



COMMUNICATION TECHNOLOGY GROUP

Vol. 2 No. 3

March 1966

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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 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
 Pan American World Airways
 725 Rosada Street
 Satellite Beach, Fla. 32937
 Office Phone: 305-494-4179, Home: 305-262-5894

All Chapter Activities

Ray Bogdan, Associate Editor
 IEEE ComTech Group Newsletter
 Teletype Corp.
 5555 Touhy Avenue
 Skokie, Illinois 60076
 Phone: 312-676-1000

THE DEADLINE FOR THE JUNE 1966 ISSUE WILL BE:
 April 15, 1966. All items must be submitted prior to this date.

MESSAGE FROM THE CHAIRMAN

Dr. R. K. Hellmann

This issue of the Newsletter should be in your hands as many ComTech Group members complete their plans for attending the International Convention (New York, March 21-25, 1966). The ComTech Group owes a vote of thanks to James Walsh of RCA Communications, who again undertook to co-ordinate the sessions sponsored by the Group's Technical Committees. The result shows that he has succeeded in arranging our 11 sessions so that it makes our Group stand out as one of the most important contributors to the vast and sometimes overwhelming display of technical information offered at New York.

Encouraged by the popularity of the dinner for Group members held in Chicago during the last NEC, your AdCom voted to provide a similar opportunity to meet friends in New York. This will be in the form of a luncheon on March 22; details will be found elsewhere in this issue. Our New York Chapter will be host.

I am pleased to report that the preparations for our Annual Conference which this year is scheduled for Philadelphia, June 15-17, are making excellent progress under the general chairmanship of Bill Forster. The Meetings Committee which has developed a master plan for meetings of the Group now extending into 1971, has proposed Philadelphia as the location for the Summer Conference for even years. In odd years, we will meet in other cities. The organization and budget for the 1967 Conference in Minneapolis have just been completed.

A significant improvement in the timely publication of our Transactions will be noted. This is due to large extent to the untiring efforts of Ran Slayton, Teletype Corp., our Editorial Manager. The sound state of our finances, which is the result of his planning and of other steps, enables the Group to render better service to its members.

On behalf of AdCom and the entire Group, I should like to offer congratulations to the 20 members who have recently been elected Fellows of the Institute. Having been in correspondence with each of them, I have learned, especially through the replies from overseas, of the high standing which the IEEE, its Members and Fellows enjoy throughout the world.

Special congratulations are offered also to the winners of the ComTech Group Awards, which are announced elsewhere in this issue.

I am looking forward to seeing many of you in New York.

COMTECH LUNCHEON

I am delighted to inform you that the dinner held in Chicago on October 25, 1965, involving members of ComTech was highly successful. In fact, it has been suggested that we organize a similar event during the International Convention in March, 1966.

Accordingly, a luncheon has been arranged to provide members, officers, and committee chairmen of ComTech with another opportunity to get together. Particulars are:

Date: Tuesday, March 22, 1966
 Time: Beginning at Noontime
 Place: Hickory House
 144 West 52nd Street, New York City
 Cost: \$4.75

Please mail in your reservation and a check (\$4.75 per person) by March 14, 1966 to:

Dr. A. B. Giordano
 Polytechnic Institute of Brooklyn
 333 Jay Street
 Brooklyn, New York 11201

The attached coupon is for your convenience.

I am looking forward to meeting you on March 22, 1966.

Kindest best wishes and regards. (The Luncheon precedes a meeting of the Administration Committee of ComTech to be held at 1:30 P.M. in Room 513 of the New York Hilton Hotel).

Dr. A. B. Giordano
Polytechnic Institute of Brooklyn
333 Jay Street
Brooklyn, New York 11201

Kindly send me _____ ticket(s) for the New York City ComTech Luncheon to be held on Tuesday, March 22, 1966, at the Hickory House, beginning at Noontime. A check for \$ _____ is attached.

Thank you.

(Please print or type)

Name: _____
Address: _____
Date: _____

COMMITTEE NEWS

Wire Communication Committee

John C. Leffel, Chairman
Michigan Bell
Southfield, Mich. 48075

We are sponsoring three technical sessions at the International Meeting in New York. Tuesday morning there are two papers concerning CATV, one of the most active subjects in the country today. One concerns coaxial cable and the other line amplifiers for these systems. This session will be completed with two papers concerning communications on a national basis - one on the Concept for a National Security Information System and one on the Elements of Survivability Analysis. Thursday morning, our session concerns impulse noise, return loss, E6 repeaters on non-loaded cable and PCM carrier. The third and last session is Thursday afternoon and is a joint session with the Data and Telegraph Committee. It concerns wideband (up to 19.2, 50 or 250 kilobits per second) data service and consists of 5 papers covering the complete aspects of such service.

