



COMMUNICATIONS TECHNOLOGY GROUP

No. 2 Vol. II

December, 1964

2.

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Your editors wish you a very pleasant HOLIDAY SEASON and hope that the NEW YEAR will bring much success and happiness.

We will do our very best in bringing to you a useful NEWSLETTER. Please remember to let us know of suggestions as to how we can improve. Letters to the Editor are also welcome.

ATTENTION C & E SUBSCRIBERS

This is the final issue being sent to subscribers of COMMUNICATIONS AND ELECTRONICS. This has been done as a courtesy during the merging period. It is necessary to become a Member of the IEEE COMTECH Group in order to receive publications and general group services. A coupon is provided on the last page of this issue. DO NOT PUT IT OFF LONGER. THIS IS THE LAST FREE NEWSLETTER.

3.

COMMITTEE REPORTS

The Editor will publish notices in this Section on behalf of the COMTECH operating Committees. A Committee Chairman or member often might find advantage in communicating to his members and also, at the same time, inform the general Group membership of his activities. It is an important function of this NEWSLETTER to enable this function and provide all Group Committees with a publicity outlet. All correspondence and announcements should be directed to your Editor who anxiously awaits NEWS for his LETTER.

TRAFFIC SUBCOMMITTEE BEING FORMED

Mr. A. E. Joel, Chairman of the COMMUNICATION SWITCHING COMMITTEE has announced that a subcommittee on TRAFFIC is being formed.

The Communication Switching Committee is forming a subcommittee on Traffic. Traffic, as applied to Switching Systems, is a subject of importance to communication engineers since the determination of the traffic capacity of such systems affects the quantity of equipment required and has a direct bearing on system design and economics. The subjects of interest in this field relate principally, but not exclusively, to optimization techniques, simulation, queuing theory, and statistical analysis of traffic carrying systems. Members interested in organizing sessions and participating in the review of papers submitted in this field are asked to contact Mr. J. H. Weber, Bell Telephone Laboratories, Inc., Room 2G-512, Holmdel, N. J.

WIRE COMMUNICATIONS

Mr. Wm. C. (Zeb) Burnett, Chairman (Southern Bell), reports that four sessions were sponsored at the NEC meeting in Chicago in October with excellent attendance - from 80 to well over 100 per session.

Two sessions developed especially large interest. The first of these was a panel discussion, "Techniques for Measuring Longitudinal Balance on Telephone Equipment." The discussion disclosed that the communication industry has many diverse ways of making such measurements. Interest was so great that the Committee is establishing a task force under J. N. Petrie. This task force will develop additional sessions and will study the possibilities of uniform methods, or of making the various methods compatible.

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, Committee Activities, etc.

Gunther Karger, Editor
IEEE COMTECH GROUP NEWSLETTER
Radiation Incorporated
725 Rosada Street
Satellite Beach, Florida 32937
Office Phone: 305-723-1511, Home: 305-262-5894

Chapter Activities

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

THE DEADLINE FOR THE MARCH, 1965, ISSUE WILL BE:
February 15th. All items must be submitted prior to this date.

A session on continuing education for engineers drew the largest attendance. Four papers developed much discussion. A questionnaire was used to test interest in further sessions. Since there was unanimous approval for doing so, the Committee is initiating efforts to hold additional sessions with more diverse subjects.

The Committee has in operation a campaign to increase membership in the ComTech Group. Application forms were sent to all committee members with a letter from the Chairman, urging them to join. As of the end of October, the committee has obtained 16 new members for ComTech. Chairman Burnett has appointed Wm. J. Roberts, Jr. as Membership Chairman of the Wire Communication Committee to continue the campaign.

The Task Force on Telephone Instrument testing under F. T. Andrews, Jr. has nearly completed the development of an industry standard for testing telephone set design transmission performance. This standard will be submitted to the IEEE Standards Committee shortly.

The Task Force on Carrier System Coordination is continuing its work under James B. Eppes, Jr.

The changes brought about by the merger that produced IEEE make it desirable for a technical committee to re-examine its committee make-up. Vice Chairman Leffel is studying the organization of the Wire communication Committee well in advance of the time for submitting nominations for committee members for the administrative year 1965-66.

