

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

INCORPORATED

BOX A, LENOX HILL STATION
NEW YORK 21, N. Y.

May 1, 1963

Recd 5/7/63

To: Professional Technical Groups Committee
From: R. M. Emberson, PTG Secretary
Subject: Area of Interest Survey

1. Enclosed is a provisional tabulation of PTG interests, as indicated by the responses we have received to the March 15th area of interest inquiry.
2. Dr. Oliver has watched these responses, as they came in, and has asked me to contact the Chairman of each of the PTGs that did other than check a single area of interest. You will observe that I will be calling many of you during the week of May 6th.
3. Undoubtedly there has been some misunderstanding about the purpose of the area of interest letter. Also, some PTGs clearly have interests in more than one area, as the responses have shown, but there is a primary interest in one area, which is not shown. I hope that our discussions will answer some of the questions, or at least sharpen the issues, in order that we may have a revised and simpler tabulation for discussion at the May 16h PTG Committee meeting.

Please bring the enclosed material with you to the PTG Committee meeting on May 16th.

Encs.

cc: H. Blackmon
J. L. Callahan

AREA OF INTEREST SURVEY
(PTG Replies as of April 30, 1963)

AREAS	1	2	3	4	5	6	7	8	9	10
G-1 *	None checked. Letter states: "it is impossible to check any category without checking all others, or to check none as being entirely applicable".									
G-2 *	"..interest in possibly merging PTGB with PTGBTR.. to merge community interest in Broadcasting & TV as a system."									
G-3 *	1			2						
G-4 *	X									
G-5 *	X	X	X		X		X	X	X	
G-6				X						
G-7 *										
G-8 *										
G-9										
G-10				X	X		X			
G-11 *	X			X	X	X	X			X
G-12 *	"Most of our AdCom members object to being put in a single category."									
	1			2		3				
G-13										
G-14 *	None checked. Letter states: ".. do not feel it is possible to make an appropriate choice as therein listed."									
G-15 *	1		3					2		
G-16										
G-17	X									
G-18										
G-19										
G-20	X		X		X	X		X	X	
G-21 *			2					1		3
G-22 *								X		
G-23 *	None checked. Letter proposes new area on "Automatic Control".									
G-24	None checked. PTGMIL AdCom proposes new area on "Military Electronics and Aerospace Systems."									
G-25 *	None checked.									
G-26 *										X
G-27 *	None checked.									
G-28										
G-29 *	None checked.									
G-30										

* Comments attached.

9-1

COMMENTS FROM PTG ON AUDIO

1 April 1963

At the March 26, meeting of the Professional Technical Group on Audio, the areas of interest of our group was discussed with respect to the questionnaire. The following is a statement of the field of interest of the group as taken from our constitution:

"The Field of Interest of the Group shall be the technology of communication at audio frequencies and of the audio - frequency portion of radio-frequency systems, including the acoustic terminations and room acoustics of such systems, and the recording and reproduction from recordings, and shall include scientific, technical, industrial or other activities that contribute to this field, or utilize the techniques or products of this field, as the art develops, to additions, subtractions, or other modifications directed or approved by the IEEE Committee on Professional Technical Groups."

From the above statement concerning interests of the group it can be seen that almost every category on the reverse side is included from the basic science involved to the applications of the scientific principles, but all of these related to the audio frequency portion of the spectrum. It was impossible for our administrative committee to check any category without checking almost all others, or to check none as being entirely applicable.

The administrative committee is actively exploring the interests of all other Professional Technical Groups and also the Technical Committees to determine overlap of interests where possible.

Robert W. Benson
Chairman, PTG-A

Comments by PTCAP Administrative Committee Members
on Oliver-Blackmon Letter of March 15, 1963.

"Some of the proposed areas of interest (Category 1 for instance) are extremely broad, while others (Computers, for instance) are quite restricted in scope. If there are to be 10 categories, they should be of roughly equivalent scope, and there should be room for one on Electromagnetic Radiation, which is hardly a trivial aspect of Electronic Engineering."

"I would not like to see the division into the areas of interest in the questionnaire become the basis for a regrouping into, say, a Professional Group on Pure Science, a Professional Group on Industrial Electronics, etc. If my guess is right, one disadvantage to this will become obvious when the questionnaire results are tabulated. I think a majority of the Professional Groups will classify their main interests under the same heading of Pure Science."

* The description of category 1, "... techniques underlying the electrical and electronic industry" seems rather ill-advised.

"The classification is orthogonal to the true specialization. Assuming for the moment that my interests are quite narrow and concern antennas, I certainly make use of basic sciences and techniques. Who would rule himself out of those? I am interested in industrial applications (of antennas). Similarly the interests would include communication, electronic systems, instrumentation, and materials. Perhaps, I might qualify my interests in computers and professional activities. I believe that members of other professional groups in entirely different fields would, likewise, be interested in much the same areas having entirely different applications in mind."

"This is a very difficult job for the Study Committee--also a continuing job. The results of the study to date show; 1 - too many groups, and 2 - incomplete coverage of interest except by joining several groups -- these are not objectionable per se. What is gained by reducing the number of molds into which you pour the 10⁵ members? Measure the usefulness of a group by the service it provides in quality rather than quantity."

UNIVERSITY OF ILLINOIS
COLLEGE OF ENGINEERING
URBANA, ILLINOIS

DEPARTMENT OF ELECTRICAL ENGINEERING
E. C. JORDAN, Head

April 26, 1963



Dr. B. M. Oliver
Chairman, PTG Committee
Institute of Electrical and Electronics Engineers
345 E. 47th Street
New York 17, New York

Dear Dr. Oliver:

In response to your memorandum of March 15, 1963, concerning IEEE organizational study committees, I have attempted to ascertain the views of my Administrative Committee in this regard. This has resulted in the choice of the two areas of interests indicated on the enclosed form. While I have indicated area 1 as first choice, I should stress that as some members expressed it as a first choice, while others had their first choice area 4. I can only conclude that our interests truly overlap into the two areas.

