



Scanfax

POSTMASTER:
SECOND CLASS POSTAGE
paid at Chicago, Illinois.

SCANFAX, 55 E. WASHINGTON ST., ROOM 532, CHICAGO, IL 60602

CHICAGO SECTION • IEEE • INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

JUNE 1975

CHICAGO SPRING CONFERENCE

The Chicago Spring Conference on Broadcast and TV Receivers will be held June 9-10, 1975, at the Marriott Motor Hotel, 8538 W. Higgins Road, Chicago, Ill. A morning session, starting at 9:30 a.m., and an afternoon session, starting at

2:00 p.m. are planned each day.

The Monday morning session on tuning will be chaired by Dick Sudges, Admiral Corporation. Monday afternoon's session on integrated circuits will have Halfon Hamaoui, Fairchild Semiconductor as the chairman. Guest speaker at Monday's luncheon will be Donald Atwood, general manager, Delco Electronics Div., General Motors Corporation.

An industry cocktail party, 6:00 p.m., will follow the afternoon session.

Tuesday morning's session on color TV will have Joseph Zahnen, Magnavox Co., as a chairman. Joseph Markin, Zenith Radio Corporation, will chair the Tuesday afternoon session on new techniques in video display.

For further information, call the IEEE office, 263-5954.

COMSOC ELECTS OFFICERS

The Chicago Chapter of the IEEE Communications Society has elected the following officers for the 1975-76 season:

Chairman:	Dean Dion
	Automatic Electric
Vice Chairman:	Jay Hammade
	Automatic Electric
Secretary:	George Wendt
	Teletype Corp.

RELAYING AND DISTRIBUTION SYSTEM

On June 11, George Hug, Inland Steel Company, will discuss "Design and Application of Relaying and Distribution System" at a meeting of the Chicago joint Chapter of the Industrial Applications Society and the Industrial Electronics and Control Instrumentation Group.

Meeting will be held at Nielsen's Village, 7330 W. North Avenue, Elmwood Park, Ill. Social hour, 5:30 p.m.; dinner, 6:15 p.m.; meeting, 7:15 p.m. For information and reservations, call Robert Loewe at 782-5520 between 8 a.m. and 5:00 p.m.

CALENDAR OF EVENTS

IEEE OFFICE: 263-5954

- | | |
|-----------|--|
| June 3 | IEEE Executive Committee Meeting; Brown & Root Offices; 2122 Spring Road, Oak Brook, Ill.; 7:30 P.M. All Welcome. |
| June 9-10 | Chicago Spring Conference; Marriott Motor Hotel, 8538 W. Higgins Road, Chicago. Morning sessions, 9:30 a.m.; luncheon, 12:30 p.m.; afternoon sessions, 2:30 p.m. |
| June 11 | Relaying and Distribution System; IAS/IECI; Nielsen's Village Restaurant, 7330 W. North Ave., Elmwood Park, Ill. Social hour, 5:30 p.m.; dinner, 6:15 p.m.; meeting, 7:15 p.m. |
| July 2 | IEEE Executive Committee Meeting; Brown & Root Offices; 2122 Spring Road, Oak Brook, Ill.; 7:30 p.m. All Welcome. |

Deadline for copy: First week of month preceding publication

GROUP & SOCIETY CHAIRMEN

Remember that your budget for the second half of fiscal 1975 (first half of 1975-76 season) should be submitted to the Section Treasurer, Paul Jahn, by June 1, 1975. This procedure is unlike that of previous years, but is necessary because the Chicago Sections hopes to change to a calendar year (instead of a July 1-June 30 fiscal year) beginning January 1, 1976.

An additional reason for requiring budgets now is the new tax status of the IEEE. For the parent IEEE organization to submit the necessary documentation to the IRS, headquarters has determined that 1975 will have to be an auditable year for all Sections. After this year, the IEEE will audit sections at random, starting with the 11 largest, which includes Chicago, of course. It now looks as though the Chicago Section books will be audited by IEEE headquarters about every two years. The shift from a fiscal to a calendar reporting year is being proposed to make this audit simpler for future treasurers.

It will also make things simpler for future group and section officers, who will not have to worry about budgets as soon as they take office. They will be able to concentrate on the more important program aspects of running the

chapter. Most groups and societies plan for orderly succession of officers so that the new set of officers every year will have some familiarity with the routine, but sometimes job transfers or reasons of health make this impossible. The new procedure will allow non-experienced officers time to learn the ropes before they are called on to prepare budgets.

