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**REPORT OF SPECIAL SUBCOMMITTEE ON
AIEE-IRE INTERRELATIONSHIPS**

June 29, 1959

ESTILL I. GREEN
ENGINEERING MANAGEMENT CONSULTANT
95 FARLEY ROAD
SHORT HILLS, N. J.

June 11, 1968

Mr. N. S. Hibshman
1885 Shore Drive South
St. Petersburg, Fla 33707

Dear Nelson:

Please forgive my delay in answering your letter of April 17. This interval resulted, not solely from procrastination, but in considerable part from absence on a mission for one of my clients and from inability to lay my hands on a copy of the report of the subcommittee which I headed. This latter obstacle was finally surmounted, and I am forwarding a copy to you for your files.

In the main the report speaks for itself. Numerous questions having to do with Student Branch activities, Section activities, Joint Technical Conferences, Joint Technical Sessions, Joint Committees, Common Standards, etc. were examined by our subcommittee through discussion and polling. The recommendations at the end of the report called for across-the board cooperation with I. R. E., looking toward merger. These recommendations, I believe, carried considerable weight with the Planning and Coordination Committee, and subsequently with the ~~AIEE~~ Board of Directors.

In my opinion, however, the most important service of our subcommittee was the stressing, both in the record and in oral discussion, of the importance and urgency of merging the two societies. (See p. 3 of the subcommittee report). The statistics which were presented, showing I.R.E. growing three times as fast as AIEE, and clearly dominating the electronic field, were extremely convincing both to the members of the subcommittee and to many others as well. The statement on p. 3 of the report that "only bold and prompt action will preserve for AIEE a satisfactory position in the electronics field" was quoted, debated and accepted. Thus a new climate was created in those divisions (except for Science and Electronics) where the previous attitude had been negative.

Despite all this, however, it was the final alchemy of two successive pairs of ~~presidents~~ broad-minded, dynamic presidents that brought the merger into being.

Sincerely,

Estill



AMERICAN INSTITUTE of ELECTRICAL ENGINEERS

(HEADQUARTERS: 33 WEST THIRTY-NINTH STREET, NEW YORK 18, N. Y.)

TECHNICAL OPERATIONS DEPARTMENT

1958-1959

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Consolidated Edison Co. of New York, Inc.
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3 Gateway Center
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Western Union Telegraph Co.
60 Hudson Street
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Division Committee Chairmen:

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Communication
H. F. HOEBEL, New York, N. Y.
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R. H. WHALEY, Indianapolis, Ind.
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R. S. GARDNER, *Technical Activities*
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W. R. CLARK, Philadelphia, Pa.
L. R. GATY, Philadelphia, Pa.
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E. W. MORRIS, San Francisco, Calif.
A. C. MUIR, Philadelphia, Pa.
B. G. A. SKROTZKI, New York, N. Y.
J. D. TEBO, Whippany, N. J.
S. R. WARREN, JR., Philadelphia, Pa.

February 13, 1959

Mr. E. I. Green
Vice President
Bell Telephone Labs., Inc.
Murray Hill, N. J.

Dear Estill:

In reply to your request of 1/5/59, the following is an attempt to integrate the views of TOD members received to date concerning the 10 questions in Mr. Johnson's letter of 12/23/58 on AIEE-IRE cooperation.

You appreciate that many of the comments from TOD people on some of these questions range all over the lot. Thus, the answers I am giving you are simply an attempt to boil down the replies to a single statement, which may not completely satisfy any one particular TOD member. Also, some knowledgeable TOD folks have just told me they are not able to make your deadline, so I'll have to crank their thinking in later.

1. Should AIEE work toward an ultimate goal of merger with IRE? If so, what is the recommended procedure to follow in pursuing this objective?

Yes. (Procedural ideas ranged from utilizing EJC to absorbing IRE en toto as another equivalent TOD. One member strongly emphasized that within two years a specific date for merger should be agreed on, even if it were 1970.)

2. What policies should govern AIEE activities with IRE
 - (a) At the Student Branch level?
 - (b) At the Section level?
 - (c) In Technical Conferences?
 - (d) On Committee Memberships?

Definite flavor to encourage joint activity at every level and get grass-roots membership to know each other.

- (a) At Student Branch level? - Joint.
- (b) At Section level? - Occasionally joint, when felt to be mutually advantageous.
- (c) In Technical Conferences? - Joint, whenever in common field of technical interest.
- (d) On Committee Memberships - In field of common technical interest and activity, probably desirable to encourage expert in either society to be full member of technical committee. Conceivable that ^{for a particular committee} both societies might list a common membership; or an AIEE subcommittee might be chaired by an IRE expert if he seemed the best choice from the technology involved.

3. Should membership grades have same requirements with respect to age, qualifications, dues, transfer fees, etc.?

Majority of opinion favors making them the same; although several thought any such move should be only after a merger definitely was in prospect.

4. Should specific fields of technical activities be delegated to IRE?

No; not until after merger, since any such move at this time would be contrary to promotion of amalgamation.

5. Should AIEE and IRE have coordinating committees in the Administrative and Technical fields as advisory representatives of each Institute?

Yes, definitely.

6. Should there be common publications covering technical activities of interest to both Institutes?

Probably desirable as a long-range objective, if financial and other problems can be resolved.

7. Should AIEE and IRE have common technical sessions at General Meetings on those subjects where committees have common membership?

Yes, when mutually desired.

8. Should AIEE and IRE have common standards in fields of common interest?

Yes, but formal mechanics for unifying may require care and caution.

February 13, 1959

9. Should AIEE be in full competition with IRE for new members?


Yes, until there is mutually acceptable plan for merger on the books.

10. Other.

Several members endorsed the motions of the IRE Board, 9/10/58, and Mr. Johnson's statement in third paragraph, page 3 of his letter 12/23/58 to Mr. Green. As a personal project, I think Bill Lewis dug deeper into this matter than any other TOD member, and you have a copy of his thoughtful letter of 1/19/59 to me.

My impression is that general TOD sentiment favors across-the-board cooperation from top to bottom as long as we can do it on a 50-50 full partnership basis.

Sincerely,


Hendley Blackmon
Chairman

cc - J H Foote
F S Black
L R Gaty
R A Heising
A A Johnson
L F Hickernell
N S Hibshman
W J Barrett
C T Hatcher
I S Coggeshall ✓



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B. G. A. SKROTZKI, New York, N. Y.
J. D. TEBB, Whippany, N. J.
S. R. WARREN, JR., Philadelphia, Pa.

January 29, 1959

Mr. Hendley Blackmon, Chairman
Technical Operations Department
Westinghouse Electric Corporation
3 Gateway Center
Pittsburgh 30, Pennsylvania

Dear Hendley

I have reviewed the questions which have been submitted in reference to the best possible ways and means for working more efficiently with the Institute of Radio Engineers. These questions require some broad considerations and for this first reply I will give you some of my general ideas which can be used in compiling the reaction from TOD.

Mr. Fischer Black, Chairman of the Admission and Advancement Department Committee has also requested similar comments. I am TOD representative on this Committee and, therefore, I propose to send a copy of this letter to Mr. Black with the statement that after TOD has consolidated its ideas I will then advise him of our overall feeling on the subject.

The following comments apply to the items as listed in Mr. Johnson's letter of December 23, 1958.

1. I believe that a merger of AIEE and IRE would certainly eliminate considerable duplication of effort which is now being expended by both organizations. However, the consolidation of the two organizations would make an extremely large organization which might be difficult to handle in an efficient manner. Perhaps an organization could be devised somewhat in line with our divisional organization with specific fields designed for each group.

January 29, 1959

2. At the present time I think it would be desirable to eliminate extreme competition at the student branch level so as to prevent confusion in the student's mind as to which organization he should join. I also think that it is desirable to work together in technical conferences rather than to have competitive technical conferences. In addition I believe that there should be some cross representation in technical committees.
3. I think that it is highly desirable to have the same requirements for membership grades in both organizations.
4. As stated in No. 1, I believe that if both organizations are to operate separately, it would be desirable to assign specific fields of technical activities for each so as to avoid duplication of effort.
5. I believe that it would be desirable to have coordinating committees in the administration and technical fields.
6. The question of publications is a tricky one. However, to keep the membership advised, I believe that some type of common publication would be desirable so as to eliminate duplicate meetings and publications.
7. I believe that common technical sessions at general meetings along with common publications would eliminate some of the duplication of meetings.
8. I think that it is highly desirable that common standards be adopted in fields of common interest.
9. I believe that effort should be made to outline the field of activities so that extreme competition for new members could be eliminated and each group would operate in an orderly manner.

The above ideas have been arrived at somewhat hastily and undoubtedly will require a lot of discussion. However, they are being submitted for consideration.

Very truly yours



glf

G. T. Hatcher, Vice-Chairman

Copy to Messrs. I. I. Coggeshall ✓
Fischer Black
A. C. Muir

1-17

RAYMOND A. HEISING
CONSULTING ENGINEER - PATENT AGENT
232 OAK RIDGE AVENUE
SUMMIT, N. J.
TELEPHONE CRESTVIEW 3-3526

Jan. 27, 1959

Mr. Ivan S. Coggeshall,
Western Union Telegraph Co.,
60 Hudson Street,
New York, 13, N. Y.

Dear Ivan,

Your letter of January 23 is received.

Yes, I received the same letter from Art Loughren that you did. I am attaching a copy of the letter that I sent him.

With respect to my telephone number, it is on this letter head. I maintain my office at my home and I am usually home now days.

Sincerely,

R. A. Heising
R. A. Heising.

Jan. 19, 1959.

Dr. A. V. Loughren *Plus IRE*
Airborne Instruments Laboratory,
160 Old Country Road,
Mineola, N. Y.

Dear Arthur,

I have at hand your letter of January 9 th on the subject of co-operation with AIEE on the part of IRE.

It is unfortunate that two electrical engineering societies have developed in the U. S. However the fact that there were two has enabled electronics to develop in the U. S. as fast and far as it has. It does, however, raise the question you bring up, should it continue.

I am aware from my committee work in AIEE that they have given it much thought at times, just as we did in the IRE Board at one time or another. Just now Messrs. Fink and Hickernell are conferring on one aspect of cooperation, that of easier joining of members in one society with the other.