In comments made accompanying their replies, some members expressed considerable disagreement with the concept of division indicated in this memorandum. I have enclosed some of these on a separate sheet.

Is it planned to have some meetings of these groups in conjunction with, or immediately preceding or following, the next PTG meeting? This might be a good way to get people together for the first time. I would hope, nevertheless, that most of the jobs of these committees can be carried out by correspondence.

Sincerely yours,

Sidney Bowhill
S. A. Bowhill
Chairman, PTGAP - IEEE

SAB:rp
Enclosures

cc: R. C. Hansen
R. M. Emberson
P. E. Mast

95-4

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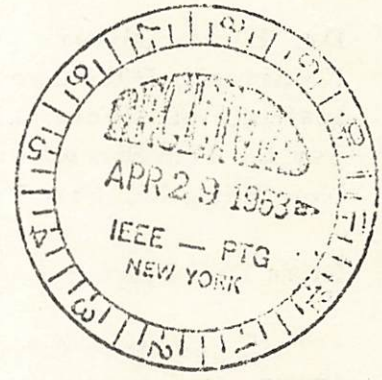
NEW YORK UNIVERSITY
COLLEGE OF ENGINEERING
UNIVERSITY HEIGHTS, NEW YORK 53, N.Y.

DEPARTMENT OF
ELECTRICAL ENGINEERING

April 26, 1963

TELEPHONE: LUDLOW 4-0700

Dr. R. M. Emberson
The Institute of Electrical
and Electronics Engineers
Box A, Lenox Hill Station
New York 21, New York



Dear Dick:

Circuit 1

In the absence of the survey form associated with your letter of March 15, 1963 concerning the Area of Interest Survey, I am taking the liberty of writing this letter to indicate the wishes of the Professional Group on Circuit Theory. The area on "Basic Sciences and Techniques" appears to be the most appropriate for PTGCT. It is important to note, however, that vigorous efforts are being made by PTGCT to work out merger arrangements quite apart from the area of interest survey. Professor John G. Linvill of Stanford University is chairman of an ad hoc committee which expects to report regarding future plans of the group in early June. I shall keep you advised of our progress.

Sincerely yours,

JHM
J. H. Mulligan, Jr.
Professor and Chairman
Department of Electrical
Engineering

JHMjr r
cc: J. G. Linvill
R. J. Schwarz
R. L. Pritchard



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

INCORPORATED

BOX A, LENOX HILL STATION
NEW YORK 21, N. Y.

April 8, 1963

Dr. B.M. Oliver
Vice President, IEEE
Box A, Lenox Hill Station
New York 21, N. Y.

Dear Dr. Oliver:

Your memo to chairmen of PTG's and TC's, dated March 15, was discussed at the PTG-NS Administrative Committee meeting on March 27. We realize that this is a mixed-up business, but there was not time to consider the situation carefully. Our group is one that does not fit any particular pattern since it covers all topics related to nuclear science and engineering. It has been an active and effective group.

Perhaps the answers to your form will not be very helpful. The Committee suggested that I try to qualify my answers to make them more meaningful. I also enclose check sheets from R. L. Chase, Secretary of PTG-NS, Edward Brown, a member of PTG-NS Administrative Committee, and David Cook, Chairman of the Nuclear Techniques Committee (the IRE Nuclear Standards Committee).

Sincerely yours,

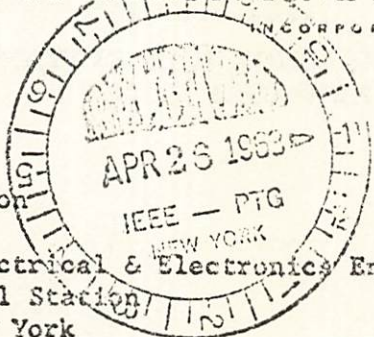
W. A. Higinbotham
Head, Instrumentation Div.

AREAS OF INTEREST

- #1 - Nuclear science, techniques applied to the nuclear field, techniques employing nuclear radiation. Probably our primary.
- #2 - Peripheral to our interests except nuclear reactors.
- #3 - Nuclear power, ionization, isotopes, nuclear techniques - not of primary importance to us.
- #5 - Not of interest except related to nuclear power or research.
- #7 - Second in importance to #1. Large part of our program relates to nuclear instrumentation.
- #8 - Radiation detectors are of primary importance to us. Concerned with radiation effects on components.
- #9 - No serious overlap with PTG-BME. We are interested in Bio-Med applications of radiations and isotopes.

93-11

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS



April 25, 1963
SHD: 3-132

Dr. R. M. Emberson
 PTG Secretary
 Institute of Electrical & Electronics Engineers, Inc.
 Box A, Lenox Hill Station
 New York 21, New York

S. H. Dodington
 ITT Federal Laboratories
 500 Washington Avenue
 Nutley 10., New Jersey

Subject: Area of Interest Survey

Dear Dr. Emberson:

I have delayed replying in order to get the maximum possible response.

I find that there is some interest among our members in all ten areas; however, I have only checked those areas in which the majority are interested. (1, 4, 5, 6, 7, 10) This encompasses 6 of the 10 and therefore would not appear to provide much of a basis for rearrangement of groups.

It seems to me that there are really only two basic kinds of interest which we should consider:-

- a. That deriving from the kind of business one is in.
- b. That deriving from the kind of technical subject one is expert in.

These two form a matrix such that most IEEE members would be members of two or more groups. This, however, is far preferable to the chaotic situation that would result from an attempt to form organisations, each of which uniquely covered all the interests of a particular group. Carried to absurdity, this could result in a PTG for each member of the IEEE.