4. COMTECH GROUP PARTICIPATION
1965 IEEE International Convention
New York Hilton and Coliseum
March 22-26, 1965, New York

Mr. J. M. Walsh (RCA Communications, 66 Broad Street, New York) has announced COMTECH Group's participation in this event. Mark them on your calendar and you will not find reason to say "If I only knew in time."

| Mon., Mar. 22 | Session | Room |
|-----------------|-------------------------------------|---------------------------|
| 10:00 a. m. | Communication System Disciplines-I | Trianon Ballroom |
| 2:30 p. m. | Communication System Disciplines-II | Trianon Ballroom |
| Tues., Mar. 23 | | |
| 10:00 a. m. | Space Communication-I | Coliseum Room B |
| 2:30 p. m. | Space Communication-II | Coliseum Room B |
| Wed., Mar. 24 | | |
| 10:00 a. m. | Communication Switching-I | Trianon Ballroom |
| 2:30 p. m. | Communication Switching-II | Trianon Ballroom |
| Thurs., Mar. 25 | | |
| 10:00 a. m. | Wire Communication-I | Regent Room |
| | Communication Switching-III | Trianon Ballroom |
| 2:30 p. m. | Wire Communication-II | Regent Room |
| | Data & Telegraph-I | Trianon Ballroom |
| Fri., Mar. 26 | | |
| 10:00 a. m. | Data & Telegraph-II | Trianon Ballroom |
| | Radio Communication-I | Regent Room |
| 2:30 p. m. | Data & Telegraph-III | Sutton Ballroom So. |
| | Telemetry | Le Petit Trianon Ballroom |
| | Wire Communication-III | Regent Room |

5. FIRST ANNUAL COMMUNICATION CONV. & GLOBECOM

Boulder, Colo., June 7-9, 1965. The September NEWSLETTER announced the complete CALL FOR PAPERS. Abstracts are due February 15, 1965. Further information may be obtained by contacting:

W. F. Utlaut, Chairman
 Tech Program Committee
 National Bureau of Standards
 Boulder, Colo.

This is our first major National meeting held by and for OUR GROUP. We are its members, so let's give our full fledged SUPPORT to the hardworking convention committee, chaired by R. C. Kirby at the NBS, Boulder, Colo.

6. 1965 REGION III MEETING - IEEE
April 6-7-8, 1965 - Winston-Salem, N. C.
Host - North Carolina Section

The COMTECH Group is supporting this meeting by the presentation of Technical Papers. Mr. Wm. C. Burnett (Chairman of the Wire Communications Committee) is serving on the program committee and has furnished us with the information.

This meeting will cover a 3-day period, starting at noon on Tuesday, April 6, and finishing at noon on Thursday, April 8. During this time, three technical sessions will be held concurrently in mornings and afternoons. The plan is for each technical session to have three papers. An hour will be allocated to each paper to permit presentation, adequate discussion, and a break.

A social hour will be held each evening at 5:30 p. m. (Tuesday and Wednesday). A banquet will be held Wednesday evening.

As you know, Region III covers the southeastern part of the country. It has a membership of about 10,000. The planners for the Winston-Salem Meeting are expecting an attendance of five to six hundred.

The entire meeting will be held at the Robert E. Lee-Jack Parr Hotel. Technical sessions will be held on power, electronics, communication, education, and broadcasting.

The General Chairman is G. L. Stanton, 115 W. Keeling Rd., Greensboro, N. C.

7. CHAPTER ACTIVITIES

It is the policy of the NEWSLETTER to provide publicity for COMTECH Group Chapters. We have endeavored to do a good job of this because it is useful for Chapter Committees to interchange information on meetings, etc., and we can provide the means. However, no interchange can be effective without the cooperation of the Chapter Committees. We solicit cooperation and consideration because it is indeed difficult and expensive to make individual follow-up telephone calls to each Chapter Chairman each time we publish.