Our Wire Communication Committee will meet on Wednesday morning at 9:00 A. M. in Room 534 of the New York Hilton. We are fortunate to have our schedule grouped so that in three days, March 22 through March 24, we complete our business and technical sessions. Also, the Task Forces on Longitudinal Balance and Telephone Set Standardization will meet on Wednesday afternoon.

Philadelphia is moving along, and I'll have something to report in our New York Committee Meeting. Chicago (1966 NEC) is looking better and we now have possibilities for ten papers, as well as a session on Longitudinal Balance.

I'll see you in New York.

Meetings Committee

Frank Reese, Chairman
Automatic Electric
Northlake, Illinois

The Meetings Committee will hold a dinner during the IEEE Convention. All members are urged to attend.

Date: Monday, March 21

Time: 6:00 P. M.

Place: Hickory House
144 West 52nd Street
New York City

Awards Committee

D. Mitchell, Chairman
Bell Telephone Labs.
Mtn. Av., Rm. 30-217
Murray Hill, N. J. 07971

The Awards Committee has selected Mr. W. T. Rea of the Bell Telephone Labs. for the 1965 Achievement Award. His citation will be: "For basic contributions to the art of systems engineering and to the technology of digital transmission and switching systems." We have also selected the following related pair of papers both written jointly by R. J. Benice and A. H. Frey, Jr., to receive the Best Paper Award for 1965:

"An Analyses of Retransmission Systems" and
"Comparisons of Error Control Techniques"

These appeared on pages 135 and 146, respectively, in the December 1964 Quarterly Transactions.

Awards Committee Membership

Dr. E. J. Baghdady
AD COM, Inc.
808 Memorial Drive
Cambridge, Mass.

Dr. A. G. Clavier
109 South Rosborough Ave.
Ventnor, N.J.

Mr. A. C. Dickieson
Bell Telephone Laboratories, Inc.
Mountain Ave. - 2D-437
Murray Hill, N.J. 07971

Mr. L. R. Kahn
Kahn Research Laboratories, Inc.
81 S. Bergen Place
Freeport, L.I., New York Vice-Chairman

Mr. Allan A. Kunze
RADC (EMD)
Griffiss AFB, New York 13442

Mr. S. J. McDermott
Pacific Northwest Bell Telephone Company
Exchange Building, 821 Second Avenue
Seattle, Wash. 98104

Mr. D. Mitchell Chairman
Bell Telephone Laboratories, Inc.
Mountain Ave. - 3C-217
Murray Hill, N. J. 07971

Mr. W. E. Morrow, Jr.
Massachusetts Institute of Technology
Lincoln Labs
Lexington 73, Mass.

Mr. D. T. Osgood
American Telephone and Telegraph Company
195 Broadway
New York, N. Y. 10007

Mr. David S. Rau
141 Meadow Street
Garden City, New York 11530

Mr. E. Reichtin
Jet Propulsion Labs
California Inst. of Technology
4800 Oak Grove Drive
Pasadena, California

Mr. S. H. Reiger
Communications Satellite Corp.
2100 L Street, N.W.
Washington, D.C. 20037

1966 IEEE INTERNATIONAL CONVENTION COMTECH PARTICIPATION

The Comtech Group will actively participate in the convention by presenting sessions and sponsoring a GROUP LUNCH (See Front Page for details concerning this luncheon). Mr. J. M. Walsh, (RCA Communications), convention meetings coordinator is congratulated on the fine job he has done in support of this significant activity.

The COMTECH sponsored program is published herein for convenient reference.

WIRE COMMUNICATION

Committee Chairman: John C. Leffel - Michigan Bell Telephone Co.
23,500 Northwestern Hwy.
Southfield, Michigan 48076

SESSION I

DATE: Tuesday, March 21

TIME: 9:00 A. M.

PLACE: Murray Hill Room

SESSION CHAIRMAN

H. T. Uthlaut - AT&T Company - 195 Broadway - New York, New York 10007

PROGRAM

Design and Characteristics of Coaxial Cables for Community Antenna Television (CATV) Systems
Warner T. Smith and Walter L. Roberts
Superior Cable Corporation, Box 489 - Hickory, N. C. 28601

A Figure of Merit for CATV Amplifiers: The Coefficient System
D. N. Carson
Bell Telephone Laboratories, Inc. - Mountain Ave. - Murray Hill, N. J. 07971

Concept for a National Security Information System
Harold R. Johnson, Col., USAF
Executive Office of the President - Office of Emergency Planning
Washington, D. C. 20504

The Elements of Survivability Analysis For Command Control Communications Systems
Edward A. Steeves
The MITRE Corporation - Bedford, Massachusetts

SESSION II

DATE: Thursday, March 24

TIME: 9:00 A. M.

