The 1966 Communication Technology Symposium at NEC has been planned by the technical committees of the IEEE Communication Technology Group to provide a forum where engineers active in the communications profession can meet and discuss their successes and perhaps their failures, their exciting new ideas and their visions of the future. Meetings such as this provide a unique opportunity to hear our colleagues describe their accomplishments and defend their ideas; they are a vital part of our constant effort to achieve an efficient and effective exchange of ideas between engineers active in communication technology.

A part of this Symposium which has become a popular tradition is the annual dinner for ComTech Group members and their guests. This is a very informal affair - no long speeches - just an opportunity to get together and meet each other. This year the dinner will be on Monday, October 3, at 6:30 p.m. at McCormick Place.

This Symposium at NEC is one of three such meetings held each year by the ComTech Group. The International Communications Conference, held annually in June, is sponsored by the ComTech Group with substantial support from other Groups having interests in communications. And the IEEE International Convention in New York each March is the third major meeting for communications engineers. Each of these meetings has its own special flavor. Together they help provide that personal contact with our colleagues which is vital to a dynamic profession.

W. B. Jones, Jr.
ComTech Group

The direction which social life will take in to be explored by Professor William Comber. The practical outlook in the art of electrical communications with respect to the problems of planning in a large metropolitan area will be presented by Chris Hodge. Anticipations in the technology of transmission, switching, and the desires and fulfillments of the using public will be covered by R. A. Kelley, Dick Stiles, and Bob Franciscio. The views advanced by the above distinguished speakers will not fall on apathetic or uniformed ears, for in addition to the distinguished members of the major audience there will be a sounding board of fast thinking skilled speakers. This sounding board includes among its members not only communications, but also experts in banking, consumer needs, food distribution, or as the rhyme goes: "Tinker, Tailor, Soldier, Sailor, Rich Man, Poor Man, Beggarman, . . .." In this manner it is hoped that the thoughts, concerns and points of view of the major audience will be fully represented and become the subject of clear and valid discussion.

For program details of this session see session No. 12.

COM TECH: DATA COMMUNICATIONS

SESSION NO. 4
Sponsor: Data Communication Committee
Chairman: R. M. Kail
Room No. 9

19 CP 66-1333
EFFECTS OF PULSE SHAPING ON DIGITAL FM SPECTRA
H. J. vonBanyaner, Tjeng T. Tjhung, Inter Tel Consultants Ltd.

19 CP 66-1334
DEMODULATION OF DIGITAL SIGNALS USING AN FM DISCRIMINATOR
Donald L. Schilling, Edwin Hoffman, Polytechnic Institute of Brooklyn

19 CP 66-1335
A VESTIGIAL SIDEBAND FM MODEM
E. Hopner, R. W. Calfee, L. B. West, IBM

19 CP 66-1336
ADAPTIVE SATELLITE DATA TRANSMISSION SYSTEM
J. A. Buigler, USAOC
H. Blashag, J. Hayase, Hann Najar, Renato D'Antonio, IBM Federal Systems Division

19 CP 66-1337
INTERNATIONAL TELEX SERVICE THROUGH COMPUTERIZED LINE SWITCHING
G. T. Fontain, P. J. Klein, Western Union International, Inc.

COM TECH: WIRE COMMUNICATIONS

SESSION NO. 5
Sponsor: Wire Communication Committee
Chairman: William J. Roberts
Room No. 8

19 CP 66-1372
MISSION CONTROL CENTER - HOUSTON (NASA-H) VOICE COMMUNICATION SYSTEM
G. J. Kulesza, Philco-Communications & Electronics Div. J. Meeting, North Electric Company George Hayden, Philco-Houston Operations
COM TECH: WIRE COMMUNICATION II

SESSION NO. 11
Sponsor: Wire Communication Committee
Chairman: Bruce F. Robinson
Room No. 8
General Telephone Co. of Michigan

19 CP 66-1327
ENGINEERING ASPECTS OF OFFICE BALANCE
Richard J. Schindler, Ohio Bell Telephone Company

19 CP 66-1326
TIME DIVISION CONFERENCING OF 4-WIRE TELEPHONE CIRCUITS
R. C. Hoyler, Westinghouse Electric Corp.

19 CP 66-1328
DESIGN OF THE 468 CABLE CARRIER TERMINAL
Larry E. Getgen, Lenkurt Electric Co., Inc.

19 CP 66-1329
ENGINEERING AND APPLICATION FEATURES OF THE 468 CABLE CARRIER SYSTEM
Philip R. Poling, Lenkurt Electric Co., Inc.