It would seem that most of our present groups have been based on the business that we are in, but there are some, like microwave theory, circuit theory, reliability, which cut across many businesses.

I think that if we could generate some guide lines from above, the task of reorganising could be much simplified.

Sincerely,

A handwritten signature in dark ink, appearing to read "Sven H. Dodington".

Sven H. Dodington
 Chairman, IEEE-PTGANE

SHD:he

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April 2, 1963

Dr. B. M. Oliver, Chairman
PTG Committee
Institute of Electrical and Electronics Engineers
Box A, Lenox Hill Station
New York 21, New York

Warwick Mfg. Corp.
7300 N. Lehigh
Chicago 48, Ill.

Dear Barney:

Your March 15 letter on the suggested IEEE Organizational Study Committee was discussed with great interest at the Professional Technical Group on Engineering Management's Administrative Committee meeting in New York on March 26. I would find it difficult to compress into a short letter the various points made by the assembled group. However, I should like to communicate two thoughts which came out of those discussions.

The first, and most important, was to set up an Ad Hoc Study Committee to give this broad problem considerably more thought than was possible that day. This is in the process of being done and you will, of course, be kept informed of their progress.

Second, it was not readily clear why the various areas of interest need to be broken down to ten or so major groupings. If the IEEE were to be a highly centralized organization, then it would automatically follow that only a relatively small number of groups could be handled administratively. However, should the IEEE continue to operate as a highly decentralized organization, it is conceivable that a much larger number of groupings might work out even better under such a philosophy. For example, the PTG-EM is a very self-sufficient body which runs itself with very little assistance from the IEEE national headquarters, except for the mechanical assistance in publishing, distribution, mailings, etc.

We have not returned your check list since we do not feel it is possible at this time to make an appropriate choice as therein listed.

Sincerely,

Edward S. White
Chairman - PTG-EM

1g cc M. Brady
J. Cave
R. Emberson
T. Marburger
S. Winkler

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Bellcomm, Inc.
1100 - 17th St., N. W.
Washington 6, D. C.

g-15

April 11, 1963

Dr. B. M. Oliver, Chairman
Professional Technical Groups Committee
Institute of Electrical
and Electronics Engineers
Box A, Lenox Hill Station
New York 21, New York

Dear Barney:

This is in reply to your "Area Interest Questionnaire" dated March 10, 1963. I have indicated Electron Device interest in three areas in the following order of preference:

1. Basic Sciences and Techniques.
2. Materials, Component and Production Processes.
3. Industry and Industrial Application.

It is our understanding this is to be used to develop ideas regarding a structure for grouping and/or merging PTG and TC interests. The major interests of a group should preferably fall in only one classification with but interface interests in other areas. Because of the overlapping scopes implied by the definitions of some of the groups, it is necessary for us to indicate interests in several areas. You will recognize that there is a close relationship between electron device interests and the basic sciences on which the devices are based (physics, chemistry, mathematics and engineering) and this is our first preference.

We are also intimately associated with "materials of interest in the fabrication... of electron devices." Incidentally we have already taken the position that the establishment of a Professional Group on Material Science should not be attempted at the present time. A copy of this report dated August 17, 1962 which states our interest and position in this field is attached for your reference. I would suggest that the material and component portion of item 8 of your suggested areas be incorporated with Basic science and Techniques thus making the Electron Device selection easy.

Our indication of a third preference interest in area 3, Industry and Industrial Applications, appears necessary since the electron devices industry is quite "specific" and of major importance in the electronics industry.

I trust that the above thought will be helpful in your initial attack. Please feel free to call on me if I can help further in any way.

R. W. Sears

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B-21

April 2, 1963

Dr. B.M. Oliver, Vice President
Chairman, PTG Committee

Dear Dr. Oliver:


I am returning your questionnaire of March 11th with regard to fields of interest. You will note, of course, that I have checked off items 3, 8 and 10 as being the areas of interest by consensus of opinion of the Administrative Committee of the PTG-CP.

Basically our interest is in the field of components - materials and production processes involving new design, manufacture and performance of components. Obviously we have peripheral interest in the industrial applications of these components as well as in any professional activities which will reflect on the status of the engineers engaged in the area of designing, manufacturing and applying components.

Very truly yours.

Louis Kahn, Chairman
Administrative Committee
PTG-CP

LK/jlr
encl.

Very truly yours,


Louis Kahn - Chairman
Professional Technical Group
Product Engineering and Production

cc: C. Elden
R. Emberson

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April 17, 1963

J. Trinkaus
Mail Station 1A36
Sperry Gyroscope Co.
Great Neck, N. Y.

Dr. B. Oliver
Hewlett Packard Co.
1501 Page Mill Rd.
Palo Alto, Calif.

Dear Dr. Oliver:

1. with reference to the area of interest survey, the Administrative Committee of PTG-PEP:

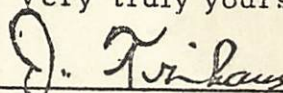
a. feel that we should be identified with Area 8, Materials, Components and Production Processes, except that the scope should be expanded to read, "Finished components and all materials of interest in the product design and fabrication-----";

b. have adopted the attached resolution proposal modified to refer to Area 8, instead of the sub-group list, in resolution proposal paragraph 3; and,

c. urge strong direction be exercised in order to affect, in a minimum of time with a maximum of benefits, the desired centralization objectives.

2. PTG-PEP supports the amalgamating of the group with others with which it shares a common area of interest, as now defined. We invite the officers of these groups to meet with us, in a joint merger planning session, at the earliest convenient date.