PLACE: Murray Hill Room

SESSION CHAIRMAN

D. M. Atkinson - Bell Telephone Co. of Canada - Beaver Hall Bldg.
Montreal, Quebec, Canada

PROGRAM

The 1963 Survey of Impulse Noise on Bell System Carrier Facilities
J. H. Fennick and I. E. O. Nasell
Bell Telephone Labs, Inc. - Mountain Ave. - Murray Hill, N. J. 07971

Transmission Audit of the Telephone Network
F. L. Burge and D. W. Gilbo
Michigan Bell Telephone Co. - 23500 Northwestern Hwy. - Southfield, Michigan 48076

Use of E6 Telephone Repeaters With Non-Loaded Cable
R. W. DeMonte and W. J. Kopp T. J. Talley
Bell Telephone Labs., Inc. American Telephone & Telegraph Co.
Mountain Avenue 195 Broadway, Room 1137B
Murray Hill, New Jersey 07971 New York, New York 10007

Systems Engineering Aspects of a High Capacity PCM System
J. Derenaucourt
Northern Electric Co., Ltd. - Research and Development Laboratories
Box 3511, Station "C" - Ottawa, Ontario, Canada

SESSION III

(Jointly With Data and Telegraph Committee)

DATE: Thursday, March 24

TIME: 2:00 P. M.

PLACE: Murray Hill Room

SESSION CHAIRMAN

D. F. Hoth - Bell Telephone Labs, Inc. - Mountain Ave. Murray Hill,
New Jersey 07971

The Evolution of Wideband Services

R. T. James
American Telephone and Telegraph Company - 195 Broadway, Rm. 1126C
New York, New York 10007

Transmission Plan For General Purpose Wideband Services

J. J. Mahoney, Jr.
Bell Telephone Labs., Inc. - Mountain Avenue - Murray Hill,
New Jersey 07971

A Wideband Data Station

F. E. Froehlich and R. D. Fracassi
Bell Telephone Labs., Inc. - Holmdel, New Jersey 07733

Transmission Facilities For General Purpose Wideband Services On Analog Carrier Systems

J. S. Ronne
Bell Telephone Labs., Inc. - 1600 Osgood St. - North Andover, Mass. 01845

T1 Carrier Transmission System for General Purpose Wideband System

R. Tarbox
Bell Telephone Labs., Inc. - 1600 Osgood St. North Andover, Mass. 01845

COMMUNICATION SWITCHING

Committee Chairman: S. B. Weiner - Stromberg Carlson Corp.
100 Carlson Road
Rochester, New York 14603

SESSION I

DATE: Monday, March 21

TIME: 2:00 P. M.

PLACE: Sutton South Room

SESSION CHAIRMAN

Sherman B. Weiner - Stromberg Carlson Corp. Rochester, New York

PROGRAM

Four-Wire Switching for Private Networks, Using the Series 100 Director

R. C. Clark and J. S. Young
Automatic Electric Laboratories, Inc.

Common Mode of Operation for Local Office Equipment and Subscriber Loop Voice Frequency Repeaters in Step-By-Step Offices

P. G. Lambidakis, C. C. Crow (members), W. Ahrens, H. P. Price and D. Riney (nonmembers)

A New Family of Dial Long Line Circuits for the Bell System

D. C. Pilkinton

New Concepts in Telephone Answering Systems

R. E. Watson, Jr. and S. B. Weinberg

SESSION II

DATE: Tuesday, March 22

TIME: 9:00 A. M.

PLACE: Sutton North Room

SESSION CHAIRMAN

Arthur J. Leininger - Illinois Bell Telephone Co. 208 W. Washington St.
Chicago, Illinois 60606

PROGRAM

An Experimental Solid-State Pulse Modulated Wideband Switch

B. Brightman (S-C)

Audio Response Unit Using a Digitally Stored Vocabulary

R. F. MacDonald (IBM)

Automated Patching System (APS)

T. K. Cheney and R. J. Walker (North)

An Approximate Method for Computing Blocking Probability in Switching Networks

L. Lee and J. A. Brzozowski (Northern Electric)

DATA COMMUNICATIONS AND TELEGRAPH SYSTEMS

Committee Chairman: W. G. Vieth - Western Union - 60 Hudson Street
New York, New York