Mr. Ray Bogdan, our Associate Editor will handle all Chapter news. All material, correspondence and inquiries should be directed to him at:

Ray Bogdan, Associate Editor
 IEEE COMTECH Group Newsletter
 Teletype Corporation
 5555 Touhy Avenue
 Skokie, Ill. 60076
 Phone: 312-676-1000

COMTECH GROUP CHAPTER ACTIVITIES COMMITTEE

Your ADCOM has a standing committee which is responsible for the monitoring of all Chapters, including assisting organizers to form new Chapters as well as help existing ones to continue successfully. The Chairman of this Standing Committee should be contacted when appropriate business arises. The committee is as follows:

Chairman: Roger McSweeney
 ITT World Wide Communications
 67 Broad Street
 New York 4, N. Y.
 (212-797-5109)

Members

Bernard Goldberg Harold J. Crowley
 USAERDL Rome Air Development Center
 Ft. Monmouth, N. J. Griffiss Air Force Base, N. Y.

Edward Fasko Robert H. Maier
 General Electric Co. ITT Kellogg Comm. Systems
 Valley Forge, Penna. Chicago, Illinois

Ralph L. McCreary Rudolph Riehs
 Autonetics USAERDL
 Anaheim, Calif. Ft. Monmouth, N. J.

CHAPTER'S COMMITTEE REPORT

Mr. McSweeney reports that:

There are now 22 COMTECH chapters as follows:

| | | |
|--------------------|---------------|-------------------|
| Baltimore | Long Island | Philadelphia |
| Boston | Los Angeles | San Francisco |
| Canaveral | Mohawk Valley | Seattle |
| Chicago | Monmouth | Syracuse |
| Connecticut | North Jersey | Toronto |
| Dallas | Oklahoma City | Twin Cities |
| Denver-Boulder | Omaha-Lincoln | Washington, D. C. |
| Florida West Coast | | |

The new chapter in Connecticut is now being organized and engineers who are interested in participating in its activities should communicate with:

David E. Ostrom
 Southern New England Telephone Co.
 227 Church Street
 New Haven 6, Conn.

The petition for formation of an Orlando Chapter has been approved by the Executive Committee of the Orlando Section and will be submitted to the IEEE Executive Committee for official approval at its meeting in the latter part of November.

Members who are interested in the activities of this new Chapter should contact:

J. M. Walter, Jr., Secretary
 IEEE Orlando Section
 112 Oriente Drive
 Altamonte Springs, Fla.

A petition for formation of a New York Chapter to take over the activities of the former AIEE C&E Division in New York has been submitted to the New York Section of IEEE; after Section approval, it will be submitted to IEEE Headquarters.

Engineers who would like to take part in the work of this new Chapter should get in touch with:

G. Spiro
 Bell Telephone Laboratories
 Holmdel, New Jersey
 Telephone: 201-949-2277
 (Mr. Spiro can also be reached by local telephone call in New York City at CHelsea 3-1000).

A new Chapter is being organized in Los Angeles. Engineers who are interested in participating in this Chapter should communicate with:

W. L. Bacon
 323 North Elizabeth St.
 Monterey Park, Calif.

CHAPTER REPORTS

Baltimore No recent report.

Boston No report.

Canaveral The Editor (G. Karger) is now residing in the Section area and is willing to help any way he can. He may be contacted at office (Radiation Incorporated, 723-1511) or home (725 Rosada Street, Satellite Beach, Fla., 262-5894).

Chicago No report.

Connecticut Welcome to the Group.

Dallas Maj. Gen. G. P. Sampson, Deputy Director, Defense Communications Agency, discussed "The Role of the Defense Communication Agency in the Military Communication System." The meeting was held on June 18 and 46 persons attended.

Denver-Boulder "Bounds on Communications" was presented on October 6 by Dr. David Slepian of the Bell Telephone Labs., Murray Hill, N. J.

Florida West Coast

No report.

Long Island The Editor apologizes for having incorrectly listed the affiliations of all except Chairman Schwartz. However, they were listed as submitted. The correct list of officers are:

Chairman: Prof. Mischa Schwartz
 Polytechnic Institute of Brooklyn

Vice Chairman: Dr. William Miller
 Electronics Systems Division
 Fairchild Stratos

Publicity Comm. Chairman: Walter Arndt
 Airborne Instruments Labs.

A meeting was held on November 18, Polytechnic Institute Graduate Center, Farmingdale, L. I. The speaker was Dr. William R. Bennett, Data Communications Consultant, Bell Telephone Labs. Topic: Digital Communications Over Telephone Networks.

