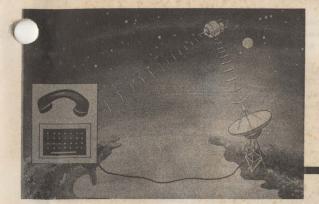
# IEEE





# COMMUNICATION TECHNOLOGY GROUP

# NEWSLETTER

Volume 4

Number 1

January 1967

# HAPPY NEW YEAR

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FINAL DEADLINE FOR MARCH ISSUE FEBRUARY 1

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# THE CHAIRMAN'S MESSAGE

# Dr. W. B. Jones Georgia Instit**ut**e of Technology

Why are you a member of the ComTech Group? For IEEE members, the cost of Group membership is small, and the opportunities which Group activities offer for professional development more than justify this modest cost for most of us. But what are you, personally getting from your Group membership?

The purpose in asking this question is not to sell more memberships - most of those who read this are and will remain Group members. The purpose is to sell you the idea that Group activities extend over a wide range and that you can profit by being aware of the opportunities which your Group membership makes available to you.

For most of us, the primary purpose for joining the Group is to receive the Transactions. This is a specialized technical publication of high quality. It is true that few of us could or would want to read each issue from cover to cover, but all of us will find several papers which are of real interest. And after a few years, as the collection of back issues increases, the availability of this complete collection of reference material may be as important than the latest paper in the current issue. Receiving the Transactions is enough to justify Group membership. But it's not all we get.

In addition to the Transactions, other things which Group members receive in the mail include this Newsletter and announcements of a variety of meetings and activities which may be of interest. The Newsletter is intended to keep members informed about things that are happening in communications. Even if you have no reason to participate in most of these activities, you are a better informed communications engineer if you know what's going on. The same thing is true for many of the notices of meetings, conferences, symposia, etc. Some will be conferences of direct interest which you would like to attend if the travel budget can accommodate one more trip. If you can't go, at least reading the program, to see who's doing what, is valuable. For the meetings in which you have no direct interest, seeing the topics and abstracts will help maintain a broad perspective which is more and more important in our age of a rapidly advancing technology. For many of us, just having our names on the Group mailing list provides many opportunities to keep in touch with what other people in our profession are doing.

The opportunity to attend and participate in technical meetings is a most important aspect of Group activities. This may take a little more effort than receiving Transactions through the mail, but there is no better way for most of us to keep in touch with what's going on NOW, and with the way people are thinking about TOMORROW'S PROBLEMS, than to meet with them, listen to them, hear them respond to questions and challenges, and to actually participate in this exchange of ideas. Large meetings such as the International Convention in March, the International Conference on Communications in June, and the Communication Technology Symposium at the National Electronics Conference in October, as well as smaller meetings sponsored by the Technical Committees of the Groups, provide a good program of technical conferences for Group members.

Another opportunity for personal interchanges is provided by the local ComTech Chapter meetings. The Chapter provides opportunities to meet with other communications engineers in your own area to get to know each other and to exchange ideas about subjects of current interest. It also provides a means for inviting prominent speakers from other parts of the country to come to you to describe their new ideas.

If all you are getting for your Group fee is a collection of the Transactions, then you are getting your money's worth. But, if all you are getting from your membership is the Transactions, then you are missing many opportunities to be a more versatile, more productive and better informed professional communications engineer.

# EDITORIAL COMMENT

# Gunther Karger, Editor Pan American World Airways

Dr. W. B. Jones, the ADCOM and the entire EDITORIAL STAFF join me in wishing you a very happy and serene HOLIDAY SEASON and a most successful NEW YEAR.

I hope that the NEWSLETTER has succeeded in bringing you the news of COMTECH ADCOM, COMMITTEES and CHAPTERS. The Editorial staff has been expanded during the past year to accomplish this task. Mr. Rollo Christensen, Radiation Incorporated, has significantly contributed to the improvement of our publication. He and his firm are credited with the new cover and the "COMMUNICATIONS" illustration. I wish to particularly recognize his devoted and able secretary, Mrs. Helen Tousley. I also wish to recognize Ray Bogdan, Teletype Corp, and George Griffith, Lenkurt Electric, who have made substantial progress in reporting the news of COMTECH Chapters. Appreciation is sincerely extended to Mrs. Nettie Warnick, my secretary, who has provided significant support. Most importantly, I extend my sincere appreciation to YOU, the MEMBERS who have helped us publish the NEWSLETTER by sending in your NEWS.

The last NEWSLETTER issue was our ANNUAL MEMBERSHIP DIRECTORY. It is hoped that it is retained for reference during the year, as it contained the names of all committee members and members-at-large by Section distribution. I apologize for its lateness. Between a few vacations, problems at IEEE Headquarters and an unusually slow mail, it was received somewhat later than usual. However, the NEC meeting information was issued by a special flyer before that event.

## NEW YEAR RESOLUTIONS

For some of us it will be the most important in our professional career. For others, it will be a year of growth and greater prosperity.

A NEW YEAR, 1967, is here. Let's make it the best yet in COMTECH history by giving somewhat more of ourselves to our chosen profession.

LET IT THEREFORE BE RESOLVED THAT:

I shall regularly support local COMTECH CHAPTER EVENTS by attending meetings and offering to help the committee.