SESSION I

DATE: Tuesday, March 22
TIME: 9:00 A. M.
PLACE: Sutton North Room

SESSION CHAIRMAN

K. R. McConnel - Westrex Communications - New Rochelle, New York

PROGRAM

High Quality Kinescope-film Recording of Meteorological Satellite Pictures at Slow Scan Rates
Stephen M. Ravner, Astro-Electronics Division - Radio Corporation of America, Princeton, New Jersey

Advancements in the Facsimile Art During 1965

Warren H. Bliss
Astro-Electronics Div. Radio Corp. of America - Princeton, New Jersey

Studies on Long Chain of Broadband PCM Repeaters

Masao Kawashima, Isao Fudemoto, Yushi Katagiri
Fujitsu Laboratories, Fujitsu Limited
1015 Kamikodanaka, Kawasaki, Japan

SESSION II

DATE: Tuesday, March 22
TIME: 2:00 P. M.
PLACE: Murray Hill Room

SESSION CHAIRMAN

F. W. Smith - Western Union - 60 Hudson Street - New York, New York 10013

PROGRAM

A New Teleprinter for 133 W.P.M.

Dr. W. A. Kaiser
Standard-Electric Lorenz AG
Hellmuth-Hirth-Atr. 42, Stuttgart, Germany

The Automatic Teleprinter Exchange System TWK

Herr Raedler
Siemens and Halske AG
Munich, Germany

Advancements in Printing Telegraph Apparatus During 1965

W. Y. Lang
Spring Lane - Towaco, New Jersey 07082

A New Technique for Application of Magnetic Tape to Digital Communications

R. P. Burr, Photocircuits Corp. - John J. Rheinhold, Photocircuits Corp., - Roy K. Andres, RCA Communications, Inc.

RADIO COMMUNICATIONS

Committee Chairman: I. T. Corbell - ITT Telecommunications
2912 Wake Forest Road
Raleigh, North Carolina

SESSION I

DATE: Monday, March 21
TIME: 9:30 A. M.
PLACE: Murray Hill Room

SESSION CHAIRMAN

L. L. Robinett - AT&T Company - Long Lines Dept. - 32 Avenue of the Americas - New York, New York 10013

PROGRAM

Grounding Considerations for Lightning Protection with Microwave Systems

R. H. Buechner
Transcontinental Gas Pipe Line - 3100 Travis St. - Houston, Texas

Simultaneous Message and Wide Band Data Loading on a Microwave Baseband

J. H. Lippard and L. R. Foiles
General Electric Co. - Mountain View Rd., Lynchburg, Virginia

Heavy Route Microwave System

I. Godier
Northern Electric Co., Ltd. P. O. Box 3511 Stn. C, Ottawa 3, Ontario, Canada

An Automatic Communications Test and Evaluation Console for ATS Ground Stations

R. W. Donaldson
Westinghouse Electric Corp., Surface Div. MS800A - P. O. Box 1897, Baltimore, Maryland 21203

SPACE COMMUNICATIONS

Committee Chairman: Clifford Mannal - General Electric Co. Schenectady, New York

COMPARISON OF VARIOUS MEDIA FOR LONG HAUL GLOBAL COMMUNICATIONS

DATE: Friday, March 25
TIME: 9:00 A. M.
PLACE: Murray Hill Room

PANEL MODERATOR

Clifford Mannal - General Electric Co. - Schenectady, New York

PANELISTS

Mr. Ralph Clark
Directorate of Telecommunications
Executive Office Building
1800 G Street N. W.
Washington, D. C.

Mr. F. J. D. Taylor
COM-SAT Corporation
2100 L Street N. W.
Washington, D. C. 20037

Mr. R. P. Haviland
General Electric Company
Advanced Requirements Plng. Oper.
Advance Systems Engineering
Philadelphia, Pa.

Mr. E. D. Becken
RCA Communications, Inc.
66 Broad St.
New York, New York 10004

Mr. George Mauksch
ITT World Communications
67 Broad Street
New York, New York

COMMUNICATION SYSTEM DISCIPLINES

Committee Chairman: C. A. Strom - Rome Air Development Center
Griffiss AFB, New York

SESSION I

PRESENT STATUS AND FUTURE UTILIZATION OF ADVANCED TECHNOLOGY IN HIGH FREQUENCY SYSTEMS ENGINEERING

DATE: Wednesday, March 23
TIME: 9:00 A. M.
PLACE: Murray Hill Room

SESSION CHAIRMAN

C. A. Parry, Director, Long Range Planning - Westrex Corporation
Div. of Litton Industries, LeFevre Lane,
New Rochelle, New York

PANELISTS

Mr. D. P. Worthington
Electronics Engineer
DCA
Washington, D. C.