Very truly yours,



J. Trinkaus - Chairman

Professional Technical Group
Product Engineering and Production

cc: C. Elden
R. Emberson

JT:dl

Resolution Regarding Organization Changes

1. Whereas the Administrative Committee of PTG-PEP recognizes that the expanded size and scope of IEEE (over IRE) will necessitate certain organizational changes,
2. And whereas the PG structure has already reached a level of specialization suggesting a policy of coalescence,
3. And whereas such coalescence would reduce administrative difficulties, existing overlap of communications, and conflicts in meeting schedules,
4. And whereas the PTG-PEP recognizes that its interests and activities overlap those of several other PTG's and former AIEE committees,
5. And whereas some inclination to form sub-groups has already been evident within PTG-PEP itself,
6. And whereas it is recognized that a careful reorganization of the PTG structure could provide administrative economies while retaining the opportunity for technical specialization and stimulate a cross fertilization of technical activities,
7. And whereas the process of reorganization will take some time to be effected to the satisfaction of all the PTG's involved,

Be it hereby resolved that the Administrative Committee of PTG-PEP proposes:

1. A reorganization of the present PTG structure to establish fewer units, each having broader scope and the opportunity to set up sub-units according to technical specialty.
2. A re-examination of PTG-PEP's field of interest only in relation to the field of interest of certain other PTG's and solely for the purpose of affiliating with a larger unit with sufficient scope to include other PTG's.
3. The establishment of a larger PTG to include (but not limit to) the following sub-groups:
 - A. Advanced Techniques
 - B. Production Engineering
 - C. Human Factors
 - D. Reliability
 - E. Environmental Factors
4. Active negotiations with other groups to establish a basis for suitable merger agreements.
5. To advise the PTG Committee by means of this resolution of the PTG-PEP's desire for a PTG merger program.

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3 April 1963

3546 Caruth Blvd.
Dallas 25, Texas

Dr. Richard M. Emberson, PTG Secretary
Institute of Electrical & Electronics Engineers, Inc.
Box A, Lenox Hill Station
New York 21, New York

Dear Dick:

I'm not sure to whom these comments relative to the "Area of Interest" survey and questionnaire should be addressed; if it's not you, please pass this letter along.

From discussion with other members of the PTG-AC Administrative Committee before, during, and after our meeting in New York in March, it is apparent that the PTG Automatic Control's "Area of Interest" cannot be chosen as one of the 10 listed on the questionnaire. We have an interest in perhaps eight of the ten areas tabulated; or better, there should be an area #11, "Automatic Control." So I really cannot fill out the questionnaire as requested.

However, since the whole purpose of the survey is to assist in matching up candidates for merger, it's really not necessary for us: it is perfectly clear that our first merger must be with the (former AIEE) ITG Automatic Control, and our second with the Feedback Control Committee (former AIEE); beyond that I can't worry just yet!

With best wishes,

Louis B. Wadel
Chairman PTG-AC

CC: N. H. Choksy, Merger Comm. Chmn. PTG-AC
O. H. Schuck, V. Chmn. & Chmn. -elect PTG-AC
C. W. Jiles, Sec'y-Treas. PTG-AC

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Mr. B. M. Oliver, Vice President
Chairman, PTG Committee

March 28, 1963

Mr. Hendley Blackmon, Director
Chairman, TOC

The Institute of Electrical and
Electronics Engineers
345 East 47th Street
New York, New York

Dear Sirs:

At our March 25th meeting the Administrative Committee of the Professional Technical Group on Education discussed, in considerable detail, your letter of March 15th dealing with the subject of IEEE Organizational Study Committees.

The Administrative Committee was, in general, sympathetic to the problem in that they recognized the need for a more simplified TC-PTG relationship.

Our Committee was not in a position to specifically state with unanimity just what the Area of Interest of PTGE should be. There was on the other hand a fair degree of unanimity as to what our interests should not be and this, interestingly enough encompassed area No. 10 - Professional Activities. Our Committee in general felt that our "friends" were more likely to be found in the Basic Sciences Area than in No. 10 which includes the management of engineering activities, relations of electrical technology to society and engineering writing and speech.

Several of our members felt rather strongly that Area No. 1 - "Base Sciences and Techniques" should be changed to read "Basic Sciences and Education." This point however, was debated. Several of the Committee felt that this might identify our Group's aims and Transactions with the basic sciences thereby divorcing us from our strong and continuing interests in the engineering sciences and educational developments in all other areas.

It would seem that if there is justification for the establishment of a Board appointed Education Committee which will concern itself with educational problems and policy as it pertains to IEEE as a whole then there may well be similar justification in considering the Professional Technical Group on Education also as a separate entity. It is my understanding, based on several discussions with Jim Mulligan, Chairman of the Education Committee, that PTG-E would implement the Board's policies through needed symposia, conferences, etc., at the national level and lend our support to similar activities on the local level. In addition, the Educational Transactions would provide a means whereby policy matters on education might be transmitted to the membership along with other papers of an educational or instructional theme that might originate in any or all of the other technical committees.

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The Institute of Electrical
and Electronics Engineers

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A number of those on the PTG-E Administrative Committee indicated a strong personal interest in you letter of March 15, 1963, and I suggested that they feel free to send their comments directly on to you. I assure you that PTG-E is interested in cooperating with you on this program, however, there is considerable reservation on our part as to the Area of Interest with which you have identified the educational group.

Very truly yours,

George E. Moore
Chairman of the Technical
Group on Education - IEEE

GEM/jd
cc: Dick Emberson
John Callahan



THE INSTITUTE OF RADIO ENGINEERS

INCORPORATED

PROFESSIONAL GROUP CORRESPONDENCE

April 29, 1963

PLEASE ADDRESS
REPLY TO

Mr. Herman Garlan
FCC - Wash. 25, D. C.

Dr. B. M. Oliver, Chairman
PTG Committee, IEEE
Box A, Lenox Hill Station
New York, New York

Dear Dr. Oliver:

At its March meeting, the Administrative Committee of PTGRFI discussed at length your memorandum of March 15, 1963, regarding the merger of PG's (from IRE) and TC's (from AIEE) and your request that each PTG and TC check one of ten areas-of-interest which is most descriptive of the Group activity.