Of half a dozen schemes for reducing the competition that I have heard of, the one that appeals to me most is to divide up the field. IRE would keep out of power and its major applications, which would be no hardship on its part, and AIEE to keep out of research, except power research. IRE would also keep out of wire communication operation. The fields now covered fairly well fit this division. There are plenty of objections to this idea. There would still be competition in development and manufacture in the electronic field.

The AIEE still operates its publication and meeting system on too formalized a basis and its members kick because articles in their magazines appear after they have appeared elsewhere, especially in IRE.

AIEE looks with envy on the vitality of the IRE Professional Group system, but when I and Coggeshall and certain others argue with their influential members about it, they (AIEE) think they have the equivalent of it in spite of all we can point out. They wonder why the groups have more vitality. They have been studying the Group system of IRE and a report is due but I do not have any advance notice of the investigator's ideas. If the two societies ever get to the conference stage,

IRE might make an effort to get the AIEE to try to interest some of their people in IRE's Affiliate membership plan, even to the extent of giving them a lot of free subscriptions to various transactions. Even printing some of the transactions with an AIEE cover might be tried. Their pride will be dented by trying to get them into the Groups as Affiliates, but by trying a joint publication scheme, it might be healed somewhat.

I have been trying for the last year to get AIEE interested in an organization more like IRE. A few years ago they spent over \$25,000 for a management firm to study the AIEE and recommend organization changes. The firm came up with their present departmentalization and wanted an administrative committee between the Board and the Departments. AIEE accepted all but the administrative committee. I have been telling them that they left out the most important part. They have had an Executive committee in their constitution for years but it never functioned except in emergencies that were telephonic in action. Everything went to the Board, just like it did in IRE up to 1943 when we got our Executive committee going. IRE is organized much like the management firm advised, though we did not "departmentalize" the committees. When we set up the Executive committee we charged it with assigning different Executive committee members to be responsible for certain committees of fields of operation and though they were called Mr. A etc at first, later they were called coordinators. The result of AIEE's organization is it lumbers along very slowly. They give their Executive Secretary very little power.

They have other handicaps in organization that I have attacked with little effect. What would an upstart like me know about running AIEE when I have sat with their Board of Directors (without vote) for only a year!!!

At any rate, if IRE has a committee study the matter and develop a few ideas for cooperation, then it would be time for joint committees to get together. It takes someone in both organizations to push it, and maybe you can do it in IRE.

Sincerely,

R. A. Heising.



AMERICAN INSTITUTE of ELECTRICAL ENGINEERS

(HEADQUARTERS: 33 WEST THIRTY-NINTH STREET, NEW YORK 18, N. Y.)

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Aluminum Laboratories, Ltd.
1800 Sun Life Bldg.
Montreal, Que., Canada

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New York 8, N. Y.

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C. G. VEINOTT, Cleveland, Ohio
C. F. WAGNER, East Pittsburgh, Pa.
C. A. WOODROW, Schenectady, N. Y.

20 February 1959

Mr. Hendly Blackmon
Westinghouse Electric Co.
3 Gateway Center
Pittsburgh 30, Pa.

Subject: A.I.E.E. - I.R.E. Cooperation

Dear Hendly:

This subject was not discussed at the meeting of the Power Division on February 4th due to lack of time. Discussion of the Fairman letter took up much of our time, as you may well imagine.

The following views regarding the questions posed in Mr. A.A. Johnson's letter of December 23rd are therefore largely my own:

1. I believe that AIEE should work toward the ultimate goal of a merger with IRE. It would appear that this should be initiated by discussions in the Boards of Directors and by the elected officers and responsible appointed officers of the two societies. From here it should filter on down to the membership, and this seems to be the process taking place in AIEE. In the meantime we should cooperate as closely as possible with IRE by means of joint meetings at the student branch level, a sectional level and in technical conferences. Joint committee memberships would be of great benefit, and would require much preliminary planning several months before committee memberships are established. I believe it would be of great value in showing the members of both societies that their aims and general methods of attaining them are fundamentally the same.

(Cont.)

3. Obviously as we approach the time when a merger is a possibility, membership grade requirements will have to approach equality. I would expect this to be a gradual process of compromise.
4. Under our present status I doubt that specific fields of technical activities should be delegated to IRE. However this should be used as a bargaining tool, an offer extended to IRE to be culminated with a merger. Perhaps IRE would eventually become the Communications Division of AIEE, or even possibly become a separate department.
5. This appears to be a good idea as an interim measure.
6. I do not see how we can have common technical publications without much closer liaison than we have today. As soon as both societies agree that a merger should be worked toward, consolidation of publications could be immediately undertaken.
7. My comments on #6 also apply to common technical sessions at general meetings.
8. Common standards in the fields of common interest are a practical necessity. Under present separate society status this would probably have to be consummated through the ASA machinery.
9. Until such time as at least an agreement to work toward a merger is reached, we have no alternative but to compete with IRE as strenuously as possible, particularly for new members.
10. The suggestions made by the IRE Board at their meetings of September 10th, 1958 and November 2nd, 1955 are encouraging moves in the right direction.

Yours very truly,

E. I. Pollard

E.I. Pollard, Chairman
Power Division *rp*

EIP/kp

cc: Mr. I.S. Coggeshall ✓
Mr. C.T. Hatcher

March 4, 1959

Mr. Hendley Blackmon
Westinghouse Electric Corporation
3 Gateway Center, P.O. Box 2278
Pittsburgh 30, Pennsylvania

Dear Hendley:

I read with interest your letter of February 13th to Mr. E. I. Green summarizing the replies you had received on AIEE-IRE cooperation. You asked addressees who were not in accord with the summary to write you unless they wanted to be counted as agreeing.

I do not find myself enthusiastic about a merger of AIEE with IRE, and if it were consummated in the early or late 1960s, I don't think that the power people in AIEE would like it much.

Each society now has approximately 60,000 members, or a total of 120,000. If the societies were combined, the total figure should be reduced by roughly 10,000 for members who belong to both societies. The power people would be in the minority in a combined society to the score of, say, 40,000 to 70,000. At present growth rates, the score in the 1960s would be even more lopsided in favor of the radio-electronics adherents.

Only when AIEE is in trouble should it consider a merger with IRE, and even then it might better be thinking about a merger with ASME.

There are some in AIEE who are so naive as to think that IRE could be run as a Division or a Department of AIEE. Over on the

other side of the fence the natural thought would be to absorb the 20,000 AIEE radio-electronics people in IRE Professional Groups and to handle the 40,000 AIEE power people as a new Professional Group of IRE.

I do not expect to live to see the day when this is done unless one society or the other cracks open at the seams and has to bail boat.

I have said right along, and I repeat, that no engineer nowadays is so poor that he cannot afford to belong to both societies, and that their programs are sufficiently divergent to give him double value for his double dues. If the whole thing were thrown together, the only advantage reaped would be a nominal "efficiency" savings of 15 to 20% under existing double dues. Peanuts.

There is a great deal of AIEE-IRE cooperation now. It is all to the good. It keeps people friendly and makes a nice thing for the approximately 10,000 members who belong to both societies. It should be continued.

The IRE Board has suggested four specific additional measures of cooperation. Consideration within AIEE of additional cooperation with IRE should be limited to these measures. Counter-proposals will only operate to IRE's benefit.

Of the four IRE Board proposals to which AIEE should give consideration, I think the AIEE Board could well approve Nos. 1, 3, and 4; that is, (1) elimination of duplicated effort by joint appointment of technical committees in common areas; (but in my opinion, this should be limited to standards work and not the procuring or presentation or publication of papers); (3) encouragement of joint Section meetings; and (4) automatic entrance, cross-Society, to equivalent membership grades. I suggest that point No. 2, agreement on a common Joint Student Branch policy, be rejected. Every concession so far made by AIEE to IRE on Student Branches has worked to the advantage of IRE, and in my opinion further concessions would continue to work against AIEE.

Applied to Mr. Johnson's 10 questions, the foregoing would give him a No on everything except: 2(b) which is the IRE Board's No. 3; No. 8 which is IRE's No. 1; and No. 10, Other, of which the remaining item refers to the reciprocal agreement on automatic entrance to equivalent membership grades in the two societies, and has nothing to do with anything except entrance.

Very truly yours,

ISC:ms



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S. R. WARREN, JR., Philadelphia, Pa.

March 9, 1959

Mr. E. I. Green
Vice President
Bell Telephone Labs., Inc.
Murray Hill, N. J.

AIEE-IRE Cooperation Mr. Coggeshall's Views

Dear Estill:

Since Mr. Coggeshall was not able to record his comments before my letter of 2/13/59 to Dr. Green, I am attaching a copy of his letter of 3/4/59 for your information.

Mr. Coggeshall is Secretary of TOD, but more significantly, he is a past President of IRE and remains in close contact with IRE. Thus, he probably has a more direct personal experience on which to base his views than a number of members of TOD who have only been on the fringes of IRE, or reflect a personal view.

Since you already have Dr. Lewis' letter (1/19/59) I thought you might like to have Mr. Coggeshall's for contrast. Both Mr. Coggeshall and Dr. Lewis have personally worked closely in both AIEE and IRE for many years. To a degree their letters represent certain extremes of the TOD spectrum of replies with regard to AIEE-IRE cooperation.

Sincerely,


Hendley Blackmon
Chairman

Enc.

cc - JH Foote
LR Gaty
AA Johnson
NS Hibshman
CT Hatcher

FS Black
RA Heising
LF Hickernell
WJ Barrett
IS Coggeshall

(blind cc) - W. A. Lewis

(blind to I. S. Coggeshall)

Coggie: Thanks for yours of 3/4/59, which I'm distributing as shown, so it will get full consideration in P&C. Also attaching a copy of Lewis' letter for your info. Regards.

- HB

Enc.
3/9/59

1-75

ILLINOIS INSTITUTE OF TECHNOLOGY
TECHNOLOGY CENTER
CHICAGO 16

Department of Electrical Engineering

January 19, 1959

Mr. Hendley Blackmon, Chairman
Technical Operations Department, AIEE
c/o Westinghouse Electric Corporation
3 Gateway Center
Pittsburgh 30, Pennsylvania

Dear Blackie:

I have your letter of January 12 requesting information for Dr. Green's committee concerning activities and relations between IRE and AIEE. I am sure you will agree that any results of Dr. Green's activities should be fully coordinated with the report of my Special Task Force on AIEE Organization, to make certain that the objectives are compatible, and that the recommendations would work in harmony. After a period of substantial disagreement, my Task Force seems to be on the verge of an agreement, and a first draft of a preliminary report is being circulated. In view of the difficulties of getting agreement in the Task Force, and the wide diversity of opinions represented there, I hesitate to speak for the Task Force until I have received approval of the preliminary draft, or such modifications as may be necessary, but I believe it would be in order to transmit copies of this draft as soon as it has received a first approval to the members of Dr. Green's subcommittee. Then, if any coordination or further modification appears necessary to bring these groups into harmony on objectives, I believe some special meeting or action should be indicated.

