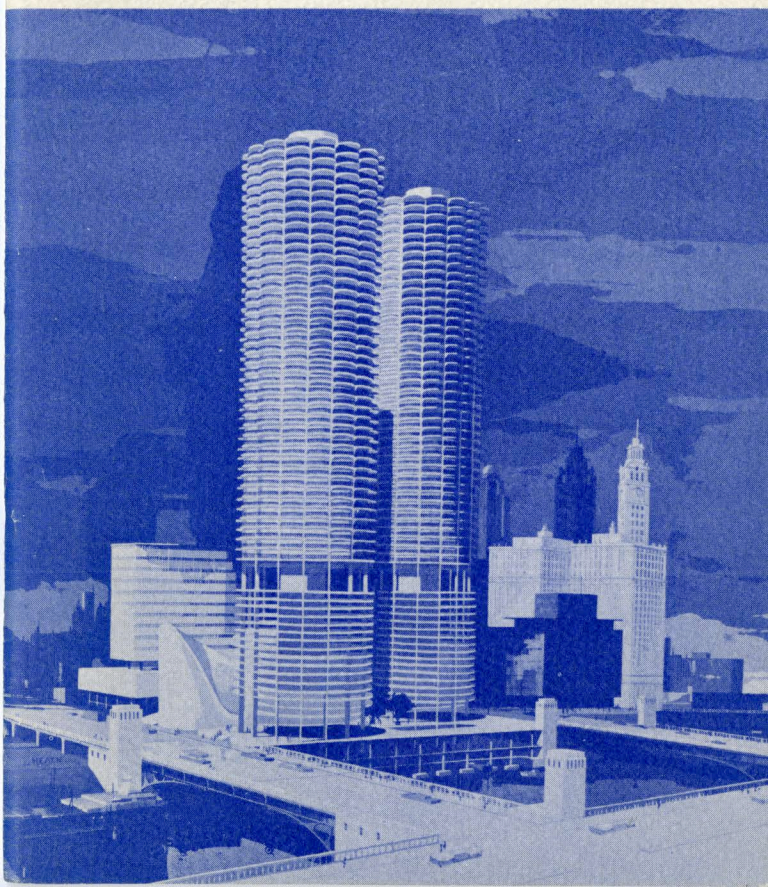


Fall General Meeting

AMERICAN
INSTITUTE of
ELECTRICAL
ENGINEERS

October 7-12, 1962
CHICAGO, ILLINOIS

Headquarters
Pick-Congress Hotel



GENERAL INFORMATION

The Chicago Section extends a cordial welcome to those attending this Fall General Meeting at the Pick-Congress Hotel on Lake Michigan at Chicago, Illinois. The technical program, inspection trips and social activities will occupy the entire facilities of the Pick-Congress during the meeting.

At the General Session to be held Monday afternoon, October 8th, the Institute's Medal for Outstanding Service in Electrical Engineering Education will be awarded to Dr. Ernst A. Guillemin, Webster Professor of Electrical Engineering, Massachusetts Institute of Technology and the William M. Habirshaw award will be presented to Herman Halperin, Retired, Commonwealth Edison Co. In addition, the Mervin J. Kelly award to Dr. Claude E. Shannon, Donner Professor of Science, Massachusetts Institute of Technology, the Morris E. Leeds award to Bernard E. Lenehan, Consulting Engineer, Westinghouse Electric Corp., and the David Sarnoff award to Harry B. Smith, Manager, Engineering Dept., Air Arm Division, Westinghouse Electric Corp. will be made. Mr. L. C. Truesdell, President of the Zenith Sales Corporation will present the principal address. His subject is Marketing Manifesto.

Information on all features may be obtained at the registration desk. Efforts will be made to deliver telegrams and messages promptly. Members who expect to receive mail are asked to inquire frequently at the mail and registration desk.

Registration Fees Required. The registration fees for members, nonmembers, and ladies have been set at \$6.00, \$10.00 and \$2.00, respectively. Student members and children are registered without fee.

Technical Sessions and Discussions are covered by the "Technical Sessions Guide" at the discretion of the presiding officers. Sufficient time will be allowed for the presentation of each paper and five minutes for each discussion. To receive consideration for publication, discussions on TRANSACTIONS papers in duplicate must be sent to Edward C. Day, Assistant Secretary, Technical Operations Department, AIEE, 345 East 47th Street, New York 17, New York, before October 26th, 1962. Discussions received later may not be included, depending upon the printing schedule of the paper to which the discussion is directed. The original typewritten double spaced copy, together with original illustrations as photographs or inked tracings should be submitted.

By action of the Board of Directors on June 22, 1962, it is contrary to the interests and policy of the Institute to conduct organized recruiting at conventions or expositions except under special circumstances where advance approval of the Institute in writing has been obtained.

American Institute of Electrical Engineers Fall General Meeting



Schedule of Events

SUNDAY, OCTOBER 7

- 2:00 p.m. Registration
- 4:00 p.m. Welcoming Tea

MONDAY, OCTOBER 8

- 9:00 a.m. Data Communication Session
H. V. Transmission Lines Session
Switching Circuit Theory and Logical Design Symposium
- 9:30 a.m. Ladies' Coffee Hour
- 1:00 p.m. Ladies' Petite Luncheon
- 2:00 p.m. General Session

TUESDAY, OCTOBER 9

- 9:00 a.m. Radio Communication Session
Data Communication & Telegraph Systems Session
Radio Noise on H.V. Lines Session
Minimization Techniques Session
Nuclear Power Plants Session - I
Algol Tutorial Session
Underwriters Laboratories Trip
United Airlines O'Hare Airport Trip
- 9:30 a.m. Ladies' Coffee Hour
- 12:00 Noon Ladies' Luncheon at Playboy Club
- 1:00 p.m. Commonwealth Edison Tour
- 2:00 p.m. Transmission Lines - Radio Noise & Line Constants Session
Nuclear Power Plants Session - II
Switchgear Session
Sequential Circuits Session - I
Thermoelectric Devices Session
Electric Space Heating Session

WEDNESDAY, OCTOBER 10

- 9:00 a.m. Signal Theory Session
Communication Switching Session - I
Industrial and Commercial Power Systems Session

WEDNESDAY, OCTOBER 10 *Continued*

Solid State Devices Session
 Generating Station Auxiliary Power Systems
 Session
 Sequential Circuits Session – II
 Substations Round Table – I
 McCormick Place Tour

9:30 a.m. Ladies' Coffee Hour

10:00 a.m. Oakbrook Shopping Center Tour

12:00 Noon Eta Kappa Nu Luncheon

1:00 p.m. Argonne National Laboratory Tour
 American Oil Tour

2:00 p.m. Communication Switching Session – II
 Industrial Control Session
 Excitation Systems Session
 Combinational Problems Session
 Substations Round Table – II

Evening Fall Frolics

5:30 p.m. Cocktails

6:30 p.m. Dinner

THURSDAY, OCTOBER 11

9:00 a.m. Communication Switching Session – III
 Energy Developments Session
 Direct Current Machinery Session
 Computer Use in Power System Analysis Session
 Forum on Proposed American Standard Code
 for Information Interchange
 Control Systems Session – I
 Substations Session
 Filtration Plant Tour
 Western Electric Tour

9:30 a.m. Ladies' Coffee Hour

1:00 p.m. U. S. Steel Tour

2:00 p.m. Wire/Switching Session – I
 Hydro-Thermal Co-ordination Session
 Fractional-Horsepower and Induction Machinery
 Session
 Control Systems Session – II

2:30 p.m. Ladies' Dessert Tea

FRIDAY, OCTOBER 12

9:00 a.m. Computer Elements Session – I
 Wire Communications Session – II
 Synchronous Machinery Session
 Power System Planning Session

9:30 a.m. Ladies' Coffee Hour

2:00 p.m. Wire Communications Session – III
 Computer Elements Session – II

PAPERS MAY BE PURCHASED

Preprints of all **numbered** papers are on sale at 60¢ each to AIEE members (\$1.00 to nonmembers).

Papers bearing **Roman numerals** will be printed in the Transactions and the bimonthly publications as follows:

I COMMUNICATION AND ELECTRONICS.

II APPLICATIONS AND INDUSTRY.

III POWER APPARATUS AND SYSTEMS.

***Asterisked papers** will be assigned numbers for sale at the same price at the meeting if copies are so provided by the authors; no further reproduction is presently scheduled.

After the meeting, all then unsold copies (including authors' papers on sale) are available by order and remittance to AIEE Order Department, 345 East 47th Street, New York 17, N. Y. Coupon books in \$12 denominations are available by order from Headquarters to those who wish to avoid remittance by check or otherwise.

Monday, October 8

9:00 a.m. – Data Communication

Lincoln Room

Chairman: **H. F. CALEY**
 Western Union Telegraph Co.
 DATA COMMUNICATION COMMITTEE

- CP.* Dataphone Service as Applied to Telemetry, Alarm, and Control Systems. D. A. Kerr, American Tel. & Tel. Co., N. B. Zenack, Bell Telephone Labs., Inc.
- CP.* Alarm, Telemetry and Remote Control Services Using Multi-Frequency Techniques Over Switched Telephone Circuits. J. F. O'Neil, R. Sokoler, Bell Telephone Labs., Inc.
- CP.* Automatic Dialing for Switched Data Services, D. W. Darling, Bell Telephone Labs., Inc.
- CP.* An Automatic Dialing Unit for Switched Data Services. P. J. Germond, K. L. Mayer, Bell Telephone Labs., Inc.
- 62-1440. Some Characteristics of a Data Communication System. I R. L. Townsend, Bell Telephone Labs., Inc. (Presentation by title and for written discussion.)

