



COMMUNICATIONS TECHNOLOGY GROUP

Number 1

September 1964

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1. NEWSLETTER FUNCTION

This NEWSLETTER is published Quarterly for the Administrative Committee of the IEEE Communication Technology Group, and serves as a vehicle for the dissemination of news items of current importance and interest to members of the COMTECH Group.

Technical Committees and other operating elements of the Group are invited to use this publication as its NEWSLETTER.

Items covering Committee, Chapter, Call for Papers, Meetings, Personal and Professional, and other appropriate news are solicited and should be submitted to the Editors as follows:

General News and Eastern Chapters Activities (E)

Gunther Karger, Editor  
 IEEE COMTECH GROUP NEWSLETTER  
 ITT Communication Systems, Inc.  
 556 Herrick Drive  
 Dover, New Jersey 07801  
 Office Phone: 201-843-2400, Ext. 4253

Western Chapter Activities (W)

Ray Bogdan, Associate Editor  
 IEEE COMTECH GROUP NEWSLETTER  
 Teletype Corporation  
 5555 Touhy Avenue  
 Skokie, Illinois 60076  
 Phone: 313-676-1000

THE DEADLINE FOR THE DECEMBER, 1964, ISSUE WILL BE:  
SEPTEMBER 15th. All items must be submitted prior to this date.

2. MESSAGE FROM THE EDITOR

This is the first NEWSLETTER published by the IEEE Communication Technology Group (COMTECH GROUP). The new organization is the result of merging PTG-CS and the Communications Division. It is hoped that all committees of the Group will use this publication for its NEWSLETTER as it provides an excellent means for reaching all members with important and timely information.

We will endeavor to publish meeting announcements, Call for Papers, etc. concerning all events relative to the Group. This includes the listing of Chapter meetings and other local activities.

To do this, we need the cooperation and support of all committee and Chapter Officers.

We also encourage members to write "Letters to the Editor" on timely subjects. We will always be pleased to receive suggestions on how the publication can be improved.

3. MESSAGE FROM THE CHAIRMAN: DR. R. K. HELLMANN

In the June issue of the NEWSLETTER, I talked about some of the policies and problems with which the new COMTECH GROUP will be concerned. Since then, we have progressed from the general to the more specific, and I can report on a few developments both in the past and in the future.

Looking back, we can record the successful conclusion of GLOBECOM VI in Philadelphia. Although the attendance only met, and did not surpass, expectations, the technical program was outstanding. The Technical Committees are now reviewing paper presented there for possible publication in the TRANSACTIONS.

Also, the Group's ADCOM has constituted itself, approved the Standing Committee Chairmen and the smaller Operating Committee, and has scheduled its first full meeting for October 19th, at the NEC in Chicago.

Looking forward, a schedule of meeting activities has been agreed upon. The Meetings Committee, under F. D. Reese, plans to organize meetings of national scope three times a year, and one or two of somewhat more limited purpose. It is expected that the Meetings Committee will eventually work out a five-year program. For the year ahead, the plan shapes up as follows:

NATCOM X will take place October 5-7 at Utica, New York. The Technical Committee on Communication System Disciplines, under C. A. Strom, Jr. is in charge of the Technical Program. Well over 50 papers are scheduled.

NEC October 19-21, Chicago, Illinois, will be the host for a number of sessions with about 50 papers which have been prepared mostly by the Technical Committees of the old Communications Division. A. J. Leininger is our co-ordinator.

The International Convention-March 22-25, 1965, will be the scene for at least 14 sessions sponsored by COMTECH. Our Technical Committees, co-ordinated by G. Walsh of the Meetings Committee, will soon be at work on this project.



Boulder, Colorado has been affirmed as the place for our Annual Communication Convention, which will include GLOBECOM VII as a special feature. The date is June 7-9, 1965. R. C. Kirby, of the Denver Section, is the Meeting Committee's representative as well as the Meeting's General Co-Chairman with Prof. P. Wicks; W. F. Utlant heads of the Technical Program Committee.

We will also be represented, through the Telemetering Committee, at the National Telemetering Conference (NTC), the leadership of which rotates among IEEE, the Instrument Society of America (ISA) and the American Institute of Aeronautics and Astronautics (AIAA). The next NTC Meeting will take place in Houston, Texas, April 13-15, 1965.

The format and procedures for these meetings are not yet as uniform as would be desirable. It is hoped that the methods of paper procurement, presentation and publication will be optimized as time goes on. It would seem that the pattern set for the 1965 International Convention is a good one to emulate. The Technical Committees will have two sources of papers available: their own solicitation and the results of the General Call for Papers. They will determine which papers should be presented and which should be published. Preprints, grouped and assembled by sessions, will replace the Convention Records or Digest.

To what extent assistance from Headquarters will be available in the future with regard to the monitoring and processing of manuscripts and other chores, is currently under consideration by the Institute's Executive Committee. The Group's officers have used every opportunity to make the wishes of our members known to the IEEE management and are confident that the proposed set-up will be adopted.

In this and other matters ADCOM will endeavor to truly represent the Group's membership. The Editor of the NEWSLETTER, your Chairman, and all members of ADCOM invite your comments.

4. MESSAGE FROM PAST CHAIRMAN: D. S. RAU

TO: Members of the former IEEE Communications Systems Group

As the final Chairman of your Group I thank you all for the splendid co-operation you gave in making this a successful year. I am especially appreciative of the time and effort given by those who graciously served on the Administrative Committee and other committees of the organization.

It has been a most eventful year particularly because of the successful negotiations with our sister organization, the Communications Division, to merge into the new IEEE Communication Technology Group. This step will eliminate the competition in meetings and publications and unite the talents of the predecessor units in a common effort to provide a more effective and stronger organization.

Dr. Ray Hellmann, the able Chairman of the new COMTECH GROUP has the assistance of an Administrative Committee of exceptionally capable members all of whom have had experience in the management of the predecessor groups. Included on the ADCOM are the Chairmen of the Technical, Standing, and Translation Committees. An opportunity is available for members of the Group to serve in its operation by applying to the Committee Chairman for appointment to possible openings. A major qualification is interest and enthusiasm. The future strength of the Group will depend a lot on the activity of these committees and the support they are given by the membership of the Group.

I feel greatly honored by having been Chairman of the Group on Communications Systems in its final year, and I am very happy indeed to have participated in promoting it into what has now become the most important organization in the field of communications engineering.

5. COMMITTEE REPORTS & NEWS

The Technical Committees and other Operating Committees of the COMTECH GROUP are invited to use this space for making announcements, publicity of events, etc.

Wire Communications Committee

Mr. William Burnett, Chairman, reports that the Wire Committee held a regular meeting on August 25th at Los Angeles during the WESCON meeting. It will meet again on October during the IEEE-NEC. The meeting will be on Tuesday, October 20th at 6 p.m. probably at the Sherman House. This will be a dinner meeting.

Two of the four sessions sponsored by the Wire Committee at the IEEE-NEC may justify particular mention. The session on Monday morning will be a panel discussion on the techniques for measuring longitudinal balance on telephone equipment. The session on Tuesday afternoon will be devoted to the subject "Continuing Education for Engineers". Although the emphasis will be on the continuing education for engineers who are in communications oriented businesses, the session should be of considerable interest to all engineering educators and training people.

Chapters Committee

Present membership of the Committee consists of the following individuals:

- |   |   |
|---|---|
| Roger McSweeney, Chairman<br>ITT Communication Systems, Inc.<br>Paramus, New Jersey | Harold J. Crowley<br>Rome Air Development Center<br>Griffiss Air Force Base, N.Y. |
| Bernard Goldberg<br>USAERDL<br>Ft. Monmouth, N.J.                                   | Robert H. Maier<br>ITT Kellogg Comm. Systems<br>Chicago, Illinois                 |
| Edward Fasko<br>General Electric Co.<br>Valley Forge, Penna.                        | Rudolph Riehs<br>USAERDL<br>Ft. Monmouth, New Jersey                              |

The Communication Electronics Division of the New York Section of the former AIEE is in the process of converting itself into a Chapter of the COMTECH GROUP. Members who are interested in assisting in this activity should get in touch with Mr. G. Sprio, at the Bell Telephone Laboratories, Holmdel, N.J., Telephone: 201-949-3000, Ext. 2277.