Other meetings planned for the future include a panel discussion on the current status of the application of modern coding techniques to communication systems; one possibly on the application of communication theory concepts to underground nuclear blast detection, and one possibly on analytical techniques of current interest in the communications field.

Mohawk Valley

The successful and jointly sponsored IEEE/COMTECH Tenth National Communications Symposium (NATCOM) was held at the Utica, N. Y., War Memorial on October 5-7. The show was considered a fine success with technical attendance in excess of 600.

An excellent state of papers was presented during the three-day period with several new advances in the area of communications being reported.

For those not able to attend, copies of the symposium proceedings may be had by addressing a request to:

COMMANDER
 Rome Air Development Center
 Attn: Mr. Harold Burton, EMCTT
 Griffiss Air Force Base, N. Y.

This request should be accompanied by payment in the amount of \$10.00--postpaid.

The second meeting for the Mohawk Valley Section COMTECH Group has been tentatively scheduled for Feb. 8, 1965--a speaker has yet to be selected.

Monmouth Officers have been elected and are as follows:

Chairman: Howard L. Kitts
 USAERDL
 407 Roosevelt Ave.
 Oakhurst, N. J.

Vice Chairman: Arthur Ross
 140 West End Ave.
 Shrewsbury, N. J.

Treasurer: Seymore Krewsky
69 Judith Rd.
Little Silver, N. J.

Secretary: M. A. Flavin
45 Farm Rd.
Middletown, N. J.

North Jersey

Rod, please tell George that I am still alive and am hungry for Chapter news - Gus.

Oklahoma City

No report.

Omaha-Lincoln

No report - Ray Bogdan is anxiously sitting at his TTY waiting to hear from you.

Philadelphia

No report.

San Francisco

No report.

Seattle

"The PICTUREPHONE EXPERIMENT" was the subject of a talk by LARNED A. MEACHAM of Bell Telephone Labs., Murray Hill, New Jersey. Mr. Meacham presented an interesting and informative talk on the PICTUREPHONE. He traced the history of development from the first video call in 1927 to the present introductory service. An outline of system and developmental efforts was presented including a description of the PICTUREPHONE set and its operating features. Several circuit techniques were discussed with departures from broadcast or closed-circuit television practice highlighted. The meeting closed with a lively question and answer period. Eighteen members attended the meeting on October 22 which was held at the Seattle City Light Auditorium in Seattle.

The next meeting is scheduled for December 1, at the same location. Mr. Don Schlumberger of the Honeywell Company in Seattle will discuss Variable Redundancy Error Control (VAREC). Also to be covered is a presentation by Fred Lightfoot of Boeing. His subject will be "A Compact HF Digital Modem with Interference and Multipath Discrimination Characteristics."

Syracuse

Are you alive? If you are, prove it.

Toronto

Memo to John Simpson:
Have you had any activity lately? Please let Ray Bogdan know - Gus.

Twin Cities (Minneapolis-St. Paul)

The Twin Cities Chapter of the Communications Technology Group was organized in early 1964. Officers are:

Chairman: Glen Barcus
224 South 5th St.
Minneapolis, Minn.

Vice Chairman: Norman W. Paurus
9549 Penn Ave. South
Minneapolis, Minn.

Secretary-Treasurer: Bruce Meyer
9549 Penn Ave. South
Minneapolis, Minn.

Other officers are: George Baldy, Meeting Chairman; Garry Barritt, Program Chairman; Larry Kogl, Group Representative; Norman Priebe, Section Representative; and Robert F. Smith, Membership Chairman.

The first dinner meeting of the 1964-65 season was held at the Northwestern Bell Telephone Company, Minneapolis, on Sept. 22nd. Mr. James Potts, of Communications Satellite Corp., delivered a talk entitled "Communications Satellite Corporation - Its Plans, Programs and Progress to Date."

Mr. Potts is Chief of the Ground Radio Engineering Dept. at Communications Satellite Corp. He has spent ten years in communications at RCA and holds a Masters Degree from Drexel Institute of Technology.

The second Dinner Meeting this season was held at the UNIV Division of Sperry Rand, St. Paul, Minn. on Nov. 10th with dinner at the Paul Bunyan Motel.