9:00 a.m. – H. V. Transmission Lines

Florentine Room

Chairman: **J. T. LUSIGNAN**
 Ohio Brass Co.

TRANSMISSION AND DISTRIBUTION COMMITTEE

- 62-1362. Digital Computer Calculation of Transients in Electric III Networks. A. J. McElroy, R. M. Porter, American Electric Power Service Corp.
- 62-1181. Effect of Predischarge Currents Upon Line Performance. III C. F. Wagner, A. R. Hileman, Westinghouse Electric Corp.
- CP.* Equipment Requirements for the Bare Hand Live Line Method. C. J. Miller, Ohio Brass Co.

MONDAY, OCTOBER 8 Continued

9:00 a.m. — Switching Circuit Theory and Logical Design Symposium

Avenue Room West

Chairman: **W. L. SEMON**
Sperry Rand Research Center
COMPUTING DEVICES COMMITTEE

The papers in this symposium of five sessions will be available as special publication S-141 at or after the meeting.

Welcoming Address — W. L. Semon, Sperry Rand Research Center.

Opening Remarks — J. P. Runyon, Bell Telephone Labs.

Invited Address — J. P. Eckert, Remington Rand Univac.

2:00 p.m. — General Session

The Great Hall

Presiding: **D. A. GILMAN**, General Chairman

Welcome: J. H. Enebach, Chairman, Chicago Section; H. A. Peterson, Vice President, Fifth District.

Address: President B. R. Teare, Jr.

Awards Presentation: W. R. Harris, Chairman, Recognition Awards Committee.

Medal in Electrical Engineering Education — Dr. Ernst A. Guillemin — Webster Professor of Electrical Engineering, Massachusetts Institute of Technology.

William M. Habirshaw Award — Herman Halperin — Retired, Commonwealth Edison Co., Consulting Engineer on Electric Power Systems.

Mervin J. Kelly Award — Dr. Claude E. Shannon, Donner Professor of Science; Massachusetts Institute of Technology.

Morris E. Leeds Award — Bernard E. Lenehan, Consulting Engineer, Westinghouse Electric Corp.

David Sarnoff Award — Harry B. Smith, Manager, Engineering Dept., Air Arm Division, Westinghouse Electric Corp.

Marketing Manifesto — L. C. Truesdell, President, Zenith Sales Corporation.

Tuesday, October 9

9:00 a.m. — Radio Communication

Avenue Room East

Chairman: **C. R. KRAUS**
Bell Telephone Co. of Pa.
RADIO COMMUNICATION COMMITTEE

62-1398. A 6GC Propagation Study to Evaluate System Engineering Considerations in Traversing Difficult Terrain. L. T. Hearson, American Tel. & Tel. Co.

CP62-1419. A Mechanized Method for Evaluating Microwave Radio-Frequency Interference. G. T. Masters, D. G. Schutt, The Pacific Tel. & Tel. Co.

CP.* Rapid Microwave Switching for a Hot-standby System. M. H. Kebby, P. Skullestad, A. R. Meier, Lenkurt Electric Co.

CP62-1428. A Multi-channel 4KMC Tropospheric Scatter System. L. D. Westenburg, Collins Radio Co.

TUESDAY, OCTOBER 9 Continued

CP.* A 150 MC Personal Signalling System for Seattle, Washington, J. M. Scoville, W. J. Radecki, Pacific Northwest Bell Tel. Co.

9:00 a.m. — Data Communication & Telegraph Systems

Florentine Room

Chairman: **W. G. VIETH**
Western Union Telegraph Co.

DATA COMMUNICATION AND TELEGRAPH SYSTEMS COMMITTEES

CP62-1441. Queuing Characteristics of a Telephone Data Transmission System With Feedback. A. B. Fontaine, Massachusetts Inst. of Technology.

CP.* The 6-A Noise Counter and Its Applications. J. H. Fennick, D. L. Favin, Bell Telephone Labs., Inc.

62-1375. A High-Accuracy Motor Drive System for Facsimile I Equipment. D. W. Wax, Minneapolis-Honeywell Regulator Co.

61-1066. Transistorized 2x24 Channel Carrier Telegraph Equipment. K. Takahashi, T. Kishigami, Nippon Telegraph & Telephone Public Corp., T. Matsuzaki, K. Sakurai, Nippon Electric Co., Ltd. (Presentation by title and for written discussion.)

62-249. An Ultra-High Speed Microfilm Facsimile System. D. I Shaler, Hogan Faximile Corp. (Presentation by title and for written discussion.)

62-1415. Federal Aviation Agency Service "A" Data Interchange I System (ADIS). F. D. Biggam, S. Silberg, Teletype Corp. (Presentation by title and for written discussion.)

62-1416. Teleprinter Margin and Margin Measurements. H. H. I Wüsteney, Siemens & Halske A. G. (Presentation by title and for written discussion.)

9:00 a.m. — Radio Noise on H.V. Lines

Gold Room

Chairman: **H. L. RORDEN**
American Electric Power Service Corp.
TRANSMISSION AND DISTRIBUTION COMMITTEE

62-1367. An Investigation of Radio Influence Voltages on Transmission and Distribution Lines on the Same Right-of-Way. F. L. Taylor, The Detroit Edison Co., J. F. Bouska, Commonwealth Edison Co.

CP62-1405. Method of Evaluating Corona Noise Generation From Measurements on Short Test Lines. M. C. Perez, The Hydro-Electric Power Commission of Ontario.

62-1406. Experimental Comparisons of Radio Influence Fields III from Short and Long Transmission Lines. C. R. Bond, R. E. Graham, Ohio Edison Co., W. E. Pakala, J. E. O'Neil, Westinghouse Electric Corp.

9:00 a.m. — SCTLDS PART II — Minimization Techniques

Avenue Room West

Chairman: **WILLIAM BURKHART**
Monroe Calculating Machine Co.
COMPUTING DEVICES COMMITTEE

The papers in this symposium of five sessions will be available as special publication S-141 at or after the meeting.

TUESDAY, OCTOBER 9 Continued

Minimal Third Order Expression of a Boolean Function. A. R. Meo, Istituto Elettrotecnico Nazionale.

Research and Algorithms in the Theory of Boolean Formulas. E. W. Samson, Air Force Cambridge Research Labs., L. Calabi, Parke Mathematical Labs.

The Algebra of Boolean Formulas: Some Criteria for Minimality. L. Calabi, J. A. Riley, Parke Mathematical Labs.

Minimal Boolean Expressions With More Than Two Levels of Sums and Products. E. L. Lawler, Harvard Univ.

9:00 a.m. — Nuclear Power Plants — I

The Great Hall

Chairman: **W. F. WITZIG**
Nuclear Utility Services, Inc.

POWER GENERATION AND NUCLEONICS COMMITTEES

62-1343. The NPD Nuclear Power Station Electrical System & the III Statistical Approach to its Design. R. A. Brown, Canadian General Electric Co., Ltd.

CP62-1364. The NPD Nuclear Power Station Control Area. B. A. Oliver, Canadian General Electric Co., Ltd.

CP.* Electric Features of the SELNI Enrico Fermi Atomic Power Plant. B. H. Axelson, Westinghouse Electric Corp., J. R. Hulley, Gibbs & Hill, Inc., A. Zambelli, Societa Elettro-nucleare Italiana.

CP62-1373. Reactor Containment Vessel — Electrical Penetrations for the Carolinas-Virginia Tube Reactor Project. E. T. Witt, R. E. Andrews, Stone & Webster Engineering Corp.

9:00 a.m. — ALGOL Tutorial

Plaza Room

Chairman: **M. D. SMITH**
Honeywell Electronic Data Processing

COMPUTING DEVICES COMMITTEE

CP.* History and Development of ALGOL. C. Katz, General Electric Co.

CP.* ALGOL — A Simple Explanation. R. F. Clippinger, Honeywell Electronic Data Processing.

CP.* User Experience with ALGOL. G. H. Jones, Burroughs Corp.

CP.* User Experience with ALGOL. R. Steck, Armour Research Foundation.

2:00 p.m. — Transmission Lines — Radio Noise & Line Constants

Gold Room

Chairman: **J. K. DILLARD**
Westinghouse Electric Corp.

TRANSMISSION AND DISTRIBUTION COMMITTEE

CP62-1350. Apportionment of Observed Broadband Noise Among Power Systems. W. R. Foley, R. E. Frese, U. S. Army Electronic Proving Ground.

62-1369. Equipgradient Lines in the Vicinity of Bundle Conductors. III A. S. Timascheff, Aluminum Company of Canada, Ltd.

CP62-1387. Electromagnetic and Electrostatic Transmission Line Parameters by Digital Computer. M. H. Hesse, General Electric Co.

TUESDAY, OCTOBER 9 Continued

2:00 p.m. — Nuclear Power Plants — II

The Great Hall

Chairman: **A. J. McCROCKLIN**
General Electric Co.

POWER GENERATION AND NUCLEONICS COMMITTEES

CP.* Control and Transient Performance — RWE Nuclear Power Plant, Kahl, Germany. M. A. Head, General Electric Co.