With regard to the answers to the ten questions referred to in your letter, I will try to provide the best answers I can, speaking both personally, and from the standpoint of experience with the Task Force, although certainly these answers should not be considered as the opinion of the Task Force as such. My answers are as follows:

1. I believe AIEE should work toward an ultimate goal of merger with IRE, to form an overall effective Society that serves the entire field of electrical engineering without duplication. I do not believe that AIEE is at the present time in a strong enough position to initiate the merger, but it should be receptive to overtures from IRE. As I see it, the only way that AIEE could initiate proposals for a merger, with hope of successful and satisfactory results, would be to develop a position of strength, so that the need for a merger would be as apparent to both societies, and each would feel that it was at least a fully coordinate partner. At the present time I am convinced that IRE considers itself in the stronger position, in the fields which it serves, and feels that the areas that it does not serve are growing unimportant. The only way to meet this situation is to develop our technical activities rapidly and strongly, particularly in those newly developing areas that appear to approach IRE interests also, and to maintain

the best possible position in the existing competitive areas. While this may not be a fully definite program, it seems to me the only possible program, because if we do not succeed in doing this, there is no excuse for a merger.

2. It is my belief that AIEE should adhere to the policy of cooperation with IRE at all levels, provided this can be done with dignity and respect, and with the definite identity of AIEE maintained.
 - a) At the student branch level the official policy of AIEE should be that AIEE serves all fields of electrical engineering, and that it is concerned with other than technical aspects, such as: licensing and registration, professional ethics, and professional service to the nation. While IRE is undertaking similar activities in these fields, it has some constitutional limitations that should restrict its activities to the strictly professional level, unless it changes its Constitution. From this position, AIEE may recognize that a student may wish to join another society to serve his most imperative technical needs, but he has a certain obligation to the profession to join the AIEE first. Making this kind of policy effective requires a lot of missionary work, particularly with faculty members.
 - b) At the section level, it seems to me that cooperation involves the possibility of joint meetings and joint sponsorship of meetings, where the subjects are clearly of overlapping interests, but the identity of AIEE should be maintained, and some meetings should be established entirely by AIEE alone. Presumably also IRE should have individual meetings of its own, as well as joint meetings with AIEE. So far as possible, it would seem appropriate to have joint local committees for the arrangement of technical programs, that might meet together for the planning of joint meetings, and meet separately for the planning of individual meetings. If all meetings are joint, one society inevitably becomes the loser, and AIEE should not take the chance that it will lose by the process of merging its identity with IRE at all section meetings.
 - c) In technical conferences AIEE is cooperating with IRE in many areas. Where AIEE has something to contribute, it appears that these relationships are working well, and redound to the credit of AIEE. It would appear that these activities could be somewhat more effective if AIEE had somewhat greater flexibility in its operating plans, but some basic principles adhered to widely in all special technical conferences should be maintained.
 - d) In some committee areas, it is my understanding that cooperation is already being achieved by having simultaneous meetings of the AIEE committee and the IRE committee, each with its own chairman, but with agreement among the chairmen as to the time and place of meeting, and the agenda. Where the fields of operation definitely overlap, it would appear that such arrangements are for the benefit of the industry, and it should be possible to sanction them formally. However, it should first be necessary to agree on the functions of committees, and how they

are to operate. It is my understanding that the IRE committees do not at the present time have exactly the same functions as AIEE committees, because of the professional group setup. Thus, any such formal merger of committees would require careful study and some adjustment beforehand.

3. Insofar as possible, it would certainly be a desirable step for the membership grades to have the same requirements as to age and qualifications. Until the cooperation is on a more formal basis, I do not see any great merit in having the same requirements with regard to dues, transfer fees, and other financial matters, since these are problems peculiar to the individual society. If and when a merger is effected, it would be time enough to take care of these coordinations. It would seem appropriate for a coordinating committee working between the two societies to agree that no change in the requirements for membership grades as to age, qualifications, previous service in the society, and so on would be made without clearing through the coordinating committee. However, it would seem premature to bind AIEE to accept the principle that the requirements would have to be the same until there is clearly some definite prospect of a merger which would make it necessary to have them exactly the same.
4. Effective operation with IRE can be carried on in only two ways. One of these is for AIEE to have strength in all areas, and maintain its technical position across the board. The other is to surrender completely certain activities to IRE. If AIEE surrenders certain fields, the basis for an ultimate merger is weakened. Yet it is clear that the technical areas so overlap that it would not be possible to make any clean separation between the two societies as to fields of activity, so that any surrendering of activity would just make the problem of maintaining activities in other fields more difficult. However, if a merger is seriously proposed, it would appear certainly in order to consider that the IRE organization would become the dominating influence in certain fields of activity, that AIEE committees and other groups working in these fields would become part of the IRE organization, and that the whole would then become part of an overall society. However, by the same token, IRE would appropriately surrender its activities in certain fields in which AIEE is more dominant, and its members would become part of the AIEE activity. Such possibilities would make easier the actual combining of operations. However, the very necessity for some give and take in this area is one clear indication of why AIEE could not surrender any activities before definite steps for combination were established.
5. It is not clear to me exactly what this question is asking. It is my belief that there should be one overall coordinating committee between AIEE and IRE concerned with administrative and operating matters, and that there should be some easy way for setting up technical coordination between the technical committees of the two societies that have overlapping areas. This could be done by appointing liaison representatives both ways or by some more formal approach, but I believe the technical areas should be left flexible. As long as each society has something to contribute to the other, coordination between committees should be expected to help both, and to serve the profession. In the long run, the guiding principle in these matters should

be that of giving the best service to the profession, with a minimum of confusion.

6. It is becoming apparent to me that some greater flexibility in publications of AIEE is needed. The growing emphasis on special technical conferences makes it important that some better way of making the reports and publications of the special technical conferences available to the AIEE members as a regular thing should be established. The IRE at the present time has the ultimate in flexibility with its professional group transactions, but it has seemed to me that ~~there~~ flexibility has been too great for their ultimate best good. If some effective plan could be worked out to meet both of these needs, I would see no great harm in having what is essentially a professional group transactions of IRE and a modified bi-monthly or other AIEE publication published jointly. However, I am sure the ground should be explored very carefully and our own house should be somewhat better in order on publications before this is actually attempted.
7. At the present time the technical cooperation between AIEE and IRE is most effective at special technical conferences. Unless there is some special compelling reason, it would not appear to be particularly advantageous to have common technical sessions at a general meeting of one society, because the society holding the general meeting would dominate, and the attraction for members of the other would hardly appear to be sufficient to bring a representative attendance. However, if the joint technical committees, assuming that such exist, feel that such common technical sessions would be fruitful, I see no reason why they should not be permitted and even encouraged.
8. Certainly it is desirable that AIEE and IRE adhere to the same standards in fields of common interest. However, until there is a close working agreement between the two societies, it does not appear feasible to insist upon any such provision. Both societies participate in ASA, and of course any standard which receives approval by ASA is a common standard for AIEE and IRE. I would favor any plan in which each society notified the other of prospective standards, and actually furnished copies of prospective standards to the other society at the time they were being submitted to the Standards Committee or equivalent for approval. At such time comments and suggestions could be solicited from the other society just as from the members of the Standards Committee, but at the present time I believe it would be premature to hold up the approval of impending standards to await approval by the other society. If the approval were completed and recommendations for changes were received thereafter, they would be considered in the first revision. If complete joint approval of each standard were required, it would become almost as cumbersome to get a standard approved by either society as to get it approved by ASA. I think this is particularly true in the areas where both societies are strong, because in such areas there is very little likelihood that other societies or groups would have strong objections in ASA. However, the main purpose in AIEE maintaining its own standardization activity in addition to its participation in ASA is to permit the more rapid and more orderly development of standards in the initial stages, when the more cumbersome ASA process would add great delays. I am sure the same would be true from the IRE viewpoint. Thus, I believe that each should have a free hand, to

develop the standards it finds desirable, but it should keep the other informed as soon as something reaches the stage of preliminary approval by the society.

9. If the AIEE objectives are to serve the entire field of the industry, I believe there can be no other position than that AIEE is in full competition with IRE for new members at all levels. Basically, the AIEE serves more broadly the professional needs of the engineer, and I believe the position that AIEE does provide a broader service is sound. Although much can be made of the importance of licensing and professional recognition, ethics, and other factors of professional life, I believe it is true that the IRE members have not felt such needs as strongly as have engineers working in the more permanently established areas of power and general industry, transportation, and other areas of long standing. Thus, these facets do not have quite the appeal to the radio and electronics engineer that they do to other branches, or as they may to these people in the future. However, if AIEE does its best to maintain the strength of its technical activity, and continues to stress this broader field of service, it has something to sell every electrical engineer, no matter what his field of specialty.
10. With regard to other points, the questions are not definite, so that all I can give are possible comments. I do not know the basis for Mr. Fink to feel that joint section meetings are contrary to 'national' policy. In this matter I am only familiar with the Chicago Section, but this section has had at least one joint meeting with the IRE each year for several years. There has been no feeling in the section Executive Committee that this was contrary to national policy, or that there was any reason why it should not be done. For these meetings a broadly popular technical topic has usually been chosen, and a large attendance has been realized. I think I interpret the feeling of the Chicago Section that it is an excellent idea, provided it is not overdone.

Mr. Fink has given certain figures regarding the overlaps between the two societies. I would assume that all of his percentages are based upon IRE totals, and certainly not upon AIEE totals. Thus, it would certainly be true that much less than twenty-five per cent of AIEE committee membership are also committee members in IRE and less than thirty-one per cent of subcommittee members in AIEE are members of IRE subcommittees. I am sure the same is true with regard to the specific subject groups. These figures seem to indicate to me that AIEE may actually have been doing a better job in covering its field of activity than I have been led to believe by other considerations. It also seems to indicate clearly that the people most active technically find it necessary to belong to both societies, and I would assume that they would welcome a merger if such could be worked out with dignity and credit to both societies.