Mr. G. Brunette
Branch Chief
Communications Techniques
RADC, New York

Mr. R. C. Kirby, Director
Ionospheric Telecommunications
Lab.
Institute for Telecommunications
Sciences & Aronomy (NBS)
Boulder, Colorado

Mr. R. Kulinyi
Leader-Propagation (NB) Team
Communications ADP Laboratory
U.S. Army Electronics Command
Ft. Monmouth, New Jersey

Dr. O. G. Villard
Professor, Electrical Eng.
Stanford University, Calif.

Mr. W. R. Vincent
Manager, Communications Lab.
Stanford Research Institute
California

Mr. W. L. Hatton, Manager
Communications Systems Section
Defense Research Telecommunications
Establishment
Ottawa, Ontario, Canada

SESSION II

DATE: Wednesday, March 23
TIME: 2:30 P. M.
PLACE: Murray Hill Room

PANEL MODERATOR

Mr. Armig Kandoian, Vice President & General Manager
Communication Systems Incorporated
Paramus, New Jersey

PANELISTS

Mr. Bernhard Strassburg, Chief, Common Carrier Bureau
Washington, D. C. 20554

Mr. Marvin C. Green, Technical Director
Automatic Data Field Systems Command, U. S. Army
Fort Belvoir, Virginia 22060

Mr. Dale Reistad, Director of Automation
American Bankers Association
90 Park Avenue
New York, New York

Mr. Robert L. Francisco, Assistant Vice President & Manager of
Management Information Systems Division
The Western Union Telegraph Company
60 Hudson Street
New York, New York

Mr. Tom Greenish, Executive VP
Western Union International
26 Broadway
New York, New York

Mr. H. T. Marcy, Vice President
IBM Systems Development
1000 Westchester Avenue
White Plains, New York

Mr. Ray Nutt, Vice President
Computer Sciences Corporation
650 N. Sepulveda Boulevard
El Segundo, California 90245

CHAPTER NEWS

COMTECH CHAPTERS

Alabama	Nebraska
Baltimore (Inactive)	New York (Metro.)
Boston	North Jersey
Canaveral	Oklahoma City (Inactive)
Chicago	Orlando
Columbus	Philadelphia
Connecticut	San Francisco
Dalls	Seattle
Denver-Boulder	Shreveport
Florida West Coast	Southeastern Michigan
Long Island	Syracuse (Inactive)
Los Angeles (Metro.)	Toronto
Mohawk Valley	Twin Cities
New Jersey Coast	Washington, D. C.
(formerly Monmouth)	

ALABAMA

Welcome to the Group.

To date, two meetings have been reported. On October 11, 1965, Mr. Parks Scott of Southern Bell Telephone Company discussed "LASERS". Eighteen people were in attendance.

The subject of "Telemetry" was covered by Mr. Bob Roberts, also affiliated with Southern Bell, on November 8.

BOSTON

Twenty-seven members attended the December 9th meeting at Sylvania in Waltham. SAUL FAST of the National Company discussed the "Recent Advances in Systems Spectrum Utilization and EM Compatibility Through Wide Dynamic Range Reception."

Other scheduled meetings are covered in the December issue.

CANAVERAL

NETWORK COMMUNICATIONS FOR SPACE was presented on February 28 by Mr. Richard E. Jones, Director, Communications National Range Division of the USAF Systems Command. He discussed the global aspect of missile range communications and concluded with a live demonstration of the various communications networks.

The next meeting will be held on April 25 when Mr. D. L. Solomon, NCS Staff, OSD will present a briefing on "The National Communication System."

Chapter members are urged to contact their officers if questions should arise concerning Chapter activities.

Chairman: Dr. B. E. Keiser, Manager
Plans & Programs Project
KSC Communications
RCA Service Co.
Phone: 867 - 2280

Secretary: Rollo Christensen
Marketing Director,
Data Communications
RADIATION, INC.
Phone 723 - 1511

CHICAGO

The next meeting will be held at the Section Meeting of the IEEE on Tuesday, February 8, 1966, at the IIT Research Institute Club, 3442 South Dearborn Street, Chicago. The evenings' schedule will be: Social Hour 5:30 p.m.: Dinner 6:15 p.m.: General Paper 7:30 p.m.: Group Papers 8:45 p.m.

Our group meeting will be highlighted with a fascinating talk by Captain Miller, Communications Officer, Chicago Police Department, on the subject of "Recent Advances in Emergency Communication Systems." Recent advances in police communications throughout the country will be presented with reference to the new highly successful practices which have been instituted in Chicago. Mr. Rasmuson, Motorola, Inc., Mr. Emond, IBM Corp., and Mr. Burroughs, IBT Co., will also discuss engineering problems encountered in their companies' contributions to the system in Chicago.