The consensus of our Administrative Committee is that it is not possible to give you a yes or no answer since it is felt that no one of the ten areas-of-interest listed in your memorandum adequately described the activity of our Group.

Permit me to digress somewhat to give you a clearer picture of our Group thinking on this matter.

Radio Frequency Interference is no longer an adequate term to describe the needs of the electronic industry for protection against undesirable effects of electrical and electronic equipment. Communications, which was the *raison d'etra* of radio until recently, is no longer the sole consideration. Today, we must also be concerned with electronic computers; we must safeguard automatic navigation equipment and guidance systems; we must protect our fire control systems; and we must not forget those highly sensitive amplifiers used in bio-medical applications. In fact, communications is a small part of the electronic field with which our Group is concerned.

But even beyond electronics, our Group is concerned with other matters that are troublesome to electronic systems. We treat with noise, i.e., disturbing electromagnetic energy at frequencies as low as 30 cycles, on power lines and from motors. We deal with the problems of grounding and shielding. And to name our final area of interest, our Group is concerned with the radiation hazards created by equipment generating high levels of electromagnetic energy.

Dr. B. M. Oliver

To return to your memorandum we can rule out, as of minor or no concern to PTCRFI, the areas Power, Industrial Applications, Bio-Medical Electronics and Professional Activities as defined in your memorandum. The other six areas are definitely fields with which our Group is vitally concerned.

We are definitely concerned with Basic Science insofar as the theory of shielding and grounding is concerned. Furthermore, a large part of our activity deals with prediction and modeling which I believe can rightfully be classed as Basic Science. Our interest in communications and electronic systems is undisputed. Instrumentation, both as to the equipment and the measurement techniques, are another area of vital concern. And in the final analysis, the control of RFI and the achievement of compatibility depends to a large extent on the quality of the finished components, the materials of which they are fabricated, and the production methods used. Hence, our interest in Materials, Components and Production Processes.

However, the Administrative Committee of PTCRFI recognizes that some consolidation of groups may be required. We understand that you propose to discuss each area-of-interest with those groups active in that area. For the purpose of such discussion, we believe that it would be most profitable if our Group participated in the discussions covering two of your areas-of-interest: Communications and Electronic Systems.

For your information, I am naming Mr. D. R. J. White, White Electromagnetics, Inc., 4903 Auburn Avenue, Bethesda, Maryland, as my alternate to attend the meetings of the Organizational Study Committees in the event that I will not be able to attend.

I realize that the problem of integrating the PG and TC activities into some cohesive form with a minimum of overlap is tremendous. And, I trust that this reply will be of some help to you.

Sincerely yours,

((signed)) Herman Garland

Herman Garland
Chairman, PTCRFI

Enclosure

cc Dr. Emberson
HG:gnt/T:E



19
34736
NORTRONICS A DIVISION OF NORTHROP CORPORATION

28 March 1963

Dr. Ernst Weber
President IEEE
Box A, Lenox Hill Station
New York 21, New York

Dear Dr. Weber:

This letter is to express my concern and dismay over the plans to integrate the PTG on Radio Interference into the Communications Systems Technical Group. I am sure that this matter has been studied by the Directors of the IEEE, but such a merger of the Radio Interference Group indicates a basic lack of understanding of the field of radio interference. The present constitution of the existing PTG on RFI states that "the field of interest of the group shall be radio frequency interference, including 1) methods of measurement and control; 2) system considerations such as susceptibility, vulnerability, compatibility, spectrum utilization, related propagation effects, and subjective effects; 3) studies of the origins of interference, both man made and natural, and their classification."

It would appear that the Directors have considered only two aspects of the field of interest, that concerning spectrum utilization and propagation effects, while ignoring those fields where the actual bulk of the work of radio interference control is done. For example, in my own company we have a group of 16 devoted to the field of electromagnetic compatibility, but our chief product is computers and stellar/inertial guidance systems, both having little to do with the conventional field of communications. Many other companies in the business of supplying military equipment or systems have similar situations regarding this field of electromagnetic interference - a greater portion of the interference effort is devoted to non-communication equipment or systems than is devoted to communication systems.

The very terminology is responsible for some of this misunderstanding, for when one considers "radio frequency" interference, one probably thinks of radios and communications. While it is true that this specialized field originated with problems in radio communications in aircraft, it is no longer true that such problems most typically represent our field of endeavor. For example, the frequency range of concern has been extended far beyond the "radio frequency" of old, and extends from extremely low audio frequencies involved in servo systems and power line distortion, to the extreme microwave frequencies involved in radar and millimeter wave transmissions. Obviously, such a frequency range can no longer be adequately nor accurately described as "radio frequency"; therefore, the term "electromagnetic interference" has come into wide usage to denote this extremely wide frequency range of interest. Communication systems do not normally cover such extremes of the frequency spectrum.

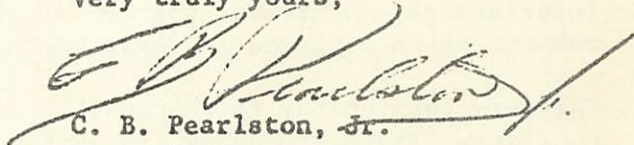
In addition, our area of interest has always included factors not properly defined as "interference", as the excerpt from the PTGRFI constitution indicates. Problems

in grounding, power distribution, shielding, cable selection, wire routing, corrosion, bonding, component and part selection, equipment location, manufacturing control, interface analysis, etc., are not necessarily defined by the term "interference", though they are all aimed to reduce the amount of undesirable interaction between parts of the total system. Interference is actually the negative - that which we are trying to eliminate in all systems and equipment - and the positive which we are trying to achieve is compatibility between all parts of the system, and by system is meant communication systems, guidance systems, computer data reduction systems, navigation systems, fire control systems, flight control systems, voice warning systems, entire aircraft, missile, or space systems, etc. It is for this reason of expanded scope of the field of interest and the failure of the previous terminology to adequately reflect the proper field of interest, that the Electronic Industries Association M5.8 Subcommittee has formally changed its name to "Electromagnetic Compatibility". The Radio Interference Panel of the Aerospace Industries Association is planning on a similar change in name.