I shall help make the COMTECH GROUP stronger by inviting associates to participate and become new members.

I shall help myself by regularly reading the TRANSACTIONS and NEWSLETTER to keep current in the "COMTECH Sphere of Interest."

I shall support the "Communications World" by submitting worthwhile and NEW papers to the Technical Committees and interesting news to the NEWSLETTER.

I shall write a "Letter to the Editor" when I have some comment or suggestion to make concerning COMTECH.



# 1967 INTERNATIONAL CONFERENCE ON COMMUNICATIONS June 12-13-14, 1967 Minneapolis, Minn.

L. H. YOUNGVORST, PUBLICITY CHAIRMAN NORTHWESTERN BELL TELE. CO. MINNEAPOLIS, MINN.

## ComTech "67" Plans Seven Parallel Session Program

The 1967 International Conference on Communications to be held in Minneapolis, Minnesota June 12-14 reports that advance interest and commitments show that it will be necessary to run seven parallel technical sessions.

The requirements for technical sessions indicated by the various committees of ComTech are:

Communication Systems Discipline	- 6
Data Communication & Telegraph Systems	- 2
Radio Communication	- 5
Space Communication	- 2
Communication Switching	- 5
Telemetering	- 1
Wire Communications	- 4
TOTAL	25

The estimated requirements of other IEEE Groups are:

erospace & Electronic Systems	- 1
udio & Electro-Acoustics	- 2
roadcasting	- 1
ircuit Theory	- 1
omputer	- 2
nformation Theory	- 3
icrowave Theory & Techniques	- 1
ehicular Communications	- 3
TOTAL	11

With the above tentative assurances of program requirement, the nominal plan for the Conference is that there will be seven parallel technical sessions for five session periods. A sixth session period will be devoted to a keynote session. Plans are being kept flexible enough to assure that the best technical program is offered to the conferees and to accommodate the needs of the society.

MAKE PLANS NOW TO ATTEND



# ADCOM BRIEFS

The ADCOM met during the NEC in Chicago. Important news is presented herein concerning the actions taken at that meeting.

# COMTECH GOES TO CALENDAR YEAR OPERATION

Chairman Jones referred to a memorandum from TAB proposing that the administrative year of groups be changed to coincide with the IEEE Calendar Year to simplify operations.

A motion in favor of the proposed change for ComTech beginning January 1, 1968, was seconded and carried. Chairman will notify IEEE Headquarters that the administrative year of ComTech will correspond to the calendar year beginning January 1, 1968.

A motion recommending to ADCOM that the By-Laws be modified to reflect the change in operating year was seconded and passed. Mr. Vieth, Chairman of the Constitution and By-Laws Committee, was instructed to amend the By-Laws.

DCOM was requested to consider extending the terms of present officers, members-at-large, and committees to December 31, 1967. Action will be taken at the March, 1967 meeting.

# CHAPTER COMMITTEE REPORT J. E. Frank, Chairman

The present number of listed chapters is 36, as follows: Alabama, Baltimore, Atlanta, Boston, Canaveral, Chattanooga, Chicago, Columbus, Connecticut, Dallas, Denver, East Tennessee, Florida West Coast, Long Island, Los Angeles, Mohawk Valley, Nebraska, New Jersey Coast, New Orleans, New York, North Jersey, Oklahoma City, Orlando, Philadelphia, Phoenix, Pittsburgh, Sacramento, San Francisco, Seattle, Shreveport, Southeastern Michigan, Syracuse, Toronto, Twin Cities, Vancouver, Washington, D.C.

Eight of the chapters are now considered inactive, based on lack of reports, last meeting reported more than 12 months ago, or no current chapter officer listing. These chapters are: Baltimore, Florida West Coast, Long Island, Nebraska, Oklahoma City, Sacramento, San Francisco and Toronto. The Vancouver chapter has a new chairman, and it is assumed that activity will shortly be apparent. The Toronto chapter will need special attention to develop some strength before the 1971 conference.

Two criteria for successful chapters have evolved from the observations of the previous Chapters Chairman, Mr. Roger McSweeney: Active membership in excess of 50; at least 4 meetings per year. This Chairman also notes difficulty of new chapters in getting suitable programs for chapter meetings organized. Suggestions for program support are hereby solicited from the ADCOM, possibly in the form of a speaker's bureau or listing from the technical committees of good papers not published or presented at conferences but suitable for verbal presentations.

Discussion following the report revealed that chapters with less than 50 members are usually in trouble. Mr. Burnett suggested that it might be wise to encourage small chapters to initiate membership drives. Mr. MacAdam recommended closer cooperation with the section that each chapter is attached to. Perhaps the sections can provide names of speakers. Visiting lecturers might also be organized. Chairman Jones encouraged Mr. Frank to explore ways of setting up a speaker's bureau comprised of ComTech members. According to Mr. Slayton, the Newsletter could serve as a medium to keep chapters well informed of activities going on in all the chapters.

# PUBLICATIONS COMMITTEE REPORT

TRANSACTIONS: The June and August issues were delivered near the end of those months. The December issue will contain an editorial on the relation of Technical Committees to TRANSACTIONS papers.