NEW YORK

On February 16, the Meetings and Papers Committee of the Communications Technology Group will give a talk by W. L. Glomb of ITT Federal Laboratories on "Satellite Communications Earth Stations" at the New York Telephone Building, 140 West Street in New York City.

Mr. Glomb will make a general presentation of satellite communications systems concepts with emphasis on the role of the medium size station. Material will be based on design, development, fabrication, and over three years of operational experience with seven medium size stations in Brazil, Spain, Hawaii and Continental U.S. with the Moon, Courier, Relay, Telstar, Syncom and Early Bird satellites.

The speaker will discuss the problem relating to citing both medium size and large earth stations as experienced in project trade posts in Brazil and Spain and more recently in the selection and experimental verification of the ITT site in Puerto Rico.

A detailed discussion of hardware manufactured or under development for medium stations with specific emphasis on components of 30-40 foot stations will include consideration of specifications, practical design problems, state-of-art limitations and physical description of hardware supplied for 14 ground stations from 1960 to the present.

About the Speaker

Walter L. Glomb is deputy director of the Space Communication Laboratory at ITT Federal Laboratories, Nutley, New Jersey, a division of International Telephone and Telegraph Corporation. He is responsible for system design analysis involving the company's space communication projects.

Mr. Glomb joined ITT FL in 1950 and specialized in advance radio systems engineering. He was project manager of the ITT FL group which designed the company's Space Communication Research Station at Nutley. This station was used at the northern terminal of the Nutley-Rio de Janeiro space communication link via the Relay satellite.

Mr. Glomb received his B. S. degree in 1946 and his M. S. in 1948, both from Columbia University. He is Executive Committee Chairman of the North Jersey Section of the Institute of Electrical and Electronics Engineers.

On March 16, 1966 N. Y. Traffic Commissioner Barnes will address a jointly sponsored meeting of IEEE's N. Y. Section. ComTech Group and the Transportation Division at the Carnegie International Center Building. He will discuss the N.Y. C. Traffic Control Program appraising N. Y. C. 's traffic problems against a background of training, experience and observation of traffic conditions and control methods in most major cities in the United States and 20 foreign countries.

The Study Group Committee of the Communications Technology Group of the New York Section is sponsoring a comprehensive symposium on the evolution and future of communications electronics in the transportation field. Six lectures will be held on successive Monday evenings (excluding March 21), commencing February 21, 1966, at the Western Union Auditorium, 160 West Broadway, New York City, from 6:30 P. M. to 8:30 P. M. The lectures, speaking for the airlines, railroads, highways, gas and marine transportation industries, are:

1 - FEBRUARY 21

"The Use of and Market for Communications in the Transportation Field"

MR. ROBERT J. MAHER, A. T. & T.

This introductory lecture will stress the increasing importance of the communications engineer in planning and implementing facilities for complete business information systems for the diverse industries in the transportation field. Particular emphasis will be placed on the extensive demands placed on these communications systems for operational, control, administrative and billing purposes.

MR. ROBERT J. MAHER is Staff Representative with the American Telephone and Telegraph Company. His principal activity is National Coordinator of Railroad Marketing Activities for the Bell System. Since 1952, Mr. Maher has specialized in all phases of transportation communications. He is associated with A. A. R., R. S. M. A., C. R. S. A. and R. S. C. S. A.

2 - FEBRUARY 28

"Communications For Large Conversational Mode Airlines Systems"

MR. JOHN R. KNIGHT, IBM

The historical development of the SABRE communication network, as applied to the airlines industry, will be outlined. Major emphasis will be given to a technical description of the pure synchronous, full duplex data transmission and multi-drop, remote multi-plexor configurations involved in the network. Diagnostic and servicing techniques will also be covered.

MR. JOHN R. KNIGHT is Manager of Product requirements, Airlines Industry Marketing, with the International Business Machines Corporation. Since 1961, Mr. Knight has given primary attention to the development of communication systems for the airlines industry. He graduated from Louisiana State University in 1952 with a BSEE degree.

3 - MARCH 7

"Communications in the Railroad Industry"

MR. R. C. KARVWATT, N. Y. CENTRAL RRD.

The rapid growth of data processing and information handling in the railroad industry has required a complete re-appraisal of its communications system. Prime consideration will be given to the development of a plan for the integration of electronic teletypewriter, data, radio and internal communications systems into an efficient business information system for customers, employees and management.