CHICAGO SECTION ELECTS OFFICERS AND EXECUTIVE COMMITTEE

The Chicago Section IEEE has elected the officers and members of the Executive Committee for the 1975-76 season. Voting was by ballot printed in the May issue of Scanfax; Officers elected were:

Chairman:

Daniel J. Veith

Argonne National Laboratory

Vice Chairman:

Paul E. Jahn

Commonwealth Edison Company

Treasurer:

Robert Waghorne

Teletype Corp.

Secretary:

John E. Waters

Bussman Mfg.

Members of the executive committee, also elected by mail ballot, include:

George W. Austin

Commonwealth Edison Co.

Paul N. Geiger

Allen-Bradley Co.

John Logeman IV

Victor Research

Michael Musko

Argonne National Laboratory

Edward Osterberg

Illinois Bell Telephone Co.

Donald B. Owen

Motorola, Inc.

Edward S. Pierson

University of Illinois

Chicago Circle Campus

Howard L. Wolfman

Teletype Corp.

The Executive Committee also includes the chairman of both the Fox Valley and Northwest Subsections and the chairman of each of the group or society chapters. According to the Chicago Section bylaws, these people are automatically members of the executive committee and do not have to be voted upon by the membership.

Scanfax Board

Ed Osterberg, Publisher
Illinois Bell Telephone Company
(312) 727-5405

Ruth L. Oldfield, Executive Editor
R. L. Oldfield & Associates
(312) 538-1407

George Mack
Finance Manager
(312) 727-3339

Scanfax Office
Room 532
55 E. Washington Street
Chicago, IL 60602
(312) 263-5954

Chicago Section Officers

James F. Ralston, Chairman

Allen-Bradley Company

Daniel J. Veith, Vice Chairman

Argonne National Labs

Robert Waghorne, Secretary

Teletype Corporation

Paul E. Jahn, Treasurer

Commonwealth Edison Company

SCANFAX, June 1975 — Volume 27, Number 10. SCANFAX is published monthly, except July and August by the Chicago Section, Institute of Electrical and Electronics Engineers for the information of the members. Editorial office is at 1200 E. Madison Park, Chicago, Ill. 60615, and business office at 55 E. Washington Street, Chicago, Illinois 60602; telephone number (312) 263-5954. Subscription rate for IEEE members collected in dues, \$1.50; for others, \$3.00 per year. Second-class postage paid at Chicago, Illinois.

Meeting Reservations

Remember that the IEEE office, (312) 263-5954, will take your meeting reservations. The best time to call is between 9:30 a.m. and 12:30 p.m. or between 2:30 p.m. and 5:00 p.m.

The meeting coordinator for any group should call and leave his number with Ollie at the office, so she can refer questions on matters other than reservations.

Change of Address

If you have moved — or are about to move — please notify the IEEE office in NEW YORK. Our SCANFAX mailing labels come from there, and we cannot update your mailing address locally in Chicago.

A change of address form is included in each issue of SPECTRUM. Your local post office will also supply you with cards; mail to Emily Sirjane, Membership Services, IEEE, 345 E. 47th Street, New York, NY 10017. Include your SPECTRUM mailing label if possible. We cannot forward this information for you, so please do not send it to the local office.

IEEE PROTESTS PROPOSED KEOGH REGULATIONS

The IEEE has sent a strongly worded protest against a proposed Internal Revenue Service (IRS) regulation that would severely restrict the opportunities for engineers and scientists to establish small Keogh plans. The Institute requested a hearing and an opportunity to testify on the subject. The protest was contained in a letter sent to the Commissioner of Internal Revenue by Washington, D.C. Attorney Frank Cummings on behalf of the IEEE.

The main objection centered on a proposed regulation which would limit an individual's contribution to a Keogh plan to the lesser of \$2,500 or 25% of the individual's compensation. The effect of this proposal would be to nullify the express provision and intention of Congress to allow a self-employed person to contribute up to \$750 per year, so long as

the amount contributed *did not exceed 100% of the employee's earned (self-employment) income*. This regulation, if put into effect, would mean a person would have to have \$3,000 of self-employed income before he or she could put \$750 into a Keogh plan. Under the initial Congressional legislation, the first \$750 of income could all be put into a plan.

In its letter to the IRS, the IEEE protested the proposed regulation "on the grounds that it is unauthorized by the statute, violates the express mandate of Congress, and would be damaging to our members. In effect, then, your (IRS) proposed regulation would deprive our members of three-quarters of the benefit which Congress believed it was granting. This is a senseless result."