Speaker for the evening was Mr. Ralph Notto, Head of Systems Engineering of UNIVAC Commercial Engineering. Mr. Notto's talk was "The Impact of Computers on Message Switching." The program included an audience participation demonstration of computer message switching, and a tour showing computers used for message switching systems.

Attendance at both meetings was very good. The next meeting is scheduled for December. Interested engineers in the Twin Cities Section are urged to check "The Radiator" for date and place - Denver-Boulder.

Dr. David Sepia of the Bell Laboratories, Murray Hill, N. J., spoke at the October 6th meeting held at Memorial Center, University of Colorado. His subject was "Bounds on Communication."

In addition to the main subject there was a short discussion on the First Annual IEEE Communications Convention and Globecom 7 Meeting to be held in Boulder in 1965.

Washington

Hello John Worthington and Bill Mazer. Please note change in address. (Chapter News should be sent to Ray Bogdan at the Teletype Corp., 5555 Touhy Ave., Skokie, Ill.) General news should still be sent to me. Regards, Gus.

8. MEMBERS COLUMN



Dr. William Firestone assumes expanded responsibility at Motorola and is elected Fellow, IEEE.

Dr. W. L. Firestone, Director of Engineering will conclude his special assignment with the Military Electronics Division of Motorola in order to meet the increasing demands of the Communications Div.

Dr. Firestone's expanded responsibilities as Director of Engineering of the Communications Division include the direct management responsibility for the precision instrument line.

Prior to assuming his present position in 1960, he was in charge of the Applied Research Dept. of the Communications Division. He is a member of the Sigma Xi, Eta Kappa Nu, Tau Beta Pi, Sigma Tau and Pi Mu Epsilon.

It was just announced that Dr. Firestone was elected Fellow of the IEEE for "Contributions to the Utilization of the Radio Frequency Spectrum in Space Communication."

On behalf of COMTECH, ADCOM and all members, congratulations, Bill.

Dr. Henri Busignies, Vice President and General Technical Director of International Telephone & Telegraph Corp., has been awarded a medal by the Institute of Electrical & Electronics Engineers "for outstanding contributions to electronic systems, especially in the fields of direction finding and air navigation." The award, known as the IEEE's David Sarnoff Award in Electronics, was presented by Mr. Clarence H. Linder, IEEE President, at the recently held National Electronics Conference (NEC) in Chicago. Dr. Busignies is a member of the COMTECH Group and resides in the North Jersey Section.

FELLOW AWARDS ANNOUNCED

The IEEE has announced the 1965 Fellow Elections, effective Jan. 1, 1965. Although local sections will make actual presentations, the COMTECH Group honors its members who are included. The ADCOM congratulates all newly elected fellows.

BOSTON SECTION

John M. Wozencraft "For contributions to coding theory and practice"

CHICAGO SECTION

Dr. Wm. M. Firestone "For contributions to the utilization of the radio frequency spectrum in space communication"
Mr. Henry Magnuski "For contributions to very high frequency and microwave radio communications"

DENVER SECTION

Ernest K. Smith "For research on sporadic-E radio propagation"

GENEVA SECTION

Gerber E. Gerber "For contributions to the development of television in Europe"
Gustav Guanella "For contributions to the electronics art and for leadership in research"

LONG ISLAND SECTION

Walter Lyons "For contributions to telecommunications systems, particularly in diversity reception and spectrum conservation"

MOHAWK VALLEY

Allan A. Kunze "For contributions to the advancement of global communications systems"

NEW YORK SECTION

Jas. E. Boughtwood "For contributions to frequency division multiplex and FM data and telegraph transmission"

Richard Guenther "For contributions to advanced communication systems"

MONMOUTH SUB-SECTION

Ray. W. Ketchledge "For his inventions and leadership in electronic telephone switching"

NORTH JERSEY SECTION

John W. Emling "For contributions to the principals of the design and rating of communication systems"

John R. Hefele "For contributions to research and engineering on visual communications"

PHILADELPHIA SECTION

David W. C. Shen "For contributions to the engineering education and the theory of adaptive control"

PRINCETON SECTION

John B. Thomas "For contributions to communication theory and engineering education"

SOUTHEASTERN MICHIGAN SECTION

William L. Root "For contributions to education research in communications random processes and radar detection theory"

SYRACUSE

Ralph A. Galbraith "For contributions to engineering education"