PANEL DISCUSSION

COM TECH: DATA COMMUNICATIONS - THE 1976 VIEW

SESSION NO. 12
Sponsor: Data Communication Committee
Chairman: Claude A. R. Egan
Western Electric Company

MORRIS, INFORMATION INNOVATION AND ECONOMICS IN 1976
Prof. W. Gomberg, Wharton School of Finance, University of Pennsylvania

TOTAL COMMUNICATIONS

SWITCHING OUTLOOK
R. C. Stiles, Sylvania Electronic Systems

TRANSMISSION OUTLOOK
R. A. Kelly, Bell Telephone Labs.

THE USERS, THEIR WANTS, AND THEIR NEEDS
R. L. Francisco, Western Union Telephone Co.

DISCUSSIONS
W. O. Vieth - W.U. Tel. Co.
Evelyn Berezin - Digitronics
Peter James - Photo Mag. Sys.
William D. Rowe - Sylvania
Sam Levine - Bunker-Ramo
W. G. Dow - Univ. of Mich.
D. A. Kerr - ETL
Harvey McMain - A.T. & T. Co.
Sam Harvey - Singer Co.
George J. Feeney - G.E. Co.
Mort Ashtaran - IBM
Leon Davidson - Union Carbide
Ed De Laura - R.T. S.E.

Milton Stone - Wakefern Foods
Marlin Miller - Dow Jones Res.
R. G. Hills - M.I.T.
Chuck Winston - Teletype Corp.
Morris Rubinoff - Univ. of Pa.
Jack Atkin - ITT World Com.
R. M. Kalb - Univac
Herman Affel - Std. Comp. Inc.
Leo S. Facher - E.S. P. O. Dept.
M. M. Hubbard - Hubbard Assoc.
Sam Alexander - N.B.S.
Spencer Spaulding - RCA

COM TECH: COMMUNICATION SWITCHING III

SESSION NO. 47
Sponsor: Communication Switching Committee
Chairman: E. J. Cienner
Automatic Electric Labs., Inc.

19 CP 66-1309
A NEW SELF-CONTAINED PBX UTILIZING ELECTRONIC CONTROL AND METALLIC CROSSPOINTS
T. E. DeStefano, A. A. Reise, Bell Telephone Labs.

19 CP 66-1310
CENTRAL OFFICE ARRANGEMENTS FOR AUTOMATIC IDENTIFICATION FOR OUTWARD DIALING FROM PBX'S
W. Comella, G. A. Backman, R. F. Pina, Bell Telephone Labs.

19 CP 66-1311
ANI ARRANGEMENTS IN PBX'S
E. P. Anderson, G. A. Scharf, Bell Telephone Labs.

19 CP 66-1312
ANI ARRANGEMENTS FOR CLO'S SMALL OFFICES
E. R. Moore, Bell Telephone Labs.

19 CP 66-1313
TRAFFIC ASPECTS OF SINGLE PARTY SERVICE IN RURAL AREAS
A. Marthens, R. E. A.

COM TECH: RADIO COMMUNICATIONS

SESSION NO. 21
Sponsor: Radio Communications Committee
Chairman: R. M. Mattern
Room No. 9
Ohio Bell Telephone Company

19 CP 66-1329
BIT AND MESSAGE ERROR RATES IN ATMOSPHERIC NOISE WITH AND WITHOUT PEAK LIMITING
W. B. Sisco, TWB - Space Technology Labs.

19 CP 66-1330
AIR-TO-AIR UHF PROPAGATION CHARACTERISTICS AT EXTREME RANGES

19 CP 66-1331
SELF-FOCUSING OF A LASER BEAM IN PLASMA
Dr. A. R. M. Rachad, Memphis State University

19 CP 66-1332
A GENERAL MODEL FOR A FREQUENCY-TIME SHIFT KEYED SIGNAL FORM OF TROPOSPHERIC SCATTER
D. H. Lazarus, Martin Company

COM TECH: WIRE COMMUNICATION III

SESSION NO. 22
Sponsor: Wire Communication Committee
Chairman: Dr. Peter Nichols
Room No. 6
Northern Electric Co., Ltd.