Format changes are being incorporated beginning with the February, 1967, issue. Catalog Cards are being discontinued, with the material being incorporated into each paper along with the regular <u>abstract</u>. This should save about \$3,000 in printing costs next year. In another revision, photographs and biographies of authors will appear at the end of their respective papers, instead of in a separate section. Now, each paper will be complete within itself, and will provide a more attractive reprint possibility.

Printing costs continue at approximately \$41.50 per page. For 1966 there are about 900 total pages, of which 780 are text, 66 are Catalog Cards, and Biographies and Indices comprise the remainder. Our 1966 subsidy was expended with the October issue, so that the December issue is being published completely at ComTech expense. Total cost for 1966 will be about \$38,350, with a net of \$32,750 after subsidy.

About a dozen papers have so far been approved by the TC's for publication in the next issue, totaling some 75 pages. Chairmen of TC's sponsoring Sessions at NEC were urged to finish their reviews early so that the list of upgraded papers could be announced at the oral presentation this week.

Users were notified that Institutional Listings in TRANS-ACTIONS were being discontinued. Work was already underway at Headquarters on a program of expediting IEEE "Time dated" mail that is to be sent overseas. Air Mail is being used, while an alternate distribution method under study includes bulk air express and foreign local distribution

Bound volumes of TRANSACTIONS could be produced by Head-quarters, if demand warranted. The ComTech Group would have to underwrite the job, and an advertising program would have to be undertaken if it were to succeed. Powelld be about \$8.00 per copy to a member, \$12.00 to colleges and libraries, and \$16.00 to non-members. To "break even" would call for about 1000 sales per year.

Mr. MacAdam commented that the IEEE Editorial Board had singled out the Transactions of ComTech as an example of an outstanding publication reflecting the good judgment of its editor. Chairman Jones acknowledged Mr. Slayton's contributions to the success of the Transactions.

# MEETINGS COMMITTEE REPORT

Mr. Kirby, Chairman, presented the following summary:

- 1. Review of 1966 International Communications Conference:
  All the technical meetings were very well attended.
  Seven parallel sessions were scheduled and over 1,000
  persons registered. The Call for Papers was beneficial.
- 2. 1967 IEEE International Convention: ComTech has received an allocation of 9 sessions based upon specific themes. The New York Convention will stress papers of wide interest involving latest developments. Program session sheets were due on October 22, 1966. Session organizers were requested to coordinate with Mr. Walsh.
- 3. 1967 International Communications Conference: The conference to be held in Minneapolis will adopt a new name "International Conference on Communications." A Call for Papers has already been issued. The Chairman of the Conference is Mr. Hird. Nine groups are planning to participate. They are: Microwave Theorand Techniques, Vehicular Communications, Audio and Electro Acoustics, Circuit Theory, Aerospace and Electronics, Information Theory, Electromagnetic Compatibility, Computer, and Broadcasting. The Conference will be held at the Leamington Hotel. Exhibits are in good shape.
- 4. <u>Future Meetings:</u> The following schedule of conferences are in the planning stage -

1968 - Philadelphia; The Meetings Committee will provide guidance. David Shore will be Chairman

1969 - Boulder; Conference officers will be elected shortly.

1970 - Philadelphia; A motion to adopt Philadelphia in 1970 was seconded and carried.

1971 - Montreal; Already committed.

1972 - ? ; An invitation was received from the last past chairman of the A.I.E.E. Columbus Section requesting that Columbus, Ohio be considered to celebrate "Golden Anniversary of the A.I.E.E. Columbus Section." Mr. Kirby to inquire further.

ADCOM BRIEFS (continued)

# TECHNICAL COMMITTEES

Communication Systems Disciplines; Mr. Schlaikjer, Chairreported a smooth transition of the Comittees
vities from the able chairmanship of Mr. Strom to
the newly appointed officers. He expressed appreciation
that Mr. Strom has consented to continue his active role
in the work of the Committee. Organization of the Committee's workshops program is progressing and the next
workshop is tentatively scheduled for late winter. A
program of active solicitation of papers and panelists
on subjects of current importance has been implemented.

<u>Data Communication and Telegraph Systems</u>; Mr. Kalb, Chairman, discussed the following report:

The Committee consists of sixty members. It has five subcommittees, one on Standards and four on Technical Disciplines including Facsimile which was Committee #9 with Pierre Mertz as chairman.

The Data/Telegraph Committee is sponsoring two technical sessions at NEC. One session consists of four papers, the other is a panel session in a unique format with five panelists to make presentations and a group of discussers. The Committee has plans to provide two technical sessions at the March 1967 International Convention in New York.

Some thought is being given to proposing a highlight session for the 1968 meeting based on the Monday afternoon panel session.

Space Communications; Dr. Barry, Chairman, presented the
following comments:

Since the last report, activities of the Space Communication Committee have been devoted entirely to the review of papers and the organization of technical meeting sessions. One session, a panel discussion, has been provided for the present National Electronics Conference. The program for the one session allocated to the Committee at the 1967 International Convention is nearly complete. Plans are now being formulated for at least two sessions to be sponsored at the 1967 Communications Conference at Minneapolis.

Because of the increasing interest and activity in the Space Communication field, there is every reason to believe that the work of the Committee will continue to increase in the future.