From where I sit, personally, it seems to me that the recommendation by the Finance Committee not to enter into an agreement on automatic entrance to equivalent membership grade in the other society is shortsighted. If the payment of a single entrance fee to the first society

serves to encourage the prospective engineer to join both, it seems to me that the dues income from his membership would far more than offset any loss from the failure to collect his entrance fee. From the purely practical standpoint, the IRE is currently getting the members, and it would appear that the proposal would tend to increase the joint membership and increase the AIEE membership, to an extent that would more than offset any possible loss of entrance fees. Of course it would be assumed that the technical qualifications for membership would be maintained, and that the remission would simply be the fee, so that admission to one society would not be automatically the means of getting in the other, if the technical requirements of the other could not have been met initially. If this is true, it seems to me that the financial question of entrance fees is hardly a major consideration. This would be true because most of the applicants for membership who would meet the requirements of both societies would be college graduates, of whom a large segment would have been members of the student branch. If the applicant had been a member of the society as a student, there would be no entrance fee in any case. If he were an IRE student member, but not an AIEE student member, it is almost a foregone conclusion that he would join the IRE, and be reluctant to join AIEE. If AIEE couldn't sell him at the student level, the additional barrier of the ten dollar entrance fee makes it even harder at the associate member level, and treating membership in IRE as the equivalent, for purposes of waiving the entrance fee, as joining the AIEE as a student would seem to provide an inducement where one is strongly needed.

If the proposal for automatic entrance were intended to require automatic acceptance by the other society, I believe this provision should be resisted until the goals of both societies are clearly set. Clearly, the tendency in IRE has been to lower the professional standards for admission, to include technicians and others not of high professional qualifications. AIEE is vacillating on this question at the present time. It seems to me that, in the long run, both societies have everything to lose and nothing to gain by lowering the professional qualifications for membership, and that AIEE should be the champion of high professional standards. However, if clear-cut agreement on professional goals and entrance requirements in accordance therewith can be obtained, the policy of automatic acceptance of the members of the other society would tend to create a favorable situation for the ultimate merger.

In approaching all of these matters, it seems to me that AIEE should adopt a conscious policy of being receptive to negotiations, of being and appearing more flexible, and of taking the broad, long-range view, instead of making decisions on the basis of the immediate effects. While such a policy might result in belt tightening in spots, the AIEE policy must be that it serves the entire profession fully and well, and its actions must be in harmony with long-range viewpoints if it is to be convincing in this regard.

There is probably very little new in the preceding comments, but occasionally the preceding comments represent a definite position that AIEE might adopt. I think all of my comments might be summed up in my belief that AIEE should show every willingness to cooperate with IRE whenever it can do so with dignity and

Mr. Hendley Blackmon

Page 7

respect, while maintaining its position of covering the entire field, and of serving the engineer on the broadest possible base. In all such actions the identity and position of AIEE must be preserved, but it should go along readily on a full partnership basis.

Yours very truly,

Bill

W. A. Lewis, Professor
of Electrical Engineering

CC: Mr. A. A. Johnson
Dr. E. I. Green

1-17

January 23, 1959

Mr. Arthur V. Loughren, Vice President
Airborne Instruments Laboratory
160 Old Country Road
Mineola, N. Y.

Dear Art:

Your letter of January 9th, with its attachment, is most interesting and shortly I am going to give you a reasonably full reply.

Of your three questions in the last paragraph, the answer to the last one is easy because it does not depend upon whether your proposal is desirable or has a reasonable chance of adoption; its chances for adoption would certainly be furthered if it were sponsored by between 10 and 100 men each of whom have the status of Fellow grade in both societies.

Thanks for wording one question so that I could answer it off the cuff -- I will give further attention to the other two.

I assume you know that Dr. Heising, like me, is very active in AIEE, and to a greater degree than I am, is influential in both societies. Your inquiry, therefore, should get to him PDQ, if it has not already.

I'd just love to talk this over with you and him, and I have a nice place near my office where we could have luncheon. What do you think, or would you rather write?

Very truly yours,

ISC:GP

cc: Dr. R.A. Heising

ISC

January 23, 1959

Dr. R. A. Heising
232 Oak Ridge Ave.,
Summit, N. J.

Dear Dr. Heising:

Did you get Loughren's proposal of January 9th to get AIEE and IRE together not later than July 1, 1960? Copy is attached -- also copy of my initial acknowledgment.

Will you kindly give me the number of the telephone where you can ordinarily be reached in the daytime? I have your home address, and residence phone as Summit 6-3526.

Very truly yours,

ISC:GP



Airborne Instruments Laboratory

160 OLD COUNTRY ROAD • MINEOLA, N. Y.

TEL.: PIONEER 2-0600 • TWX: G CY 2455 • CABLE ADDRESS: AIRLAB

A DIVISION OF CUTLER-HAMMER, INC.

January 9th, 1959

Dr. Ivan S. Coggeshall
Director, International Communications
Western Union
60 Hudson Street
New York, New York

Dear Coggie:

For some time the anomaly of having two professional societies functioning in a single area with no clear-cut line of demarcation between them has existed in the field of electronic and electrical engineering. I became sufficiently interested and bothered by this to set down some notes looking toward the development of a means of resolving the situation. I am taking the liberty of asking a few of my friends who are Fellows of both societies to read these notes and let me have any comments they may wish to make.

In particular, is a proposal more or less similar to the enclosed memorandum desirable? Does it have any reasonable chance of adoption? Would its chances for adoption be furthered if it were sponsored by between 10 and 100 men each of whom has the status of Fellow grade in both societies?

Sincerely yours

Arthur V. Loughren
Vice President

AVL:al



THE INSTITUTE OF RADIO ENGINEERS

INCORPORATED

1 EAST 79 STREET
NEW YORK 21, N.Y.

LEHIGH 5-5100

January 9th, 1959

Memorandum on the Inter-Society Problem

Some Considerations and Recommendations with respect to the AIEE - IRE Relationship

1. It is a fact that there are two professional societies active in the field of electrical and electronic engineering. The fields of interest of these societies overlap largely rather than marginally. It is believed that this situation is not in the interest of the members of our profession.
2. Quiet acquiescence in the continuing of a state of affairs which is admittedly not in the interest of the profession which these two societies represent seems an unworthy course of conduct for those entrusted with the governing of the two societies. It seems, therefore, that a recommendation should be made that ultimately these two societies should merge, federate or unite.
3. There are obstacles to the course of conduct suggested in the preceding paragraphs. Even a brief examination of the structures of the two societies will reveal numerous obstacles which are physically substantial such as the differences in geographic scope of the two societies. It is also clear that obstacles arising out of emotional attachments are not unimportant.
4. If the course of conduct recommended in paragraph 2 above is ultimately to be followed, the substantial obstacles must be eliminated by suitable changes in the structure of one or both societies and, in addition, the emotional obstacles must be allowed and encouraged to die out.
5. This memorandum recommends that those interested in the solution of the inter-society problem consider the preparation of a petition addressed to the Boards of Directors of the two societies urging that each Board recognize an obligation in this matter to the members of our profession. It is suggested that this recognition take some such form as the following:

- A. The adoption by each Board of the policy that merger, federation or unification of the two societies is to take place at the earliest practicable date and, in any event, not later than 1980.
- B. That the respective Boards appoint members to a Joint Committee charged with developing at least three general plans for accomplishing this objective with instructions to the Committee that these plans be reported to the respective Boards of Directors not later than July 1st, 1960.
- C. That the two Boards schedule a joint meeting of the Executive Committees of the respective societies on or about September 1st, 1960 to arrive at a recommendation for the achieving of the objective which the joint Executive Committee session can recommend to the respective Boards of the two societies.

AVL:al
1/9/59

1-17 - AIEE-IRE Coordination

In the course of his post-luncheon remarks, President Hickernell reported that consideration is being given by the AIEE and IRE directors to an additional measure of cooperation involving the encouragement of members (of comparable higher grades) of each society to join the other. Asked for comments, the TOD Secretary said that in his opinion such a program would be productive of new members, since, without concessions, several thousand engineers were already "Two-Society Members." "The two societies' programs are more complementary than competitive," he said, "and compared with what unionized artisans pay for benefits, ~~electronics~~ engineers can well afford to join two societies." (TOD 22 - 10/30/58)

June 29, 1959

REPORT OF SPECIAL SUBCOMMITTEE ON

AIEE-IRE INTERRELATIONSHIPS

Mr. A. A. Johnson, Chairman
Planning and Coordination Committee

In your letter of December 23, 1958 (Attachment A), you appointed the undersigned to review relationships between AIEE and IRE and formulate recommendations which, after review by the Planning and Coordination Committee, might be submitted to the Board of Directors. The following report is presented in compliance with that directive.

BACKGROUND

In examining those questions and issues set forth in the letter of appointment, the subcommittee took due notice of the previous background on these matters. Specifically, reference was had to the following records, copies of which are attached hereto:

- (1) Excerpt from Minute 110 of the November 2, 1955 IRE Board of Directors (Attachment B).

(Note: This requested the President of IRE to work out with AIEE a reciprocal arrangement whereby a member of either society may become a member of comparable grade in the other society without paying an admission fee. This proposal was disapproved by the Finance Committee of the AIEE Board because of the loss of revenue it would entail.)

- (2a) Excerpts from the Minutes of the AIEE Board of Directors Meeting, June 28-29, 1956 (Attachment C), and

- (2b) Minutes of the Committee of the Whole on Intersociety Relations, AIEE Board of Directors Meeting, June 28, 1956 (Attachment D).

(Note: Item 2b records an extended discussion of AIEE-IRE Relations, which resulted in two motions approved by the Board (Item 2a), as follows:

VOTED that, a) We wish to avoid any split in the Electrical Engineering Profession. b) We wish to work toward the ultimate goal of merger with IRE. c) As one means toward that end, we propose to strengthen our technical programs in the fields in which both they and we are interested.

VOTED that, the incoming President and the incumbent President appoint a special task force to study the various thoughts given this morning with the idea of establishing some dynamic plans for implementing some action to accomplish the objectives discussed.

(Note: This action by the Board led to further discussion and to increased cooperation with IRE in certain areas, as well as to consideration of IRE relationships by the W. A. Lewis ad hoc committee on AIEE organization and activities.)