Dr. McCreary expects to initiate action to revive our Los Angeles Chapter or to form new Chapters in that area. Engineers and scientists who are interested in participating in these activities should get in touch with Dr. McCreary at Autonetics in Anaheim, Telephone: 213-772-8111.

Action is under way to form a Chapter in Connecticut and those who are prospective members of this Chapter should get in touch with Mr. David S. Ostrom, Southern New England Telephone Company, New Haven 6, Connecticut.

Mr. McSweeney would like to hear from engineers who may be interested in forming Chapters in Buffalo, Rochester, Westchester (N.Y.), Princeton, Montreal, Ottawa and Tokyo.

6. **CALL FOR PAPERS**

*First*

**IEEE ANNUAL COMMUNICATIONS CONVENTION**

including

**GLOBECOM VII**

Hosts: University of Colorado  
National Bureau of Standards

**CALL FOR PAPERS**

Boulder, Colorado  
June 7-9, 1965

The IEEE Annual Communication Convention has been initiated by action of the IEEE Communication Technology Group and is the first of what is expected to become an annual convention. Its function is to provide for an interchange of knowledge on theory, methods, and techniques from the several communication disciplines. GLOBECOM VII is included as a portion of this Convention and special sessions, identified as such, will be held. Papers are requested for General and GLOBECOM sessions as indicated below.

--GENERAL SESSIONS--

Papers covering all timely phases of communication technology. Typical topics include:

- Radio Communication
- Space Communication
- Telemetry
- Communication Theory
- Communication Systems
- Wire Communication
- Communication Switching
- Data Communication
- Information Theory
- Telegraphy

--GLOBECOM SYMPOSIUM--

Papers which contribute to the theme "Channel Characterization and Adaptive Communication Techniques."

- Typical topics include:
- Communication Channel Characterization (Radio and Wire)
  - Time-Variant Dispersive Channels
  - Signal Design and Processing
  - Monitoring, Measuring, and Predicting Channel Performance
  - Channel Simulation for Various Propagation Media
  - Diversity Effects on Channel Characteristics
  - Antennas and Propagation
  - Adaptive Communication Techniques
  - Detection and Coding for Real Channels

--INSTRUCTIONS FOR AUTHORS--

1. An original and four (4) copies of a complete manuscript must be submitted for review for presentation at the convention. Preprints of all papers accepted for presentation will be made available at the meeting. Papers approved for Transactions by Technical Committees will be published.
2. Original manuscripts must be typewritten in English on standard 8½ x 11" paper with ½" margins at top and sides and 1" at bottom. Typing is to be single spaced, with double spaces between paragraphs, and on one side of the paper only. Glossy prints (8 x 10") of all figures are to be included at the end of the text. Preprints will be photo copies from this original manuscript. The IEEE Authors Guide is recommended to aid in proper manuscript preparation.
3. Four(4) copies of an abstract of less than 200 words are also required. No figures are to be included with the abstract.
4. Authors and their affiliation should be identified at the heading of both the manuscript and abstract.
5. DEADLINE for receipt of abstracts and manuscripts is FEBRUARY 15, 1965.
6. Authors will be notified of acceptance or rejection by March 22, 1965.
7. Mail manuscripts and abstracts simultaneously to:

W. F. Utlaut  
Chairman, Technical Program Committee  
IEEE Annual Communications Convention  
National Bureau of Standards  
Boulder, Colorado

Information on exhibit arrangements and institutional listings in the Convention Program may be obtained from C. Wilson, Ball Brothers Research Corporation, Boulder Industrial Park, Boulder, Colorado.



CHAPTER ACTIVITIES

It is the policy of the NEWSLETTER to announce past and future Chapter events and list elected Chapter Officers. The purpose of this is threefold:

1. Provide additional publicity coverage to Chapter members who receive this publication.
2. Provide a means for interchanging ideas for future chapter activities. This service can substantially assist in selecting Chapter programs.
3. Assist during the formation of new Chapters by providing publicity for the organizer.

This is a service to Chapter Committees and we sincerely solicit their cooperation in order to insure the success of our objective.

It is suggested that the Chapter Publicity Chairman place the appropriate Editor on his mailing list. (Eastern Chapters marked with (E) should communicate with G. Karger). (Chapters marked with (W) should communicate with Ray Bogdan).

Baltimore (E)

Wilson C. DeAndrades, Chairman, and Robert Martell, Vice-Chairman, of the Baltimore Chapter would like to hear from engineers in the Baltimore Section who have program suggestions or who would like to participate in Chapter activities. Messrs. Andrades and Martell are both at the Westinghouse Air Arm Div.:

Mail Address: P. O. Box 746  
Mail Stop 436  
Baltimore 3, Maryland

Telephone: Area Code 301-761-1000, Ext. 3779

Mr. Andrades' home telephone number is: STate 9-7416

Boston (E)

Chapter Officers are:

Chairman: William L. Roberts  
Litton Systems  
335 Bear Hill Road  
Waltham, Massachusetts

Vice-Chairman: William Floyd  
Litton Systems  
335 Bear Hill Road  
Waltham, Mass.

Secretary-Treasurer: Saul Fast  
National Company  
61 Sherman Street  
Melrose, Mass.

The Chapters met jointly with the Information Theory Group on March 10th, to hear A. Kohlenberg of the Codex Corp. discuss:

"Diffuse Threshold Decoding for Real Data Channels"

Canaveral (W)

Chapter Officers are:

Chairman: J. P. Anderson  
RCA Communications Coordinator  
NASA Mission Control Center  
Cape Kennedy, Florida

Vice-Chairman: W. C. Uler  
Instrument Corp. of Florida  
Eu Gallie, Florida

Chicago

Chapter Officers are:

Chairman: Frank Varen Horst  
Illinois Bell Telephone Co.

Vice-Chairman: Harry Palm  
Western Union Co.

Secretary: Charles Westerlund  
ITT Kellogg

Dallas

Chapter Officers are:

Chairman: Jim Loras  
Linor Temco Veught  
Dallas, Texas

Vice-Chairman: Douglas Ziemer  
Texas Instruments  
Dallas, Texas

Secretary: Frank Reisch  
Collins Radio Co.  
Dallas, Texas

Denver-Boulder (W)

Chapter Officers are:

Chairman: Professor Platt Wicks  
University of Colorado  
Boulder, Colorado

Vice-Chairman: M. Nesenbergs  
National Bureau of Standards  
Boulder, Colorado

Secretary: Leo Malaney  
National Bureau of Standards  
Boulder, Colorado

Florida West Coast (W)

Chapter Officers are:

Chairman: Lewis Borges  
Electronic Communications, Inc.  
St. Petersburg, Florida

Vice-Chairman: Henry Pichol  
Electronic Communications, Inc.  
St. Petersburg, Florida

Secretary: John Cobb  
Electronic Communications, Inc.  
St. Petersburg, Florida

Long Island (E)

Chapter Officers are:

Chairman: Professor Mischa Schwartz  
Polytechnic Institute of Brooklyn  
Brooklyn, New York

Vice-Chairman: James C. Hepburn  
Polytechnic Institute of Brooklyn  
Brooklyn, New York

Secretary: William A. Miller  
Polytechnic Institute of Brooklyn  
Brooklyn, New York

Mohawk Valley (E)

Chapter Officers are:

Chairman: Harry A. Carlson  
Rome Air Development Center  
Griffiss AFB  
Rome, New York

Vice-Chairman: Beverly Gallup  
Motorola, Inc.

Secretary: Zigmund Bara  
GEELA  
Griffiss AFB  
Rome, New York

The Chapter is busily engaged in arranging the Tenth National Communications Symposium which will be held in Utica on October 5, 6, 7. A preliminary program of this meeting is announced in Section 7 of this NEWSLETTER.

