

IEEE TECHNICAL ACTIVITIES, MEETINGS, PAPERS, ORGANIZATION

Suggestions from TOD to the Board of Directors

- 1) Letter from Director TOD to President AIEE 5/29/62
- 2) Notes from Denver Conferences Power and Electronic Division

Dear President Chase:

In matters having to do with the organization of AIEE's technical activities into committees, sub-committees and Divisions; with the procurement and content of technical papers; with the organizing of papers into sessions; with the disposition of papers among available publications, the Technical Operations Department (TOD) feels an obligation to speak in behalf of the thousands of AIEE members who, in the event of favorable voting, may automatically become members of IEEE next January.

Perhaps the majority of some 22,600 (40%) of our members statistically may be expected to make a direct technical-financial alliance with a similar majority of the members of IRE who now belong to one or more Professional Groups: these are our members who for the most part are interested in sessions and publications fostered by our Communication and Science & Electronics Divisions and most of our Instrumentation Division. Another group of approximately 33,900 (60%) of our members will find no counterparts in the IRE organization to swell their ranks or add importantly to their experience in obtaining, presenting, and publishing technical papers: these are the members who constitute our Power and Industry Divisions and much of our General Applications Division. (It is convenient, though somewhat inaccurate, hereafter to refer to these two large groups respectively as Electronics, and Power, membership and interests. The 40/60 apportionment between them is based on a 1960 survey of primary and secondary interests.)

The Transactions, our permanent record, discloses how these proportionate interests are reflected in pages printed (1960):

Electronics: "Communication and Electronics" (C&E) Bimonthly;
"Transactions, Vol. I," 846 pages, 31%

Power: "Power Apparatus and Systems" (Power), "Applications
and Industry" (A&I) Bimonthlies; "Transactions, Vols. II,
III," 1,889 pages, 69%

As these broad groups of members move into the IEEE consolidation, TOD conceives it has a duty to plan so that, in the establishment of the proposed Professional Technical Groups, the Electronics category of presently functioning AIEE technical committees and the members they serve are not merely swallowed up as members into a going IRE Professional Group organization, but that joint arrangements contemplate the continuing service of their officers; the continuing organizational contributions by their constituted committees (TCs) and subcommittees (S/Cs), and, if merited, by their Divisional structure; and the continuing functioning of AIEE and AIEE-IRE STCs and joint conferences.

As for the Power category, TOD conceives its responsibility to include the eventual adoption of appropriate measures in IEEE which will attempt to assure members a papers-and-publication program adequate by standards evolved in AIEE over a long period of years.

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TOD believes that most of the "Principles of Consolidation," reached by the Boards of Directors protect the interests of both the Electronic and Power portions of the AIEE membership in the respect mentioned. It finds, however, that many members acquainted with organizational and publication matters question certain of the Principles and feel that, as now stated, they will require modification, as a practical matter, even though they have been included among all the principles comprehended in the voting.

Accordingly, the Administrative Committee of TOD unanimously went on record at its meeting on April 25, 1962, requesting the AIEE Board of Directors to recommend the following considered opinions to the Fourteen-Man Committee when formed and to the IEEE's first Board of Directors.

I. ORGANIZATION

1. (Principles, VI b, c.) TOD agrees that any AIEE Institute Technical Group (ITG) established before the close of 1962 might well become a Professional Technical Group (PTG) on January 1, 1963, in the event of merger; and that consolidation with or redefinition of areas of interest in relation to existing or reconstituted PGs might well take place.
2. (Principles, VI f. 1) TOD sees great benefit, where parallel PTGs of IEEE and TCs of the previous AIEE structure exist, for them to consider combining any or all their functions, and would expect many of the TCs, especially in the Communication, Science and Electronics, and Instrumentation Divisions so to combine by choice in all functions except standardization.

We envision an exception being made of standardization because the experiences of AIEE and IRE seem to coincide that this subject has been found to be best pursued as a separate activity under a Standards Committee as a standing committee, with appointed delegates en liaison from the TCs and PTGs.