- (3) Excerpt from the Minutes of the IRE Board of Directors Meeting, September 10, 1958 (Attachment E).

(Note: This requested the President of IRE to arrange with AIEE for a joint study of four suggestions aimed at closer cooperation between the two societies, as follows:

- (1) Eliminating duplication of effort by joint appointment of technical committees in common areas.
- (2) Agreement on a common Joint Student Branch policy.
- (3) Encouragement of Joint Section meetings.
- (4) Reciprocal agreement on automatic entrance to equivalent membership grades.

In addition, the IRE Board action of November 2, 1955 (Item 1 above) was reaffirmed.

It was this latest IRE action which led to the appointment of the undersigned committee.)

IMPORTANCE AND URGENCY

The subcommittee believes that it would fail of fulfilling its complete obligation unless it placed on record the strong conviction it has acquired of the importance and urgency of the matter under consideration. The basis for this conclusion may be found, in a form most convincing to engineers, in various statistics.

A comparison of membership growth and present statistics for the two societies is shown in Attachment F. In total membership, excluding students, IRE has passed AIEE (roughly 56,000 versus 53,000 at the end of 1958) and is growing three times as fast. If non-voting members (15,000 IRE Associates and 2,000 AIEE Affiliates) are excluded, then AIEE is ahead today (51,000 versus 42,000) but will be overtaken in about three years. IRE now has twice as many Student Members and is growing three times as fast in this category.

Another slant on the comparative status of the two societies has been obtained by a count of members in a large industrial laboratory devoted to development and research in communication and electronics. This showed 1027 IRE members and 342 AIEE members, or a ratio of almost exactly three for IRE and one for AIEE. This particular laboratory is one with an historical record of strong affiliation with AIEE. In newer electronics laboratories the preponderance of IRE members would be much greater.

Noteworthy in the membership figures is the great surge of IRE growth which has accompanied the expansion of the electronic industry since World War II. It seems clear that, in future, electronics in its various forms, which has moved from 49th place in American industry in 1939 to 5th place today, will increasingly dominate the field of electrical engineering and that only bold and prompt action will preserve for AIEE a satisfactory position in the electronics field.

QUESTIONS AND ANSWERS

In the appointment letter of December 23, the Subcommittee was asked to review the four suggestions made by IRE and in addition to give consideration to a number of other questions. As a first step of the study, the chairmen of the AIEE functional departments were requested to collect and forward the ideas of their departments on all of these items, together with any other pertinent suggestions or comments. The result was a great quantity of material expressing or summarizing ideas and opinions ranging over a wide gamut. Statistically, however, there emerged for almost every question a clear preponderance of opinion, this in certain instances approaching unanimity.

A summary of these results is given below. (The numbering of the questions is that of the December 23 letter.)

- (1) Should AIEE work toward an ultimate goal of merger with IRE? If so, what is the recommended procedure to follow in pursuing this objective?

Opinion is nearly, but not quite, unanimous in favor of a merger at some time or other, but many counsel caution in working to this end. Ideas differ widely on the question of how a merger should be approached. A considerable number believe that the best approach is a long range one, through increased cooperation between the two societies. There is some variation, however, in ideas as to what forms this cooperation should take. (See below.) Another but less numerous school believes that AIEE should develop more effective competition with IRE so that it can bargain for merger from a position of greater strength. Still others believe AIEE should move immediately toward merger on the best obtainable terms. A smaller but by no means negligible number believe that merger is either undesirable or impossible and that the two societies can continue to coexist, serving different purposes and interests.

In general, the belief is that the approach toward merger should be through full cooperation across the board. A number of people believe that the IRE problem should be looked at as a whole and not piecemeal and hence that the four IRE suggestions should not be considered in isolation. (See, for example, Attachment G.)

- (2a) What policies should govern AIEE activities with IRE at the Student Branch level?

(This item corresponds essentially to Item 2 of the four IRE suggestions.)

It should be noted by way of background that AIEE now has 157 Student Branches, IRE has 168, and 115 of these totals are Joint Branches. It may be well also to recall the previous statement that IRE has twice as many Student Members as AIEE and is growing three times as fast.

The consensus on this topic seems to favor increased cooperation at the Student Branch level, but again there are varying and sometimes conflicting opinions. Some would prefer to maintain the status quo. Others, fewer in number but quite articulate, feel that cooperation at the Student Branch level is already working to

the disadvantage of AIEE and that further cooperation may make things worse, so that steps should be taken to restrict cooperation rather than expand it.

As far as the students and faculty members are concerned, the situation is fairly clear. Mostly they would prefer a single branch of AIEE and IRE, with common membership, meetings and publications.

During discussion of the IRE suggestion, it has become apparent that there exists a definite feeling that AIEE should critically examine its internal policy on Student Branches. Among other things it has been suggested that more branches be established in non-ECPD-accredited schools, that Affiliate Branches be set up in schools with good physics background, in two-year technical schools, etc. Apart from possible modifications, there seems to be a need for better understanding of present AIEE Student Branch policy.

- (2b) What policies should govern AIEE activities with IRE at the Section level?

(This item corresponds essentially to Item 3 of the four IRE suggestions. Dr. D. G. Fink in submitting the IRE suggestions commented that in his travels he had encountered a feeling in some areas that joint Section meetings are contrary to AIEE national level policy.)

Again there is a fairly wide spread of opinion. People tend to be more cautious, however. Some think joint Section meetings should be encouraged, some think they should be only occasional, some think joint meetings should be discouraged but IRE members invited to AIEE meetings, some suggest joint activity in technical areas, etc. Mr. T.M. Linville, opposing cooperation in this area, writes (Attachment G): "The Sections are the root strength of both societies and when you tamper with them you affect the whole of both societies."

The consensus seems to be that cooperation at the Section level should be encouraged where advantageous, and that AIEE policy should be made clear both within AIEE and to IRE.

- (2c) What policies should govern AIEE activities with IRE in Technical Conferences?

Here opinion is practically unanimous that joint Technical Conferences have been quite successful and should be encouraged.

- (2d) What policies should govern AIEE activities with IRE on Committee Memberships?

(This item corresponds essentially to Item 1 of the four IRE suggestions. In commenting on this item, Dr. Fink gave the following data:

Total IRE Membership in common	13%
Committee Membership in common	25%
Subcommittee Membership in common	31%
Specific Subject Groups in common	80 to 90%

There is practically unanimous agreement that cooperation in committee activities on standards is desirable. (See below.) Apart from this, a substantial number, perhaps a majority, seem to favor joint technical committees for areas of mutual interest, but almost as large a number are strongly opposed. Careful study is suggested by many. One recommendation is that consideration be given to permitting a qualified IRE member to be a member of an AIEE committee even though he is not an AIEE member.

- (3) Should membership grades have the same requirements with respect to age, qualifications, dues, transfer fees, etc.?

(This item is closely related to, but not identical with, Item 4 of the IRE list.)

The consensus is that the two societies should work toward (a) membership requirements that are nearly if not exactly the same (except for Fellow), and toward (b) automatic entrance to equivalent member grades. In addition, it is felt that there should be a re-examination of the proposal made by IRE in 1955, and reiterated in 1958, to permit a member of one society to enter a comparable grade in the other society without paying an entrance fee.

- (4) Should specific fields of technical activities be delegated to IRE?

The unanimous and emphatic answer is "No".

- (5) Should AIEE and IRE have coordinating committees in the Administrative and Technical fields as advisory representatives of each Institute?

Regardless of differences of opinion as to how far AIEE should go in cooperating with IRE, there is a unanimous belief that coordinating committees, both Administrative and Technical, at appropriate levels in appropriate areas, are essential for orderly consideration and planning of various phases of cooperation with IRE.

- (6) Should there be common publications covering technical activities of interest to both Institutes?

Opinion is divided. The general inclination is to look carefully and go slow. A joint publication for students is frequently mentioned.

- (7) Should AIEE and IRE have common technical sessions at General Meetings on those subjects where committees have common membership?

The majority answer is that this should be permitted when mutually desired, and that encouragement would depend on how cooperation in other respects develops.

- (8) Should AIEE and IRE have common standards in fields of mutual interest?

(This is related to Item 2d above, and hence to IRE Item 1.)

The simple answer is "Yes". However, the plain fact seems to be that (except for Definitions as discussed below) there is at present little overlap on standards work and that the situation is fairly well coordinated by ASA. A different way of phrasing the question might be: "Should AIEE be more active in cooperation with IRE on those standards which are now handled exclusively by IRE?" The popular answer seems to be "Yes". Negotiation with IRE and ASA would be required, as well as coordination with EIA, NEMA and ASES.

One of the most fruitful areas for immediate cooperation between AIEE and IRE is that of definitions of electrical terms. Present procedures, which are described in detail in Attachment H, involve a large amount of duplicate effort and inefficiency. The view of those directly concerned is that a new approach is needed.

- (9) Should AIEE be in full competition with IRE for new members?

To this the answer is unanimously and unequivocally in the affirmative.

OVERALL CONSIDERATIONS

In discussion of these matters by the Subcommittee, by the Planning and Coordination Committee, and elsewhere, certain overall considerations have become evident, as follows:

- (1) The overall problem is an extremely complex one, requiring for its full understanding a considerable degree of familiarity with the activities of the two societies.
- (2) The intersociety problem is closely related to AIEE intrasociety problems of organization and activities which are now under study.
- (3) The matter of AIEE-IRE relationships is likewise related to problems of unity in the engineering profession.
- (4) The preponderant sentiment in AIEE favors across-the-board cooperation with IRE on a full partnership basis, looking toward merger.

RECOMMENDATIONS

In the light of the above, the Subcommittee on AIEE-IRE Interrelationships submits the following recommendations:

- (1) AIEE and IRE should work expeditiously toward closer cooperation in all fields of activity with the objective of an eventual unified electronic and electrical engineering association.
- (2) In furtherance of this broad policy, AIEE should take steps to foster:
 - (a) Full cooperation at the Student Branch level. (As one part of this, immediate investigation of joint student publication is recommended.)
 - (b) Joint section activities, particularly in common technical areas.
 - (c) Joint technical conferences.