Monmouth

Chapter Officers are not yet elected.

Last Chairman was: Dr. Fritz E. Froehlich  
Bell Telephone Labs  
Holmdel, New Jersey

"Unified Theory of Digital Communications was the subject of a talk by Mischa Schwartz of Polytechnic Institute of Brooklyn at the Chapter's meeting on March 27th, 1964.

Mischa Schwartz, Professor of Electrical Engineering, is the Head of the Department of Electrical Engineering, Polytechnic Institute of Brooklyn. His fields of specialization include: communication systems analysis, statistical detection studies, studies of noise phenomena in communication systems, and radar, etc.

He received the B. E. E. from Cooper Union in 1947; M. E. E. from Polytechnic Institute of Brooklyn in 1949; and the Ph. D. in Applied Physics from Harvard in 1951.

Professor Schwartz has published many important technical papers and is especially well known for his book, "Information Transmission, Modulation, and Noise", McGraw-Hill, 1959.

North Jersey (E)

Chapter Officers are:

Chairman: R. D. Chipp  
Chipp Associates  
15 Ward Street  
Bloomfield, New Jersey

Vice-Chairman: A. A. Roetken  
Bell Telephone Labs  
Murray Hill, New Jersey

Secretary: Jack Harvey  
Sichak Associates  
Nutley, New Jersey

Financial & Arrangements: M. Westheimer  
ITT Comm. Systems  
Paramus, N. J.

MEETING NOTICE

**SUBJECT:** Communications for the National Political Conventions  
**DISCUSSION LEADER:** James Parker, CBS Television Network  
**PLACE:** Arnold Auditorium, Bell Tel. Labs., Murray Hill, N. J.  
**DATE:** Tuesday, September 22, 1964 at 7:45 P.M.  
**PRE-MEETING DINNER:** Wally's Tavern on the Hill, Watchung, NJ  
**FOR RESERVATIONS CONTACT (BY SEPTEMBER 21st):**

G. K. Helder  
Bell Telephone Labs., Inc.  
Murray Hill, N. J.  
Phone: 201-582-6669

Mr. James Parker, Director of RF Engineering of the CBS Television Network will be the discussion leader at the September joint meeting of the North Jersey Section of the IEEE and the North Jersey Chapter of the IEEE Group on Communication Technology. He will lead a group discussing the communications provided for the recent national political conventions held in San Francisco and Atlantic City. Communications include those internal to the Convention Hall, outside communications on the common carriers and other communications for TV and radio. Representatives of groups providing these communications will be the speakers.

The meeting will be held at 7:45 P.M. on Tuesday, September 22, 1964 at Arnold Auditorium, Bell Telephone Labs., Murray Hill, New Jersey. The pre-meeting dinner begins at 5:45 PM at Wally's Tavern on the Hill, Watchung, New Jersey.

**JAMES D. PARKER**  
Director, Television R-F (Radio Frequency) Engineering  
Engineering Department  
CBS Television Network

Following one and a half years of graduate study at Mass. Institute of Technology, where he majored in electrical engineering as an undergraduate, Mr. Parker joined the Engineering Department of CBS in February, 1937. While an undergraduate he was elected to Tau Beta Pi, the national engineering honor society. Except for two military leaves of absence (World War II and the Korean War) he has been with CBS continuously since that time, and was appointed to his present position in August, 1954. In this capacity, his responsibilities encompass transmitter station installation, station coverage studies, and FCC activities including allocation matters. He has maintained a continuous association with the military, currently holding a commission as Colonel in the Air Force Reserves, and from 1954 until 1960 was in command of an active Air Force Reserve organization in New York City. On October 1st, 1960 he was made Mobilization Assistant to the Commander, ROAMA Griffiss Air Force Base.

STUDY GROUP ON OVERALL COMMUNICATION SYSTEMS PLANNING

The advent of data communications placed an increasing burden upon engineers engaged in the design and planning of communication systems. Responding to the needs of the future, systems engineers must satisfy the operational requirements of the users and have a broad understanding of the system requirements. Analyses of both the actual and the predicted requirements are necessary; both must eventually be expressed in terms that can be effectively used by designers and planners to define the network parameters.

This study group will survey the problems, tools and methods applicable to the subject matter and enable attendees to acquire a basic understanding of the problem and methods encountered in overall communication systems planning. Bound lecture notes will be provided.

Starting Date: Wednesday, 23 September 1964

Time: 6:30 P. M. to 8:30 P. M.

Location: Vail Hall, Bell Telephone Building  
540 Broad Street  
Newark, New Jersey

Registration Fee:\* Early Registration: Members, \$25; Non-Members, \$35

Door Registration: Members, \$30; Non-Members \$40

\*Non-Members may apply the \$10 difference in registration fee towards membership in the IEEE by requesting a Refund Certificate.

NOTE: Advance registration is solicited since there is a limited supply of notes available for distribution.

Information & Registration may be obtained from:

Mr. R. Kudisch  
ITT Communication Systems, Inc.  
Paramus, New Jersey  
201-843-2400



SESSION OUTLINE FOR STUDY GROUP ON  
"OVERALL COMMUNICATION SYSTEMS PLANNING"  
FOR THE FALL 1964

SESSION 1: - Wednesday, 23 September 1964

HIERARCHY OF USER REQUIREMENTS AND NEEDS (Commercial, Governmental or Military)

Determination of user needs generated by his mission;  
(a) Traffic Demands, (b) Traffic Flow Patterns, and (c) Secure/Non-Secure Traffic Flow, for the following hierarchy of complexity:

Lecturer: - Mr. Carl Harvey - ITT Communication Systems, Inc.

SESSION 2: - Wednesday, 30 September 1964

SESSION 3: - Wednesday, 7 October 1964

SYSTEM DEVELOPMENT

Identification and Analysis of the Ultimate Objectives, System Synthesis, Program Implementation

Lecturer: - Mr. Henry Hutchinson - ITT Communication Systems

SESSION 4: - Wednesday, 14 October 1964

SESSION 5: - Wednesday, 21 October 1964

METHODOLOGICAL CONSIDERATIONS

1. Relationship between communications systems and information systems.
2. System synthesis procedure, tools, techniques, etc.
3. Tools and Techniques for Information System Synthesis
4. Future application of Information Systems

Lecturer: - Mr. Wolfgang Jakobsberg - Booz Allen Applied Res., Bethesda, Md.

COMMUNICATIONS NEEDS VERSUS EXISTING FACILITIES

SESSION 6: - Wednesday, 28 October 1964

1. Terminal Sources and Sinks (Terminal transducers, control, transmission transducers)
2. Transmission Plant Considerations

Lecturer: Dr. Noah Kramer - Stelma, Inc. Stamford, Conn.

SESSION 7: - Wednesday, 7 November 1964

CONDUCTIVE PATH (Coaxial Cables, Submarine Cables, etc.)

Lecturer: - Mr. Jack Wolff - Radio Corporation of America New York City

SESSION 8: - Wednesday, 18 November 1964

RADIO PATH (HF, Tropo, Satellite)

Lecturer: - Mr. Robert P. Adams - Sichak Associates Nutley, New Jersey

SESSION 9: - Wednesday, 25 November 1964

MULTIPLEX (FDM, TDM)

Lecturer: - Mr. Charles D. Hansell - G. T. & E. Service Corp. New York City

SESSION 10: - Wednesday, 2 December 1964

SESSION 11: - Wednesday, 9 December 1964

ROUTING AND CONTROL

1. Circuit and Message Switching Considerations

Lecturers: - Will be supplied by the AT&T Organization

SESSION 12: - Wednesday, 16 December 1964

STANDARDIZATION

Lecturer: - Mr. H. H. Smith - ITT Communication Systems, Inc.

