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CHICAGO SECTION · IEEE · INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

SEPTEMBER, 1973

September 19

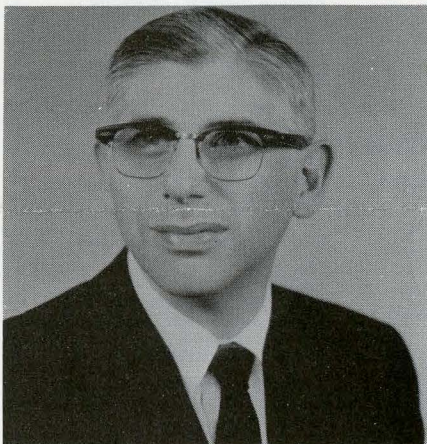
THIN TV PICTURE PANELS

The idea of a thin, flat TV picture has captured imaginations and sparked research efforts for a long time. Why is it still so difficult to achieve? What work is being done? Why is the cathode-ray tube still the dominant electronic picture-display device?

In his talk at the September 19 meeting of the Northwest Subsection, Dr. Allan Sobel of the Research Department at Zenith Radio Corporation will give some of the reasons that the problem is worth working on, describe some of the many efforts which have been made, and indicate some of the constraints which make the problem so difficult.

Dr. Sobel will also show motion pictures of the most successful approach to date, a gas-discharge panel developed at Zenith and capable of displaying a fraction of a broadcast TV picture in real time with good quality.

Meeting will be held at the Maitre d' Restaurant, Higgins (Ill. 72) and Arlington Heights Roads, Elk Grove Village on September 19. Social hour, 6:00 p.m.;



Dr. Allan Sobel

dinner, 7:00 p.m.; and meeting, 8:00 p.m.

For reservations call 263-5954 by Tuesday, September 18. Come to the meeting at 8:00 p.m. even if you can't attend the dinner.

(Continued on page 3)

September 5

Proto Plant Tour

On Wednesday, September 5, the Fox Valley Subsection will hold a joint meeting with the IEEE Communications Society, featuring a tour of the Western Electric Northern Illinois Works, Lisle, Illinois.

The Northern Illinois Works introduces new products into the manufacturing process by developing manufacturing and training techniques for new Bell System high technology products. These products are later turned over to one of Western Electric's major works for high volume manufacturing. This facility is located near the Bell Laboratories in Indian Hill, the Bell System research facility dedicated to electronic switching systems.

Dominick (Dom) Cuomo, director of engineering, electronic switching systems, Northern Illinois Works, will provide an introduction before the tour.

The meeting will be held at the Tree Gables Restaurant in Lisle, Ill. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; and meeting, 8:00 p.m. Call 263-5954 for reservations.

CALENDAR OF EVENTS

IEEE OFFICE: 263-5954

- | | |
|-------------|--|
| Sept. 5 | Fox Valley Subsection - Communications Society joint meeting. (See page 1 (above) for details. |
| Sept. 11 | Executive Committee meeting. See page 3 for details and future meeting dates. |
| Sept. 19 | Northwest Subsection meeting on "Thin TV Picture Panels". (See page 1). |
| Oct. 6 | IEEE 1973 Treasure Hunt. Coupon for reservations on page 3. |
| Oct. 8-9-10 | NEC National Electronics Conference and Exhibition. (See page 4) |
| Nov. 8 | Reliability Group's first of three meetings for coming year. Details on page 3. |

Deadline for copy: First week of month preceding publication.

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Scanfax Office
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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 Judy 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

TREASURE HUNT

The Chicago Section IEEE Treasure Hunt will be held Saturday, October 6, 1973, starting time 6:30 p.m. This is your “last chance” to participate in this year’s fun time spree.

Tickets for the hunt will be \$18.00 per couple. Only reservations for a full car (3 couples) will be accepted. The cost includes a post-hunt dinner. Reservations for the hunt only will not be accepted.

Send your checks or money orders totaling \$54.00 for the dinner and hunt, including the names of the 6 hunters, using the registration form on this page.