Radio Communication: The Committee is holding a meeting
on October 4 to formulate plans.

Telemetering; Mr. Long, Chairman, reported that the Committee is reorganizing around members with strong interests. There seems to be a conflict of interest developing with the Aerospace Group. Stronger liaison needs to be developed. Both Dr. Hellmann and Chairman Jones expressed the desire to assist in stimulating cross-representations with various groups. Scope may have to be re-defined.

Liaison with Other Groups; Mr. Abraham, Chairman, reported that the Standards Committee on Information Theory and Modulation Systems has decided to find a home with the Information Theory Group. They would very much like to have some kind of liaison with ComTech. In addition, they feel they should divide their Standards Committee into two parts, one on Information Theory and one on Modulation Theory or Signal Theory. The latter would like to affiliate with ComTech.

Mr. Abraham suggested that Dr. Bucher, Chairman of the Technical Committee on Communications Theory, contact Mr. F. K. Becker, (Bell Telephone Laboratory, Holmdel, N.J., Tel. 201-949-2662) offering to assist in setting up such a subcommittee as part of the Communication Theory Committee. Dr. Bucher might also want to suggest a liaison member from his committee for Mr. Becker's Information Theory Standards Committee.

Nominating Committee; Dr. Hellmann recommended to Chair man Jones the following list of members of the Nominating Committee for the ensuing year:

A. F. Culbertson

H. E. Weppler

J. E. Schlaikjer

W. B. Jones, Jr., Ex-Officio

R. K. Hellmann, Chairman

All members have been contacted and have agreed to serve if appointed.

Next Meeting of ADCOM: The next meeting of ADCOM will be held in New York City on Tuesday, March 21, 1967 during the 1967 IEEE International Convention at the New York Hilton.

" INTERESTING QUOTES

BERTRAM TOWER, BOARD CHAIRMAN, ITT WORLD COMMUNICATIONS
..."The important objective is to integrate communications services via the new medium of satellites with other communications facilities and to maintain all such facilities in a viable condition until it has been demonstrated that any particular element of the overall system has ou ed its usefulness."

LIEUTENANT GENERAL ALFRED D. STARBIRD, USA DIRECTOR, DEFENSE COMMUNICATIONS AGENCY ... "At present our Government communications, which are largely those of the Department of Defense, embrace over 30 million channel miles of long-haul circuitry extending to more than 200 major switching centers, and serving terminals in about 95 countries."



COMMITTEE REPORTS

### COMMUNICATIONS

Chairman: Wm. C. Burnett Southern Bell Tel. & Tel. Co. Atlanta, Georgia

The Membership Committee of ComTech has been considerably enlarged so that it can cover more ground in its efforts to increase ComTech memberships. For example, in the important field of attracting Student Members to ComTech, another worker has been added who will deal directly with Student Branches. This brings to five committee men whose specific responsibility is the student field.

Representation in specific industries has been increased. The Committee has a new member in Europe and is currently seeking representation in Japan, where electrical and electronic growth is rapid.

At the NEC Meeting in Chicago in October the Committee obtained the names and addresses of all persons who attended sessions sponsored by the ComTech Group. Each one of these persons who is not a member of ComTech will be approached and invited to join.

ne membership of the Committee, as it now stands, is:

Wm. C. Burnett, Southern Bell Tel. & Tel. Company Atlanta, Georgia

Wm. J. Roberts, Jr., Mountain States Tel. Company Denver, Colorado C. E. Munsell, General Tel. & Electronics Corp.

New York, New York David Dettinger, The Mitre Corp.,

Bedford, Massachusetts

P. M. Kelly, Philco Corporation

Arlington, Virginia

W. L. Sullivan, Southern Bell Tel. & Tel. Company Atlanta, Georgia

B. L. Traeger, Michigan Bell Tel. Company

Detroit, Michigan W. S. Hazlett, Southwestern Bell Tel. Company

Houston, Texas

F. S. Beale, Lenkurt Electric Company

San Carlos, California G. Y. R. Allen, Osborne Electric Company, Ltd.,

Etobicoke, Toronto, Canada

J. G. Pearce, Automatic Tel. & Electronic Company, Ltd. Liverpool, England

P. D. Lattner, Illinois Bell Tel. Company Chicago, Illinois

J. E. Frank, Communication Systems Inc.,

Paramus, New Jersey

B. S. Quell, Michigan Bell Tel. Company Southfield, Michigan

D. L. Schilling, Polytechnic Institute of Brooklyn,

Brooklyn, New York

R. S. Bleackley, Bell Tel. of Canada

Montreal, Quebec

W. L. Bacon, General Telephone Company

Pomona, California D. E. Clark, Automatic Electric Laboratories Inc.,

Northlake, Illinois

L. R. Shucavage, Comm/ADP Laboratory

Fort Monmouth, New Jersey

H. E. Corey, Jr., Northeast Electronics Corp. Concord, New Hampshire

C. O. Jett, Union Pacific Railroad Company

Omaha, Nebraska

H. W. Curtis, IBM International Business Machines Corp,

Armonk, New York

Alexander Kohan, American Tel. & Tel. Company

New York, New York

G. K. Helder, Bell Tel. Laboratories

Murray Hill, New Jersey

George Jacobs, Voice of America.