- (d) Common technical sessions at general meetings of either society.
 - (e) Joint committees in common technical areas.
 - (f) Membership on AIEE committees of IRE members who are not also members of AIEE.
 - (g) Common standards (including definitions) in fields of common interest.
- (3) An ad hoc committee should be formed in AIEE to study the problems of coordinating publication activities.
 - (4) Joint AIEE-IRE coordinating committees should be established in both administrative and technical areas (including an overall coordinating committee) with the objective of furthering increased cooperation.
 - (5) Immediate steps should be taken to make membership requirements uniform and to establish automatic reciprocal admission to corresponding grade without entrance fee.
 - (6) AIEE should continue to broaden its activities in all technical fields, and should, under the conditions outlined above, compete vigorously with IRE in all areas until unification comes into being.

Respectfully submitted,

F. S. BLACK
H. BLACKMON
J. H. FOOTE (Represented by C. T. Pearce)
L. R. GATY
R. A. HEISING
E. I. GREEN, Chairman

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
PLANNING AND COORDINATION COMMITTEE
1958-1959

East Pittsburgh, Pa.
December 23, 1958

Mr. E. I. Green, Vice President
Bell Telephone Laboratories, Inc.
Murray Hill, New Jersey

Dear Mr. Green:

As discussed with you by telephone on December 22, the Planning and Coordination Committee has been asked by President Hickernell to renew the activities and operating relationship between I.R.E. and A.I.E.E. We have been requested to report, with recommendations, to the A.I.E.E. Board of Directors at the June 1959 meeting.

To cover this request, I appreciate your willingness to accept the chairmanship of a special subcommittee of Planning and Coordination. By copies of this letter, I am asking the Chairmen of the five functional departments of A.I.E.E. to serve with you on the subcommittee. In addition you may also wish to have other members to assist you with this assignment. Likewise, each Department Chairman may wish to appoint a special working group within each department to provide information to him.

This review and report should cover several specific questions, which I will outline below, as well as other questions which Planning and Coordination, you and your committee wish to include.

Mr. Hickernell had a meeting with Mr. Donald G. Fink, on September 15, at Mr. Fink's invitation. Mr. Fink expressed an earnest desire to cooperate with A.I.E.E. and presented Mr. Hickernell with an "Excerpt from the Minutes of the I.R.E. Board of Directors Meeting Held on September 10, 1958". A copy of this excerpt is attached. Your subcommittee is requested to make recommendations with respect to A.I.E.E. position (policy) on the questions raised by the I.R.E. Board of Directors.

December 23, 1958

With respect to item 1 of the I.R.E. attachment, Mr. Fink gave the following data:

1.1	Total I.R.E. Membership in Common	13%
1.2	Committee Membership in Common	25%
1.3	Subcommittee Membership in Common	31%
1.4	Specific Subject Groups in Common	80 to 90%

On item 3, Mr. Fink gave the following comment:

"In his (Mr. Fink's) travels, he has encountered a feeling in some areas that Joint Section Meetings are contrary to 'National' level policy."

On item 4, Mr. Fink commented as follows:

"The A.I.E.E. Finance Committee recommended not to enter into the agreement on the basis of a possible loss in revenue to A.I.E.E. because of the difference in Entrance Fees. I.R.E. would be willing to consider paying the difference, if this were the only deterrent."

Certain discussions have been held from time to time in the A.I.E.E. Board with respect to future operations with I.R.E., as well as what should be done to prevent future splintering-off of special technical groups (forming new technical societies). The opinions on operating with I.R.E. have varied over a wide range depending on the membership of the A.I.E.E. Board. Some favor the idea of working towards the possible merger of A.I.E.E. and I.R.E., others cooperative coexistence and still others seem to desire independent activities.

In addition to the specific points raised by Mr. Fink, the Planning and Coordination Committee and your subcommittee has the assignment of making a careful review of our present policies and making recommendations on what changes should be made. Such questions as the following should be considered.

1. Should A.I.E.E. work toward an ultimate goal of merger with I.R.E.? If so, what is the recommended procedure to follow in pursuing this objective?
2. What policies should govern A.I.E.E. activities with I.R.E.
 - (a) At the Student Branch Level?
 - (b) At the Section Level
 - (c) In Technical Conferences
 - (d) On Committee Memberships

December 23, 1958

3. Should membership grades have same requirements with respect to age, qualifications, dues, transfer fees, etc.
4. Should specific fields of technical activities be delegated to I.R.E.?
5. Should A.I.E.E. and I.R.E. have coordinating committees in the Administrative and Technical fields as advisory representatives of each Institute?
6. Should there be common publications covering technical activities of interest to both Institutes?
7. Should A.I.E.E. and I.R.E. have common technical sessions at General Meetings on those subjects where committees have common membership?
8. Should A.I.E.E. and I.R.E. have common standards in fields of common interest?
9. Should A.I.E.E. be in full competition with I.R.E. for new members?
10. Other

You and your subcommittee will undoubtedly have other points which you wish to include in your deliberations.

In carrying out this assignment, on some of the questions, you may wish to have discussions with representatives of I.R.E. This could involve questions where additional information from I.R.E. would be helpful.

It is, of course, a fact that both A.I.E.E. and I.R.E. are strong societies and this must be recognized. My opinion is that an ultimate merger of the two societies would be desirable yet I am convinced that we must have a relatively long time of cooperative coexistence before this would ever be a practical possibility. I therefore conclude that our objective should be to appraise all working relationships in the light of providing greater unity in the broad electrical engineering field. At the same time, I believe A.I.E.E. should strengthen its activities to cover all areas of electrical engineering more effectively. Your recommendations therefore should recognize the broader scope of A.I.E.E. activities which extend beyond our relations with I.R.E. In other words, what we do in our relations with I.R.E. should be tempered by what we do in the entire field.

December 23, 1958

Because of the large magnitude of the questions involved in this review and the requested recommendations to the Board, I would suggest at least one full day meeting of your subcommittee. You may need several meetings. If possible, it would be appreciated if you could have recommendations available by no later than the middle of May 1959, so that the report can be sent to the Board thirty days before the June meeting.

I will look forward to being of as much assistance as possible.

Sincerely yours,

CC: J. H. Foote
F. S. Black
L. R. Gaty
R. A. Heising
H. Blackmon

A. A. Johnson

Copy to: L. F. Hickernell
N. S. Hibshman
W. J. Barrett

ATTACHMENT "B"

Excerpt from Minute 110 of the November 2, 1955 IRE Board of Directors Meeting

"Director Tucker moved that the Board of Directors approve the policy of establishment of a reciprocal arrangement with the American Institute of Electrical Engineers, whereby a member of either society may become a member of the other society in a comparable grade without payment of admission or entrance fee in the second society; that the Board of Directors request the President to negotiate with the President of AIEE; and that at such time as similar action of approval is taken by the Board of Directors of AIEE, the Constitution and Laws Committee be requested to prepare the necessary Bylaws amendments for submission to the Board of Directors. (Unanimously approved.)"

ATTACHMENT "C"

Excerpt from the Minutes of the AIEE Board of Directors Meeting
Held June 28-29, 1956

"(C) COMMITTEE OF THE WHOLE ON INTERSOCIETY RELATIONS

President Hooven suggested that for the purpose of free discussion and informal polling of opinion the Board, including members-elect might advantageously adjourn temporarily and assemble as a 'Committee of the whole on Intersociety Relations' for discussion of relations with IRE. It was so VOTED.

"(D) BOARD MEETING RECONVENED

To summarize the consensus of the 'Committee of the Whole' it was unanimously,

VOTED that, a) We wish to avoid any split in the Electrical Engineering Profession. b) We wish to work toward the ultimate goal of merger with IRE. c) As one means toward that end, we propose to strengthen our technical programs in the fields in which both they and we are interested.

To devise means of implementing the conclusions of the 'Committee of the Whole', it was unanimously,

VOTED that, the incoming President and the incumbent President appoint a special task force to study the various thoughts given this morning with the idea of establishing some dynamic plans for implementing some action to accomplish the objectives discussed."

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
33 West Thirty-Ninth Street
New York 18, N. Y.

Minutes
Committee Of The Whole
On
INTERSOCIETY RELATIONS

Board of Directors Meeting 6/28/56

San Francisco, Calif.

(Thur. 9:43 A.M. PDT.) ASSEMBLED at the call of Chairman M. D. Hooven

I. INTRA PROFESSIONAL RELATIONS: AIEE-IRE

President Hooven finds relations with IRE a topic of major interest throughout AIEE as evidenced by discussions in various committees and conferences at this convention. His survey of Board opinion reveals a range from "close cooperation" to "split entirely." The latter view is in the minority. There is a strong opinion calling for the discouragement of Joint Branches and vice versa. Likewise opinions differ on the encouragement of open and avowed "competition" as against "intense cooperation."

After this review of the results of the President's mail survey of Board opinion, the question of the Board's attitude toward relations with IRE in general was discussed as preliminary to consideration of specific aspects of it, such as Joint Student Branches.

(A) AIEE-IRE GENERAL POLICY ON RELATIONS

- 1) Aims and attitudes: President Hooven, responding to a question from the floor, gave as his personal observation that within IRE attitudes toward AIEE vary widely. One extreme takes the position that AIEE is so committed to an interest in power as to be unable to cope with the present growing predominance of member needs in science-based electronics and communications arts. Lacking appeal for the younger generation, AIEE will automatically pass out of the picture and leave the whole field of Electrical Engineering to IRE. There is also said to be an older group in IRE who prefer to emphasize radio and the earlier, more limited, objectives of IRE. Some responsible leaders, including some recent IRE presidents, hope for an eventual merger of the two Institutes and would encourage all possible present cooperation as a prelude. Others doubt that a

merger is practicable and would accept "competition" as inevitable, but not uncontrollable. President Hooven said that in the light of his conversations with various IRE leaders he believes that their considered attitude as to ultimate aims would be to avoid splitting the Electrical Engineering profession and to work toward ultimate unification on some, as yet unspecified, basis.