CP62-1399. The Advanced Epithermal Thorium Reactor Concept for Power Utility Application. D. T. Eggen, Atomic International.

CP.* Development Objective of the Army Nuclear Power Program. J. D. Griffith, Div. of Reactor Development, AEC.

62-1429. Thermionic Nuclear Reactors. E. F. Gyftopoulos, G. N. I. Hatsopoulos, Massachusetts Inst. of Technology (Presentation by title and for written discussion).

62-1436. Static Nuclear Thermoelectric System for Space. T. E. III Kueser, P. S. Merrill and F. G. Tauch, Westinghouse Electric Corp. (Presentation by title and for written discussion.)

2:00 p.m. — Switchgear

Florentine Room

Chairman: **J. B. OWENS**
I-T-E Circuit Breaker Co.

SWITCHGEAR COMMITTEE

62-1430. Switching Severity of Industrial Circuits — I. E. W. III Boehne, I-T-E Circuit Breaker Co.

CP62-1349. A Digital Computer Program for Determination of Power Circuit Breaker Adequacy. C. H. Fleming, R. E. Raun, Ohio Edison Co.

CP62-1437. Application of Fuses for D.C. Capacitor Banks. J. G. Murray, G. Bronner, Princeton University.

62-1431. An Extruded Polyphase Bus. H. G. Frostick, R. E. Goers, III U. S. Steel Corp. (Presentation by title and for written discussion.)

2:00 p.m. — SCTLDS PART III — Sequential Circuits — I

Avenue Room West

Chairman: **T. H. CROWLEY**
Bell Telephone Laboratories, Inc.

COMPUTING DEVICES COMMITTEE

The papers in this symposium of five sessions will be available as special publication S-141 at or after the meeting.

Machine Properties Preserved Under State Minimization. C. C. Elgot, J. D. Rutledge, IBM Research Center.

A Procedure for Obtaining an Economical Asynchronous Sequential Circuit Directly from a Set of Regular Expressions. B. Hazeltine, Brown University.

States of Sequential Machines Whose Logical Elements Involve Delay. F. E. Hohn, University of Illinois.

Reduction of Feedback Loops in Sequential Networks and Carry Leads in Iterative Networks. E. J. McCluskey, Jr., Princeton University.

TUESDAY, OCTOBER 9 Continued

2:00 p.m. — Thermoelectric Devices

Plaza Room

Chairman: **E. H. LOUGHER**
Battelle Memorial Institute
SOLID STATE DEVICES COMMITTEE

- CP.* Optimization of Thermoelectrically-Cooled Infrared Detectors. G. F. Boeson, P. F. Fenlon, A. D. Reich, Borg-Warner Corp.
- CP.* A 45-Watt Thermoelectric Generator for Field Use. M. Barmat, General Instruments Corp.
- CP.* Encapsulated Rectilinear Thermoelectric Couples for Use With Various Heat Sources. W. J. van der Grinten, General Electric Co.

2:00 p.m. — Electric Space Heating and Heat Pumps

Avenue Room East

Chairman: **W. R. STEPHENS**
General Electric Co.

DOMESTIC AND COMMERCIAL APPLICATIONS COMMITTEE

- CP.* Basic Engineering & Estimating Tools for Direct Electric Space Heating. L. O. Buckner, Metropolitan Edison Co., C. B. Hershey, Consulting Engineer, Hummelstown, Pa.
- CP.* Comparison of Heat Pumps With Resistance Heating on All-Electric Housing Projects. W. R. New, R. G. Walraven, TVA.
- CP.* Control of Distribution of Electric Infrared Energy. R. L. Boyd, Edwin L. Wiegand Co.
- CP.* Quartz Lamp Infrared Heating for a Gymnasium. C. J. Eagan, Illinois Power Co.

Wednesday, October 10

9:00 a.m. — Signal Theory

Belmont Room

Chairman: **HERBERT SHERMAN**
MIT Lincoln Laboratory
COMMUNICATION THEORY COMMITTEE

- CP.* The Space of Essentially Time and Band-Limited Signals. H. O. Pollak, Bell Telephone Labs., Inc.
- CP.* Orthonormal Exponentials. D. C. Ross, IBM Federal Systems Div.
- CP62-1378. A Note on Orthogonal Digit Coding. L. Kurz, New York University.
- 62-1358. Two Dimensional Signal Representation Using Prolate Spheroidal Functions. D. A. Landgrebe, G. R. Cooper, Purdue University.
- 62-1379. Adaptive Digital Communication for a Slowly Varying Channel. G. Lieberman, RCA. (Presentation by title and for written discussion.)
- 62-1439. Markov Processes in Communication Networks. W. S. Litchman, ITT Communication Systems, Inc., D. I. Epstein, Adcom, Inc. (Presentation by title and for written discussion.)

WEDNESDAY, OCTOBER 10 Continued

9:00 a.m. — Communication Switching — I

Avenue Room East

Chairman: **F. D. REESE**
Automatic Electric Labs., Inc.
COMMUNICATION SWITCHING COMMITTEE

- CP62-1424. Premium Autollizer Toll Ticketing. D. A. Dion, North Electric Co.
- 62-1356. Reducing Operator Effort on Person-To-Person Calls, by Automatic Toll Ticketing. R. B. King, Automatic Electric Labs., Inc.
- CP62-1391. Automatic Number Identification. B. R. DeMaeyer, Illinois Bell Telephone Co.
- CP62-1422. A Local Area Integrated PCM Telephone Network. C. Dumousseau, ITT Federal Labs.

9:00 a.m. — Industrial & Commercial Power Systems

Gold Room

Chairmen: **HARRY TAUBER**, Detroit Edison Co.
and **W. MATHEWS**, Bussman Mfg. Co.
INDUSTRIAL AND COMMERCIAL POWER SYSTEMS COMMITTEE

- 62-1377. Bibliography of Industrial System Coordination and Protection Literature. AIEE System Coordination and Protection Sub. of the AIEE Industrial and Commercial Power Systems Committee, D. S. Brereton, Chairman.
- CP62-1417. Symposium: The Influence and Effect of Various Code Making and Enforcing Organizations on Power Distribution in Industrial and Commercial Buildings. W. A. Farquhar, Underwriters Labs., Inc., W. P. Hogan, Jr., Bureau of Electrical Inspection, L. D. Price, National Electrical Manufacturers Association, F. H. Roby, Federal Pacific Electric Co., J. St. Andre, B. A. Wesche Electric Co., B. Whitaker, Underwriters Labs., Inc.

9:00 a.m. — Solid State Devices

Lincoln Room

Chairman: **P. H. KLEIN**
Sperry Rand Research Center
SOLID STATE DEVICES COMMITTEE

- 62-202. Charge-Step Derived Transfer Functions for the Junction Transistor. C. J. Bader, Burroughs Corp. (Presentation by title and for written discussion.)
- 62-1403. Semiconductor Sheets for the Manufacture of Semiconductor Devices. S. N. Dermatis, J. W. Faust, Jr., Westinghouse Electric Corp. (Presentation by title and for written discussion.)
- CP62-1404. Charge Model of Fast Transistors and Measurement of Charge Parameters by High Resolution Electronic Integrator. C. L. Hegedus, IBM Corp.
- 62-1392. Artificial Commutation of Static Converters. J. R. Toth, Sunstrand Corp., K. M. Chirgwin, Lear Siegler Corp., J. D. Schoeffler, Case Inst. of Technology.

9:00 a.m. — Generating Station Auxiliary Power Systems

The Great Hall

Chairman: **J. G. NOEST**
Consolidated Edison Co.
POWER GENERATION COMMITTEE

American Institute of Electrical Engineers

WEDNESDAY, OCTOBER 10 Continued

- 62-1400. Reappraisal of Auxiliary Supply and Controls for Avon III No. 8. C. F. Paulus, K. L. West. C. Rush, The Cleveland Electric Illuminating Co.
- 62-1393. Auxiliary Systems for 600-1500 MW, 3500 PSIG Steam III Turbine-Generator Units. S. L. Corbin, J. J. Heagerty, D. L. Weller, General Electric Co.
- CP.* Application of Static Inverters for Essential AC Loads. J. L. Fink, J. F. Johnston, F. C. Krings, General Electric Co.
- CP62-1360. Emergency Transfer of Power Plant Auxiliaries. R. A. Larnier, H. R. McKenzie, Texas Electric Service Co.

9:00 a.m. — SCTLDS PART IV — Sequential Circuits — II

Avenue Room West

Chairman: **SEYMOUR GINSBURG**
System Development Corp.
COMPUTING DEVICES COMMITTEE

The papers in this symposium of five sessions will be available as special publication S-141 at or after the meeting.

The Synthesis of Generalized Cascade Circuits. R. E. Levien, The Rand Corp.

Some Theorems for Incompletely Specified Sequential Machines with Applications to State Minimization. J. Beatty, R. E. Miller, IBM Research Center.

Bounded-transient Automata. S. Winograd, IBM Research Center.

Generalized Automata and their Information Losslessness. S. Even, Sperry Rand Research Center.