19 CP 66-1314
CARRIER SYSTEM CHARACTERISTICS AND FREQUENCY ALLOCATIONS
James B. Eppes, JI., J. M. Flanigan, A. H. Flores,
Rural Electrification Administration

19 CP 66-1315
CARRIAGE TRANSMISSION ON VOICE-LOADED LOOPS
M. J. Birk, Communications Apparatus Corporation

19 CP 66-1316
TRANSMISSION DESIGN FOR LONG LOOPS
Paul G. Lambdakis, R.E.A.

19 CP 66-1317
A NON-INTERFERING CABLE PAIR TRANSFER SYSTEM
DeMatteo W. Gilbo, Michigan Bell Telephone Company
COM TECH: POWER SOURCES FOR SPACE COMMUNICATIONS

SESSION NO. 23
Tuesday, Oct. 4 - 9:30 A.M.
No. 2
Sponsor: Space Communication Committee
Chairman: Louis Pollack
I.T.T. Federal Laboratories

SPEAKERS

CHEMICAL BATTERIES
Dr. P. L. Howard, P. L. Howard Associates, Inc.

FUEL CELLS
R. S. Mushrush, General Electric Corp.

SOLAR CELLS
W. Luft, TRW Systems

THERMIORIC AND THERMAL SOURCES
F. Roukove, Jet Propulsion Laboratories

NUCLEAR POWER SOURCES
W. J. Lavedahl, Martin-Marietta

MAGNETOHYDRODYNAMICS
T. Brogan, AVCO Corp.

This panel discussion will include presentations and discussions covering the above-mentioned types of power sources for space communications. Each subject will be presented by an expert in that field, and will cover the present state-of-the-art, the advantages and disadvantages, and future possibilities. Following the presentations there will be a question and answer period including panelists and audience.

COM TECH: COMMUNICATION SWITCHING I

SESSION NO. 30
Tuesday, Oct. 4 - 2:30 P.M.
Sponsor: Communication Switching Committee
Chairman: A. J. Leininger
Illinois Bell Telephone Company

19 CP 66-1301
ESK - RELAY AS CROSSPOINT COMPONENT
Dr. Fischer, Siemens & Halske

19 CP 66-1302
ESK - CROSSPOINT SWITCHING SYSTEM FOR LOCAL OFFICES
Hartmut Skauski, Siemens & Halske

19 CP 66-1303
CROSSPOINT SYSTEM FOR TELEX EXCHANGE
H. Doermann, Siemens & Halske

19 CP 66-1304
AUTOMATIC MAIL SORTING USING CODE MARKS FOR DESTINATION
A. Kuhn, Siemens & Halske

COM TECH: WIRE COMMUNICATION IV

SESSION NO. 11
Tuesday, Oct. 4 - 2:30 P.M.
Sponsor: Wire Communication Committee
Chairman: Frank E. Demaree
Illinois Bell Telephone Company

19 CP 66-1318
THE TYPE NZ REPEATERED LINE
E. H. Perkins, Bell Telephone Laboratories

19 CP 66-1319
COMPARDED DELTA MODULATION FOR TELEPHONE TRANSMISSION
Atashi Tomazawa, Hisashi Kaneko, Nippon Electric Co., Ltd.

19 CP 66-1320
SWEPT FREQUENCY MODULATION
E. K. Holland-Moritz, J. C. Dute, D. R. Brundage,
University of Michigan

19 CP 66-1321
A LOW-SPEED DATA-TRANSMISSION SYSTEM WITH RC - FILTERS
FOR USE IN VOICE FREQUENCY BANDS
K. G. Dieter, Siemens & Halske

COM TECH: COMMUNICATION SYSTEM DISCIPLINES I

SESSION NO. 32
Tuesday, Oct. 4 - 2:30 P.M.
Sponsor: Communication System Disciplines Committee
Chairman: J. Schlitz
I.T.T.