The following opinions were expressed:

- 2) Merger can be achieved only after the ability of AIEE to compete effectively in the electronics and communications area has been demonstrated.
- 3) The effort to make such a demonstration would be widely interpreted as precipitating the undesired split and would lose friends and support for AIEE.
- 4) Attitudes within IRE include fear of being absorbed and dictated to by the older and bigger AIEE. It is alleged that AIEE is not cooperative because the committees through which cooperation should take place do not enjoy the proper sympathy and support of the AIEE Board of Directors for proposed cooperative activities.
- 5) That no program or plan for extending "cooperation" is at hand. It must be developed in steps as we proceed under the prompting of mutual good intentions.
- 6) Merger is not a realistic aim. The best that can be expected is good, clean competition.
- 7) Historically, the two Institutes have supplemented each other. If the present and future are viewed from the standpoint of functional rather than material and equipment interests the same might still be true. AIEE represents management, system planning, operation and the broader aspects of engineering; while IRE represents the physics, research, and electronic equipment detail interests and aspects of the communications field.
- 8) Members and students feel that AIEE is on the defensive. More aggressive action is called for.
- 9) Effective competition in securing the services of the best technical committee leadership and technical programs has been carried on between the two Institutes without excessive friction.
- 10) Better to approach the achievement of the original and continuing purposes of AIEE in serving the whole field of Electrical Engineering should not be looked upon as "competition".

(B) INFORMAL POLLS

At this point it was proposed and agreed that there should be informal polls taken to get a quantitative appraisal of the opinions of the "committee", consisting of 33 present and incoming Board members, as to questions of policy and procedure. The questions and the vote on each follow:

- 1) AIEE should take all reasonable precautions to avoid "splitting" the EE profession. Yes - 33. No - 0.
- 2) The ultimate aim of AIEE should be a merger with IRE into one Electrical Engineering Institute as opposed to an indefinite continuation of two separate societies. Yes - 31. No - 2. (Discussion indicated that "absorption" of one Institute by the other would never provide a realistic basis for planning.)

An invitation to explain the two negative votes brought comments from five members of the "committee". In summary these comments were:

- a) One third of AIEE members appear to be interested in electronics; all of IRE members are so interested. A merger is unrealistic.
- b) AIEE has plenty to offer as the "overall" professional electrical society vs IRE as a purely specialized technical society.
- c) AIEE publications in the newer fields are "second-hand"; articles have appeared elsewhere. The future lies in computers, nucleonics, etc. and AIEE must cover these fields more effectively.
- d) 102/143 Branches are joint - "..... and a little child shall lead them."
- e) Merger should be sought by the junior society. This will happen only when the senior society makes it evident that it is capable of covering the whole field.
- f) The idea of a better job in electronics as an incentive to merger is wishful thinking.

- 3) As a practical step toward ultimate merger and the clarification of current relations AIEE should propose and seek a joint meeting of the Boards or Executive Committees of the two Institutes in the near future - perhaps at Chicago during the NEC. Yes - 14, No - 15. The negative votes were in part explained by the question, "What have we to offer at this time - simply notice that we are determined to do a better job in the electronics field with the purpose of inspiring them to seek a merger?" On the affirmative side, it was pointed out that merger talk should, at this time, be based on economies of operation, professional representation of individual members, elimination of duplication, greater strength and broader coverage for the members.

- 4) If there were no Joint Branches today, AIEE would, in the light of past experience, favor the establishment of this type of cooperation with IRE.
Yes - 15. No - 15.
- 5) Taking the situation as it stands today, AIEE policy should be to encourage the establishment of new and additional Joint Branches. Yes - 9, No - 21.
- 6) The chairman appeared to find no dissent from his following statements:
a) We are and should be in competition for members. b) We are and should be cooperating in technical meetings and activities. c) The formation of overlapping technical committees is a proper type of competition, since after formation they usually cooperate. d) In Standards, AIEE policy is now to take greater initiative and a more independent position in promotion and publication.

(C) SUMMARY

The chairman summarized the informal discussion of the "Committee of the Whole": We are in almost unanimous agreement on three points - a) Nothing should be done further to "split" the Electrical Engineering Profession, b) Our ultimate objective is a merger with IRE. c) As a means of encouraging the achievement of that ultimate objective AIEE should do a better job in its service of all fields of electrical engineering. We are nearly equally divided in our concepts of the methods implementing these policies. (See also formal Board actions Item II (D) of the minutes of 6/28/56).

II. INTERSOCIETY RELATIONS: EJC, ECPD, NSPE, etc.

(A) GENERAL STATEMENTS

- 1) Past-President Robertson stated the objective of this session of the "Committee of the Whole on Intersociety Relations" as the establishment of "guide posts" which could be used by a drafting committee to prepare a statement of AIEE policy to inform the membership and any affected organization of our position on these matters.
- 2) President Hooven reviewed the responses to his questionnaire to Board members as follows: a) Opinions divided. b) Many wanted to remain in EJC; some, "yes but with stronger interest in NSPE." c) A number wish to leave EJC. d) A number wanted to support NSPE better. e) Some supported the "Morton Plan". f) A half dozen favored a resurvey of the situation. g) Previous poll of membership was taken before half of present members were in the AIEE.

(B) INFORMAL POLLS

- 1) AIEE believes that there should be unity of the profession with AIEE carrying the entire technical burden in the Electrical Engineering field.
Yes - 33 No - 0.
- 2) Past President Robertson proposed that AIEE examine the activities of existing bodies with a view to identifying those which should receive AIEE support. ARTICLE VIII paragraph 3 of the EJC Constitution was cited as providing that constituent societies may contribute to the support of EJC activities on a selective basis. As means of reviewing the activities of EJC, ECPD and NSPE and deciding which were suitable for AIEE endorsement and support; the committees of each society were listed in parallel columns as below and a vote was taken as to the suitability of the activity as represented by the committee. "X" indicates a vote of "not suitable for AIEE support in this organization."

ACTIVITIES OF TYPICAL ORGANIZATIONS REPRESENTING:

Coordination of Scientific Activities (EJC)	Coordination of Educational Activities (EGPD)	Individual Membership Professional Activities (NSPE)
1. Employment Conditions - X	Guidance	Education - X
2. Engrg. Sciences	Education	Registration
3. Honors for Engrs.	Student Development	Young Engineers - X
4. International Relations	Training	Employment Practice
5. Labor Legislation - X	Recognition	Salaries and Fees
6. Membership	Ethics	Engrs. in Industry
7. National Engineers - X	Information	Engrg. Practice
8. Nat'l. Engrs. Register	Practice of Engrg. - X	Ethical Practice
9. Nuclear Congress	Accrediting Curric.	Bd. of Ethical Rev.
10. Planning	Tech. Inst. Prog.	Awards
11. Practice of Engrg. - X	OTHER BODIES	Nat'l. Affairs
12. Recognition of Specialties	UET	Nat'l. Defense
13. Social Security Legislation-X	NSCBEE	Public Relations
14. Special Surveys - X	ASEE	Prof. Soc. Relations
15. Nat'l. Water Policy	Conf. Bd. for Ind.	Chapter Activities
16. UNESCO	AAAS	Membership
17. World Power Conf.		Publications
18. Com. on Large Dams		Budget
19. Annual Gen'l Assembly - X		Const. & Bylaws
20. EMC		Legislative

- 3) It was the consensus with regard to the above action that, in certain instances such as Special Surveys, when the subject matter is technical in nature surveys by EJC or a similar technical coordinating body are proper. When the subject to be surveyed is political or has to do with economic welfare and working conditions of engineers it is more properly the function of a body of the type of NSPE.
- 4) A statement of AIEE policy proposed by Past President Robertson follows:

".....to formally recognize and publicly say that AIEE feels that certain organizations are best fitted to carry on in a particular field and that these will get AIEE support both moral and financial We feel there is need for a Technical Council but that it should confine its activities to purely technical matters, by this we mean such matters as are now handled by EJC and as were approved on the foregoing list (not marked "X".) We feel that such matters as concern the professional prestige, and the economic status of engineers, and legislative activities, should properly be in the province of NSPE. We feel that ECPD is the proper joint agency to handle and be concerned with the general field of engineering education and training; that ECPD will continue to receive active AIEE support."

It was further specifically recommended that: the foregoing discussion and analysis of joint activities serve for the guidance of a committee appointed to draft, for later Board approval, messages to our membership, to EJC and to others that may be concerned, such as NSPE or ECPD. These messages possibly to be different in each case. (Action was deferred for further consideration of the "unity problem")

- 5) President Hooven asked for consideration of a broad aim. a) Do we want two "unity organizations", one purely technical, the other purely professional? or b) Should there be a bridging connection between the two? or c) One national society with a professional division and various technical divisions? These are Plans "B" and "D" of ten years ago.

Past-President Robertson's proposal was then further amplified as follows: "The AEA, as we have been thinking of it, may or may not be the ultimate solution that we want for the engineering profession. In spite of the fact that the ABA has its sections and the AMA has its scientific assemblies as a part of ABA and AMA, to handle the technical side of the profession, we know that not all of the technical and scientific medical societies are affiliated with AMA. The formation of a technical council in AEA introduces so many problems and personalities that I feel that probably we should delay the wedding of a technical council and a professional council into AEA until some time later, if at all."

President Hooven again asked if there were a desire to set as an ultimate objective one unity organization for engineers, which has been assumed to be an objective, or two separate ones. The consensus appeared to be that this question should not be answered at this time. It was admitted that this represents a retreat from the AIEE position of the last five years. It was,

VOTED that we adopt in principle and propose actually to support three organizations of this character. ("This character" to be inferred from B 2 above as modified by the elimination of activities marked X".)

- 6) VOTED to request the President to appoint a special committee to draft, subject to Board approval, a statement to the membership and other interested parties setting forth the AIEE position as today determined. (L. F. Hickernell, Ch., M. D. Hooven, Elgin B. Robertson)
- 7) VOTED to request the President to appoint a committee to place before NSPE the suggestion that it make provision, for a period of years, to include in its membership unregistered engineers holding appropriate grades in those technical societies subscribing to the ECPD uniform membership grades.
- 8) VOTED to rescind the instructions to AIEE representatives on EJC under which they are required to work for the development of EJC into an individual membership unity organization.

(Thur. 3:55) COMMITTEE OF THE WHOLE ON INTERSOCIETY RELATIONS
ADJOURNED.

ATTACHMENT "E"

Excerpt from the Minutes of the IRE Board of Directors Meeting Held
on September 10, 1958

"Director Ryder moved that the President be empowered to approach the President and the Board of Directors of the American Institute of Electrical Engineers with a proposal for joint study of the following four suggestions for closer cooperation with that society in areas of common interest, and further moved that the Board of Directors reiterate the action taken at the meeting held on November 2, 1955, minute 110:

1. Eliminating duplication of effort by joint appointment of technical committees in common areas.
2. Agreement on a common Joint Student Branch policy.
3. Encouragement of Joint Section meetings.
4. Reciprocal agreement on automatic entrance to equivalent membership grades.