9. ITEMS OF GENERAL INTEREST

RADIO SPECTRUM UTILIZATION

Updated and greatly expanded book by JTAC available by year's end

THE JOINT TECHNICAL ADVISORY COMMITTEE, sponsored by The Institute of Electrical and Electronics Engineers and the Electronic Industries Association, is pleased to announce that RADIO SPECTRUM UTILIZATION will be available in December, 1964. The need for a book of this type was satisfied in 1952 when the Joint Technical Advisory Committee published its "Radio Spectrum Conservation." At that time it filled the gaping requirement for a philosophical review of telecommunications. Recently, however, the accelerated growth of science has again pinpointed the need for a world-wide review of radio spectrum utilization. Appreciation of this fact has resulted in the compilation by JTAC of this broad treatise and reference volume.

The book, divided into four chapters and a bibliography, presents the current view on the electromagnetic spectrum as a natural resource. The first chapter deals with basis conclusions and recommendations. Chapter 2 is an historical account of the development of the radio spectrum from the inception of wireless telegraphy. Chapter 3 is concerned with the state of the art of radio-wave propagation for various portions of the radio spectrum. Also reviewed is the effect of technical characteristics of transmitters, receivers, antennas, etc. The final chapter presents an analysis of frequency allocations of the radio spectrum, including long-term recommendations for use of the entire radio spectrum. In addition, some of the problems which the world community must solve to assure continued maximum benefits from spectrum usage are discussed.

Copies of RADIO SPECTRUM UTILIZATION may be reserved in advance by writing to the JTAC Secretary, Mr. L. G. Cumming, 345 East 47th Street, New York 17, N. Y. The price is \$10 per copy.

SIXTH NATIONAL SYMPOSIUM ON HUMAN FACTORS IN ELECTRONICS May 6, 7, 8, 1965 - BOSTON, MASSACHUSETTS ANNOUNCEMENT AND CALL FOR PAPERS

The Human Factors in Electronics Group of the Institute of Electrical and Electronics Engineers will hold its annual symposium on May 6, 7, and 8, 1965, at the new Boston-Sheraton Hotel in Boston, Massachusetts.

The theme of the symposium is "Human Behavior in Relation to Computer Behavior." Any serious technical and scientific attack responsive to this theme will fit the program. Major emphasis in selection of papers will be upon empirical findings, although national speculations will be considered. The following topic areas are offered as suggestions:

Man-computer interaction
Computer simulation of human performance
Human models for the design of computing devices
Human communication with computers
Computer communication with humans
Human compatibility of input-output devices
Man-computer systems
Psychological, sociological, and economic implications of computer technology

In addition, any paper reporting a new and innovative attack or speculation on any critical problem area of concern to the professional Group will be given consideration for inclusion in the program.

It is planned to have preprints of papers available at the symposium. In addition, selected papers will be published in the Transactions of the Group.

All papers must be submitted in final form, suitable for reproduction and publication, no later than February 1, 1965, to:

Dr. James Degan
MITRE Corporation
P. O. Box 208
Bedford, Massachusetts

CALL FOR PAPERS

SYMPOSIUM ON SIGNAL TRANSMISSION & PROCESSING

May 13 and 14, 1965
Columbia University

New York, New York

Sponsored by the IEEE Circuit Theory Group
and

Department of Electrical Engineering
Columbia University

The IEEE Circuit Theory Group and the Department of Electrical Engineering, Columbia University are sponsoring a Symposium on Signal Transmission and Processing to be held at Columbia University, May 13 and 14, 1965 in conjunction with the Centennial Celebration of the School of Engineering and Applied Science of Columbia University.

The object of the Symposium is the presentation of papers on the fundamental aspects of characterization and design of signal transmission systems; with particular reference to the matching of signal and channel characteristics for optimum performance. Papers in the following general areas would be especially appropriate:

I. Signal theory - Representation of signals and stochastic signal processes

- a. efficient representations
- b. sampling theorems and error analysis
- c. modelling of random sources

II. Systems and circuits for signal processing

- a. linear and nonlinear filtering
- b. optimization techniques
- c. regeneration and synchronization techniques
- d. design of communication nets
- e. use of computers and optical systems for signal processing

III. Signal transmission systems

- a. characterization of transmission channels
- b. performance measures for digital data transmission systems
- c. signal detection and signal parameter estimation
- d. signal design for noise and intersymbol interference immunity

It is planned to publish all papers accepted for presentation in a special publication of the Circuit Theory Group. Complete manuscripts must be submitted. Manuscripts should be limited in length to 15 typewritten double-spaced pages, including figures. Authors are advised to follow the rules stated in the "Information-for-Authors" on the back cover of the Transactions in the preparation of their manuscripts. The papers will be reviewed in accordance with the customary policy of the Circuit Theory Group.