Washington, D. C.

E. W. Miller, Jr., Tampa Electric Company Tampa, Florida

Andrew Salis, Arlington State College

Arlington, Texas

H. A. French, Trans-Canada Pipe Lines, Ltd.

Toronto, Ontario, Canada

Mr. Wm. C. Burnett, Chairman of the ComTech Membership Committee, writes:

To aid you in your recruiting efforts for ComTech, I am giving herein information which I have recently assembled. While much of the information is not new, it was so well stated that it had great appeal to me. It is particularly oriented toward the Transactions (published by our Group) which go bimonthly to every ComTech member (including student members of ComTech).

The IEEE Transactions on Communication Technology is a publication of broad scope concerned with technical problems of communications. It is the only well established publication which attempts to serve the entire communications profession, as contrasted to limited aspects of communications, and which accepts contributions of merit without restriction as to the affiliations of authors.

The scope of these Transactions covers both the theory and its application in a variety of communications media and communications environments. Though special requirements or restraints may lead to identification of special areas of communications activity and interest, these various specialties will still have much in common. Mod ulation techniques developed for one application may be useful in other applications; coding, noise and interference, detection and decision techniques, systems problems, etc, are subjects of interest to most communications engineers. Many papers which may be directed to a specific specialized area are nevertheless of value to workers in other areas of communications.

A number of specializations within communications are represented by the Technical Committees of the ComTech Group. However, many papers are received and published which do not correspond closely to the current activities of any of these TC's; such papers are reviewed and published if they are of good quality and treat a communications subject which is judged to be of interest to the ComTech Group or the general membership of IEEE.

Although several other Groups have interests in communications, these are either highly specialized or secondary to the major interest of the Group. Only ComTech attempts to provide broad coverage for the general membership.

In 1967 the six issues of the IEEE Transactions on Communication Technology will run to about 900 pages of technical papers. These papers will be carefully selected from a much larger number of papers, hence the published papers represent only the best technical material available in IEEE.

Although the dues of ComTech are but five dollars a year (one dollar for students), the cost of providing Transactions is substantially greater. Thus the ComTech member gets a real bargain in ComTech Transactions. Additional services are the local chapters, the annual conferen in June, and technical sessions at other meetings. It should be concluded that no engineer in the communications field could afford not to be a member of ComTech.

COMMITTEE REPORTS (continued)

# COMMUNICATION SYSTEMS DISCIPLINES

Chairman: Jes. E. Schlaikjer ITT

New York

## CALL FOR PAPERS!

The IEEE Committee on Communications System Disciplines is endeavoring to stimulate for presentation at its sessions and for publication, a new class of papers dealing with areas that appear to be of increasing future import. It requests that each reader of this notice search his mind and, if he believes that he can supply useful information in any of the following fields, the Committee requests that he send a 50-word summary plus a 100-to-500 word abstract of his proposed paper to:

> Raymond C. P. Hinton, Papers Chairman IEEE Committee on Communications Systems Disciplines Communications Systems Inc. Route 17 Paramus, New Jersey

The group promises earliest possible presentation of such worth papers.

Areas currently of interest are:

- 1) Tactical Communication and Its Relationship to Global Networks
- Improvements for HF Circuits
- Error Control as Applied to Communication Networks System Interfacing Problems for Global Networks
- Interfacing Considerations for Integrated Tactical Systems Communications for On-Line Computers with Areas
  - Treating a) Wide band digital data - 48 khz and greater
  - b) Narrow band digital data on 4 khz voice frequency lines
- Media Simulators
- Computers as Aids to Design of Communication Systems
- Computers as Parts of Communication System

## STANDARDS LIAISON

Chairman: W. Y. Lang Towaco, N.J.

Those of us working in the field of communications know full well the need for definitions of terms which are used in our papers and in our talks with others. Only if we have good definitions which are understood by others can we communicate.

Mr. Blackmon's letter of October 11th and Mr. Anderson's letter of October 19th gave information on the revision of definitions of terms used in our technology. These letters were followed up by a letter from our Chairman, Dr. W. B. Jones to the Chairmen of all Technical Committees asking that they take part in this task.

With the great expansion of the field from voice and telegraph to the use of the same facilities for data which can be from machine to machine, man to machine or vice versa, there have been many new terms introduced. In some cases they cover new items or techniques, in other cases they are new words which are already defined in C42 for a term which has been in use for years. The task which has been put up to us collectively is no simple one and we will require the help of all of the committees to do a job which will be a credit to our group.

Some of the Technical Committees are already setting up the nucleus of working groups and it is requested that all others do likewise. If there are any questions or conflicts the Standards Liason may get in touch with me or with Mr. J. J. Anderson at headquarters.

# TELEMETERING

Chairman: F. Vinton Long Shreveport, La.

The Telemetering Committee is sponsoring sessions at the IEEE Winter Power Conference, NTC '67, and ICC '67. We particularly need papers for ICC '67.

We are coordinating efforts in the standardization field and attended a TSCC meeting at Huntsville, Alabama last month as an observer. We have been invited to present a short resume in industrial telemetry at their next meeting.

