and
Quality Control
G-22 Product Engineering
and Production

E. SCIENCE, ENERGY AND MATERIALS

Basic Sciences and Materials

Electron Devices

Components

Nuclear Science

f7 Research
14a Basic Sciences
14e Electronics per se
14c Electrical Insulation

14k Electronic Tubes
14i Solid State Devices
14h Semiconductor Rectifiers

14e Electronic Transformers
14f Magnetic Amplifiers

14g Nucleonics
12e Nuclear Instrumentation
F5 Nuclear Congress

G-15 Electron Devices

G-21 Component Parts

G-5 Nuclear Science

"Professional-Technical
Group"

Biomedical Electronics

Technical Committees
AIEE

14d Electrical Techniques in
Medicine and Biology
f7a Safety

Professional Groups
IRE

G-18 Biomedical
Electronics

F. EDUCATION AND MANAGEMENT

Electrical Engineering Education

G-25 Education

Engineering Management

d7 Management
f7 Research

G-14 Engineering
Management
G-26 Engineering Writing
and Speech

Code Designation of AIEE Divisions:

- 9 Communications
- 10 General Applications
- 11 Industry
- 12 Instrumentation
- 13 Power
- 14 Science and Electronics

f, F refer to general committees in TOD, d refers to committee in
Professional Development and Recognition Department.