Oklahoma City (W)

Chairman: Elmo Black  
Mobile Radio Co.  
413 N. E. 38 Terr.  
Oklahoma City, Oklahoma  
(Joint with G-VC)

Omaha-Lincoln (W)

(Joint with VC Group)

Last known Chairman: W. R. Emerson  
Norris Public Power District  
Beatrice, Nebraska

Philadelphia (E)

(Joint with VC Group)

Chapter Officers are:

Chairman: Roy Gaskell  
Bell Telephone Co.  
1835 Arch Street  
Philadelphia, Pennsylvania 19103

Vice-Chairman: Keith Wilder  
R. C. A.

Secretary: Ronald Kern  
General Electric  
R S D

Treasurer: Ralph Bailey

MEETING ANNOUNCEMENT

A tour of General Electric Space Technology Center, Valley Forge, will be conducted at 7:00 P.M. on October 13th.

The event will begin with Dinner at 6:30 at the GE Center.

For reservations and Information, contact:

Miss Helen Yonan  
IEEE Office  
University of Pennsylvania  
215-594-8106 - 8134

San Francisco (W)

Chapter Officers are:

Chairman: Owen Thompson  
Secode Corporation

Vice-Chairman: Fred Beale  
Lenkurt Electric  
San Carlos, California

Secretary: Robert Howland  
Pacific Tel. & Tel.

Seattle (W)

Chapter Officers are:

Chairman: Dale O. S. Huck  
Boeing Company  
Seattle, Washington

Vice-Chairman: Don L. Scidmore  
Honeywell Company  
Seattle, Washington

Secretary: James G. Carter  
Pacific Northwest  
Bell Telephone Company  
Seattle, Washington

Syracuse (E)

No recent activity

Last known Chairman (62-63) was: R. E. Hansen  
General Electric Co.  
208 S. Geddes Street  
Syracuse, New York

Toronto

No recent activity

Last known Chairman (63-64) was: John R. Simpson  
Cushing & Neville  
181 Eglinton Ave., East  
Toronto 12, Canada

WASHINGTON, D. C. (E)

Chapter Officers are:

Chairman: John W. Worthington  
Defense Communications Agency  
Washington, D. C. 20305

Vice-Chairman: Merle B. Floegel  
Federal Communications Commission  
Washington, D. C. 20554

Secretary: Dr. William M. Mazer  
ITT Intelcom  
5817 Columbia Pike  
Falls Church, Va.

MEETING ANNOUNCEMENT

MULTIPLE ACCESS FOR COMMUNICATIONS SATELLITES

Promoted by the COM TECH & Military Electronics Group Chapters)

R. M. Hultberg by  
Director  
Surface Systems Division  
ITT Intelcom, Inc.  
Falls Church, Virginia

T. A. Pickering  
Member Technical Staff  
ITT Intelcom, Inc.  
Falls Church, Virginia

Date: October 20, Tuesday

Time: 8:00 P.M.

Place: Pepco Auditorium  
10th & "E" Streets, N.W.

Satellite communications has become a topic of considerable general interest in the engineering community.

Proceeding from a background discussion of the important communications satellite system parameters, this talk will deal primarily with the problem of modulation and multiple access. Access methods, such as FDM/FM and SSB/FDM/FM, will be discussed. Considerations attendant to the lesser known technique of time division will be developed, i. e., modulation methods and access techniques, and a typical system ( MESA) will be discussed in detail showing operational characteristics and techniques of implementation. As a design example, a 600-voice channel system will be the subject of discussion, and it will be shown that the MESA approach offers interesting possibilities for network organization, as well as providing extreme flexibility for both data and voice transmission.

Mr. Hultberg has been involved in the development of communications and data equipment and systems for over 15 years. Within ITT he has held several other managerial positions, including Manager, Electronic Products Division, ITT Kellogg, and Associate Laboratory Director, ITTFL. He was also Director, Data Systems Division, Radiation, Inc. His education consists of a B. E. E. Fenn College, Cleveland, Ohio, and selected graduate work at Illinois Institute of Technology.

Mr. Pickering has been active in the design of communications and data systems and equipment for the past eight years. He has participated in and supervised the design of TDM data systems for space telemetry ground stations, and holds patents in the field of telegraphic communications. He was formerly Section Head, Communications, Radiation, Inc., Orlando, Fla. Prior to that he was Project engineer for ITT Kellogg, Chicago, on the development of the AN/TTC-14 electronic switchboard. He was educated at Case Institute of Technology, University of Illinois, and Illinois Institute of Technology.

SYNCOM - Past, Present and Future  
was presented on May 25, 1964 by Harry N. Stafford, SYNCOM Program Officer, Communication and Navigation Programs Division, NASA - 42 persons attended

The SYNCOM family of communication satellites is unique in that the orbital period is adjusted to be synchronous with the earth's period of revolution. Since the satellite altitude required for synchronism with the earth is 22,300 miles, SYNCOM is several times more distant than the medium altitude communication satellites, namely RELAY, TELSTAR, and ECHO. Although the orbital maneuver required for a SYNCOM launch is complex, once in position the satellite can be easily tracked by ground stations. SYNCOM has the further advantage that only three satellites are required to link the major inhabited parts of the world.

There have been two SYNCOM launches to date with a third one imminent. These three spacecraft are similar in design but each one has its unique story. The technical performance of SYNCOM has demonstrated the feasibility of communications via the synchronous altitude satellites. The commercial application of synchronous communication satellites is foreseen in the very near future.

Prior to his assignment with NASA, Mr. Stafford was an electronic supervisory engineer with CIA and REA for a period of 17 years. He served as an electronic officer during the Korean War in research and development activities at Wright-Patterson AFB. In World War II he was a Signal Corps Officer in various assignments including that of Chief of Radar and Radio maintenance at Kadena Air Base, Okinawa. He is a graduate of the University of Texas and has taken courses of study at Harvard and MIT. He is a member of Tau Beta Pi and Eta Kappa Nu honorary fraternities, and a Member of the IEEE.

8. NATCOM X PROGRAM

Oct. 5, 6, 7.  
Utica, New York

The National Communications Symposium will celebrate its Tenth Anniversary on October 5, 6, and 7. An excellent program has been prepared and all ComTech Group members and guests are urged to attend. In addition to the regular program, a classified session (Confidential) is scheduled, and will be sponsored by the nearby USAF Rome Air Development Center. Clearances and inquiries regarding this should be directed to Mr. H. J. Crowley, RADC Griffiss AFB, Rome, N. Y. Tel. 315-336-3200, Ext. 71243 or 74101 or 3117. It is anticipated that this NEWSLETTER issue will reach the members prior to this Symposium.

Technical Program

October 5, 1964  
Monday, 10:00 A.M.  
Utica Memorial Auditorium

SESSION 1-A

Title: Communications Theory

Moderator: Mr. Paul Gruber, Senior Engineer, Radio Engineering Labs.

Session Organizer: Lt. J. T. McClure

RADC. GAFB. NY

1Aa - Optimizing Signal Extraction Under Co-Channel Interference

David S. Dayton

Technical Communications Corporation



1Ab - Performance of Matched Filter Receivers in Non-Gaussian Noise Environments  
John C. Lindenlaub and Kuo An Chen  
Purdue University

1Ac - A Hybrid Computational Digital Data Transmission Algorithm  
K. H. Renshaw  
Hughes Aircraft Company

1Ad - Comparisons of Error Control Techniques  
R. J. Benice and A. H. Frey, Jr.  
International Business Machines

1Ae - Value Coding of Information  
Tracy Wichmann  
Tasker Instruments Corporation

October 5, 1964  
Monday 10:00 AM  
Utica Memorial Auditorium

SESSION 1-B

Title: Multiplexing  
Moderator: B. S. Quell, Michigan Bell Telephone Co., Detroit, Michigan  
Session Organizer: Mr. W. Campola  
RADC, GAFB, NY

1Ba - Efficient and Economic 4Kc Carrier Channel Generation and Usage  
S. J. Mehlman  
RCA

1Bb - A Unique Technique for Frequency Division Multiplexing and the Integration of this Method with Time Division Switching  
P. M. Thrasher  
International Business Machines

1Bc - A System for Continuous Monitoring of Communications Channel Parameters on a Non-Interfering Basis  
C. R. Abbey & H. H. Pursel, Jr., Honeywell

1Bd - A New Concept in Communications Network Monitoring, Routing and Control  
M. T. Aguilar, P. H. Fowler and W. S. Litchman, ITT Communication Systems, Inc.