It should be brought out that although this Committee, and the papers it sponsors and edits for the Transactions have been largely industrial, that we are interested in papers in other areas, such as Space, provided the subject matter is concerned with telemetering technology.

We are desirous of obtaining vigorous, hard-working members for this committee.



## CHAPTER

NEWS

# COMTECH CHAPTERS

Alabama Atlanta Baltimore (Inactive) Boston Canaveral Chattanooga Chicago Columbus Connecticut

Dallas Denver-Boulder East Tennessee Florida West Coast Long Island Los Angeles (Metro.) Mohawk Valley Nebraska New Jersey Coast

New Orleans New York (Metro.) North Jersey Oklahoma City (Inactive) Orlando Philadelphia Phoenix

Seattle Shreveport Southeastern Michigan Syracuse Toronto Twin Cities Vancouver, B.C. Washington, D. C.

# ATLANTA

The IEEE Executive Committee, at its meeting on July 20, approved the petition for the establishment of a local chapter of the IEEE Communication Technology Group within the Atlanta Section. Mr. W. B. Warren served as organizer of the Chapter.

Welcome to ComTech.

# CANAVERAL

Since the publication of the last Newsletter, the Canaveral Chapter has had two technical meetings, one on 26 September and one on 28 November 1966.

The 26 September meeting included a presentation by Mr. George P. Kefalas of the Martin Company, Orlando, Florida on A PHASED-ARRAY GROUND TERMINAL FOR SATELLITE COMMUNICATIONS. The 28 November meeting featured a talk by Dr. E. J. Baghdady, ADCOM, Inc., Cambridge, Mass., on SIGNAL DESIGN FOR SPACE COMMUNICATION AND TRACKING SYSTEMS. Both presentations were well received and sparked unusual interest and many questions on the subject matter.

The next meeting will be on 23 January, at which time Mr. John Berry, Southern Bell Telephone and Telegraph Company, will present a talk on WIDEBAND DATA TRANSMISSION. The meeting will begin at 8:00 PM and will be held at Ramon's on the Causeway, Cocoa Beach,

Future meetings of the Canaveral Chapter will be held on 27 March and 22 May 1967.

# NEW JERSEY COAST

At a meeting held on June 22, Dr. Richard Gunther, Chief Scientist of the RCA-DEP Communication Division, spoke on commercial satellites of the future.

# CHICAGO

Sacramento

San Francisco

The following members of the Chicago Chapter of the IEEE Communications Technology Group will be serving on the Administrative Committee of the Chapter for the year 1966-67.

# ADMINISTRATIVE COMMITTEE

## Officers

CHAIRMAN:

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Chapter News (continued) Chicago PUBLICITY COMMITTEE

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MR. ROBERT N. HETTRICK Chicago, Milwaukee, St. Paul & Pacific Railroad Co. Union Station

516 West Jackson Blvd. Chicago, Illinois 60606 CE 6-7600 Extension 368

MR. GEORGE E. MISTHOS Smith, Corona, Marchant, Inc. Kleinschmidt Division Lake Cook Road Deerfield, Illinois 60015 945-1000 Extension 238

# MEMBERSHIP COMMITTEE

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VICE\_CHAIRMAN: MR. JOHANNES F. GOTTWALD Teletype Corporation 5555 West Touhy Avenue Chicago, Illinois 60076 CO 7-6700 Extension 6602

> MR. JAMES M. CLARK Zenith Radio Corporation 6501 West Grand Avenue Chicago, Illinois 60635 745-4934

MR. HUBERT C. RETT Illinois Bell Telephone Company 212 West Washington Avenue Chicago, Illinois 60606 727-3591

NOMINATING COMMITTEE

CHAIRMAN:

MR. CHARLES F. WITTKOP Motorola Inc. Gov't. Electronics Division 1450 North Cicero Avenue ES 9-6700 Extension 340

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> MR. HARRY A. PALM Western Union Telegraph Company 427 South LaSalle Street Chicago, Illinois 60164 WA 2-4321 Extension 378

DR. GORDON J. MURPHY Northwestern University Electrical Engineering Department Evanston, Illinois 492-7258

# PLANNING COMMITTEE

DR. HERBERT J. STEIN University of Illinois Department of Information Engineering Circle Campus Box 4348 Chicago, Illinois 60680 663-3423

MR. FRANK G. VARENHORST Western Electric Company 220 Church Street New York, New York

PROGRAM SCHEDULE 1966-1967

Friday, November 18, 1966
Talk By: J. N. Petrie, Chief Transmission Engineer, Automatic Electric Company

Where we have been and where we are going Subject: in Telephone Transmission

IITRI: Research Tower Building Place: 10 W. 35th Street

Social Hour 5:30 P.M. Time: Dinner 6:15 P.M.