9:00 a.m. — Substations Round Table — I

Florentine Room

Chairman: **J. O. NOEL**
Illinois Power Co.
SUBSTATIONS COMMITTEE

2:00 p.m. — Communication Switching — II

Avenue Room East

Chairman: **A. E. JOEL**
Bell Telephone Labs., Inc.
COMMUNICATION SWITCHING COMMITTEE

- CP.* DYNALOGIC — Its Application to a Telephone Switching Center. B. Brightman, General Dynamics/Electronics.
- CP.* DYNALOGIC — Its Application to Impulse Analysis and Common Control for a Telephone System. G. Richards, W. Bartlett, General Dynamics/Electronics.
- CP.* Development of a Multi-Channel PAM Telephone Transmission System. R. Scott, T. Stump, General Dynamics/Electronics.
- CP.* High Speed Storage and Switching Circuits for a DYNALOGIC Switching System. J. Shirman, G. Sager, General Dynamics/Electronics
- CP.* Design for Maintainability and Reliability for Commercial Switching Systems. H. Pitlik, W. Karas, General Dynamics/Electronics.

Fall General Meeting

WEDNESDAY, OCTOBER 10 Continued

2:00 p.m. — Industrial Control

Gold Room

Chairman: **H. G. FROSTICK**
U. S. Steel Corp.
INDUSTRIAL CONTROL COMMITTEE

- 62-1434. Automatic Splicing System for Printing Press. V. B. II Kwast, Union, N. J. (formerly with Daystrom, Inc.), J. McDonald, R. Hoe & Co., Inc.
- CP62-1432. A Static Multi-Speed Synchro Switch. O. J. Struger, Allen Bradley Co.
- CP62-1433. A New Method of Starting Single Phase Induction Motors. A. K. Chatterjee, V. K. Jain, Birla College of Engineering.
- CP62-1443. Automation of a Filtered Water System. T. N. Brown, Reynolds Metals Co.
- 62-1444. Dynamic Resistance Test of Spot Welds. L. B. Cherry, I Lamar State College of Technology.

2:00 p.m. — Excitation Systems

The Great Hall

Chairman: **M. TEMOSHOK**
General Electric Co.
POWER GENERATION COMMITTEE

- 62-1347. EHV System Overvoltages Following Load Rejection of III Hydraulic Generation. P. L. Dandeno, K. R. McClymont, The Hydro-Electric Power Commission of Ontario.
- 62-1346. Analogue Computer Studies of System Overvoltages Following Load Rejections. F. P. deMello, A. C. Dolbec, D. A. Swann, M. Temoshok, General Electric Co.
- 62-1402. Some Transient Stability Problems Connected with Displacement Governors. A. K. El-Kharashi, Ain-Shams Univ.

2:00 p.m. — SCTLDS PART V — Combinational Problems

Avenue Room West

Chairman: **R. L. ASHENHURST**
University of Chicago
COMPUTING DEVICES COMMITTEE

The papers in this symposium of five sessions will be available as special publication S-141 at or after the meeting.

Synthesis of Combinational Logic Using Three-input Majority Gates. S. B. Akers, Jr., General Electric Co.

A Realization Procedure for Threshold Gate Networks. P. M. Lewis, C. L. Coates, General Electric Co.

A Class of Self-dual Threshold Functions and Lower Bounds of the Number of Threshold Functions and Maximum Weight. S. Muroga, IBM Research Center.

On Some Transformation Theorems in Many-valued Logical Systems. C. K. Tung, General Electric Co.

2:00 p.m. — Substations Roundtable — II

Florentine Room

Chairman: **J. O. NOEL**
Illinois Power Co.
SUBSTATIONS COMMITTEE

Thursday, October 11

9:00 a.m. — Communication Switching — III

Lincoln Room

Chairman: **A. J. LEININGER**
Illinois Bell Telephone Co.

COMMUNICATION SWITCHING AND RADIO COMMUNICATIONS COMMITTEES

This session will include a demonstration of the actual Chicago Police Communications Center located nearby.

- CP.* The Need for an Expanded Police Communication System in Chicago. Lt. W. Miller, Chicago Police Dept.
- CP62-1426. Voice Switching Considerations — Chicago Police Department Communications System. C. M. McLaughlin, Illinois Bell Telephone Co.
- CP62-1425. Radio Communications System Design — Chicago Police Communications System. J. Rasmuson, Motorola, Inc.
- CP62-1418. Teletypewriter Communications System for the Chicago Police Department. E. A. Hilker, Automatic Electric Labs., Inc.

9:00 a.m. — Energy Developments

Avenue Room West

Chairman: **B. G. A. SKROTZKI**
Power Magazine

POWER GENERATION COMMITTEE

- CP.* 300 KWE Fast Reactor with Thermionic Element. C. P. Stanford, The Martin Co.
- CP62-1401. Liquid Metal Faraday-Type MHD Generators. W. D. Jackson, Mass. Inst. of Technology.
- CP.* Arc MHD Generator. E. C. Kehoe, Scientific Developments, Inc.

9:00 a.m. — Direct Current Machinery

Plaza Room

Chairman: **D. E. KILTY**
Caterpillar Tractor Co.

ROTATING MACHINERY COMMITTEE

- 62-1348. Dissymmetry in D.C. Rotating Electrical Machines. J. E. III Diehl, Stackpole Carbon Co.
- 62-1374. Digital Calculation of No-Spark Zones of Large D-C III Machines. S. Wada, K. Ototake, Tokyo Shibaura Electric Co., Ltd.
- CP62-1372. D-C Machine with Solid State Commutation. T. G. Wilson, Duke University, P. H. Trickey, Sperry Rand Corp.
- 62-1359. The Development of Torque in Slotted Armatures. A. S. III Langsdorf, Washington Univ.

9:00 a.m. — Computer Use in Power System Analysis

Florentine Room

Chairman: **R. B. SHIPLEY**
Tennessee Valley Authority

POWER SYSTEM ENGINEERING COMMITTEE

THURSDAY, OCTOBER 11 Continued

- 62-1353. Analysis of Networks with Complex Autotransformers — III Part I: The Driving Point and Transfer Impedance Matrix. H. H. Happ, General Electric Co.
- CP62-1409. Minimizing Power Transmission Losses by Reactive Volt Ampere Control. H. M. Smith, Jr., Shih-Yung Tong, University of Vermont.
- CP62-1427. Effects of Capacitors on Generation and Interchange. J. P. O'Brien, Illinois Power Co.

9:00 a.m. — Forum on Proposed American Standard Code for Information Interchange

The Great Hall Balcony

Chairman: **R. W. FERGUSON**
Westinghouse Electric Corp.

COMPUTING DEVICES COMMITTEE

- CP.* History and Organization for the Establishment of American Data Processing Standards. J. B. Booth, Teletype Corp.
- CP.* Technical Features of the Proposed ASCII. T. H. Bonn, Remington Rand Univac.
- CP.* Implementation Considerations of the Proposed ASCII and Its Relationship to Other Codes. C. E. Mackenzie, IBM Corp.

9:00 a.m. — Control Systems — I

Avenue Room East

Chairman: **F. C. WEIMER**
Ohio State University

FEEDBACK CONTROL SYSTEMS COMMITTEE

- 62-1382. Quenching of Adaptive Control System Response to Test II Signal. R. Oldenburger, L. J. Schrock, Purdue Univ.
- 62-1383. Minimum-Fuel Feedback Control Systems: Second-Order II Case. M. Athanassiades, Massachusetts Inst. of Technology.
- 62-1384. Transient and Stability Studies of Multivariable Control Systems by the Method of Linear Transformations. Mrs. C. Lakshmi-Bai, University of Toronto, R. L. Kashyap, Harvard University (both formerly with the Indian Inst. of Science).
- 62-76. Multi-Parameter Self Adaptation Using Auxiliary Models. II K. W. Han, G. J. Thaler, U. S. Naval Postgraduate School. (Presentation by title and for written discussion.)
- 62-94. Modern Synthesis of Computer Control Systems. J. T. Tou, II Northwestern Univ., P. D. Joseph, Space Technology Labs., Inc. (Presentation by title and for written discussion.)

9:00 a.m. — Substations

Gold Room

Chairman: **J. O. NOEL**
Illinois Power Co.

SUBSTATIONS COMMITTEE

- 62-1388. Electrical Features of the High Voltage Switchyard — III Niagara Power Project. L. M. Berry, Charles T. Main, Inc.
- CP62-1354. Cost Reduction in Tower Design for Fault Bus Relay Protection. G. E. Heidenrich, The Cincinnati Gas & Electric Co.

THURSDAY, OCTOBER 11 Continued

2:00 p.m. — Wire/Switching — I

Avenue Room West

Chairman: **S. B. WEINER**
General Dynamics/Telecommunication
COMMUNICATION SWITCHING SYSTEMS AND
WIRE COMMUNICATIONS COMMITTEES

- 62-1407. Tone-Selective Waystation Dialing System Interconnects I "Message" and Regular Telephone Line. E. L. Roback, Automatic Electric Labs., Inc.
- CP62-1361. New Coin-Control and Ringing Techniques for End Offices. W. A. Lindbloom, Automatic Electric Labs., Inc.
- CP62-1355. Automatic Routine Testing of Exchange Trunks. J. P. Jallits, Automatic Electric Labs., Inc.
- CP62-1351. Telecommunication System of Israel. W. Fondiller, Consulting Engineer, New York City, M. J. Guy, M. E. Berman, Israel Ministry of Posts.