With the field of interest thus defined as system electromagnetic compatibility over the complete frequency spectrum, the Communications Systems Group is seen to be an unsuitable choice for merger. The logical course of action would be to merge this area of electromagnetic compatibility with either the Military Systems Group or a group in Systems Engineering, for only in such a group would the full potentiality and field of interest of our area of specialization be realized.

I hope that the above information will be effective in causing the Directors of the IEEE to re-investigate the present Technical Group merger plans. It should be noted that under the AIEE, there is an Electromagnetic Interference Control Subcommittee located within the Flight Vehicle System Integration Subcommittee. My personal protest is made as a member of both this subcommittee and the PTGRFI.

Very truly yours,



C. B. Pearlston, Jr.
Supervisor
Electromagnetic Compatibility

CBP/kgb

cc: Herman Garlan
Bill Lash
A. H. Sullivan, Jr.

26 March 1963

MEMORANDUM TO: Dr. Emberson

SUBJECT: PTG-RFI Action on Oliver-Blackmon Letter of March 15

Dear Dr. Emberson:

As requested, I attended the meeting of PTG-RFI this morning and am reporting to you the action taken on the matter of selecting an area of interest among the chairmen presented with the subject letter.

A motion was passed that the Chairman should indicate that the PTG should designate Electronic Systems as first choice and Communication as second choice. The Group did not feel that it could name a single area of interest.

Even with respect to these two areas, the Group was not prepared, unequivocally, to designate these two areas, but felt that the definitions given to the areas required interpretation and expansion before the Group could commit itself to designate either of these areas of interest. Experience had taught this PTG that when it associated itself with a limited area, potential Group members misinterpreted the action in such a way as to place themselves outside interest in the Group.

Accordingly, the Chairman volunteered and was instructed to get in touch with other officers and members of the PTG in the Washington area, in time to meet the Oliver-Blackmon deadline, to draft and circulate the precise terms of the PTG's response to the subject letter.

Chairman Garlan will attend the appointed meeting tentatively set for May 17th for the purpose of meeting with representatives of other PTG's and (former AIEE) Technical Committees, to see whether, and to what extent, there are community of interests between PTG-RFI and others, whether the tentative scopes can be accepted as they now appear (which was doubted) or modified suitably; or whether it is found that the PTG-RFI is, in fact, not correctly cast in either area.

It was made clear by me to the Group that the only obligation undertaken in checking one of the areas was to meet and talk with others who checked the same area. The talks would be directed to the enunciated purposes to, "re-examine and possibly to re-structure our organization along lines that would provide simpler administration and better member service."

One interesting observation is here recorded; namely, that, granted the necessity for dividing technical operations for administrative purposes, it may be unnecessarily complicating the choices made by PTG's and TC's to name the areas and describe by scopes. The necessity of administrative convenience is recognized. Most of the difficulty presently being encountered would appear to stem from area names chosen and scopes adopted which would not accurately describe the interests of the PTG.

Very truly yours,
Ivan S. Coggeshall

CC: Mr. Callahan
Mr. Garlan

P-29

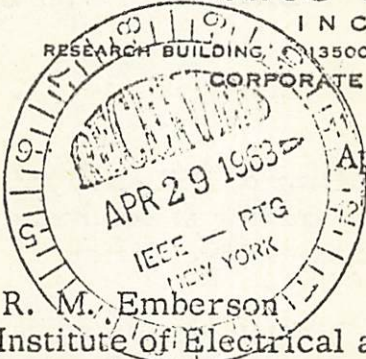
page 22



TEXAS INSTRUMENTS

INCORPORATED

RESEARCH BUILDING 13500 NORTH CENTRAL EXPRESSWAY • DALLAS, TEXAS
CORPORATE RESEARCH & ENGINEERING



April 25, 1963

Mr. R. M. Emberson
The Institute of Electrical and Electronics Engineers
Box A, Lenox Hill Station
New York 21, N. Y.

Dear Mr. Emberson:

This letter is a reply in lieu of return of the form you transmitted with your letter of March 15, 1963. The PTG on Geoscience Electronics has taken your survey very seriously. I sent photocopies of it to all members of the Administrative Committee on March 21, 1963. (I enclose a copy of the letter by which it was transmitted.)

We have concluded that it is not possible for us to answer the survey on the form provided, but rather that we must comment on the philosophy behind the organization of PTG's.

We feel that a PTG must be discipline oriented, of necessity a little bit narrow. It seems to us that it might be a valid test to inquire whether a group proposed as a PTG group could in a single city be interested in a single paper to the extent that half of the membership would turn out to hear it. If not, the PTG is foredoomed to inactivity and for all practical purposes failure.

Commenting on the ten areas of interest in the Area of Interest Survey, dated March 11, 1963, our belief is that Numbers 1 and 2 are much too broad to have any cohesiveness--that is a paper in the basic sciences would probably be of interest to a rather narrow group compared to a basic science as a whole. Likewise, power.

Industry and industrial applications (No. 3) has a vast multitude of little groupings which have almost nothing in common and consequently a viable PTG could not be organized around the whole field, but rather would require a number of small ones.

Mr. R. M. Emberson

2

April 25, 1963

Numbers 4, 5, 7, and 8 likewise appear to us to be too broad.