All Group-Society Chapters

If you have not already done so, remember to report the results of your election of officers to the Chicago section. Send this information to our new secretary, Joe Feitler, 110 N. Kenilworth Ave., Oak Park, Ill. 60302.

THIN TV PICTURE PANELS

(Continued from page 1)

Allan Sobel, a member of the Research Department at Zenith Radio Corporation, Chicago, Illinois, has been involved in image recording and display research since 1951 and has been working in this area at Zenith since 1964. His other research and engineering activities have included audio and video instrumentation and high-fidelity sound reproduction.

Sobel received a BS in electrical engineering from Columbia University in 1947, an MS in electrical engineering in 1949, and a PhD in physics from the Polytechnic Institute of Brooklyn in 1964. He is an Associate Editor of IEEE Transactions on Electron Devices; a member of the IEEE Committee on Medical Engineering Training; and is a licensed professional engineer in New York and Illinois.

Julius Simon
Registration Chairman
IEEE 1973 Treasure Hunt
9248 Oketo
Morton Grove, Illinois 60053

Enclosed is our check(s) totaling \$54.00 for the 1973 IEEE Treasure Hunt on Saturday, October 6. We understand that the Hunt will take place rain or shine and that full instructions and tickets will be mailed to us a few days prior to the Hunt.

Names of Team-mates:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Mail all instructions and tickets to:

Telephone _____

Make checks payable to: 1973 IEEE TREASURE HUNT

Mark Your Calendar Now

The newly revitalized Reliability Group has planned three meetings for the coming year. The first will be joint with Parts, Hybrids & Packaging, with a panel discussion on the reliability considerations of semiconductor devices and integrated circuits. Among the four speakers will be Al Tamburrino, Rome Air Development Center. The dinner meeting on November 8 at Nielsen’s Restaurant, Mannheim Road, Rosemont, will start at 6:00 p.m.

Executive Meeting Schedule

The Executive Committee of the Chicago Section will meet on the second Tuesday of every month during the 1973-74 season. Any member of the Chicago section is welcome to attend these meetings. All will be held at Menard’s Black Steer Restaurant, 6446 W. North Ave., Chicago, except for the October 9 meeting which will be held at NEC.

Dates of the meetings are: Sept. 11; Oct. 9; Nov. 13; Dec. 11; Jan. 8, 1974; Feb. 12; March 12; April 9; May 14; and June 11.

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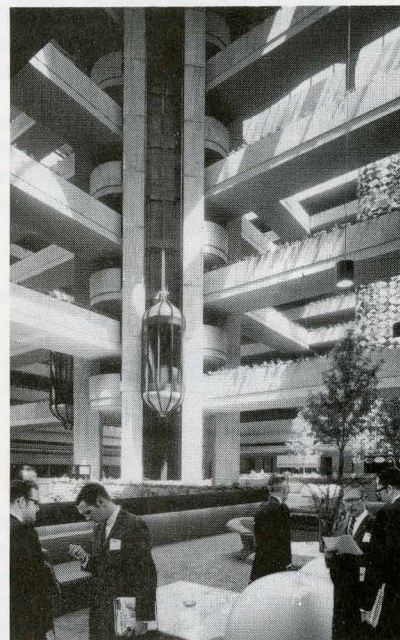
an invitation to attend . . .

communications/73

OCTOBER 8, 9, 10

Hyatt Regency O'Hare, Chicago

Plan now to attend **Communications / 73** and participate in an outstanding engineering education program. **Communications / 73** will highlight new engineering developments in the communications industry bringing both current practices and new technology to the thousands of engineers who will be attending. The educational program will include nine New Technology Seminars; New Product and Development Seminars featuring the latest products and techniques; and an integrated 100 Paper Program covering a wide range of communication subjects.