2:00 p.m. — Hydro-Thermal Co-ordination

Florentine Room

Chairman: **P. L. DANDENO**
Hydro-Electric Power Commission of Ontario
POWER SYSTEM ENGINEERING COMMITTEE

- 62-1410. Susquehanna River Short Range Hydro-Thermal Co-ordination. L. T. Anstine, Baltimore Gas and Electric Co., R. J. Ringlee, General Electric Co.
- CP62-1341. Computer Program to Simulate Operation of Electric Generating System. H. B. Behm, Columbus and Southern Ohio Electric Co.
- 62-1366. Optimum Scheduling of Hydrothermal Systems — A Generalized Approach. B. G. Sökkappa, The Mitre Corp.
- 62-1411. Hydrothermal Economic Scheduling — Part V: Scheduling a Hydrothermal System with Interconnections. B. Bernholtz (formerly with the Hydro-Electric Power Commission of Ontario), University of Toronto, L. J. Graham, The Hydro-Electric Power Commission of Ontario. (Presentation by title and for written discussion.)

2:00 p.m. — Fractional-Horsepower and Induction Machinery

Plaza Room

Chairman: **W. A. BROADLEY**
Metals and Controls, Inc.
ROTATING MACHINERY COMMITTEE

- 62-1345. An Analysis of the Hysteresis Motor — Part I: Analysis of the Idealized Machine. M. A. Copeland, G. R. Slemon, Univ. of Toronto.
- CP62-1423. Equivalent Circuits with Transformer Elements for Eddy Current Rotor Induction Motors Derived from the Field Equations: Part I. — Sleeve Rotor Motors and Part II. — Drag Cup Motors. W. H. Koch, Univ. of California.
- 62-1389. Saturistors and Low Starting Current Induction Motors. P. L. Alger, Rensselaer Polytechnic Inst., G. Angst, W. M. Schweder, General Electric Co.
- CP62-1413. A Study of the Double-Delta Reduced Voltage Starting Method. J. J. Courtin, Westinghouse Electric Corp.
- 62-1414. Economics, Evaluation & Trends of High Temperature Motors. V. J. Picozzi, General Electric Co. (Presentation by title and for written discussion.)

THURSDAY, OCTOBER 11 Continued

2:00 p.m. — Control Systems — II

Avenue Room East

Chairman: **J. T. TOU**
Northwestern University
FEEDBACK CONTROL SYSTEMS COMMITTEE

- CP.* Transfer Function Tracking of a Linear Time Varying System by Means of Orthogonal Networks. N. N. Puri, Drexel Inst. of Technology, C. N. Weygandt, Univ. of Pennsylvania.
- CP62-1385. Redundancy Techniques for Reliable Flight-Control Computers. J. J. Fleck, General Electric Co.
- CP62-1386. Feedback Control System Analysis with a Digital Computer — Part I: Theory and Techniques. R. W. Stine-man, W. S. King, The Boeing Co.
- CP.* Integral Control in Sampled-Data Control Systems. D. L. Baker, North American Aviation, Inc.
- CP62-1421. Mathematical Impulse Techniques in the Analysis of Control Systems. G. E. Gloss, Univ. of Colorado.

Friday, October 12

9:00 a.m. — Computer Elements — I

Plaza Room

Chairman: **W. R. BEAM**
Rensselaer Polytechnic Institute
COMPUTING DEVICES COMMITTEE

- CP62-1420. The Design of Biasing Networks for Circuits Containing More Than One Non-Linear Element. L. P. Huelsman, University of Arizona (formerly with Univ. of California.)
- CP.* Lumped Charge Model of a Junction Diode and Its Application for Theoretical Analysis of High Speed Diode Logic Circuits. Yohan Cho, The Mitre Corp.
- CP.* Expanded Application for Acoustic Delay Line Devices Through Functional Design. C. E. Wellman, General Electric Co.
- CP62-1394. Statistical Design and Reliability Study of Neon Photo-conductor Circuits. J. L. Patterson, IBM Corp.
- CP62-1442. Size and Speed Capabilities of Dro Film Memories. A. V. Pohm, R. J. Zingg, T. A. Smay, G. A. Watson, R. M. Stewart, Jr., Iowa State University.

9:00 a.m. — Wire Communications — II

Lincoln Room

Chairman: **J. W. STUBNER**
Illinois Bell Telephone Co.
WIRE COMMUNICATION COMMITTEE

- CP.* New 12-Channel Carrier System for EAS Trunk and Subscriber Service. O. A. Jorgensen, General Dynamics/Telecommunication.
- CP.* Repeater for New 12 Channel Carrier System. D. Rimlinger, General Dynamics/Telecommunication.
- CP.* The T1 Carrier System — Philosophy & General Features. D. F. Hoth, Bell Telephone Labs., Inc.

FRIDAY, OCTOBER 12 Continued

- CP.* The T1 Carrier System — System Description. N. E. Lentz & A. Hamori, Bell Telephone Labs., Inc.
- CP.* The T1 Carrier System — Application Planning. P. W. Erickson, Illinois Bell Telephone Co.

9:00 a.m. — Synchronous Machinery

Avenue Room West

Chairman: **R. F. EDWARDS**

The Elliott Co.

ROTATING MACHINERY COMMITTEE

- CP62-1390. Detecting and Locating Interturn Short Circuits on Turbine-Generator Rotors. P. K. Hermann, R. Mahrt, AEG, Research Inst., H. H. Doon, Burns and Roe, Inc.
- CP62-1363. An Experimental Study of Cooling Flow Distribution in a Model Alternator. R. J. Munton, E. Markland, Univ. of Nottingham.
- 62-1368. Determination of the Magnetic Field in the End Zone of III Turbine Generators. J. A. Tegopoulos, Westinghouse Electric Corp.
- 62-1352. Permanent Magnet Generators — Part II: Optimum Design. D. J. Hanrahan, D. S. Toffolo, U. S. Naval Research Lab.

9:00 a.m. — Power System Planning

Gold Room

Chairman: **E. C. PLANT**

Public Service Electric & Gas Co.

POWER SYSTEM ENGINEERING COMMITTEE

- 62-1371. Load Growth Characteristics as Related to Generating III Capacity Additions. C. W. Watchorn, Pennsylvania Power & Light Co.
- 62-1344. Determination of Reserve Requirements of Two Interconnected Systems. V. M. Cook, M. J. Steinberg, Consolidated Edison Co. of N. Y., Inc., C. D. Galloway, A. J. Wood, General Electric Co.
- CP62-1412. Distribution Planning and All-Electric Load Building. A. D. Bertolett, W. J. Cloues, Philadelphia Electric Co.

9:00 a.m. — Basic Sciences

Belmont Room

Chairman: **T. J. HIGGINS**

University of Wisconsin

BASIC SCIENCES COMMITTEE

- CP62-1380. The Graphical Solution of Linear Circuits in the Steady State — I. E. W. Boehne, I-T-E Circuit Breaker Co.
- 62-1365. Adaptation of a Numerical Technique for Solving Static I Field Problems to Rigid Magnets. P. V. Raab, D. Henkel, Allen-Bradley Co.
- CP.* An Approach to the Unified Theory of Electric Machines. R. N. Sudan, Cornell Univ.
- CP.* Functions Annihilable by Sampling. J. P. L. Ho, C. A. Halijak, Kansas State Univ.
- CP.* Subarea Determination of the Capacitance of Coaxial Conical Capacitors. T. J. Higgins, F. J. Kriegler, Univ. of Wisconsin.

FRIDAY, OCTOBER 12 Continued

2:00 p.m. — Wire Communications — III.

Lincoln Room

Chairman: **J. N. PETRIE**

Automatic Electric Co.

WIRE COMMUNICATION COMMITTEE

- CP62-1408. A Method of Estimating the "1% Minimum" Cross-talk Loss (for Voice Frequencies) in a Paired Cable, Without Empirical Data. D. G. Aviv, M. Landis, RCA.
- CP.* Radio Frequency Interference in Carrier Telephone Systems. R. L. Davis, Bell Telephone Labs., Inc.
- CP62-1438. A Special Purpose Cordless Telephone. R. H. Hoglund, E. E. Reinke, Pacific N.W. Bell Telephone Co.
- CP.* A Unique Frequency Generating System for a Transistorized 600-Channel Single-Sideband Frequency Division Multiplex Equipment. J. H. Ingram, G. M. Ohlen, Collins Radio Co.

2:00 p.m. — Computer Elements — II.

Plaza Room

Chairman: **A. W. LO**

International Business Machines Corp.

COMPUTING DEVICES COMMITTEE

- CP62-1395. Piece-Wise Linear Analysis Applied to Design of Integrated Logic Circuits. W. C. Seelbach, N. Miller, Motorola, Inc.
- CP.* Non-Linear Feedback Technique Applied to a High-Speed Computer Logic Element. C. E. Ruoff, IBM Corp.
- CP62-1396. Transistor Push-Pull Logic. R. S. Lewis, Lockheed Missiles & Space Co.
- CP62-1397. Resistor-Transistor-Backward Diode Nanosecond Logic. W. R. Smith, Iowa State Univ.
- CP.* A High-Speed Tunnel Diode-Transistor Sense Amplifier-Register. T. A. Smay, A. V. Pohm, Iowa State University.

INSPECTION TRIPS: All inspection trips will leave from and return to the Pick-Congress Hotel. The round-trip fee for each tour will be \$2.00. The morning tours will leave at 9:00 A.M. and the afternoon tours will leave at 1:00 P.M. Some trips will have a limited attendance as noted.

Tuesday, October 9, morning — Underwriters Laboratories, Inc. The tour to this facility will better acquaint AIEE members and guests with the scope and depth of testing carried on continually on all kinds of electrical equipment and apparatus. Tour members will witness electrical testing of equipment and inspect electrical testing facilities.