3. (Principles, VI f. 2) TOD is in agreement with this Principle of establishing new PTGs and broadening the areas of interest of others, and would expect many of AIEE's TCs, particularly those presently active in science, electronics, communication, and instrumentation, to participate in these changes.
4. (Principles, VI f. 4) TOD seriously questions the wisdom of making a statement of policy at this time that "Wherever possible, PTGs shall replace TCs in all functions except standardization."

TOD has no apprehensions that the activities of PTGs and TCs will not be pursued adequately under merger by an evolving organization; but it is concerned lest this specific, pre-merger statement of principle, in an area of importance and delicacy, tend to solidify matters which ought to be left fluid.

It is captious to point to the phrase "wherever possible" as a saving clause in the present version of the Principle, because in matters of organization, changes are always possible, however unwieldy, impracticable, uneconomic, or unsatisfactory to a major segment of the membership, they may be.

We think, therefore, that this Principle, that "PTGs shall replace TCs in all functions except standardization," should be revised to express what we believe was the real intent: "Depending upon the desires of the directly-concerned IEEE members, PTGs or TCs shall be responsible for all appropriate functions."

TCs and PGs (or PTGs) are alike in these respects: A guiding committee ranges its field of technical interests, gathering papers offered, or having invited papers prepared; arranging for the review, acceptance, rejection, or referral of papers; scheduling sessions at regular Institute meetings or holding sole or joint Special Technical Conferences (STCs or symposia); editing the papers for reproduction (offset and/or type-set); dictating or controlling the distribution of papers in collaboration with the Publications Department and the headquarters subscription and service organization; organizing the committee into appointive, functional subcommittees; encouraging the establishment, by Sections, of discussion groups (AIEE TDGs and IRE PG Chapters) properly coordinated and financed.

TCs and PGs are unlike in these respects: PG officers are elected, TC officers appointed. PG membership is enrolled for a fee and runs into large numbers, for which a specialized publication is furnished; TC membership is limited in numbers and contributes its allotment of papers to a more comprehensive publication sold to subscribers. PGs are given control of funds and are subsidized in part by headquarters; TCs handle no funds and operate within a page-allotment publication budget. PGs do not participate in standardization; TCs do. PGs cover the radio/electronics field with 29 PGs; TCs cover a similar field, less thoroughly with regard to radio communication, more thoroughly with regard to wire communication, with 33 TCs; and power and its applications with 37 more TCs. PGs publish 29 periodicals; TCs, three.

Thus, it is seen that PGs and TCs are substantially the same as to their activities, widely different as to their organizations and direct operating responsibilities.

TCs have a decided advantage over PGs in that they can cover technical activities in relatively narrower fields which, though small, are still very important. TCs enable the Institute to get started in new technical fields rather easily and promptly. These new fields, because of their newness, have small member interest at the start but hold tremendous possibilities for future growth.

5. (Principles, VI f., f. 3) TOD notes the intent to establish a Technical Operating Committee (TOC) in IEEE, to coordinate "the complete TOD structure of AIEE and the complete Technical Committee structure" (i.e., the standardization operation) of IRE. Initially, this TOC would encompass the full spectrum of activity of TOD, but gradually (under Principle VI f. 4) all its functions except standardization would disappear.

Under (4), above, we have already counselled against assuming, in the initial stages of consolidation, that the papers-sessions-conferences functions of the AIEE Power segment in TOC ought eventually to disappear.

But we consider the proposed initial parallel set-up of PTGs by Divisions (vide Principles, VII b.) and of TOD's "complete TC structure" (VII f.) which is organized by Divisions, to introduce needless delays and difficulties of intercommunication. Refer to Figure 1, which shows this parallel organization in simple form. At a crucial time, when "communication" between the membership and operational elements of IEEE should be closest, we find them taking a route of circumlocution through two spectrum-spread committees coordinated by the Executive Committee (a third spectrum-wide committee) of the Board of Directors. This implies detached masterminding by top-side manipulators, rather than desirable decision making by the large number of directly affected working committees grouped by technical interests on the down-to-roots level. These TCs and PTGs could only with great strain on credulity come to meetings of the mind while they remained sensitive to separate aloof managerial directions from above.