MID-CAREER PLANNING

The third annual report of the Manpower Planning and Member Employment Committee of the Institute of Electrical and Electronics Engineers (IEEE) has been released. This year's book deals with "The EE at Mid-Career — Prospects and Problems." Hans Cherney, Chairman of the Institute's Manpower Planning and Member Employment Committee, notes that this report "focuses on a subject which — although it affects only a segment of the engineering population at any given time — should be of concern to every engineer, and specifically to the engineer employed in industry."

"Mid-career occurs when you begin to get just frightened enough to think that really if they had another company cut-back you're the least likely to be missed," writes Harold Goldberg, Chairman of the IEEE United States Activities Board (USAB). To help prepare for the impact of this point in your career, the book contains sixteen articles of subjects ranging from "The Demand for Electrical Engineers" to "Long-Range EE Educational Requirements — The Impact of Changing Demands." Other chapters include a look at age discrimination patterns, the effect of the recently passed pension legislation, and specialization — can it be a problem?

This 298 page report is available from the IEEE, 445 Hoes Lane, Piscataway, New Jersey 08854. The cost to Institute members is \$15; to non-members, \$25.

USAB has also announced the results of its second Unemployment Index of

IEEE members. Using a random sample of approximately 2,600 members, those indicating they were involuntarily unemployed were 2.5%. This compares with an adjusted figure of 2.3% in the first survey. Over 70% of the unemployed group gave their age as 40 or over. Those reporting themselves as employed but available for work in the field of their primary technical competence was 4.2%. This was one percent lower than the initial survey.

The Institute will continue to track the Unemployment Index to gain accurate information about how the economy is affecting our profession.

BOOK ON TECHNOLOGY AND SOCIETY PUBLISHED BY IEEE PRESS

A book entitled *Technology and Social Institutions* has been published by the IEEE PRESS. This volume, edited by Kan Chen of the University of Michigan, contains papers presented by leaders from industry, government, universities, and labor unions at an Engineering Foundation Conference.

Today there is a growing awareness that the relationships between technology and society are changing or taking on new dimensions. A sense of urgency about reducing technology-society mismatches has been stimulated by a variety of problems, such as the pressures being exerted on energy resources and the

MESSAGE FROM THE CHAIRMAN:

This past year as Chairman of the Chicago Section has been very rewarding and successful. Rewarding as much has been done to enhance the engineer in Chicago by the following:

1. The first engineering society to submit recommendations on the new Chicago Electrical Code.
2. The first time we have ever had a set of By-laws for the Chicago Section that will give us a foundation on which to grow and build.
3. The first time we have been awarded the ICC Conference in the Chicago Area.
4. The first time we have had financial guidance and help from the Section Executive Committee on Budgeting.

The successes will only be determined in time, but I think we are heading in the right direction. Only if we all work together as one will we ever achieve success.

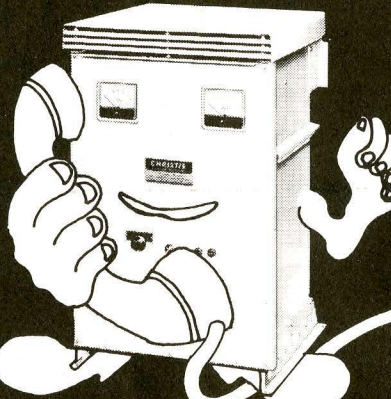
We have sent to Headquarters in New York one of the largest sets of recommendations for Fellow nominations from the Chicago Section. All of these nominees are certainly worthy of this high grade and are evidence of the caliber of men living and working in our Section.

As a personal note, I would like to thank all of those people who worked so hard in making my job easier, but more important, to help you, their fellow engineers. These people are certainly worthy of our gratitude. I thank them.

James Ralston,

Chairman, Chicago Section 1974-75

TALK TO THE
CHRISTIE



for all you ever wanted
to know about **high current**
DC POWER SUPPLIES
BATTERY CHARGERS
Call HERM RUDMAN toll-free
(800) 421-2058
SINCE 1929
CHRISTIE
ELECTRIC CORP
3412-U W 67TH ST. • BOX 60020
LOS ANGELES, CALIFORNIA • 90060
(213) 750-1151 • TWX 910-321-3867

EPA ASKS HELP

The Environmental Protection Agency is asking for data and information from scientists, electrical power companies and others on the health and environmental effects associated with the operation of extremely high voltage power lines.

This request is a part of the overall EPA program of assessing the environmental impact of various sources of non-ionizing radiation. The program covers radiation from radar and other microwave transmission lines. At present, EPA efforts are directed at assessing both environmental levels of exposure and biological effects.

The Agency wants to collect the data necessary to define the potential effects of lines operating at or above 700 kilovolts (kV) so that it can determine whether or not there is a need to provide guidance for radiation standards to protect the public health and welfare.