1Be - Sensitivity Improvement from Threshold Extension Techniques  
J. Wakeley, Jr.  
Sanders Assoc., Inc.

October 5, 1964  
Monday 10:00 AM  
Utica Memorial Auditorium

SESSION 1-C

Title: Panel Discussion - "Thin Film Panel"  
Moderator: Mr. G. W. Randolph, Bendix Corp.  
Session Organizer: Mr. E. E. Selover  
RADC, GAFB, NY

Panel Organizer: Mr. C. H. Lane, RADC, GAFB, N.Y.

Purpose: A panel discussion organized by Bendix Radio and contributing authorities in communications.

Panelists:

Stanley M. Stuhlberg, Manager of Marketing, Mallory-Zerex Corp.  
"Thin Film Component Boards for Custom Etching by Customer".  
Samuel E. Church, Manager, Integrated Circuit Applications Engineering, Sprage Electric Co.  
"Printed Film Circuits"

Robert Crain, Circuit Development Engineer, Corning Glass Works  
"Tin Oxide"

David A. McLean, Department Head, Film Components, Bell Telephone Lab.  
"Tantalum"

Dr. Charles Feldman, Malpar, Inc.

"Thin Film Transistors, Integrated Circuits"

Robert Frieberg, Applied Physics Lab., Johns Hopkins University  
"Nuclear Radiation Effects on Thin Film"

October 5, 1964  
Monday, 2:00 PM  
Utica Memorial Auditorium

SESSION 2-A

Title: Communications Systems  
Moderator: Mr. Edward May, Head Advanced Program Development, Hughes Aircraft Co.

Session Organizer: Mr. O. A. Tagliaferri  
RADC, GAFB, NY

2Aa - Predictions of Demand for World-Wide Telephone Traffic  
F. J. Sites  
Hughes Aircraft Co.

2Ab - Design Concepts for Multiple-Access Discrete Address (MADA) Communication Systems  
A. M. McCalmont

Technical Communications Systems  
2Ac - Simulation for RADAS  
B. W. Beals, F. R. Zitzmann  
International Business Machines

2Ad - Recent Advancements in the Performance Analysis of Multichannel Tropospheric Scatter Systems for Global Trunking  
C. A. Parry  
Martin Co.

2Ae - Format Message Composer  
R. G. Matteson  
General Dynamics

October 5, 1964  
Monday, 2:00 PM  
Utica Memorial Auditorium

SESSION 2-B

Title: Optical Communications  
Moderator: Mr. L. G. Abraham, Bell Telephone Labs., Murray Hill, N. J.  
Session Organizer: Mr. E. Lowicki  
RADC, GAFB, NY

2Ba - Pulse Position Modulated Optical Communication System  
G. S. Entwistle, W. N. Peters  
Westinghouse

2Bb - Optical Time Multiplex - A Method for Extremely Wideband Optical Communication  
V. J. Fowler  
General Telephone and Electronics Laboratories, Inc.

2Bc - Thermoelectrically Cooled Gas Injection Laser for Optical Communications  
K. E. Niebuhr, H. M. Burns, Jr.  
IBM Federal Systems

2Bd - Coherent Forward Scattering by Means of Diffraction Gratings  
H. P. Raabe and G. W. Wales  
Litton Industries

2Be - Laser Secure Communication Links  
K. L. Brinkman, W. K. Pratt  
Hughes Aircraft Co.

October 5, 1964  
Monday 2:00 PM  
Utica Memorial Auditorium

SESSION 2-C

Title: Panel Discussion - Logistic Support  
Moderator: Mr. Russell E. Haruff  
Session Organizer: Mr. D. J. Waters  
RADC, GAFB, NY

Purpose: Panel will identify and discuss programming, funding and procurement of Logistic Support.

October 6, 1964  
Tuesday, 9:30 AM  
Utica Memorial Auditorium

SESSION 3-A

Title: Scatter Communications  
Moderator: Dan Buscher - Communications Systems Engineer, Philco Corp.  
Session Organizer: Mr. Frank J. Zawislak  
RADC, GAFB, NY

3Aa - Tropospheric Scatter Transmission Loss Anomalies Observed on a Long Tropical Path  
Major M. L. Norton, US Army Strategic Communications Command, S. Zebrowitz, Philco Corp.

3Ab - Extended, Fixed Range, Air-Ground Tropospheric Propagation Test  
J. L. Levatich  
Bendix

3Ac - A Digital Signal Level Distribution Recorder for Microwave Communication Systems.  
J. E. Vetack  
Philco Corp.

3Ad - Automated Performance Evaluation of Troposcatter Links  
P. Hoch and K. F. Smith  
Page Communications

3Ae - Variable Redundancy Error-Control System  
C. R. Abbey and D. E. Schlumberger  
Honeywell

October 6, 1964  
Tuesday, 9:30 AM  
Utica Memorial Auditorium

SESSION 3-B

Title: Space Communications  
Moderator: Mr. J. L. Jatlow, ITT Federal Labs., Nutley, N. J., Chairman, Space Committee, CTG, IEEE.

Session Organizer: Mr. James Bailey  
RADC, GAFB, NY

3Ba - Data Transmission Subsystem Requirements for a Manned MARS Mission Module, L. B. Wilker  
North American Aviation, Inc.

3Bb - Aircraft-to-Ground Communications via Satellite  
H. P. Hutchinson  
ITTCS

3Bc - Design of a Low Noise Receiving System for a 60 Channel Communication Satellite Ground Station.  
J. A. Cone, R. A. Miller, R. G. Slaughter  
TRW Space Tech. Labs

3Bd - Relay System Operations and Spacecraft Performance  
D. E. Kendall  
TRW Space Tech. Labs

3Be - The Relay Test Stations  
W. C. Wray  
TRW Space Tech. Labs

October 6, 1964  
Tuesday, 9:30 AM  
Utica Memorial Auditorium

SESSION 3-G

Title: Panel Discussion - Engineering-Installation-Maintenance  
Panel Organizer: Mr. Z. Bara  
GEEIA, GAFB, NY  
Session Organizer: Mr. A. J. Uryniak  
RADC, GAFB, NY

Panelists:

A panel discussion by Air Force and industry personnel on the impact of commercial off-the-shelf C-E equipments on E-I-M of military communication systems.

October 6, 1964  
Tuesday, 2:00 PM  
Utica Memorial Auditorium

SESSION 4-A

Title: Communication Antennas & Propagation  
Moderator: Dr. Thomas Tice, Chief Engineer, Antennas & Microwave Lab., Motorola Co.

Session Organizer: Mr. J. McEvoy  
RADC, GAFB, NY

4Aa - Analysis of Characteristics of Electrically Short Top Loaded Antennas of the Umbrella Type  
H. Hartley  
Westinghouse Electric Corp.

4Ab - Input Resistances and Resonant Frequencies of Horizontal Dipoles Near Homogeneous Ground Masses  
G. J. Harmon  
Northrup

4Ac - Notes on Broadband Antennas and Terminal Equipment for HF Communication Systems Planning  
C. E. Phillips  
Grangers Assoc.

4Ad - Comparison of Computer Predicted Maximum Useable Frequency with Observation  
H. A. Turner  
Stanford Research Institute

4Ae - The Feasibility of Phased-Array Ground Terminals in Medium-Orbit Satellite Communications  
G. P. Kefalas  
Martin Co.