In contrast, TOD advocates the set-up of Figure 2, which was presented by TOD to the AIEE BofD and by it recommended to AIEE representatives on the Eight-Man Committee. We still think its featuring of direct communication among the working groups of PTG and TOD by functions is vital to smooth transition as the IEEE organization evolves. Here the single detached managerial function also would strive for complete coverage of, and correct balance in, the entire IEEE spectrum-of-interest but would specialize in the papers-sessions-conference-standards field (whereas the Executive Committee takes over-all responsibility for it only as one of several fields.) Below TOD (or its otherwise-named equivalent in IEEE), responsibility would be immediately fanned out into Divisions according to technical function. TOD has no objection to the prospect of recasting of Divisions (named as "possibilities" in Principle VI b. and shown in Figure 2) according to need. Here, really knowledgeable experts would hold meetings with and guide their constituent PTGs and TCs so that the latter would arrive at wise decisions how to reorganize or combine in the best manner - and this implies different manners - to serve the specialized technical interests of all the members of IEEE. We see no insuperable questions of finances or autonomy affecting the PTGs which would be introduced by the imposition of a sympathetic and knowledgeable Divisional structure between the PTGs and TOD (that is, between IRE's present PGs and the PG Committee).

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II. PUBLICATIONS

We favor the publications program for the IEEE which was proposed by the AIEE Publications Department in its communication of March 1, 1962, addressed to the AIEE representatives on the AIEE/IRE Merger Committee, with the exception so designated noted below.

Briefly, the recommendations in the report provide for the following publications:

1. A monthly magazine "ELECTRICAL ENGINEERING" containing articles of general technical interest which should be distributed to all members and student members. It should contain advertising.

Comment: This concurs with Principles of Consolidation.

2. The TRANSACTIONS papers of the Institute, to be published in three separate periodicals called TRANSACTIONS ON _____. These periodicals would encompass the entire electrical and electronics engineering field under the classifications of: Communication and Electronics; Power Engineering; Electrical Engineering (General). The papers of the various Technical Divisions or Professional Technical Groups would be grouped into the most applicable periodical.

To make certain that only the highest quality papers appear in these TRANSACTIONS periodicals, uniform and mandatory regulations for review and evaluation procedures for accepting such papers should be established. In addition, these periodicals should contain industry and Institute news items. The frequency of publication would be dependent on activities, finances, advertising potential, etc. The publications should contain advertising. Each member (except student members) would be entitled to receive free one periodical, others by subscription.

Comment: The TRANSACTIONS ON _____ periodicals would replace the Principles of Consolidation proposal to issue one monthly PROCEEDINGS magazine for all fields of technical interest and for distribution to all members.

EXCEPTION: The draft of the Publications Department report dated February 23, 1962, later modified, called for each Technical Division to publish its own TRANSACTION papers in a separate magazine called DIVISION.TRANSACTIONS ON _____, assuming the volume justified. TOD agrees with the draft version. It feels it is desirable for each Division to have its own publication rather than combining Division publications as proposed above.

3. Each Professional Technical Group should be free to issue its own Professional Technical Group PROCEEDINGS ON _____, provided it can be published on a technically and financially sound basis. The Professional Technical Group Proceedings should not contain advertising.

Comment: The Principles of Consolidation state that the Professional Technical Groups should issue TRANSACTIONS type publications. It is our recommendation that the periodicals TRANSACTIONS ON _____ not be the prime publication of these groups. However, they would contribute to the TRANSACTIONS ON _____ publications covered in recommendation #2 above. The Professional Technical Groups should be free to issue less formal publications named the PROFESSIONAL TECHNICAL GROUP PROCEEDINGS ON _____. These PROCEEDINGS should be under the control of the professional groups in that they would publish what they want when they want it.

4. The ANNUAL TRANSACTIONS OF IEEE or the permanent record of the Institute should be a society-wide publication made up of a compilation of the periodicals TRANSACTIONS ON _____. The ANNUAL TRANSACTIONS should contain only TRANSACTIONS papers and no advertising.

Comment: The Principles of Consolidation indicate that the Professional Technical Groups should publish TRANSACTIONS. No mention is made as to the form of the permanent record of the Institute.