Prospective authors are urged to express their intention to submit papers as far in advance of the deadline date as possible.

Deadline for submission of papers: January 15, 1965
Notification concerning acceptance: March 1, 1965

Please send manuscripts to: Dr. L. E. Franks, Bell Telephone Labs.
No. Andover 45, Mass. Tel. 617-686-0600

Address all other inquiries to: Prof. Omar Wing, Dept. of Electrical Engineering, Columbia University,
New York 27, N. Y.

10.

COMMUNICATION TECHNOLOGY
MEMBERSHIP ROSTER BY SECTION

It has been customary to publish an updated membership roster in the December issue. The IEEE Headquarters Group is hard at work on computerizing the membership files and as a result, we are unable to publish such at this time. Bear with us because we hope to publish a very accurate list in the next issue (March).

LATE ITEM

RADIO COMMUNICATION COMMITTEE

Chairman: C. R. Kraus
Bell Telephone Co of Penna.
One Parkway - 16th floor
Philadelphia, Pa. 19102
Phone: 215-466-2568

A successful session was held during NEC in Chicago in October with over 65 attending. One session scheduled for the International Convention is shaping up very well and we should all encourage attendance.

Members are asked to suggest for membership on our Committee leading men in the field of radio communications who would be influential in stimulating the preparation of excellent papers for presentation and publication. For example, series of tutorial papers covering the broad aspects of various portions of the field such as antenna design, propagation, modulation and demodulation systems, back-up protection systems and many others are badly needed. Included in this should be a paper on the economic engineering selection of the type of radio communication systems for various applications. Furthermore, much development work is going forward and it is vital that we keep our Group members informed of the state of the art.

11. MEMBERSHIP IN COMMUNICATION TECHNOLOGY GROUP

All IEEE members are invited to become members of the new IEEE Communication Technology Group, which was formed July 1, 1964 by a merger of the former IRE Communications Systems Group and the AIEE Communication Division. An application form is included in this NEWSLETTER for your convenience.

-----Tear Here-----

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.
345 EAST 47TH STREET, NEW YORK 17, NEW YORK

GROUP APPLICATION

I wish to apply for membership in the COMMUNICATION TECHNOLOGY GROUP.
The enclosed \$4.00 covers the annual fee.

NAME _____

STREET _____

CITY _____ STATE _____ ZIP CODE _____

IEEE MEMBERSHIP GRADE _____ IEEE MEMBERSHIP # _____



IEEE

COMMUNICATIONS TECHNOLOGY GROUP

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.
BOX A, LENOX HILL STATION, NEW YORK, NEW YORK 10021

MEMBERSHIP IN COMMUNICATIONS TECHNOLOGY GROUP

All IEEE members are invited to become members of the new
Communications Technology Group, which was formed July 1, 1984.
The former IRE Communications Systems Group and the
IEEE Communications Division. An application form is included in this
newsletter for your convenience.

Send your completed form to:
IEEE, Box A, Lenox Hill Station, New York, New York 10021

The IEEE Council, through the Department of Electrical Engineering, Columbia University, is pleased to announce the formation of the new Communications Technology Group. This group will be formed on May 15, 1984. The new group will include the former IRE Communications Systems Group and the IEEE Communications Division. An application form is included in this newsletter for your convenience.

-----Tear Here-----

GROUP APPLICATION

I wish to apply for membership in the COMMUNICATIONS TECHNOLOGY GROUP.
The enclosed \$4.00 covers the annual fee.

NAME _____

STREET _____

CITY _____ STATE _____ ZIP CODE _____

IEEE MEMBERSHIP GRADE _____

Non-Profit Organization
U. S. POSTAGE
PAID
New York, N. Y.
Permit No. 8021