29th Annual NEC National Electronics Conference and Exhibition

conference highlights

In recent years communications research and manufacturing resources in the Chicago Metropolitan Area have expanded dramatically and to the extent that the area is now recognized as the Communications Center of the World. NEC, aware of this important development, has expanded its services to the communications industry and the thousands of technical personnel working in this and related fields. The entire 29th Annual National Electronics Conference will be devoted to the theme **COMMUNICATIONS/73**.

- NEC has responded to the growing demand of engineers and managers for continuing education programs by developing a **COMMUNICATIONS/73** program with maximum appeal for those individuals desiring to keep up-to-date with the rapid developments in communications and electronic engineering. While maintaining continuing programs of the conference, NEC will provide an in-depth treatment of communications subjects.

- A unique **NEW TECHNOLOGY** series of seminars will emphasize areas of vital concern to communications engineers and managers. The internationally recognized Annual **NEC TECHNICAL PROGRAM** of invited papers has been especially selected to emphasize the communications theme.
- To round out the program, a special effort has been launched to selectively attract meaningful, informative exhibits which will appeal to the communications engineer and manager. A program of **NEW PRODUCT DISCLOSURES** has been instituted to provide exhibits which will introduce new products at the conference of special interest in the area of communications.
- The ultra modern facilities of the Hyatt Regency O'Hare, site of **COMMUNICATIONS/73**, will include comfortable, well lighted meeting rooms and exhibition halls. The convenient hours — 10:00 a.m. to 5:00 p.m. — and a carefully scheduled programming of the **NEW TECHNOLOGY** seminars and the **TECHNICAL PAPER PROGRAM** make it possible for registrants to participate daily in a complete seminar program and view the latest products and developments on display in the exhibition area.

convenient exhibit hours

10:00 a.m. — 5:00 p.m. — Monday, Tuesday, Wednesday — October 8, 9, 10

Technical Sessions Start at 10:30 a.m.

New Technology Seminars start at 8:30 a.m.

NATIONAL ELECTRONICS CONFERENCE, INC.

Oakbrook Executive Plaza #2—Suite 629
1211 W. 22nd Street
Oak Brook, Illinois 60521

ELECTRICAL CONTACTS SEMINAR

OCTOBER 15 TO 18, IN LA SALLE HOTEL, CHICAGO

The environment and its implications for electrical contacts and contact materials is a major theme of the Nineteenth Annual Holm Seminar which meets Monday through Thursday, October 15 to 18 at the LaSalle Hotel in Chicago.

PURPOSE

For engineers and scientists concerned with the behavior and reliability of electrical contacts, this Seminar provides information on the latest developments and the opportunity to discuss and solve individual contact problems.

PROGRAM HIGHLIGHTS

Technical papers — both invited and volunteered — describe the latest scientific developments in many areas of electrical contacts, spanning the range from heavy current contacts to light currents and dry circuits.

The environment and its implications for contacts, comprising seven papers and a panel discussion, is featured in a full day of sessions Tuesday.

Workshops are planned on a wide variety of topics allowing registrants, in small groups under competent leadership, to examine and treat individual problems involving contacts.

A Late News Session opens Thursday with topics too new to be a part of the proceedings. Attendees are invited to contribute.

The Seminar will open on Monday morning with presentation of the Ragnar Holm Scientific Achievement Award to Dr. A. Keil, Inovan-Stroebe KG, Pforzheim, West Germany, who will present "A European Perspective on Contact Material Development."

PROGRAM CONTENT

Monday's session on Bonding and Plating — Gold and Precious Metals will include the following topics:

- The Bonding Characteristics of Gold in Ultra-high Vacuum.
- Wear of Gold Plate/Effect of Surface Films and Polymer Codeposits.
- Compatibility of Gold Deposits for Connector Contacts.
- High Temperature Stable Hard Gold Electrodeposits.

Environment is the theme of Tuesday's sessions, which start with two invited papers:

- The Atmospheric Environments in which Electrical and Electronic Components Work and Live, T. E. Graedel, Bell Laboratories, Murray Hill, New Jersey.
- Economic Effects of Air Pollution on Electrical Contacts, R. C. Robbins, Stanford Research Institute, Menlo Park, California.