Tuesday, October 9, morning — United Airlines, O'Hare Airport. With the complete transfer of all air traffic from Midway to O'Hare International Airport, United Air Lines has installed automated equipment to efficiently handle luggage for departing passengers. Tour members will get a behind-the-scenes look at the new conveying system, which is controlled electronically to route luggage to the proper departing flight. After the agent weighs the bag, it is then automatically sorted and dispatched or stored for a particular flight. Hangar facilities for the maintenance and repair of United Air Lines' fleet of jets and propeller-driven aircraft also will be visited. Limit for the tour — 40.

Tuesday, October 9, afternoon — Commonwealth Edison Substations. This tour will enable AIEE members to appraise the practices of Commonwealth Edison Company in the design, construction and operation of five types of substations. Included in the tour will be typical examples of metropolitan, urban and compact distribution center substations, plus a 138-kv to 12-kv substation located on transmission right-of-way, and a 34-kv transmission substation.

Wednesday, October 10, morning — McCormick Place. A complete tour will be made of one of the largest and most modern convention halls in the world. The tour will cover the extensive electrical facilities as well as the exhibit areas. A highlight of the tour will be a trip through the Arie Crown Theater, with a look backstage at the elaborate lighting and sound systems.

Wednesday, October 10, afternoon — ZGS Installation, Argonne National Laboratory. The Argonne National Laboratory has as its primary objective research and development of peaceful uses of atomic energy, with its work divided about equally between basic research and engineering development. One of the key facilities that will contribute to basic research is the \$50 million Zero Gradient Synchrotron, now under construction. Tour members will have an excellent opportunity to view more of this facility and its major components than they could after completion of the project. The ZGS is a 12.5-billion electron volt particle accelerator and is expected to produce a greater abundance of particles than other and larger accelerators. For work in basic research it will produce all of the 30 known sub-atomic particles. Depending upon the progress of construction, tour members may see the ring of magnets that weighs 4,000 tons and is 200 ft. in diameter, plus the shielding afforded by tons of surplus battleship armor plate. Limit for the tour — 40.

Wednesday, October 10, afternoon — Computer Installation, American Oil. American Oil Company, at its Whiting, Indiana Refinery is now using a special closed-loop IBM computer system to control the operation of a 140,000 bbl. crude pipe still. The on-line computer control system is an integrated operation for scanning process instruments, immediately computing current operating conditions and then adjusting the control points to achieve optimum operations. The operators of the crude pipe still use a console for making inquiries to the computer and for inserting information into the computer, such as product specifications or the latest laboratory results.

The trip will start with a short talk by the company's computer control coordinator. This will be followed by a trip into the refinery where the crude pipe still, the control room and the computer will be explained separately. Limit for the tour — 40.

Thursday, October 11, morning — New Filtration Plant. Chicago's Central District Filtration Plant is the world's largest water filtration plant and is the largest single construction job of its kind now under way in the United States. The plant is built in Lake Michigan within a 60-acre coffer dam. More than 125,000 timber pilings have been driven into the lake bottom to support the structures which will consist of 515,000 cubic yards of concrete and 40,000 tons of reinforcing steel.

The filtration plant will have a capacity of at least 960 million gallons of filtered water a day. Motor-driven pumps will lift raw lake water to a 25.5-foot head and the water will then flow by gravity through the filtration plant. The water flow will be controlled by 2,000 valves and 80 sluice gates. Across the middle of the plant is the operation center, or head house, which includes the pumping station, chemical, control and administration buildings and the chlorine and chemical receiving building. Settling basins and filter units are located on both sides of the operation center and cover about 31 acres. A 69-million gallon filter water reservoir is located at the west end of the plant.

Thursday, October 11, morning — Western Electric Company. AIEE members and guests will have a chance to tour the Hawthorne Plant of Western Electric Company, the manufacturing arm of the American Telephone and Telegraph Company. To make the many and varied pieces of equipment used by the operating companies of AT&T, the Hawthorne Plant includes a rod and wire mill, a cable plant, and step-by-step shops. The tour will also visit examples of light and heavy manufacturing operations. Limit for the tour — 40.

Thursday, October 11, afternoon — Gary Works of U. S. Steel Company. Conceived and operated as an integrated steel plant, Gary Works of U. S. Steel Company stretches for five miles along Lake Michigan and one and one-half miles inland just north of Gary, Indiana. The plant receives iron ore from the great Mesabi Range in Minnesota, millions of tons of limestone from quarries in Michigan, and coal from Pennsylvania and West Virginia.

From these basic raw materials, the plant turns out more than 40,000 sizes and shapes of steel products in its merchant mills. Products include plates, shapes, bars, and slabs for steel sheets, plus rods, rails and railroad car wheels and axles.

Trip members will have a conducted tour that will show them every step in the making of steel. Facilities to be seen include a row of 12 blast furnaces, open hearths, primary mills and finishing mills. The plant has within its boundaries 250 miles of railroad tracks and 65 miles of paved roadway. Limit for the tour — 40.

LADIES' ACTIVITIES: During the morning hours of each weekday, Room 900 of the Pick-Congress Hotel will be the headquarters for the ladies of AIEE members and guests. A good way to start each day will be to have coffee in Room 900 starting at 9:30 A.M.

Tickets for ladies' activities will be available each morning in Room 900 for the event of the day and for following days. It is not intended to have tickets for each event available "at the door" so be sure to obtain all your desired tickets early, especially where participation in an event is limited.

Information will be on hand for those attractions and diversions in the Chicago area that hold particular appeal for the ladies. In addition, Room 900 will be available for messages, and lost and found articles will be kept there for their owners.

Monday, October 8, 1:00 P. M. — Petite Luncheon. The Petite Luncheon for ladies only will be served in the Pick-Congress. Following the meal Phillips Florist will offer a flower arrangement demonstration using artificial and "dried" flowers. Price, about \$2.50.

Tuesday, October 9, noon – Playboy Club Lunch. A lunch and entertainment is planned in the Play Room of the internationally known Playboy Club of Chicago, 112 E. Walton Street, on the near North Side. To give the ladies a morning of relaxed and individual activity in the downtown area, it is planned not to have transportation arranged to the Playboy Club, but to leave the transportation flexible.

The Playboy Club is a short cab ride from downtown or may be reached by buses going north on Michigan Avenue from Randolph Street or north. Lunch will be followed by entertainment provided by Miss Fern Fels, a monologist. Price, about \$3.75. Limit for this event – 120.

Wednesday, October 10, morning – Oakbrook Shopping Center. Buses will leave the hotel at 10:00 A.M. for one of Chicago's newest and largest shopping areas, the Oakbrook Shopping Center. This project has such stores as Marshall Field, Bonwit Teller, and Best's, plus a variety of smaller specialty shops. After a visit to these shops, there will be a lunch at the Red Room of Henrici's at 1:30 P.M. Lunch will be followed by a performance of the Sweet Adeline Singers. Price, about \$3.50.

Thursday, October 11, afternoon – Dessert Tea. A demonstration of the latest styles and fashions in wigs will be presented in the Pick-Congress at 2:30 P.M., followed by a dessert tea. Price, about \$1.75.

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ETA KAPPA NU LUNCHEON: The annual luncheon sponsored by Eta Kappa Nu will be held on Wednesday, October 10, at noon in McCormick Place. A prominent speaker for the luncheon is being arranged and will be announced at the meeting. Price for the luncheon will be about \$2.50. Limit for the luncheon will be about 100. Luncheon is open to AIEE members.

"FALL FROLICS" DINNER AND ENTERTAINMENT: Highlight of the social functions of the Fall General Meeting will be the "Fall Frolics," an evening for dinner and entertainment, the latter offered by top-flight talent. This event will be held on Wednesday evening, October 10 in the Pick-Congress. The price will be \$12.50 per person. Dress informal.

FALL GENERAL MEETING COMMITTEE

General

D. W. Gilman, *Chairman*
 D. R. Whitlow, *Vice Chairman*
 L. E. Ackmann, *Secretary*
 T. Donaldson, *Treasurer*

Fall Frolics

F. D. McGuire, *Chairman*
 R. L. Tucker
 R. L. Davis
 L. R. Stensland

General Session

J. R. Wessling, *Chairman*

Hotel Arrangements

J. M. Henderson, *Chairman*

Technical Session Rooms and Equipment Sub-Committee

K. Hicks, *Chairman*
 S. W. Anderson
 R. L. Bolger
 W. N. Brown
 Samuel Cluts, Jr.
 I. E. Cooper, Jr.
 H. J. Ingram, Jr.
 J. F. McFarland
 W. J. Meek
 H. A. Onishi
 W. L. Peterson

Committee Rooms and Catering Sub-Committee

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 L. N. Cathey
 J. S. Mashl
 N. I. Saven
 R. D. Webster
 L. R. Yule

Registration Area Sub-Committee

R. D. Homer, *Chairman*
 A. L. Rachofsky

Signs and Banners Sub-Committee

R. M. Miller, *Chairman*
 T. M. O'Regan

Finance and Budget

P. Casterline, *Chairman*

Hospitality

W. C. Wiechmann, *Chairman*
 R. A. Bulley
 W. J. Coogan
 W. J. Dres
 W. J. Klepitch
 P. D. Lattner
 J. R. Lies
 G. J. Mack
 C. N. Mathewson
 T. O. Michels
 R. A. Paul
 C. E. Pigue
 C. O. Roe
 R. B. Russell
 T. M. Scharf
 R. E. Schreiber
 R. R. Smessaert
 F. L. Wunderlich