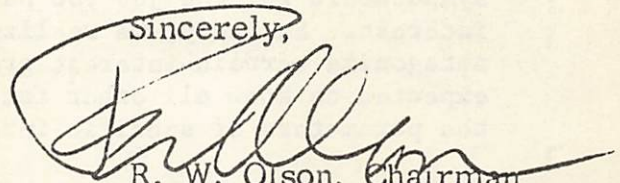
Computers and data processing seem to be only a little broader than might be appropriate.

Number 9, biomedical electronics, looks to us as a good example of a discipline-oriented PTG. A group around that would be likely to have common interests so that technical communications via the technical paper route would be possible and attractive. Incidentally, the seeds of its own division would already be planted in biomedical electronics as the field becomes broader and specialties develop.

It may be that we are looking at the subject of Professional Technical Groups too narrowly, but our group saw no possibility of a Professional Technical Group around professional activities as being too diffuse and undefined, let alone broad.

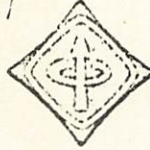
I am sorry that this comment is as late as it is, but we did have a meeting of the administrative group scheduled for April 19, and I felt it worthwhile to bring it to the attention of this group. I hope our comments are of some value to you.

Sincerely,



R. W. Olson, Chairman
Administrative Committee
IEEE Professional Group
on Geoscience Electronics

9-30



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

INCORPORATED

BOX A, LENOX HILL STATION
NEW YORK 21, N. Y.

April 24, 1963

Mr. B. M. Oliver, Vice President
Mr. Hendley Blackmon, Director
IEEE Headquarters
Box A, Lenox Hill Station
New York 21, N. Y.



Gentlemen:

After due consideration, much conversation, and considerable coordination, including conjecturing, I forward these comments along with my marked-up sheet regarding areas of interest sent to me as Chairman of the Aerospace Support Systems Committee.

First, may I point out that I, and my committee associates, are sympathetic for the job you have undertaken in trying to align areas of interest. Secondly, we realize that as human beings, you are bound to antagonize certain interest groups. And last, you gentlemen can not be expected to know all other facets and have the capability to delineate the parameters of specific interests within the Institute's membership.

A peculiarity exists among those individuals associated with aerospace. Many years ago, the word aircraft denoted a small group of radical thinkers, somewhat unbounded by conventional accepted procedures in relation to normal industrial practices. However, if the technology of space salved the growing pains, it emerged as a recognized profession with seemingly unethical and unfounded practices, became a foundation for practical and recognized avocations. Consequently, we will be somewhat a polyglot of respectable, staid, specific sciences.

Although we could perhaps, take credit for some of the now accepted standards, procedures, and products used by the electrical-electronic industries, we prefer to address our requirements to the adaptation of readily available components and systems, where possible. This then, in part, explains our diversification, rather than our being capable of denoting specifics.

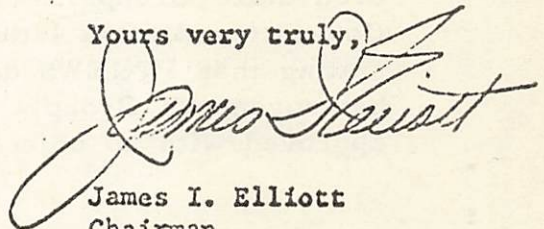
Upon this premise, we could reluctantly relegate our main interests to the industry and industrial applications category of your questionnaire, retaining the prerogative of being welcomed to designate our interests in the other 9 areas to a lesser degree.

To present specifics, may I call your attention to the multitude of subject areas that will be discussed by panel sessions, and through the presentation of technical papers, at the forthcoming International Conference and Exhibit on Aerospace Support.

It, is with full realization that we perhaps have unintentionally clouded the issue, but we do appreciate the opportunity to present our case and hope that these remarks are taken as a presentation rather than a criticism.

Our sincere wishes for the success of this effort by you gentlemen is hereby conveyed.

Yours very truly,



James I. Elliott
Chairman
Aerospace Support Systems
Committee

JIE:df

PTG COMMENTS RE AREA OF INTEREST LETTER

PTGR (G-7) - (Excerpt from Chairman's letter dated 4/24/63)
"Some discussion with a few members of the PTGR Committee indicates the areas specified don't really cover the problems of the Reliability Group - except in part. I hope to be able to offer something of a more positive nature than this, but I'm afraid I cannot meet your deadline."

PTGBTR (G-8) - (Comments at March '63 AdCom meeting).
Strong views were expressed against any step that might force the Groups to abandon their autonomous freedom and revert to a planned structure similar to that of the former AIEE committees and divisions. It was agreed that the chairman would write to Dr. Oliver somewhat along these lines.

PTGEWS (G-26) - (Excerpt from minutes of March '63 AdCom meeting.)
"Mr. Meyer then commented on the Area of Interest Survey distributed to all Committee members by Headquarters. He remarked that IEEE seemed to be adopting a policy of extreme centralization, while the Ways and Means Committee favors the formation of even more Groups. Professor Farrell moved that the Ways and Means Committee draft a letter to Headquarters for the Chairman's signature stating that PTGEWS does not wish to be amalgamated into any larger heterogeneous Group. Mr. Destal seconded the motion, and it was approved with no objections and one abstention."

COPY

page 27

IEEE Organization Study Committees

Mr. L. G. Abraham
Bell Telephone Labs.,
Murray Hill, N. J.

March 22, 1963

CHAIRMEN OF TC'S OF THE COMMUNICATION DIVISION:

This is with reference to a letter by Messrs. Oliver and Blackmon of March 18, regarding IEEE Organization Study Committees, which was sent to all TC and PTG Chairmen.

I would expect and hope that this line of attack would lead to the formation of some rough equivalent of Divisions, each including both TC's and PTG's. Each such Division would have an Organization Study Committee to thresh out mutual problems. At that time, suitable combinations of PTG's and TC's could be worked out properly with all interested parties having a voice in such decisions.