EPA officials say that there are uncertainties about the effects of these lines. Current information as to the health effects for potential environmental levels indicates a high degree of uncertainty throughout the nonionizing spectrum. Current U.S. research indicates that certain effects on organisms occur due to thermal impact or heating. Some foreign research, notably from the U.S.S.R., indicates that nonthermal effects may occur to the neurological system but this has not been substantiated in the U.S.

There are about 300,000 miles of alternating current (ac) transmission lines in the United States which operate at various voltages in the range from 69 to 750 kV. Most of these lines operate at voltages below 750 kV.

However, it has been estimated that perhaps 10,000 miles of lines rated at 765 kV or higher may be built in the next fifteen years.

At present there is an 800 kV direct current (dc) line in Oregon and California. There are 750 kV alternating current (ac) lines now operating in West Virginia, Ohio and Indiana; and two authorized 750 kV lines in New York.

The next generation of transmission systems may operate at voltages of 1000 kV or more. System voltages up to 2000 kV are reportedly feasible, and a full scale prototype of a 1500 kV transformer is being tested in Sweden.

The EPA is particularly concerned about the measurement and analytical methods for quantifying electric and magnetic fields; measurement and analysis of induced voltages and currents; electric discharge phenomena; and health effects.

Notice of EPA's request for information appeared in the March 18, 1975 issue of the Federal Register.

Interested persons may submit written comments (preferably five copies) on these concerns to the Environmental Protection Agency, Office of Radiation Programs (AW-558), 401 M Street, S.W., Washington, D.C. 20460. It is requested that all comments be submitted on or before June 30, 1975. Comments received will be available for public inspection at the Freedom of Information Center, Room 206, West Tower, 401 M Street, S.W., Washington, D.C. 20460.

CALLS FOR PAPERS

UNDERGROUND TRANSMISSION AND DISTRIBUTION

The 1976 IEEE Power Engineering Society Underground Transmission and Distribution Conference will be held September 27 — October 1, 1976, at Convention Hall, Atlantic City, N. J. This conference will feature technical papers on the design, installation and operation of underground systems for both transmission and distribution. Prospective authors are encouraged to prepare suitable technical papers on any aspect of this subject.

The opening sessions will highlight contributions by the utilities on underground residential and commercial distribution as well as underground transmission. Solicitation of these papers will be directed to the utilities in June 1975, requesting coverage of specific areas relating to "Past, Present, and Future." In addition, authors from the utility industry are invited to submit individual technical papers on underground transmission and distribution.

A title and abstract of approximately 50 words should be submitted by July 1, 1975 to the Technical Program Chairman: E. K. Duffy, Essex International, Inc., Box 1000, Lafayette, Ind. 47902.

Papers must not exceed nine pages of model paper, including figures, and must be prepared in accordance with the IEEE PES Author's Guide on the two-column paper available from IEEE, Technical Conference Services, 345 E. 47th Street, N. Y., N. Y. 10017. Final papers are due by January 5, 1976.

PES SETS PROGRAM

The Chicago Chapter of the IEEE Power Engineering Society has selected a tentative program for the 1975-76 season. Six meetings and a field trip have been set. Starting with a luncheon meeting in October, the meetings will alternate between luncheon and dinner meetings. A tour in May will round out the year; student branch members will be invited to participate in the tour. Meeting dates and location will be published in the September issue, and individual meeting notices will be carried each month.

SOFTWARE ENGINEERING

The First National Conference on Software Engineering will be held at the Mayflower Hotel, Washington, D.C., September 11-12, following COMPCON FALL '75. The conference will address the problems of building reliable and robust programs, on-schedule delivery of low-cost software, thorough testing of what is practically unprovable, organizing creative skills for maximum productivity. . . Papers are solicited on practical tools and techniques in software development, as well as case studies and experience reviews of recent large-scale software projects.

Authors are invited to submit original, unpublished papers in the following and related subject areas:

Methodology — Software specification and design techniques, Program validation and verification techniques, Top-down and modular design criteria, Evaluation and quality control procedures, Interface and integration techniques, Software design for portability.

Applications — Structured programming experiences, Program testing results, Reliability analyses of current software, Project organization and management control.

Five copies of the paper (maximum 5000 words) should be submitted by April 15, 1975 to:

Mr. Thomas Steel, Program Chairman
Equitable Life Assurance Society
1285 Avenue of the Americas, 7-F
New York City, New York 10019

Camera-ready copy for selected papers will be required on July 1, 1975.

For further information regarding this conference, write to:

Software Engineering
P.O. Box 639
Silver Spring, Maryland 20901