MR. R. C. KARVWATT is Director of Communications and Signals with the New York Central Railroad System.

4 - MARCH 14

"Traffic Flow and Control"

MR. EDWARD F. CLEARY, Wilbur Smith and Associates

The need of Traffic Engineers to operate highway control systems on a real-time rather than historical basis has led to transitional developments from electro-mechanical through electronic to solid state. Emphasis will be given to the analysis of the various traffic communications systems in existence and a prognosis of their future in highway traffic control.

MR. EDWARD F. CLEARY is Director of New York City Signal Study with Wilbur Smith and Associates. Prior assignments for Scranton, Pa., Washington, D. C., Boston, Mass., Baltimore, Md., Phila. Pa., and Denver, Colorado have made Mr. Cleary eminently qualified to provide expert analysis of the communications requirements for highway traffic control systems. He is a member of I. T. E., I. E. E. E., M. E. and I. M. S. A.

5 - MARCH 28

"Operation of Gas Communications Using Data Applications"

MR. WALDO A. SHIPMAN, COLUMBIA GAS

The application of data communication, data transmission and data processing in gas communications will be covered. Particular emphasis will be placed on the technology required in the future to satisfy the Gas Industry's growing requirements for communications.

MR. WALDO A. SHIPMAN is Director of Communications and Tele-control with the Columbia Gas Company. He has been associated with Columbia Gas for more than 25 years during which time he has been extremely active in I. E. E. E., I. R. E., P. I. E. A., A. P. I., A. G. A. C. & I. N. G. A.

6 - APRIL 4

"Application of Electronic Computer to Far-Flung Cargo Operations"

SPEAKER TO BE ANNOUNCED, MOORE-McCORMACK LINES

The speaker will describe a unique mathematical model which will enable financial results of a prospective year's shipping operations to be made available in less than one hour. Waiting, loading, steaming and discharging, as well as sales volume, can be simulated and comparison of the relative profitability of alternative methods of operation can be made employing a representation of "Mooremack's accounting" and "decision rule" structure.

The computer program is being developed by Mooremack and IBM.

Registration fees the full 6-lecture series are \$5.00 for IEEE members (and other professional societies), \$8.00 for non-members, and \$2.00 for full-time students. Per lecture rates are \$1.50 (IEEE members) and \$2.00 (non-members).

Since advance registration is required, please contact Mr. N. J. SYVERTEEN at the address below for further information:

N. J. Syverteen
463 West Street, Room 930
New York, New York 10014
(Telephone 212-CE 3-1000, Ext. 3500)

PHILADELPHIA

Eighteen people were in attendance at a meeting held in Philadelphia on November 9. James B. Potts, associated with the Communications Satellite Corporation, spoke on the subject of Communication Satellites.

SEATTLE

Dr. William E. Banton of the Western Electric Company at Newark discussed the "Electronics Revolution in the Telephone Manufacturing Industry at a meeting held in Seattle on November 9. Seventeen members were in attendance.

WASHINGTON, D. C.

The Navy's role in satellite communications will be discussed at the February 7 meeting by Edward N. Marsh, of the System Sciences Corporation, Falls Church, Virginia, who has been manager of the company's technical support for the BUSHIP'S COMSAT program. A pre-meeting dinner will be held at O'Donnell's Grill.

A brief review of the Navy's participation in early R & D program will be given, followed by a summary of the current DOD communication satellite program, with emphasis on the Navy's activities and role.

A detailed discussion of the technical characteristics of the Navy's ship-mounted satellite link terminal will follow, including the problems presented by the unique shipboard environment. Finally, some prognostications of future trends in satellite technology will be given.

Mr. March, Deputy Director of the Surface and Information Technology Division at System Sciences Corporation, manages studies and system engineering projects in the area of link terminal technology, with emphasis on information transmission problems. He was formerly with Radiation Inc., and ITT Kellogg, where he directed programs for the development of digital data acquisition systems, transmission equipment, and electronic switches. Mr. Marsh received the BEE degree (cum laude) from Fenn College, and did graduate work at the Illinois Institute of Technology.

THE NETWORK HOTLINE

Louis A. deRosa WINS DISTINGUISHED ALUMNUS AWARD from the Brooklyn Polytechnic Alumni Association.

Mr. deRosa, an ITT executive, has devoted many years in support of the communications industry and the ComTech Group. The Editor extends his personal congratulations.

1966 IEEE FELLOW AWARDS

The IEEE has announced the fellows for 1966. ComTech Group is proud to have so many as its members. The AdCom and the entire membership congratulate these men having attained such an outstanding distinction. They are listed here, by geographical section, together with the appropriate citation.