5. Two Student Publications should be issued: One publication for Student Member use - the IEEE STUDENT JOURNAL, issued quarterly. The second, a tabloid publication called the IEEE DIGEST to be distributed free to both member and non-member students in order to promote IEEE among high school and college level students. The reproduction of this DIGEST material in non-AIEE media should be encouraged.

Comment: The Principles of Consolidation state that one periodical named the IEEE STUDENT JOURNAL be issued to students quarterly. No mention is made for publishing a student tabloid paper for promoting student membership in IEEE.

6. We concur in the Principles of Consolidation proposals for the ANNUAL DIRECTORY, SPECIAL TECHNICAL CONFERENCE Publications and STANDARDS Publications.

General Comments on IEEE Publications Plan

The total number of separate magazines should remain for future determination, in terms of readers' needs and of net advertising income. In IRE each Professional Group (PG) now issues one, but it is significant that 29 PGs are grouped for the purpose of limiting the "Convention Record" (an important IRE publication) to fewer than 29 parts (usually about 10). Division Transactions would fulfill a unifying need.

There is a serious question whether publications, which presuppose leisurely reading or reference, should in every case follow the narrower optimum channeling of papers into conferences or into sessions at conventions and meetings. At the latter, considerations of attendees', authors', and discussers' time dictate a specialization which may not always be ideal in the ensuing publications. AIEE's experience has shown what we believe to be wisdom in combining the published output of scores of committees' and subcommittees' activity into a limited number of bimonthlies. This gives each member-subscriber the advantage of reading in a range profitably wider than his specialty, yet without his roaming the entire scope of electrical-electronic engineering. The latter is the province of the monthly magazine.

The Principles presuppose, we believe mistakenly, the superiority for universal application, both as to reader interest and economics, of the one-magazine-per-PG plan. Many of our Power members are convinced that there is merit in combining specialized categories of papers for purposes of publication, and that a proper point of departure for AIEE's Power component is the two bimonthlies now published for them: "Power" and "A&I". People interested in electrical power are interested in its generation, transmission, distribution, and to some degree its utilization. Viewed from the present and our past, we consider it inadvisable to break these topics down for publication purposes into narrow components, although AIEE does so for purposes of papers procurement and presentation.

At IRE's Special Symposium on Merger 4/26/62, President Haggerty said:

"If something useful is to result in spite of this proliferation of knowledge, to take advantage of the specialties thus created, the need for interdisciplinary ties is enormous and, at the same time, almost infinitely difficult to achieve. What every engineer needs as he pursues his own roadway to usefulness are plenty of crossroads: crossroads which lead to the other specialties."

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It was his expectation that IEEE would be so organized as to increase the use of crossroads among the specialties. It seems axiomatic to TOD that an insufficient number of crossroads is being provided if the pattern is to be, solely, "one-periodical-per-PTG plus one monthly magazine." IRE's "Convention Record" and AIEE's bimonthly magazines provide desirable crossroads, and both are organized roughly by Divisions.

Conclusion

In asking the AIEE BofD to present the foregoing views to the Fourteen-Man Committee, to the first IEEE Board, and to the Editorial Committee to be created by the new Board, TOD has received encouragement from Dr. Haggerty's statement, again at the IRE Symposium 4/26/62, in response to an observation by G. L. Turin. Mr. Turin said, in part: "Some of us in the PGs have been somewhat worried recently about the structure of the PG organization. We feel that, in many instances, the organization is obsolete . . . The problem here is one of perpetuating obsolence. . . . We have had the experience that when a certain structure becomes entrenched it is very difficult to change it. . . . One wonders if some of the entrenched Professional Groups and Technical Committees will really trend toward an optimum or just be a conglomeration of disparate groups with overlapping interests."

To this, President Haggerty replied: "I think those are very good questions and they are questions that do need to be considered seriously."

If Mr. Turin's observations are well taken, it is fairly evident that IRE's PG Committee, an "umbrella" type of committee, has not wielded a scalpel in carrying out its function of coordination. Instead, it appears to have adopted the relatively painless process of acceptance-or-rejection as new PGs have been proposed. How can two similar, independent, "umbrella" committees (TOC and PGC) be expected to amalgamate AIEE's TCs and IRE's PGs, performing what amounts to a deferred surgical operation on the PGs and a grafting operation involving the TCs without resort to some kind of direct crossroad consultation and action among the specialists - the TV and broadcasting people, the industrial electronics people, the instrumentation people, the power people, the scientists in our midst, and so on?