The above reference to TC's is intended to refer to the old AIEE TC's only. The relation of the old IRE TC's (Standards Committees) to this organization is not clear but I would hope that this move would result eventually in a closer relationship than has existed in the past.

At the start, at least, I would expect a much looser organization than the old AIEE Divisions in TOD with the Division Committee functioning more as an Advisory Debating Society than as an Administrative Committee. Nevertheless, I would hope that many of the problems could be worked out at such meetings. Eventually, I would expect that the advantages of a more functional organization would become apparent to all and would be instituted by evolution.

Personally, I would feel that a little more autonomy than in the present TOC Organization would be highly desirable but that the looseness of the present PTG organization needs considerable correction.

Many problems will need to be worked out in such an organization. One of the serious problems confronting all such organizations is the matter of Publications. Each PTG publishes something by way of Papers and Newsletters and each Division published TP's in a Bimonthly. Perhaps the solution for Communications would be to have a Communications Bimonthly that would publish selected high grade Papers sponsored by PTG's and TC's and separate publications of Newsletters, and perhaps Conference Papers by PTG's and TC's. The latter might be individual to each PTG or TC or might also be suitably grouped for several Committees or Groups. Obviously the question of what the PTG Members get for their yearly fee is of importance here.

Another problem has to do with meetings for presentation of Papers and other technical matters. The STC's and individual meetings of PTG's will no doubt wish to continue, but I would hope that some General Meetings for each Division and perhaps combined for more than one Division would be desirable. The two General Meetings planned for IEEE as a whole do not seem enough, particularly in view of the 10 ring circus aspects of such meetings.

I am sure that many other problems of such nature will need to be threshed out in each Division at the kind of meetings envisaged.

In closing, I would like to make a few suggestions as to your actions at this time.

- (1) I hope that all TC Chairmen of the Communication Division will want to pick the Communications area in responding to the Oliver-Blackmon letter. If any feel attracted to other areas by the rather sketchy scopes given, perhaps you would wish to indicate a secondary preference for Communications.
- (2) I think you will want to continue to investigate possible combinations of your Committee with PTG's, but I hope that you will defer final action until the effect of the proposed new organization set up is more clear. For example, if you combine with a particular PTG you might find yourself in a Division that is incompatible with your present desires.
- (3) Please keep me advised of your action along these lines so that I can help intelligently in the Headquarters procedures.

Yours truly,

L. G. Abraham
Chairman
Communication Division

LGA-EG

Copy to
All Members of Communication Division Committee
Messrs. H. Blackmon
B. M. Oliver
J. L. Callahan
R. M. Emberson



THE INSTITUTE OF RADIO ENGINEERS

INCORPORATED

PROFESSIONAL GROUP CORRESPONDENCE

May 7, 1963

PLEASE ADDRESS
REPLY TO

Mr. Herman Garlan
FCC - Wash. 25, D. C.

TO: Members of Administrative Committee
FROM: Chairman
SUBJECT: Generation of Standards

There is attached a copy of a memorandum dated April 30, 1963, from Donald G. Fink, General Manager, IEEE, advising that the IEEE By-Laws have been amended to permit Technical Committees (formerly AIEE) to carry over their standards activities into the PTG organization. This change will also permit PTGs to engage in standards generating activity.

In view of this change, I am requesting Mr. Egli, Chairman of our By-Laws Committee, by means of this letter, to prepare a suitable amendment to our Constitution and By-Laws to show that PTGRFI may, with the approval of the IEEE Standards Committee, generate standards in the field of electro-magnetic compatibility.

It is my understanding that while IEEE standards deal chiefly with definitions and measurement procedures, they are not so limited but may also go into the field of specifications for measuring equipment, etc.

Sincerely,

Herman Garlan
Chairman, PTGRFI

Attachment



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

INCORPORATED

BOX A, LENOX HILL STATION
NEW YORK 21, N. Y.

April 30, 1963

To: Chairmen, Professional Technical Groups &
Technical Committees

From: Donald G. Fink, General Manager

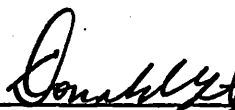
Subject: Generation of Standards

The Executive Committee recommended, and the Board of Directors approved, the following Bylaw change at the Dallas April 18-19th meeting.

"Standards recommendations may be prepared by individual PTGs and TCs or TC-Standards, provided advance approval for each specific proposal is obtained from the Standards Committee, to assure coordination."

As a result of this Bylaw change it is now in order for Technical Committees to carry their standards activity into the PTG organization. Also it is in order for PTGs to engage in standards generating activity. In each case the activity is subject to Standards Committee coordination.

If further information is desired contact the Staff Secretaries, Messrs. Emberson and Callahan, PTG and TOC respectively.



Donald G. Fink
General Manager



THE INSTITUTE OF RADIO ENGINEERS

INCORPORATED

PROFESSIONAL GROUP CORRESPONDENCE

May 6, 1963

PLEASE ADDRESS
REPLY TO

Mr. Herman Garlan
FCC - Wash. 25, D. C.

Dr. B. M. Oliver, Chairman
PTG Committee, IEEE
Box A, Lenox Hill Station
New York, New York

Dear Sir:

This letter is to advise you that at our March 26th meeting, the Administrative Committee of PTGRFI voted to change the name of the Group to:

Professional Technical Group on Electromagnetic Compatibility
(with the initials PTGEMC)

May we point out that this change does not require a revision of the present statement of our field of interest set out in Article III § 1 of our Constitution. Although the present statement encompasses electromagnetic compatibility rather than being limited to radio frequency interference, we propose to reword the present statement in order to emphasize this fact.

The necessary amendments to our Constitution and By Laws are being prepared.

Sincerely,

Herman Garlan
Chairman, PTGRFI