Benelux Section
Hoffmann, J. A. J. For contributions to engineering teaching and analog computation in Belgium.

Boston Section
Morrow, W. E. For contributions to the development of space and communication tropospheric scatter systems.

von Recklinghausen, D. R. For contributions to FM multiplex broadcasting and reception in the field of high fidelity music reproduction.

Merrimac Valley Subsection
Berger, U. S. For contributions in the field of VHF, UHF and microwave radio system analysis, development and design.

Egypt Section
Gheith, Fathy For contributions to telecommunications and broadcasting in Egypt, Syria, Kuwait, Ethiopia and the Middle East.

France Section
Angot, A. M. For achievement and leadership in military telecommunications and in engineering education.

Italy Section
Palandria, G. L. For contributions to the development of power cable systems.

Mohawk Valley
Marks, R. L. For contributions to communications techniques and systems and upgrading of circuit standards for global services.

Strom, Jr., C. A. For contributions to military global communications systems and military electronic computers for command and control.

New York Section
Myers, Oscar For contributions to the development of common-control telephone switching systems and direct distance dialing.

Schwartz, Mischa For contributions to communication systems analysis and engineering education.

North Jersey Section
Pollack, Louis For the pioneering design and development of communication satellite earth terminals, employed in moon reflection relaying.

Princeton Section

Davey, J. R.

For contributions to telegraph and data transmission systems.

Santa Clara Valley Subsection

Waterman, Jr., A. T.

For contributions to the science and practice of transhorizon radio propagations.

San Gabriel Valley Section

Ludekens, L. E.

For contributions in microwave VHF mobile radio and carrier relaying in the utility field.

Syracuse Section

Applebaum, Sidney

For invention and analytical contributions in the field of signal processing.

Dickey, Jr., F. R.

For advances in the radar field, particularly in antennas for airborne high resolution radars, and the correlation air navigator.

Toronto Section

Bridgland, C. J.

For contributions to the development of a transcontinental communication system in Canada.

Washington Section

Miles, P. D.

For contributions to the efficient utilization of the radio spectrum and management of frequency allocations.

Weinschel, B. O.

For contributions in the field of precision microwave measurements and advancement of attenuation measurements.

THE INTERNATIONAL CONFERENCE OF ELECTRONIC SWITCHING

March 28-31

Unesco Conference Hall

Paris, France

Research in the field of Electronic Switching as applied to telecommunications engineering has assumed considerable importance in recent years and is now beginning to give rise to interesting experimental hardware. Present state of knowledge and results of recent technical and industrial developments will be discussed.

This Symposium follows the Internat'l Symposium on Electronic Switching organized in 1960 in London by the IEE. Symposiums were also organized in 1957 and 1963 by the Bell Telephone Labs.

This Conference will be organized by:

- the Union of Internat'l Technical Associations (UITA) and the
- Societe Francaise de Electroniciens et des Radioelectriciens(SFER)

Under the patronage of:

- the Union Internationale des Telecommunications (UIT) and
- the Federation Nationale des Industries Electroniques (FNIE)

PROGRAM

The subject matter of the technical papers to be presented to the Symposium must be either original research or R&D reports relating to aggregate results, or else reports on original work connected with special problems, but both must fall within the scope defined as follows:

System Design

- General design of networks
- Structure of electronic systems
- Connection to existing systems
- Reliability of systems
- Size of systems

Connection Networks for Spatial-Switching Systems

- Electronic switching cross points (semiconductors, etc...)
- Electromechanical switching cross points (reed relays, crossbar switches, conventional relays, etc...)

Control Components

- Wired logic type
- Stored program type

Programming of Electronic Systems

Time Division Electronic Switching Systems

- Analog Modulation systems (P. A. M., ...)
- Digital Modulation systems (P. C. M., DELTA, ...)

Special Devices for Switching Systems

- Logic circuits
- Storages
- Grosspoints
- Scanning devices

Assistance Provided by Computers for Telecommunications

Systems Engineering

- Integrated telecommunications systems with intermediate storage
- Electronic metering
- Traffic observation
- Electronic network management
- Aid provided by simulation for designing and developing equipment and for programming the latter.

The working languages of the Conference will be English and French.

PUBLICATION OF PAPERS

The full text of the technical papers will be issued in autumn 1966. The subscription will be opened during the Conference and the proceedings will be published by Editions CHIRON, 40, rue de Seine - PARIS 6e (publishers of the "Onde Electrique").

REGISTRATION

Further information may be obtained from F. N. I. E. Services des Relations Exterieures 16, Rue de Presles - Paris - XV (Tel. 273-24-70)



IEEE

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