Very truly yours,

F. L. LAWTON
F. L. Lawton, Director TOD
by I. S. Coggeshall, Staff Secretary

Attachment: Figures 1 & 2

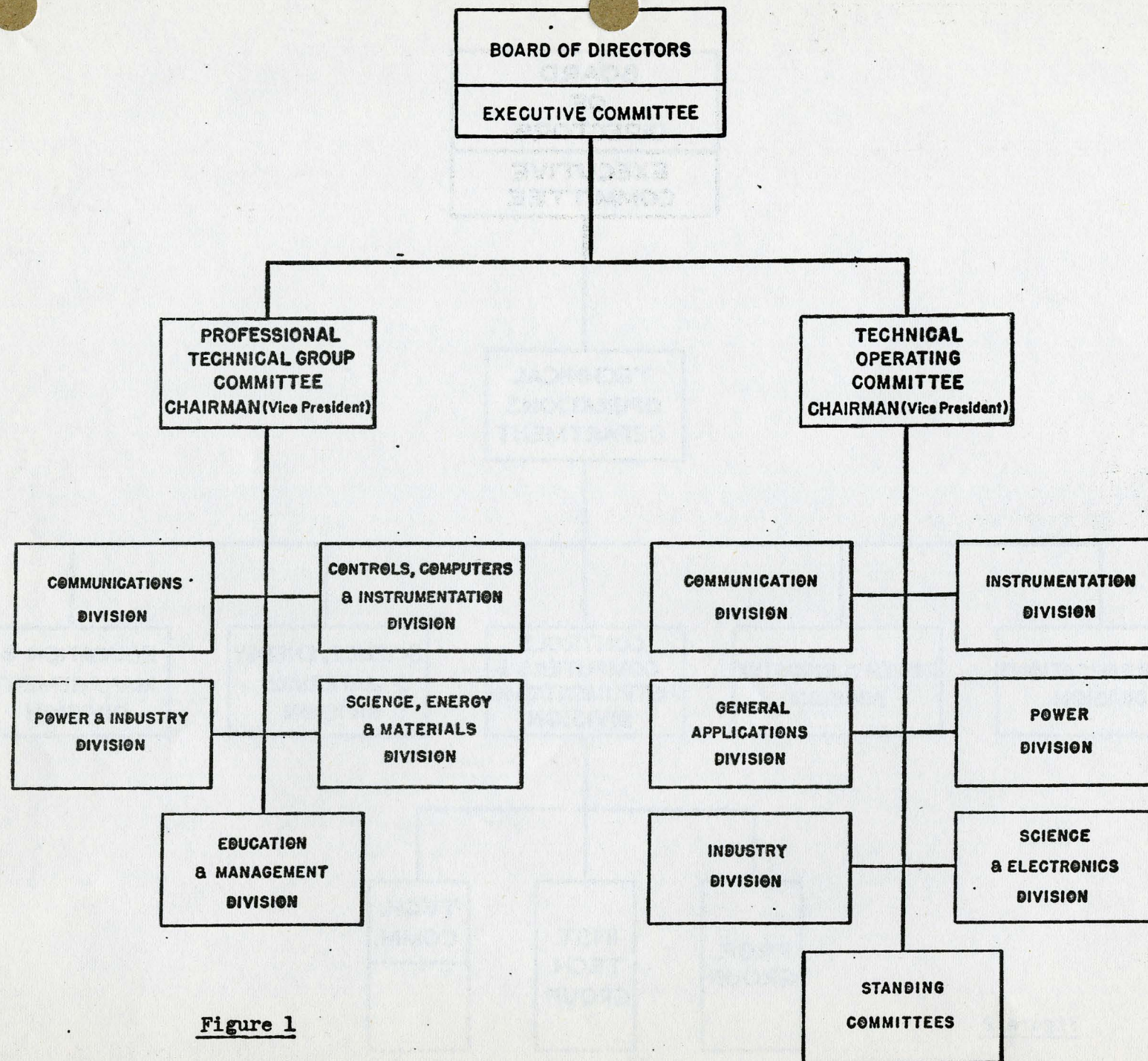


Figure 1

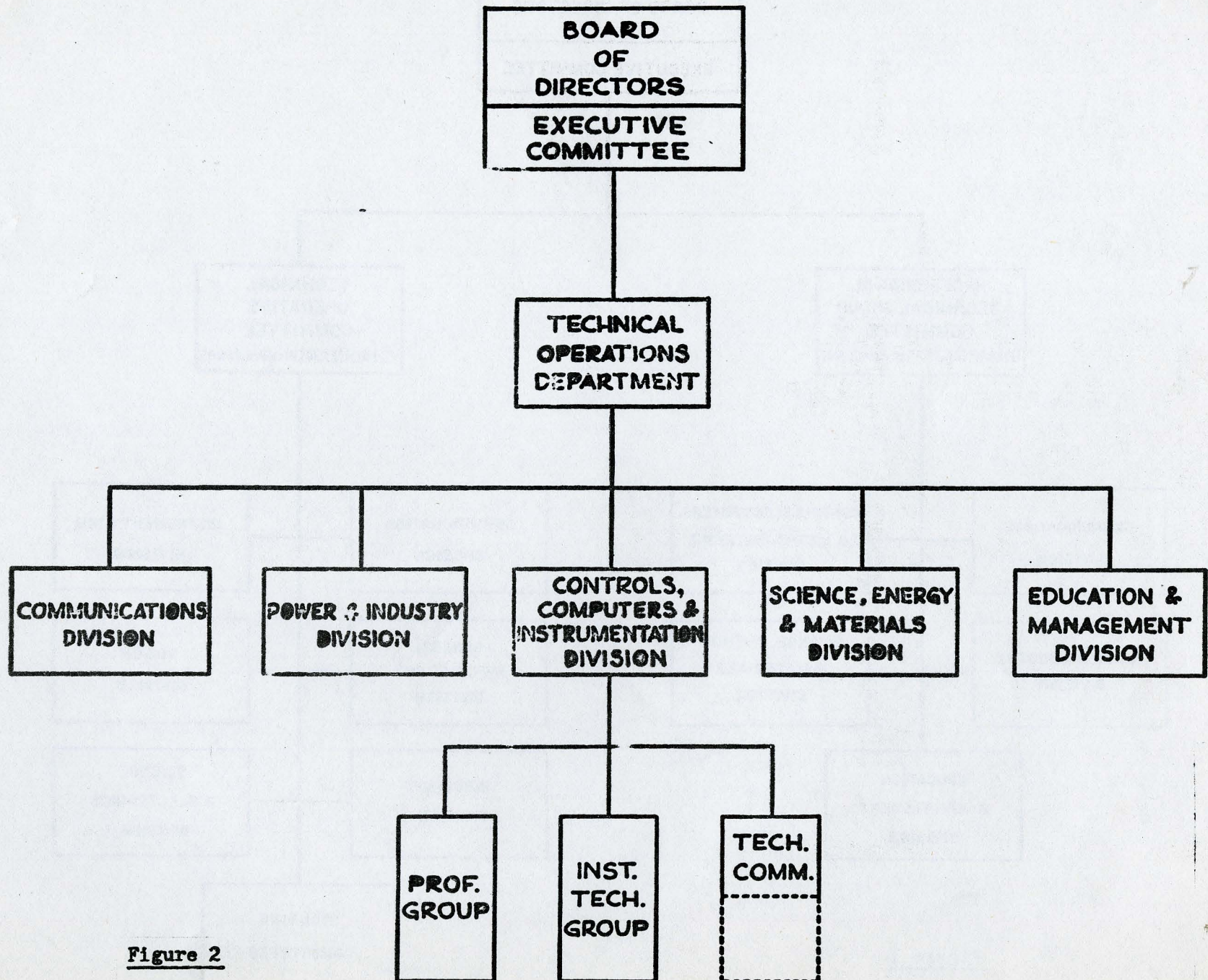


Figure 2