19 CP 66-1339
ECONOMIC ANALYSIS OF COMMUNICATIONS II
R. Chipp, T. Cosgrove, Communications Systems, Inc.

19 CP 66-1340
ANALYTICAL AND STATISTICAL ANALYSIS GAC CHANNEL UTILIZATION IN THE ATM ENVIRONMENT
R. Podell, G. Scharff, Communications Systems, Inc.

19 CP 66-1341
DIGITAL SWITCHING AND CONTROL FOR THE A/F FORCE GLOBAL AIR NET
Melvin Fastow, Westrex Division, Litton Industries

19 CP 66-1342
A TROPOSCHEMIC SCATTER TEST PROGRAM
O. Tagliaferri, Rome Air Development Center
John Kelly, Page Communications Engineers

19 CP 66-1343
DISCOSE - A NEW TOOL FOR DIGITAL COMMUNICATIONS STUDIES
Harold Crowley, Rome Air Development Center

COM TECH: COMMUNICATION SWITCHING II

SESSION NO. 38
Wednesday, Oct. 5 - 9:30 A.M.
Sponsor: Communication Switching Committee
Chairman: J. G. Pearce
Stromberg-Carlson Corp.

19 CP 66-1305
SUBSCRIBER DIALING FOR INTERNATIONAL TRAFFIC IN EUROPE
J. Rosenblatt, Siemens & Halske

19 CP 66-1306
TELEPHONE NUMBERING PLANS KEEPING PACE WITH DOMESTIC AND GLOBAL SERVICE NEEDS
R. J. Keever, Bell Telephone Laboratories

19 CP 66-1307
PROBLEMS OF PROGRAMMING FOR REAL TIME SHARED SYSTEM
L. S. Tuomenoska, W. Ulrich, Bell Telephone Laboratories

COM TECH: COMMUNICATION SYSTEM DISCIPLINES II

SESSION NO. 39
Wednesday, Oct. 5 - 9:30 A.M.
Sponsor: Communication System Disciplines Committee
Chairman: R. Regia
Hazelton Corporation

19 CP 66-1344
APPLICATION OF THE SUNDE MODEL TO AN AIR FORCE TROPIC TRANSMISSION TEST
M. R. Rickel, Rome Air Development Center

19 CP 66-1345
MODELING OF PCM-TDM OVER A TROPIC PATH
A. S. Kobos, Rome Air Development Center

19 CP 66-1346
MODELING OF PPM-FREQUENCY TIME HOPPING OVER A TROPIC PATH
R. G. McLaughin, Rome Air Development Center

19 CP 66-1347
MODELING OF DELTA MODULATION WITH FSK OVER A TROPIC PATH
J. K. Wolf, Polytechnic Institute of Brooklyn

19 CP 66-1348
A METHOD OF OBTAINING ALL PHASES OF A PSEUDO RANDOM SEQUENCE
R. C. Currie, RCA Labs
PANEL DISCUSSION
COM TECH: NEW DIGITAL TECHNIQUES ON LONG TROPO PATHS
SESSION NO. 48
Wednesday, Oct. 5 - 2:30 P.M.
Room No. 7

Sponsor: Communication System Disciplines Committee
Chairman: C. A. Strom, Jr.
Rome Air Development Center

SPEAKERS

FUTURE NEEDS FOR TROPOSPHERIC SCATTER
R. Feik, Air Force Communication Service

PCM-TDM OVER A VERY LONG TROPO PATH
J. Polyzou, I. T. T. Labs

PPM FREQUENCY TIME HOPPING OVER A TROPO PATH
McDonald Wiggins, Martin Company

DELTA MODULATION WITH FSK OVER A TROPO PATH
Lloyd Englebrecht, Motorola Inc.

FREQUENCY DIVISION MULTIPLEX ON LONG TROPO PATHS
R. Heine, R. White, Lenkurt Electric

COM TECH ANNUAL DINNER

DATE: MONDAY, OCTOBER 3, 1966
TIME: 6:30 P.M.
PLACE: ROOM D - MCCORMICK PLACE
COST: $6.50 PER PERSON

LAST CHANCE TO ORDER TICKETS

NAME ____________________________
COMPANY __________________________
STREET ____________________________
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Send order and make check payable to:
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I am enclosing $____ for tickets for the Com Tech Dinner.

☐ Mail tickets to me.
☐ Hold tickets for pickup at registration desk.
* All orders received after Sep. 26 will be held.