Sale of Papers

E. H. Shintani, *Chairman*
J. A. Hughes, *Co-Vice Chairman*
K. C. Stenerson, *Co-Vice Chairman*

R. E. Basta	E. G. Ross
W. J. Carmen	E. W. Schmunk
S. L. Chapin, Jr.	F. S. Stiglitz
J. B. O'Brien	W. L. Tiffin, Jr.
H. A. Palm, Jr.	T. E. Zielinsky

Technical Program

R. E. Anderson, *Chairman*
R. A. Zurowski, *Vice Chairman*

D. Lobsinger	H. J. Ingram, Jr.
W. Moser	W. T. O'Sullivan
T. Horita	

Ladies' Activities

Mrs. D. Gilman, *General Chairman*
Mrs. H. R. McCannel, *Co-Chairman*

Publicity Sub-Committee
Mrs. M. J. Adams, *Chairman*

Registration Sub-Committee
Mrs. W. C. Freeman, *Chairman*
Mrs. G. G. Law, *Co-Chairman*

Mrs. R. L. Boyd	Mrs. R. Treece
Mrs. L. E. Ackmann	Mrs. F. D. Hurd
Mrs. H. E. Nason	Mrs. J. E. McFarland
Mrs. F. Carlton	

Coffee Hours Sub-Committee
Mrs. W. Wiechmann, *Chairman*
Mrs. W. Larner, *Co-Chairman*

Mrs. R. Gawronski	Mrs. J. Hughes
Mrs. C. W. Puent	Mrs. E. Edwards
Mrs. R. Lies	Mrs. O. Butler
Mrs. W. G. Betz	

Reception Tea Sub-Committee
Mrs. L. E. Randall, *Chairman*
Mrs. D. Whitlow, *Co-Chairman*

Mrs. W. M. Ballenger	Mrs. D. Parry
Mrs. E. R. Whitehead	Mrs. R. H. Beal

Monday's Entertainment Sub-Committee
Mrs. Warren Baxter, *Chairman*
Mrs. J. J. Karnes, *Co-Chairman*
Mrs. W. Peterson Mrs. W. Garity

Tuesday's Luncheon Sub-Committee
Mrs. E. Norell, *Chairman*

Mrs. J. Romano Mrs. J. Fox

Wednesday's Luncheon Sub-Committee

Mrs. J. Schneider, *Chairman*
Mrs. H. T. Pearson, *Co-Chairman*

Mrs. R. Scheffers	Mrs. R. Van Meter
Mrs. J. R. Weyrauch	Mrs. C. Mennecke
Mrs. W. Kottemann	

Thursday's Entertainment Sub-Committee

Mrs. F. A. Cox, *Chairman*
Mrs. P. McLaughlin, *Co-Chairman*

Mrs. F. M. Scott

Flower Sub-Committee
Mrs. J. Bracken, *Chairman*

Ticket Sales

R. A. Nelson, *Chairman*
H. Fossum, *Vice Chairman*

L. LaTourette	N. Greever
P. R. Cassidy	D. J. Sommers
R. Treece	J. Banas
J. Hilton	W. Cook

Registration

W. A. Baxter, *Chairman*
V. E. Finnigan, *Vice Chairman*

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R. X. French	K. V. Knudsen
E. H. Horn	R. L. Wallent
R. Huber	

Trips & Transportation

J. G. Miller, *Chairman*

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D. C. Pearcy	

Publicity

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B. R. DeMaeyer	R. L. Storer
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M. R. Kochevar	

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M. RUBINOFF
C. F. SAVAGE
G. E. SCHALL, JR.
C. G. VEINOTT
R. N. WAGNER
W. P. WILLS
B. J. WILSON
C. A. WOODROW

* Ex Officio

Committee Meetings

Monday, October 8th

Room

9:00 A.M. — 12:00 Noon

Radio Communication Systems Committee.....Columbian
Membership Committee.....Roosevelt

9:30 A.M. — 12:00 Noon

Professional Conduct Committee.....Carter

10:00 A.M. — 12:00 Noon

Safety & Standards Subcom., Nucleonics Committee..Tally-Ho

4:00 P.M. — 6:00 P.M.

Public Relations Committee.....Carter
System Planning Subcom. Pwr. Sys. Engg.....Columbian
Data Communication Committee.....Lake Shore

7:00 P.M. — 10:00 P.M.

1963 Workshop Task Group, Computing Devices.....Music
Control Computer Workshop, Computing Devices...Park View

8:00 P.M. — 10:00 P.M.

Computing Devices Executive Committee.....Tally-Ho

Tuesday, October 9th

9:00 A.M. — 12:00 Noon

Computer Application Subcom., System Engg.
Comm.Buckingham
Electric Space Heating, Heat Pumps & Air Conditioning
Subcom. Dom. & Comm. Appli. Comm.....Illinois No. 4
Cybernetics Committee.....Belmont
Domestic Appliance Comm.....Illinois No. 5
Intersociety Relations.....Carter
Research Committee.....Columbian
Executive Subcommittee, Substations.....Lake Shore
System Modelling W. G., Systems Science Comm.....Music
Systems Optimizing Techniques W. G., Systems
Science Comm.Park View
Systems Reliability W. G., Systems Science Comm.....Shelby
Systems Theory W. G., Systems Science Comm.....Victorian
Executive Subcommittee, I. & C. P. S.....Private Room

9:00 A.M. — 4:00 P.M.

Materials Subcom., Electronic Transformers.....Francis I

9:00 A.M. — 5:00 P.M.

Prize Awards Committee.....Roosevelt
System Operations Subcom., Power Sys. Engg...Illinois No. 3

11:00 A.M. — 12:30 P.M.

Programming Subcommittee, Computing Devices....Lincoln

12:00 Noon — 2:00 P.M.

Luncheon — Systems Coordination & Protection Subcomm.,
Ind. & Comm. Pwr. Sys.....Lake Shore

12:30 P.M. — 5:00 P.M.

Luncheon — Systems Science Committee.....Music
Luncheon — Communication Division Committee...Park View

1:00 P.M. — 4:00 P.M.

Electric Welding Committee.....Victorian

2:00 P.M. — 5:00 P.M.

Educational Publications Committee.....Shelby

Illinois rooms located on lower level

American Institute of Electrical Engineers

TUESDAY, OCTOBER 9 Continued

	<i>Room</i>
Industrial & Commercial Power Systems Comm.	<i>Lake Shore</i>
Safety Committee	<i>Carter</i>
Application of Probability Methods Subcom., System Engg.	<i>Illinois No. 5</i>
Substations Committee	<i>Buckingham</i>
Rural Electrification Subcom., Domestic & Comm. Appli.	<i>Columbian</i>
Electronics Committee	<i>Belmont</i>
Periodicals & Transactions	<i>Illinois No. 4</i>
4:30 P.M. — 6:30 P.M.	
Special Technical Conferences Subcom. Tech. Oper. Dept.	<i>Victorian</i>
5:00 P.M. — 9:00 P.M.	
Computing Devices Committee	<i>Roosevelt</i>
7:00 P.M. — 10:00 P.M.	
Computer Systems Subcom., Computing Dev.	<i>Lake Shore</i>
7:30 P.M. — 10:00 P.M.	
Administrative Subcommittee, Pwr. Sys. Engg.	<i>Carter</i>
7:30 P.M. — 11:00 P.M.	
Logic & Switching Circuit Theory Subcom. Comp. Dev. Comm.	<i>Tally-Ho</i>

Wednesday, October 10th

9:00 A.M. — 11:00 A.M.	
Application to Design Evaluation, Comp. Dev.	<i>Francis I</i>
System Economics Committee, System Engg. Comm.	<i>Tally-Ho</i>
9:00 A.M. — 12:00 Noon	
Domestic & Commercial Appli. Comm.	<i>Lake Shore</i>
Science Subdivision	<i>Illinois No. 5</i>
Aero Space Applications Subdiv. General Applications Div. Comm.	<i>Music</i>
Electronics Subdivision	<i>Victorian</i>
Advancement of Power Engg. Subcom., Pwr. Gen. Comm.	<i>Illinois No. 4</i>
Professional Development and Recognition Dept.	<i>Columbian</i>
System Controls Subcom., System Engg. Comm.	<i>Park View</i>
W. G. on Load Characteristics	<i>Carter</i>
Information Processing & Systems Subdiv.	<i>Roosevelt</i>
Industrial Control Committee	<i>Buckingham</i>
9:00 A.M. — 5:00 P.M.	
General Administration Dept.	<i>Plaza</i>
12:30 P.M. — 2:00 P.M.	
Luncheon — Eta Kappa Nu	<i>McCormick Place</i>
12:30 P.M. — 5:00 P.M.	
Luncheon — General Applications Division Committee	<i>Columbian</i>
Luncheon — Nuclear Instrumentation Committee	<i>Victorian</i>
Luncheon — Science & Electronics Division Committee	<i>Roosevelt</i>
1:30 P.M. — 4:30 P.M.	
Data Processing Applications Subcom. Comp. Dev. Comm.	<i>Buckingham</i>
2:00 P.M. — 5:00 P.M.	
Edison Medal Committee	<i>Lake Shore</i>
Feedback Control Systems	<i>Shelby</i>
Power Division Committee	<i>Music</i>
Telegraph Systems Committee	<i>Lincoln</i>
District TOD Representatives Comm.	<i>Illinois No. 4</i>