Mr. George Mack, 727-3339 Coordinator:

Tuesday, December 6, 1966 (Joint with Electronic Computers G-16)
Talk By: R. P. Sander, Senior Supervisor,
Automatic Electric Company

Trends in Digital Telemetering Subject: and Control

A. E. Laboratory Facilities Tour: Automatic Electric Company 400 N. Wolf Road

Northlake, Illinois Buffet 6:30 P.M. Time: Cost: \$3.50

Mr. E. Bonanno, 562-7100 Coordinator:

Thursday, January 12, 1967 (Com. Tech. G-19 - General Business Meeting) Talk By: R. W. LeForge, Voice Frequency Transmission Engineer

Illinois Bell Telephone Company The Com. Tech. Story Subject: Black Steer Restaurant Place:

6446 W. North Avenue, Chicago Social Hour 5:30 P.M. Dinner 6:30 P.M.

Coordinator: Mr. Warren Foxwell, 267-6700

The six part Winter Series on "Switching Systems and their Applications" will open January 17, 1967 with the following schedule:

January 17 - Application of Building Blocks

January 24 - Memory

January 31 - Electronic System Elements

February 7 - Programs

February 14 - Electronic PBX Systems

February 21 - Electronic Central Office Systems

Professor R. A. Anderson will give the first four lectures.

The lecturer on Electronic PBX Systems will be announced later.

Mr. S. Levine of the Western Electric Company will close the Winter Series with a lecture on Electronic Central Office Systems.

Anyone requiring additional information on this course, is invited to contact Mr. K. R. Iler, General Telephone and Electronics Service Corp., 730 3rd Avenue, New York, N. Y., Tel. No.: (212) 551-1391.

# INSPECTION TRIP

On November 29, 1966 the Related Activities Committee of the Communication Technology Group of the New York Section, IEEE will sponsor a field trip to the New Jersey Bell Telephone Company's Electronic Switching Exchange, at Succasunna, New Jersey, to inspect the No. 1 Electronic Switching System (ESS). No. 1 ESS exploits new developments in computer technology as the means for operating this revolutionary new telephone exchange. The system has the potential to follow switching schemes of an almost limitless variety, depending upon the particular user's needs. Some of the services that No. 1 ESS can provide are: automatic dialing for a list of often-used telephone numbers, automatic setting up of conference calls, and allowing a user to communicate directly with a computer over any telephone.

A "Satellite TDM Multiple Access Experiment" will be discussed at a meeting on November 17, 1966. It wi be held at the Department of Commerce Building at 8:00 p.m. A pre-meeting dinner will be held at O'Donnell's

Dr. Tadahiro Sekimoto and Mr. J. G. Puente will discuss the equipment and performance of an experimental time division multiplex satellite access system which has been designed and developed at the Communications Satellite Corporation. Three stations were constructed for the test. Two stations were placed at Andover, Maine, and one station was placed at Mill Village, Canada. Multiple access tests conducted using the Early Bird

Their talk will cover the guard-time between bursts. the amount of information required for burst synchronization, the access time format, the acquisition and lockup procedure, and other information concerning TDM

Mr. O. Gene Gabbard will discuss the design approach to the burst synchronization subsystem and the performance predicted and obtained.

Mr. Puente is a member of the Technical Staff of the Communications Satellite Corporation in the Research and Development Division where he is responsible for the analysis and development of advanced systems for satellite communications. He received the BEE from the Polytechnic Institute of Brooklyn in 1957 and his MSEE from the Stevens Institute of Technology in 1960.

Dr. Sekimoto is manager of the Modulation Techniques Department of the Research and Development Division of Communications Satellite Corporation where he is responsible for research and development of pulse code modula-tion communications. He received a BS degree in physics and a Ph. D. degree in systems engineering both from the University of Tokyo, Japan, in 1948 and 1962 respective

Mr. Gabbard is a member of the Technical Staff of the Communications Satellite Corporation in the Research and Development Division where he has the responsibility of developing digital instrumentation and control equipment for satellite communications systems. He received a BSEE degree in electrical engineering from the University of Kentucky, Lexington, Kentucky, in 1961 and an MSE (EE) degree from the University of Pennsylvania, Philadelphia, Pa., in 1965.

# SAN FRANCISCO

The first meeting of the season was a social affair to which approximately ninety members, wives and guests of the IEEE Communication Technology Group attended. The meeting was held on the 21st of September, 1966 at the Paul Masson Mountain Winery in Saratoga, California.

The program started with wine tasting followed by a barbequed steak dinner. After the dinner the Strafilcher String Quartet delighted everyone with a half hour of Mozart's Quartet.

Towards the end of the dinner the officers of the Group were introduced by Chairman R. S. Howland. Then Vice Chairman George Griffith outlined the program established for the year. One of the highlights of the evening was the introduction of Fred Heer, retired, a member of the AIEE and IEEE for over 50 years.

## WASHINGTON

october we completed another successful Com-Tech Symposium at NEC. Already it is time to start planning for the 1967 Symposium. As most of you know, there is no general call for papers for this symposium. We negotiate with NEC for the number of sessions we wish to sponsor and the organization of these sessions is completely the responsibility of the sponsoring Technical Committees. Firm plans by the TC's and strict adherence to the following dates will greatly assist your program committee in organizing the symposium according to your wishes.