(Unanimously approved.)"

MEMBERSHIP STATISTICSAIEE

<u>Year Ending Apr. 30</u>	<u>Honorary Members</u>	<u>Fellows</u>	<u>Members</u>	<u>Associate Members</u>	<u>Affiliate Members</u>	<u>Total Excl. Students</u>	<u>Student Members</u>	<u>Grand Total</u>
1945	6	914	6,238	15,914		23,072	4,613	27,685
1950	8	1,255	9,186	23,749		34,198	20,668	54,866
1955	5	1,521	11,353	35,181	933	48,993	7,666	56,659
1956	7	1,519	11,888	35,362	1,173	49,949	9,458	59,407
1957	7	1,536	12,454	35,175	1,386	50,558	9,747	60,305
1958	7	1,544	13,535	35,515	1,612	52,213	10,592	62,805
1959	7	1,572	14,418	36,065	1,766	53,828	11,616	65,444

IRE

<u>End of Year</u>	<u>Fellows</u>	<u>Senior Members Equiv. to AIEE Members</u>	<u>Members Equiv. to AIEE Associates</u>	<u>Associates Equiv. to AIEE Affiliates</u>	<u>Total Excl. Students</u>	<u>Student Members</u>	<u>Grand Total</u>
1945	210	1,288	1,238	11,145	13,881	1,898	15,779
1950	323	2,726	3,803	14,590	21,442	7,560	29,002
1955	565	5,643	13,360	20,492	40,060	7,328	47,388
1956	635	6,486	19,110	18,879	45,110	10,384	55,494
1957	750	7,685	26,115	16,827	51,327	13,446	64,773
1958	770	8,536	32,373	14,721	56,400	14,961	71,361

ATTACHMENT "G"

May 8, 1959

Dr. E. I. Green
Executive Vice President
Bell Telephone Labs., Inc.
Murray Hill, New Jersey

Subject: Minutes of Planning and Coordination
Committee Meeting of March 20, 1959

Dear Dr. Green:

With respect to Item 4.4.5 "Response to the Specific Proposal for a Joint Study Committee," I feel that I owe you and the others present at the P&CC meeting of March 20 some amplification of my thoughts on this agenda item.

The proposal of the IRE is "For a joint study of the following four suggestions for closer cooperation ... in areas of common interest":

1. Elimination of duplication of effort by joint appointment of technical committees in common areas.
2. Agreement on a common joint student branch policy.
3. Encouragement of joint section meetings.
4. Reciprocal agreement on automatic entrance to equivalent membership grades.

I think this proposed agenda needs the careful and thorough study which I'm sure your committee is giving to it. Some of my thoughts are the following.

There are large and growing areas of common interest between the two societies and inevitably joint activities will continue to increase.

Because electronics is involved in the entire field of electrical engineering today, it appears that the two societies will be increasingly in parallel operation in virtually the entire field.

If this is the case, then it could be expected that eventually one or the other of the societies will eventually take over the field and absorb the other.

In the leading engineering colleges it is evident that there is only one curriculum for all electrical engineers, and the students are perplexed to find two technical societies competing for their interest.

In General Electric about three-quarters of the total engineering employees are engaged in activities where the predominant interest is electronics. IRE is serving the technical interests of these engineers effectively but it is evident that there is need to belong to AIEE also in order to keep abreast of the technology.

An appraisal of the strengths and weaknesses of the two societies would be useful.

Relatively IRE may be weak, for example, in power, heavy apparatus, telephone, and computer technologies. AIEE may be relatively weak, for example, in radio, microwave, tube, semiconductor, and military technologies. I would not like to make these statement categorically.

The AIEE strength is in its organization structure for across-the-board technical operations without separation into technical divisions, each based on a body of individual members. IRE strength is in its organization structure including specialized technical divisions, each with its own organization based on individual membership. Therefore, it appears that AIEE is competing against IRE, with a centralized organization structure for technical operations against a decentralized organization structure for their respective technical operations. An important advantage should lie with one or the other and I expect it will favor the decentralized organization. I am thinking of how things appear from the grass-roots point of view. I must admit to some disappointment in the development of technical groups in the AIEE Sections and I believe this can be attributed, at least in part, to the lack of organization connecting the technical groups to the technical operations department.

Taking a cue from the situation of the students and faculty in the engineering colleges, it seems to be indicated that common membership, branches and sections is the ultimate development. These factors plus others that need consideration suggest to me that a joint study should be undertaken on a broad exploratory basis to determine the possibilities for common action to advance the art and science of electrical engineering in view of the explosive changes which are taking place in the technology.

With respect to the four point agenda proposed by IRE, I am inclined to believe that 1 and 3 would be detrimental to AIEE and advantageous to IRE. The Sections are the root strength of both societies and when you tamper with them you affect the whole of both societies. Therefore, the whole of each society needs to be considered first if the objective is to encourage joint Section meetings. There is certainly a heavy responsibility on the leaders in AIEE in determining the relationships with IRE.

In summary my suggestions are as follows:

1. Appraise the relative positions, work and effectiveness of the two societies against today's EE technology and distribution of manpower.
2. Look at the big job of bringing the societies together in total, rather than to bring them together at vital points where the life strength of one or the other may be sapped feeding the other.
3. Skim off those joint activities which the study shows can be undertaken now with full knowledge of where such joint activities should be leading us.
4. Propose a joint study with IRE with an agenda coming from this preparation.

I am stressing in particular the importance of the first step in this procedure.

Sincerely yours,

T. M. Linville

TML:JD

AAJohnson
Hendley Blackmon
JLCallahan
WRClark
JHFoote
RAHeising
LFHickernell
WALewis
JCStrasbourgger
NSHibshman

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DEFINITIONS OF ELECTRICAL TERMS

Present procedures in AIEE, IRE and ASA for standardizing definitions of electrical terms are described below.

AIEE - ASA C42

AIEE, acting for the American Standards Association, establishes ASA Sectional Committee C42 which is charged with the preparation and issuance of definitions of electrical terms. The Sectional Committee includes representatives both from AIEE and from a large number of other societies and organizations (including IRE). The Chairman of C42 (now Prof. C. L. Dawes) appoints the chairmen of a number of subcommittees to cover definitions in different fields. The present subcommittee assignments are as follows:

Subcom.
No.

- | | |
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| 1 | Group 05 - General (Fundamental & Derived) Terms |
| 2 | Group 10 - Rotating Machinery |
| 3 | Group 15 - Transformers, Regulators, Reactors, and Rectifiers |
| 4 | Group 20 - Switchgear |
| 5 | Group 25 - Control Equipment |
| 6 | Group 30 - Instruments, Meters, and Meter Testing |
| 7 | Group 35 - Generation, Transmission and Distribution |
| 8 | Groups 40, 41 and 42 - Transportation |
| 9 | Group 45 - Electromechanical Applications |
| 10 | Group 50 - Electric Welding and Cutting |
| 11 | Group 55 - Illuminating Engineering |

Subcom.
No.

- | | |
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| 12 | Group 60 - Electrochemistry and Electrometallurgy |
| 13 | Group 65 - Communication |
| 14 | Group 70 - Electron Tubes |
| 15 | Group 75 - Radiology |
| 16 | Group 80 - Electrobiolgy including Electrotherapeutics |
| 17 | Group 85 - Mining |
| 18 | Group 95 - Miscellaneous |

Each subcommittee chairman selects the working members of his subcommittee. Likewise he may appoint special working groups or task forces to prepare particular groups of definitions. The objective of the C42 setup is to bring out at infrequent intervals (i. e., 10 to 15 or more years) a complete set of up-to-date definitions covering the entire electrical field. Originally the entire set of definitions was published in one volume, the last such volume having been issued in 1941. The definitions work was suspended during World War II and resumed in 1947. To avoid the delay that would have been involved in getting out a single volume, separate books have been issued over the last few years for each of the subcommittee areas listed above. The definitions prepared by the subcommittees are approved by letter ballot of the Sectional Committee. Publication, including indexing, proofreading, etc. was handled by AIEE.

In most cases this definitions work was prosecuted independently of AIEE technical committees. In certain areas (e. g. Fundamental Terms, Communications and Electronics) there was a large amount of overlap with definitions being prepared by IRE technical committees as discussed below. In general, advantage was taken of definitions available through IRE, these sometimes being used unchanged but more frequently being modified. A weakness in the C42 setup, apart from duplication of IRE effort as discussed below, lay in the lack of an effective method of assigning jurisdiction for particular terms which concerned the areas of one or more subcommittees.

IRE Definitions Activity

In IRE there is a large amount of activity on definitions. This covers completely all those areas of communication, electronics and related fields in which IRE is active. The definitions are prepared by the technical committees with assistance from task forces or working groups. In fact, the preparation of definitions and standards comprises a large part of the responsibility of the IRE technical committees. There is an efficient Definitions Coordinating Committee which maintains lists of all terms which have been, or are to be, defined and assigns jurisdiction to a particular committee in all cases of doubt. The definitions clear through the IRE Standards Committee, usually but not always with perfunctory approval, and are then submitted to the ASA for standardization through ASA C16, C60, etc.

Difficulty of Coordinating IRE and C42 Definitions

At the time that IRE requests ASA standardization of the definitions prepared by its committees, coordination with the definitions which have been standardized by C42 is extremely difficult. The grouping of the definitions differs widely in the two cases, so that for any one set of IRE definitions different C42 committees may be involved. Even in the fortunate but infrequent case where the same definition starts out along the two paths, modifications along the way generally lead to important differences. As a practical matter it turns out that in the usual group of IRE definitions a few are identical with those of ASA C42, a few have minor differences and most of them have major differences.

This awkward situation has received some attention in ASA and in fact certain procedures identified as ASA CE405 and 406 have been set up which are intended to alleviate the situation. Among other things these procedures call for (1) a notation of those definitions proposed by IRE for standardization which are identical with standard C42 definitions and (2) in the case of definitions not conforming to C42 definitions, a statement of the reasons why revision is imperative. Up to now these procedures have been honored more in the breach than in the observance. Furthermore, the magnitude of the task of reconciling large numbers of differing definitions and terminology has been such as to preclude any effective coordination.

It will be apparent that the amount of duplication of effort involved in the above procedures is quite large. An entirely new approach is needed in order to utilize with maximum efficiency the effort expended in the two organizations in the definitions area.

E. I. GREEN