October 6, 1964  
Tuesday, 2:00 PM  
Utica Memorial Auditorium

SESSOPM 4-B

Title: Digital Communication

Moderator: Mr. R. M. Gryb, American Telephone & Telegraph Co., N. Y., Chairman, Data Apparatus Input/Output Subcommittee, CTG, IEEE  
Session Organizer: Mr. R. Kenyon  
RADC, GAFB, NY

4Ba - Digital Transmission Over Submarine Cables  
W. S. Litchman  
ITTCS

4Bb - Error Protection via Time Diversity  
W. Lyons  
Tele-Signal Corp.

4Bc - High Speed Communication in Synchronous Bandlimited Channels  
J. B. Lord and D. W. Lytle  
Honeywell

4Bd - A Digital Data Transmission System with Optimum Bandwidth Utilization  
C. M. Melas, E. Gorog  
IBM

4Be - A Data Transmission Scheme Using Non-Linear PPM  
H. A. Hansow  
Bunker-Ramo Corp.



October 6, 1964  
Tuesday 2:00 PM  
Utica Memorial Auditorium

SESSION 4-C

Title: Long Range Ground/Air Communications

Moderator: Mr. Armig Kandoian  
Vice President, Engineering  
ITT Communication Systems, Inc.  
Paramus, New Jersey

Panel Organizer: Mr. Gunther Karger,  
ITT Communication Systems Inc.

Session Organizer: Lt. R. Boozer  
RADC, GAFB, NY

Purpose: Panel will identify problem areas connected with long range ground-air-ground communications and attempt to offer possible technical solutions.

Panelists: Mr. Lloyd Schneider  
Operations Analysis Dept.  
Hq SAC, USAF  
Omaha, Nebraska  
Mr. Vernon I. Weihe  
Director, Advanced Navigation & Communications Systems  
General Precision, Inc.  
Washington, D. C.  
Mr. Frank White, Manager  
Communications & Data Processing Air Transport Association  
Washington, D. C.

Mr. J. Conerly, Chief  
Communications Development Division, R&D Services  
FAA, Washington, D. C.

Mr. Milton C. Freuhauf  
AT&T Co., N. Y.

Mr. R. W. Britton, Director  
Systems Division  
Collins Radio

October 7, 1964  
Wednesday, 9:30 AM  
Utica Memorial Auditorium

SESSION 5-A

Title: Aerospace Media Communications

Moderator: Mr. Sidney Lomax, Westinghouse Electric Corp.

Session Organizer: Mr. S. Seidman  
RADC, GAFB, NY

5Aa - Quasioptical Components for Communications

J. J. Taub and H. J. Hindin  
Cutler-Hammer, ALL Division

5Ab - Problems Surrounding the Location of a Site for Deep Strata

Communications Experiments  
A. S. Orange  
AFCRL

5Ac - Performance of Binary Group Codes on a Dispersive Channel

A. D. Whalen  
Bell Telephone Laboratories, Inc.

5Ad - A System for Moon-Moon and Earth-Moon Communication by Satellites

M. E. Brady, R. C. Davis  
ITT Intelcom, Inc.

5Ae - A Digital Underwater Communications Technique

P. J. Ferrell and A. S. Williamson  
Boeing Co.

October 7, 1964  
Wednesday, 9:30 AM  
Base Theater, Griffiss AFB, NY

SESSION 5-B

Title: Classified Session (Sponsored by Rome Air Development Center)

Moderator: Mr. D. T. Worthington  
Defense Communication Agency

Session Organizer: Mr. S. J. Tuorno  
RADC, GAFB, NY

5Ba - AJ Techniques for Fast-Fading Digital Communications Links

I. Jacobs  
Bell Telephone Laboratories, Inc.

5Bb - A Miniature Pulse Repeater for Wire Communication

I. L. Rohm and R. O. Rowlands  
Ordnance Research Laboratory, Pennsylvania State University

5Bc - An Asynchronous Command System Suitable for Use in a Jammed Environment.

R. J. Richardson  
Martin Company

5Bd - A Hardened Microwave Antenna

M. A. Stephens  
Martin Company

5Be - A Wide Band Solid State F-M Receiver for Surveillance Data Transfer

Systems  
J. K. Lauchner  
Motorola, Inc.

October 7, 1964  
Wednesday, 2:00 PM  
Utica Memorial Auditorium

SESSION 6-A

Title: Communication Theory

Moderator: Mr. Valerio R. Hunt P. E.  
Chief Engineer World Wide Communication, Bendix Radio

Session Organizer: Lt. J. T. McClure  
RADC, GAFB, NY

6Aa - Communication User Constraints on Adaptive Error Control Procedures

A. G. Franco and M. E. Wall  
ITTCS

6Ab - Statistics of the Frequency-Differential Phase Relationship of Multiple CW Signals Transmitted Over a 4000 Mile Ionospheric Path

T. de Haas  
General Dynamics

6Ac - Performance Effects of System Parameters on Message Switching Systems

L. Wolin and E. Fox  
RCA

6Ad - Analysis of Digital Communications Systems Using Binary Error Correcting Codes

T. Lerner  
Bell Aerosystems Co.

6Ae - Adaptive and Distribution-Free Coincidence Detectors

J. C. Hancock and D. G. Lainoitis  
Purdue University

October 7, 1964  
Wednesday, 2:00 PM  
Utica Memorial Auditorium

SESSION 6-B

Title: Communications Signal Processing

Moderator: Dr. Seymour Stein  
Sylvania

Session Organizer: Lt. R. McLaughlin  
RADC, GAFB, NY

6Ba - Energy Detection of Gaussian Communication Signals

Ira Jacobs  
Bell Telephone Laboratories, Inc.

6Bb - Derivation and Analysis of a Non-Linear Transformation for the Optimum Improvement of an Envelope Detector

Dr. W. D. Wade and G. A. DeCouvreur  
University of Iowa

6Bc - Digital Error Control Through Coding  
B. Goldberg, T. J. Klein, and E. D. Moyes  
USAERDL, Ft. Monmouth, New Jersey

6Bd - Digital Color Television Techniques

C. Teacher  
Philco Corp.

6Be - Signal Detection in the Presence of Noise of Unknown Power Spectrum

L. J. Barton, Jr.  
Carlyle Laboratory, Johns Hopkins University

9. NATIONAL ELECTRONICS CONFERENCE

October 19-21

Chicago, Illinois

NEC will be held on Oct. 19-21 in Chicago. Comtech Group Technical Committees are sponsoring several sessions at this conference and the papers are listed below for the convenience of our members.

Monday, Oct. 19

WIRE COMMUNICATION--I

Meeting Room 6--9:30 AM

Sponsored by: IEEE Wire Communication Committee

Chairman: J. N. Petrie, Automatic Electric Co.

Panel Discussion - Techniques for Measuring Longitudinal Balance on Telephone Equipment

Moderator: D. T. Osgood, American Telephone and Telegraph Co.

Panelists: P. G. Lambidakis  
REA Telephone Standards Division

G. L. Menning  
Michigan Bell Telephone Co.

D. M. Atkinson  
Bell Telephone Company of Canada

E. H. B. Bartelink  
Northeast Electronics

J. V. Buscemi  
Anaconda Wire and Cable Co.

SPACE COMMUNICATION TECHNIQUES

Meeting Room 5 -- 9:30 AM

Sponsored by: IEEE Space Communication Committee

Chairman: C. H. Dawson, Stanford Research Institute

Multiple Access Techniques for Commercial Communication Satellite Systems, H.R. Mathwich and W.B. Garner, Radio Corporation of America

Multiple Access Technique for Military Communications Satellite Systems, D. Silverman, Radio Corporation of America

Antenna Mounted Microwave Equipment for Telstar, Relay and Syncom, C. E. Hershberg, ITT Federal Laboratories

FM Broadcasting from Satellites: Preliminary Consideration of Standards and Sharing, R.P. Haviland, General Electric Co.

Design and Operation of a Digital Simulation for the NASA Data Network, G.A. Barnard, W.R. Cox and T. Yoshikawa, Philco Corp.