Other Topics on Tuesday include:

- Environmental Reactions on Precious Metals.
- The Effect of Tarnishing on the Contact Resistance Performance of Silver-Palladium Contact Alloys.
- Accelerated Tarnish Testing of Contacts and Connectors Employing Silver Alloy Contacts.

Mail to:

Department of Electrical Engineering
Illinois Institute of Technology
Chicago, Illinois 60616

Advance Registration Form

HOLM SEMINAR ON ELECTRIC CONTRACT PHENOMENA

Nineteenth Annual Meeting
October 15-18, 1973

☐ Kindly reserve place for:

Name _____

Title _____

Company _____

Address _____

Please circle workshops desired.

A B C D E F G H I J K

List additional persons on reverse side.

Check(s) in the amount of \$ _____ attached
(fee \$150 per person) payable to

Illinois Institute of Technology

☐ Please send further information.

High-lighting Tuesday's schedule is a panel discussion on "Environment" under the direction of Morton Antler, Seminar Co-Chairman, Bell Laboratories, Columbus, Ohio. The panelists are:

- W. H. Abbott, Battelle Columbus Laboratories, Columbus, Ohio.
- W. E. Campbell, Consulting Chemist, Troy, New York.
- S. M. Garte, Burndy Corporation, Norwalk, Connecticut.
- M. S. Mamrick, General Motors Company, Warren, Ohio.
- A. C. Snowden, Cutler-Hammer, Milwaukee, Wisconsin.
- M. J. Trzeciak, International Business Machines Corporation, Endicott, N.Y.

The Arc is the subject of Wednesday and Thursday mornings' sessions, with the following topics included:

- The Anode Mechanism of a Fast Moving Arc.
- Experimental Investigation of Low Work Function Metal Coated Reed Contacts for Lateral Erosion Enhancement.
- Current Chopping in Vacuum.
- The Use of Ceramic Matrices Infiltrated with Silver for Electric Contact Applications.

Materials is the subject of Wednesday and Thursday afternoon's sessions, whose topics include:

- Materials for Electrical and Electronic Applications.
- New Miniature Connector Systems for Printed Circuit Boards and Hybrid Modules.
- The Ductility Reversal During Age Hardening of Beryllium Nickel Contact Spring Material.
- Relationship Between Contact Resistance and Wear in Sliding Contacts.
- Important Problems in Applying Liquid Metal Current Collectors.
- I'll See You In Court—A Lawyer's View of Products Liability is the title of a talk to be given by featured speaker, Philip H. Corboy, a Chicago Attorney, following the Seminar Dinner on Wednesday Evening.

WORKSHOPS

A series of five 75-minute workshop sessions is interspersed among Wednesday's and Tuesday's sessions. Topics of the workshops are:

- A Activation — Contact Material
- B Aluminum Connections
- C Arcing Contacts
- D Contact Contamination
- E Contact Material Selection (High Currents)
- F Contact Material Selection (Low Currents)
- G Electrodeposited Contact Material
- H Reed Contacts
- I Sliding Contacts
- J Tarnishing of Contact Materials
- K Vacuum Arc Phenomena

SPONSORSHIP

This 19th Annual Holm Seminar is sponsored by Illinois Institute of Technology and IIT Research Institute in cooperation with American Society for Testing Materials, Committee B-4 on Metallic Materials for Thermostats and for Electrical Resistance, Heating and Contacts. The Institute of Electrical and Electronics Engineers, Electrical Contacts Technical Committee on the Parts Hybrids and Packaging Group and the Chicago Section.

REGISTRATION

The registration fee for the Seminar is one hundred and fifty dollars (\$150). This includes all costs of instruction and materials, a hard cover bound volume of proceedings, one noon meal and one evening meal. (Charges for lodging are not included.)

For further information, one should contact:

Ralph E. Armington
Professor of Electrical Engineering
and Seminar Chairman
Illinois Institute of Technology
Chicago, Illinois 60616