Illinois rooms located on lower level

Fall General Meeting

WEDNESDAY, OCTOBER 10 Continued

	<i>Room</i>
Power System Engineering Committee	<i>Belmont</i>
Industrial Plant Power Systems Subcom., Ind. & Comm. Pwr. Sys. Comm.	<i>Park View</i>
Industry Division Committee	<i>Tally-Ho</i>
Gray Book W. G., Ind. & Comm. Pwr. Syst. Comm.	<i>Carter</i>
2:30 P.M. — 5:00 P.M.	
Merger Matters	<i>Francis I</i>
4:00 P.M. — 6:00 P.M.	
Telegraph Instrument Testing Subcom. Wire Comm. Comm.	<i>Private Room</i>
4:30 P.M. — 6:30 P.M.	
PICA Conference Comm.	<i>Buckingham</i>
5:00 P.M. — 6:30 P.M.	
TOD Personnel Development Subcom.	<i>Carter</i>
7:30 P.M. — 10:00 P.M.	
Communication Switching Systems Committee	<i>Park View</i>
Wire Communication Committee	<i>Roosevelt</i>
7:30 P.M. — 11:00 P.M.	
Computer Standards Subcom. Comp. Dev. Comm.	<i>Tally-Ho</i>

Thursday, October 11th

9:00 A.M. — 12:00 Noon	
Administrative Comm., Institute Tech. Group on Automatic Control	<i>Columbian</i>
Communication Theory Committee	<i>Tally-Ho</i>
PSCC Methods of Measurements Subcom.	<i>Lake Shore</i>
PSCC Equipment Design Standards Subcommittee	<i>Music</i>
PSCC Microwaves Subcommittee	<i>Park View</i>
PSCC Wire Line Subcommittee	<i>Shelby</i>
PSCC Research Subcommittee	<i>Victorian</i>
Joint W. G. on Outage Data Analysis for System Planning	<i>Roosevelt</i>
9:00 A.M. — 12:30 P.M.	
Technical Operations Dept.	<i>Washington</i>
11:00 A.M. — 2:00 P.M.	
Luncheon — Administrative Subcom., Rotating Machinery	<i>Carter</i>
12:30 P.M. — 2:00 P.M.	
Luncheon — Technical Operations Dept.	<i>Buckingham</i>
2:00 P.M. — 5:00 P.M.	
Data Acquisition & Transformation Subcom. Comp. Dev. Comm.	<i>Lake Shore</i>
D-c. Subcommittee, Rotating Machinery Comm.	<i>Tally-Ho</i>
Planning & Coordination Comm.	<i>Washington</i>
Power Generation Committee	<i>Belmont</i>
PSCC Executive Subcommittee	<i>Columbian</i>
4:00 P.M. — 7:00 P.M.	
Induction Machinery Subcom., Rotating Machinery	<i>Roosevelt</i>
7:30 P.M. — 10:00 P.M.	
Forum of Technical Committee Chairmen	<i>Gold</i>

Friday, October 12th

9:00 A.M. — 12:00 Noon	
Board of Directors	<i>Florentine</i>
9:00 A.M. — 4:00 P.M.	
Power Systems Communications Committee	<i>Roosevelt</i>
12:00 Noon — 2:00 P.M.	
Luncheon — Board of Directors	<i>Florentine</i>
2:00 P.M. — 5:00 P.M.	
Board of Directors	<i>Florentine</i>
Basic Sciences Committee	<i>Columbian</i>

Illinois rooms located on lower level

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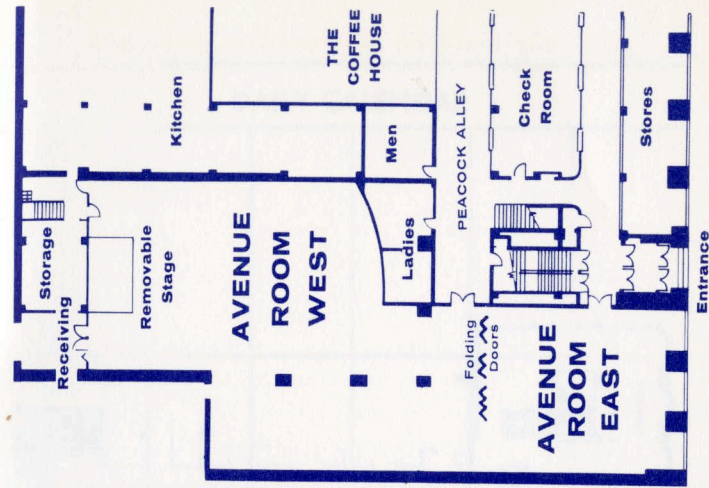
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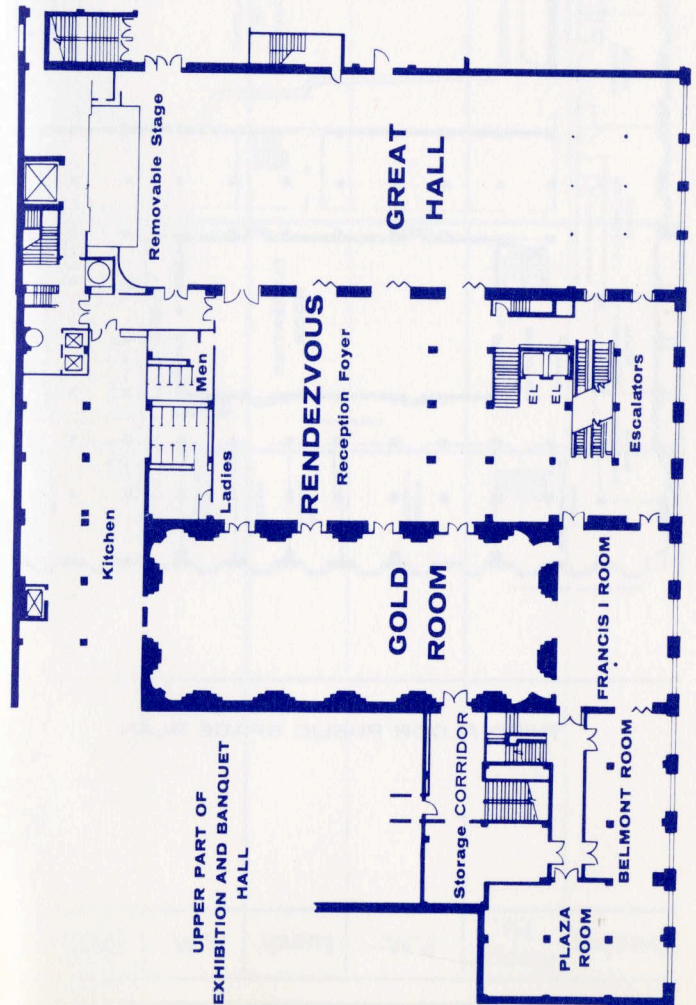
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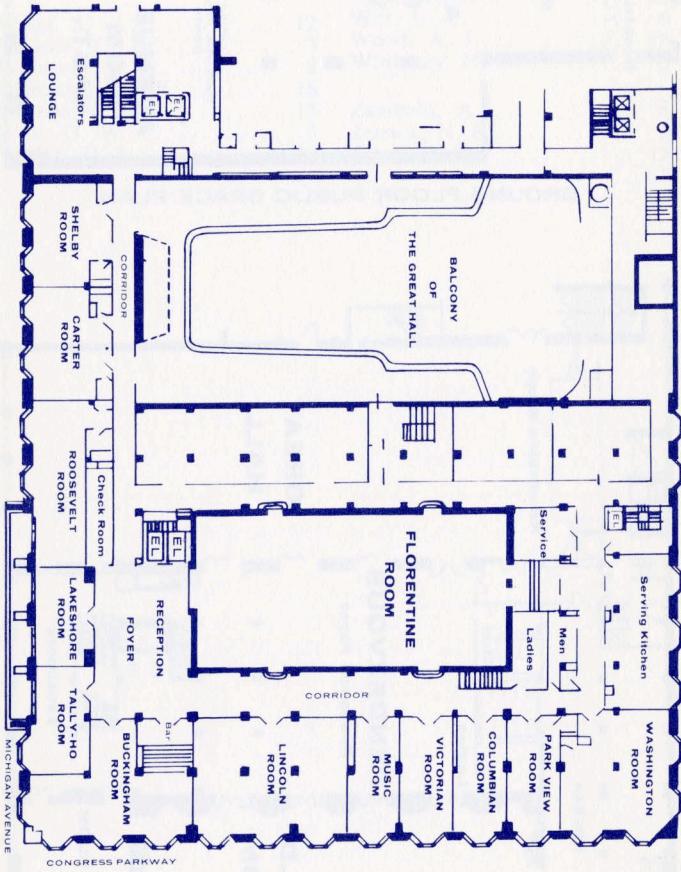
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GROUND FLOOR PUBLIC SPACE PLAN



SECOND FLOOR PUBLIC SPACE PLAN



THIRD FLOOR PUBLIC SPACE PLAN

DAILY CALENDAR

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Evening						
Happy Hr.						
P.M.						
Lunch						
A.M.						
Bkfst						



Artist's rendering of Marina City, an all-electric residential, commercial and recreational development on the Chicago River north of the "Loop"