A Phase Locked Demodulator for Multichannel Telephone Traffic from Satellites, M. Sassler, ITT Federal Laboratories

WIRE COMMUNICATION--II

Meeting Room 6 -- 2 PM

Sponsored by: IEEE Wire Communication Committee

Chairman: J. G. VanBosse, Automatic Electric Co.

Development in Communications for Braille Embossing

R. E. Morrison,  
Illinois Bell Telephone Co.

Subscriber Carrier Pay Phone Control

J. G. Coutts, A. Herchenroder and B. G. Pringle,  
Northern Electric Co.

Transmission Improvement on Long Rural Subscriber Telephone Loops, A. Curran, Research and Development Laboratories, Northern Electric Co. Ltd.

RADIO COMMUNICATION

Meeting Room 5 -- 2:30 PM

Sponsored by: IEEE Radio Communication Committee

Chairman: C.R. Kraus, Bell Telephone Company of Pennsylvania

Noise Loading Techniques Applied to TD-2 Radio Systems, E.E. Reinke, Pacific Northwest Bell Telephone Co.

Digital Communication Interference Measuring Techniques, C. H. Taylor, Radio Corporation of America

Radiation Pattern and Impedance of a Dipole Near a Finite Cylinder, H. P. Neff and J. D. Tillman, Jr., Univ. of Tennessee

Tuesday, Oct. 20

Meeting Room 5 -- 9:30 AM

Sponsored by: IEEE Communication Switching Committee

Chairman: A. J. Leininger, Illinois Bell Telephone Co.

Magnetic Latching Wire Spring Relays, T. G. Grau and A. K. Spiegler, Bell Telephone Laboratories

Some Consideration in the Design of Reliable Long Life Relays, M. Feder, Bell Telephone Laboratories, Inc.

Ruggedizing Wire Spring Relays, F. P. Balacek, Bell Telephone Laboratories, Inc.

Plug-In Concept Applied to Miscellaneous Relay Rack Equipment, J. G. Papantony, Illinois Bell Telephone Co.

Pneumatic Tube Switching System, B. Warmann, Lamson Corp.

WIRE COMMUNICATION--III

Meeting Room 6 -- 9:30 AM

Sponsored by: IEEE Wire Communication Committee

Chairman: J. E. Fulenwider, Automatic Electric Co.

Experience with Engineering Cable Plant with Computers, J. W. Larson, Michigan Bell Telephone Co.

Low Capacitance Coaxial and Multiconductor Cables, K. P. Roberts and L. H. Farrell, Simplex Wire and Cable Co.

Transmission Characteristics of the D-66 Loading System, P. G. Lambidakis, REA Telephone Standards Division

Engineering and Application Considerations for the D-66 Loading System, P. G. Lambidakis, REA Telephone Standards Division

CONTINUING EDUCATION FOR ENGINEERS

Meeting Room 6 -- 2:30 PM

Sponsored by: IEEE Wire Communication Committee

Chairman: L. C. Peach, Illinois Institute of Technology

Bell System Regional Communications Engineering School Program Objectives, M. L. Calrk, American Telephone and Telegraph Co.

Realization of Bell System Regional School Objectives, D. F. Wann and R. M. Kline, Washington University

Training Engineering Instructors for In-Company Technical Course M. M. Broadwell, Southern Bell Telephone and Telegraph Co.

Continuing Education for Engineers, H. C. LaParo, ITT Federal Laboratories

The Continuing-Education Program at a Research and Development Laboratory, R. R. Jackson, Northern Electric Co.

Training Engineering Personnel for Small Telephone Companies T. J. McDonough, REA Telephone Standards Division

Wednesday, Oct. 21

SWITCHING SYSTEMS

Meeting Room 6 -- 9:30 AM

Sponsored by: IEEE Communication Switching Committee

Chairman: A. E. Joel, Jr., Bell Telephone Laboratories, Inc.



Automatic Training Position for DDD Toll Operators,  
H. T. Blankenship, United States Instrument Corp. and  
J. Mallory, Southern Nevada Telephone Co.

A PPCS Ticketing System for Small Toll Centers,  
L. R. Cain, ITT Kellogg Telecommunications

A New Mobile Radio Switching System,  
T. P. Miller, ITT Kellogg Telecommunications Division

Fundamentals of the Traffic Data Processor No. 1A,  
W. J. Lamneck and V. L. Ransom, Bell Telephone Laboratories, Inc.

Engineering and Administrative Uses of the Traffic Data Processor,  
H. C. Illig, Bell Telephone Laboratories, Inc.

Switching in a Computer Complex for I/O Flexibility,  
E. W. Devore and D. H. Lander, IBM Data Systems Division,  
Development Lab.

#### NEW DEVELOPMENTS IN PBX'S

Meeting Room 6 -- 6:30 PM

Sponsored by: IEEE Communication Switching Committee

Chairman: S. B. Weiner, U. S. Instrument Corp.

Packaged PBX Switchboards,  
R. Pedrick, Stromberg-Carlson

A New Step-by-Step Equipment Package for Dial Private Branch  
Exchange Customers,  
W. P. Foley, Western Electric Co.

Trends In Telephone Service for Hotels and Motels,  
A. A. Jorgensen, U. S. Instrument Corp.

A Small 4-Wire Switching System,  
H. J. Michael and R. E. Watson, Bell Telephone Laboratories

The 758C Private Branch Exchange,  
A. E. Gerbore and H. J. Walsh, Bell Telephone Laboratories, Inc.

#### 10. COMTECH MEMBERS COLUMN

##### Former PTG-CS Chairman David S. Rau Retires

Mr. D. S. Rau, the last chairman of PTG-CS retired in May, 1964 from RCA Communications where he held the post of Vice President, Engineering. We wish to express our sincere appreciation for his guidance and leadership during an important time period and thank him for his untiring efforts on behalf of our organization. We are sure, however, that he will for a long time give continued support and guidance to us and we look forward to it with a feeling of need. The editor is certain that this feeling is shared by all officers and committee members. See you at NATCOM X, Dave and Mrs.

##### E. H. Weppler Appointed to Joint Technical Advisory Committee (JTAC)

Mr. Weppler is Radio Engineer, American Telephone and Telegraph Company. In this capacity he heads the organization which provides advice and assistance on radio engineering matters to all units of the Bell Telephone System. He has participated actively in international conferences -- the Xth Plenary Assembly of the International Radio Consultative Committee (CCIR) and more recently the International Telecommunications Union (ITU) 1963 Extraordinary Administrative Radio Conference (EARC) at which radio frequency allocations for space communication were established. Mr. Weppler has for several years actively supported IEEE in various capacities.

##### Joseph L. Ryerson Appointed Technical Director at SHAPE

Assignment of Joseph L. Ryerson, 3 Park Ave., Holland Patent, N. Y. as technical director of SHAPE (Supreme Headquarters - Allied Powers of Europe) at the Hague, Netherlands, has been announced by Rome Air Development Center.

Ryerson is assistant chief of RADC's Communication's Division. As the senior American at the Center, his new position at SHAPE will involve minor diplomatic responsibilities.

Originally from Goshen, N. Y., Ryerson attended Tusculum College, Greenville, Tenn., received a BA degree in Electrical Engineering from Clarkson College of Technology, Potsdam, N. Y. and is currently engaged in a study program at Syracuse University leading to a PhD in Electrical Engineering.

Mr. Ryerson is a Senior member of the IEEE, Physics Honor Society, Sigma Pi Sigma; and a registered Professional Engineer in Indiana.

He is at present chairman of the technical program for the 10th National Communications Symposium to be held at Utica, N. Y., on October 6-8 and has held other important IEEE posts. The Editor wishes to extend personal good wishes to Mr. Ryerson.