MEETING	DATES:	October	23-25,	1967
(Number	Program to Program of <u>firm</u> sessions design themes)	esired	i se ava	2/20/67
To T	nd Abstract TC Chairman Program Chairman			3/14/67 4/14/67
	pt TC Chairman TEC Proceedings Chai	rman		6/19/67 7/17/67

The final manuscript is typed on special paper provided by NEC and sent directly to the Proceedings Chairman by the author. Draft copies of the final manuscript should be in the hands of the TC Chairman by 6/19 or earlier, to allow time for review. The final manuscript is limited to six pages on the special paper, (approximately 10 to 12 - $8\frac{1}{2}$ " x 11" typed pages) and the review should not only be for publication in the NEC Proceedings, but also for Transtions publication unless the author is planning to prode a longer paper for Transactions review. The CP and TP numbers will be assigned. It should be emphasized that submission of Title and Abstract to the Program Chairman denotes acceptance of the paper for at least oral presentation and the review discussed here is in regard to publication in the NEC Proceedings and/or the IEEE ComTech

Communication Technology Symposium at NEC \*\*\*\*\*\*\*\*\*

A few words about the 1966 Symposium. The average session attendance was 77 with a spread of 27 to 240. Nine sessions were below, four above and one at the average. Following is the attendance by session:

Session No.	Committee	Attendance	
Audi alleria Autor	ony (sensitives) and	Rivia Lancont	
3	Data	69	
4	Wire	52	
12	Data	240	
13	Wire	76	
21	Radio	38	
22	Wire	112	
23	Space	33	
30	Switching	71	
31	Wire	55	
32	Sys. Disc.	49	
38	Switching	112	
39	Sys. Disc.	27	
47	Switching	110	
48	Sys. Disc.	30	

Let me again stress the importance of early planning. The NEC plans to hold to deadline dates much more tightly than in the past. We presently have excellent relations with NEC and the best way to continue them is to come through with well planned and interesting sessions on time. If any member would like more information regarding the Com-Tech Symposium at NEC, please contact me.

> A. J. Leininger Program Chairman IEE Communication Technology Symposium at NEC

Illinois Bell Telephone Company 225 W. Randolph Street Room 24A Chicago, Illinois 60606

THE NETWORK HOTLINE 

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# NEW APPOINTMENT FOR L. A. DE ROSA

Transactions.

Louis A. de Rosa, a member of ComTech AdCom, was recently named Director of Engineering and Research for Philco-Ford Corporation, Electronics Group. In that capacity Mr. de Rosa also will be a member of the company's Operating Policy Committee. Best wishes on your new assignment.

# FRED W. MORRIS JOINS RADIATION, INC.

Fred W. Morris, Jr., well known electronics engineering and management consultant and top government advisor on space communications has been named to the new post of Vice President-Corporate Planning and Special Assistant to the President of Radiation Incorporated.

# WALTER K. MAC ADAM 1967 PRESIDENT OF INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

New York, New York, November 4, 1966 - Walter K. MacAdam, Vice President - Government Communications for the American Telephone and Telegraph Company, has been elected President of the Institute of Electrical and Electronics Engineers for 1967.

# R. K. SNELLING - BELL DISTRICT ENGINEER

R. K. Snelling has been named Southern Bell District engineer in Brevard County, Florida. Snelling succeeds W. E. (Wally) Hahn, district engineer since since 1 Sept. 1960, who has been appointed state outside plant engineer (exchange) with headquaters in Jacksonville.

Snelling has served in various positions in engineering for Southern Bell in Jacksonville, West Palm Beach, Orlando and Cocoa. He attended the Bell system regional transmission engineering school at Clemson University in 1963-64. For the past two years, he has been the supervising engineer in the Cocoa Beach area.

He is a member of the Florida Society of Professional Engineers, the Cocoa Beach Chamber of Commerce, the Cocoa Kiwanis and is an officer and member of the Institute of Electrical and Electronic Engineers.

Snelling lives on Merritt Island with his wife and three children. They are members of St. Marks Church, Cocoa.

The Board of Directors has accepted recommendation of the Economic Advisory Committee, George Spatta Chairman, that a new policy committee on Telecommunications be created.

Telecommunications Committee work and interests were described:

"Primarily this Committee would act as a watchdog over the telecommunications field in order to recommend policy to the Board of Directos, which upon approval will be implemented to give members every necessary aid to increase their efficiencyin production and managerial control.

"The activities of the Committee will also include participation in government-industry committees frequently initiated by the Federal Communications Commission to seek agreement on various problems such as sharing television space.

"More specifically and as examples the Committee will give attention to:

"Two-way mobile radio: Used by industry to control lift trucks and other material handling equipment.

"Flea Power: Low powered units used by industry for remote control of mechanical equipment such as cranes and locomotives and as a personnel safety device.

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"Microwave: Used by industry for point-to-point communications between plants and offices located in different geographical areas.

"Computer Channels: Used for transmission of data and analysis from plant to plant and from computer to computer.

"Space communications: Presenting potential use by industry for domestic and international communications now covered by a policy statement that may require revision as the art advances.

"National Emergency communications systems: Government proposal that industry coordinate its present tele-communications systems with government to meet various emergencies.

"Coordination: A duty performed by the committee executive at the direction of the committee providing a service to all manufacturers in order that they can abide by the FCC rules requiring a "showing of coordination" before a license will be granted.

"As is customary in the operation of NAM policy committees various subjects are assigned to subcommittees for their study and consideration as the full committee may believe necessary or desirable."

COMMUNICATION TECHNOLOGY

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