##### Gunther Karger is honored by the U. S. Junior Chamber of Commerce.

Mr. Karger has been selected for inclusion in the first annual edition (1965) of "Outstanding Young Men of America", sponsored by the U. S. Junior Chamber of Commerce. Doug Blankenship, Past U. S. JAYCEE President and chairman of the 13 men national board which made the selections said that the men were chosen between the ages of 21 and 36 who "had distinguished themselves in one or more fields of endeavor to the point of being outstanding". Karger was nominated by Louisiana State University from which he received a B. S. E. E. in 1958. He is a member of the Technical Staff at ITT Communication Systems, Inc., Paramus, N. J. where he is responsible for Airborne Command & Control Communication Systems Engineering. Previously, he was concerned with communications systems planning for utilities and assisted in the telemetry design of the COURIER Satellite System. He is a veteran of the USAF, having served as an instructor in airborne radar & navigation and meteorological systems. Karger has served the IEEE for several years in various capacities. He was Chairman of the North Jersey ComTech Chapter and is now Editor of the IEEE ComTech Group Newsletter. He resides with wife and two sons at 556 Herrick Drive, Dover, N. J.

#### 11. ITEMS OF GENERAL INTEREST

Mr. Dorman D. Israel, a member of the Joint Technical Advisory Committee since 1952, was appointed Chairman of JTAC at its meeting on May 21, 1964. Mr. Israel is Vice Chairman of the Board of Emerson Radio and Phonograph Corp. The JTAC is a Committee sponsored by the Institute of Electrical and Electronics Engineers and the Electronic Industries Association. The JTAC plans to publish "Radio Spectrum Utilization" in the near future. Currently, a subcommittee is studying the complex problems of electromagnetic compatibility; another subcommittee on Microwave Radio Relay System Reliability will shortly submit its report on questions raised by the FCC. At its most recent meeting, JTAC established a subcommittee to consider questions raised in an FCC Docket on land mobile services. Mr. Israel has succeeded Mr. James D. O'Connell who resigned to accept the appointment as Special Assistant to the President for Telecommunications and Director of Telecommunications Management in the office of Emergency Planning.

##### Systems Field Engineers Become Active in IEEE

Delmer C. Ports, International Chairman of the Group on Military Electronics, IEEE, announced the formation of the FIELD INTEGRATION AND SUPPORT sub-group of G-MIL at the charter meeting of this organization held on May 6th in Baltimore.

The new organization is specifically chartered to study and advance those managerial, engineering and administrative efforts of IEEE members that pertain to the integration and support of systems in the field.

The operating committee of the new sub-group in the IEEE complex consists of Messrs. W. L. Pridgen of Westinghouse, L. F. Graffis of Bendix, W. G. Donaldson of ITT-Federal Electric, J. Carpenter of the Martin Co., and W. J. Crotty, Jr., of ITT-Surprenant Co. Orest A. Meykar, P. E., is the national chairman of the FIS Sub-Group of G-MIL. He is an engineer at Westinghouse Defense and Space Center, Surface Radar Dept., Baltimore, Md. and all inquiries concerning membership and organization should be addressed to him, Crownsville, Md., 21032.

##### CALL FOR PAPERS

##### Symposium on General Systems Knowledge

The Symposium on General Systems Knowledge will be held at the American Association for the Advancement of Science meeting in Montreal during December 26-31, 1964. The Symposium is sponsored jointly by the Society for General Systems Research and the IEEE Circuit Theory Group. It will be devoted in part to the stocktaking of current knowledge in various systems groupings such as ecological systems, economical and business systems, computer and control systems, communication systems, and in

part to the characterization and analysis of these systems. Papers dealing with the philosophical and heuristic description of systems that are of interdisciplinary nature are most welcome. For further information, contact,

Professor Omar Wing  
Columbia University  
Department of Electrical Engineering  
New York, New York 10027

##### 1965 G-MTT Symposium

Prospective authors are invited to submit abstracts and summaries for consideration for presentation at this 10th Symposium on Microwave Theory and Techniques. Papers are desired in the areas of microwave acoustics, microwave components for phase arrays and for space applications, active and passive microwave solid state devices, components and techniques for millimeter through optical wavelengths, and in all other areas within the field of Microwave Theory and Techniques.

1. Summaries suitable for publication in a Symposium Digest must be submitted; these summaries must consist of no less than two and no more than four double spaced typewritten pages, on standard 8-1/2" x 11" paper, with 1" minimum margins; in addition, no more than 6 (six) figures may be submitted. One copy of each of the figures must be reproducible; in the case of photographs, one copy of each must be an 8" x 10" glossy print. If possible, authors should submit ten (10) copies of each summary, including figures; this will facilitate speedy review by the program committee.

2. In addition authors should submit three (3) copies of an abstract consisting of no less than 3/4 page and no more than 1-1/2 pages of double spaced typewritten copy, on standard 8-1/2" x 11" paper. No figures are to be included in the abstract.

3. Authors and their affiliation should be identified at the heading of both summary and abstract.

4. Authors are requested to pay close attention to these instructions on length of copy. Full-length papers will not be read by the Program Committee, and inadequate information will result in a rejected paper.

5. Mail summaries and abstracts simultaneously to  
John E. Pippin  
Chairman - Technical Program Committee  
1965 - G-MTT Symposium  
Sperry Microwave Electronics Company  
P. O. Box 1828  
Clearwater, Florida

6. DEADLINE for receipt of abstracts and summaries:  
NOVEMBER 15, 1964.

7. Authors will be notified of acceptance or rejection by  
JANUARY 2, 1965.

##### Symposium on Short Term Frequency Stability

NASA's Goddard Space Flight Center and the Technical Committee on Standards - 14, Piezoelectric and Ferroelectric Crystals, of the IEEE are jointly sponsoring a Symposium on the Definition and Measurement of Short Term Frequency Stability to be held on Monday and Tuesday, November 23 and 24, at the Goddard Space Flight Center, Greenbelt, Maryland.

Original papers are solicited on these subjects:

- 1) System requirements for short term frequency stability
- 2) Theory of oscillators' bearing on short term stability characteristics
- 3) Device characteristics and measurement techniques

Those interested in submitting papers or in attending should contact Mr. Charles Boyle, Code 207, Goddard Space Flight Center, Greenbelt, Maryland, Telephone: (301) 982-5006.

##### Globecom VI Keynote Papers Available

The papers presented at the Keynote Session of the Inter-

national Symposium on Global Communications (Globecom VI), at Philadelphia, on June 2, 1964, will shortly be published by the Institute of Electrical and Electronics Engineers. They are scheduled for appearance in an early issue of the IEEE Transactions on Communication Technology, and will also be made available as a collection in a common binder, as a special service to those interested in world-wide communications. Globecom VI was sponsored by the IEEE Communications Division and the IEEE Group on Communications Systems, which have since merged into the new IEEE Group on Communication Technology. The IEEE Group on Computers, the Philadelphia IEEE Section, and the University of Pennsylvania also co-sponsored Globecom VI.

The Keynote Session, with its theme of "World-Wide Communications," included introductory remarks by Mr. H. I. Romnes, Vice-Chairman of AT&T, who was Chairman of the session, and the following addresses:

"New Developments in U. S. Communications," by R. R. Hough, AT&T.

"Commonwealth Submarine Cable System," by R. J. Halsey, G. P. O., England.

"Telecommunication Service and Technical Developments in Japan," by S. Yonesawa, Nippon Tel. & Tel., Japan.

"European Long-Distance Communications," by E. M. Deloraine, Lab. Central de Telecommunications, France.

"Communication Needs of the New African Nations," by G. Tedros, Imp. Board of Telecommunications, Ethiopia.

The collection of papers may be obtained from the Order Department of the Institute of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York, N. Y. 10021, by requesting "Globecom VI Keynote Papers." The price for the volume is \$2.00 per copy, to be included with the order.

#### MEMBERSHIP IN COMMUNICATION TECHNOLOGY GROUP

All IEEE members are invited to become members of the new IEEE Communication Technology Group upon its formation effective July 1, 1964. This may be accomplished either by renewing their membership in the Communications Systems Group, or by directly applying for membership in the new group. An application form has been included in this NEWSLETTER for your convenience.









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