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CHICAGO SECTION · IEEE · INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

APRIL 1973

Hornbeck To Speak At Joint Meeting

IEEE, WSE, ISPE joint meeting on the "25th Anniversary of the Transistor—Looking Ahead". Speaker will be Dr. John Hornbeck, vice president, Electronics Technology Division, Bell Telephone Laboratories, Murray Hill, N.J. The meeting will be held at the Illinois Bell Telephone Company Headquarters building, 225 W. Randolph Street, Chicago, Illinois. Hot buffet dinner (\$5.50) 6:00 p.m.; meeting at 7:00 p.m. Reservations are required; call 263-5954.

The transistor—the Bell System invention that started the computer revolution and the space age, and created a multi-billion dollar industry — is 25 years old.

Originally developed as a solid-state replacement for electron tubes in telephone applications, the Nobel Prize-winning invention has become virtually ubiquitous in American life. Most people are never more than a few feet away from a transistor.

Dr. Hornbeck will comment on what the transistor has meant to us—and will "blue sky" further development in this field.

John A. Hornbeck is vice president, electronics technology, Bell Telephone Laboratories. He received his BS in physics

Wednesday, April 18, 1973



from Oberlin College in 1939. After receiving his PhD in physics from Massachusetts Institute of Technology in 1946, he joined Bell Labs as a Research Physicist in the Physical Electronics Department. He transferred into the Transistor Research Department shortly after the transistor was invented at Bell Labs.

In 1952 Hornbeck was placed in charge of the Semiconductor Physics Department and the following year was named head of the Solid State Devices

Department. From 1955 to 1958 he was director of Electron Device Development and afterwards served four years as executive director of the Semiconductor Device and Electron Tube Division.

In 1962 he left Bell Labs to become President and a Director of Bellcomm, Inc., an AT&T-Western Electric subsidiary created to provide technical assistance to NASA. Hornbeck was elected vice president of the Western Electric Company on September 1, 1966. At that time he also became vice president, a director and a member of the Executive Committee of Sandia Corporation. He became president of Sandia on October 1 of that year and served in that capacity until returning to Bell Labs to assume his present position on October 1 of this year.

A fellow of the IEEE and the American Physical Society, he is also a member of the American Association for the Advancement of Science, Phi Beta Kappa, Sigma Xi, and Delta Sigma Rho.

Mr. Hornbeck is a member of the Aerospace Advisory Panel to NASA and serves as chairman of the Advisory Board, National Bureau of Standards Institute of Basic Standards.

CALENDAR OF EVENTS

IEEE OFFICE: 263-5954

- April 4 Fox Valley Subsection, Tally Ho Restaurant, West Chicago, Ill. Call IEEE office for reservations.
- April 7 Midwest Acoustics Conference, Northwestern University. See page 3.
- April 18 IEEE, WSE, ISPE joint meeting on 25th Anniversary of the Transistor, IBT Headquarters, 225 W. Randolph St. Reservations required. Call IEEE office.
- April 18 IEEE Executive Committee meeting, 4:30 p.m., Illinois Bell Telephone Co., 225 W. Randolph St.
- May 6 Fox Valley Ladies Night & Stage Play. Shady Lane Farms, Marengo, Ill. Call IEEE office.
- May 8-10 American Power Conference, Dr. R. A. Budenholzer, IIT, 225-9600.
- May 12 Recognition Dinner. See page 4.

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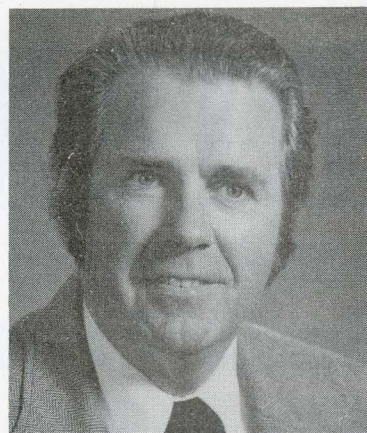
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A Message From The Region 4 Director

It is my pleasure to greet you for the first time as your representative to IEEE management as a new member of the IEEE Board of Directors. I appreciate your invitation to pen a few words about IEEE. At a later time I would like to discuss IEEE activities, both technical and professional, but now I want to stress the theme "We Need Your Help". As Directors, Regional, Section, and Chapter Officers, none of us are close to being All Wise and WE NEED YOUR HELP in a myriad of ways—in the choice of actions to be taken in the technical and professional areas; in the establishment of action priorities; in the determination of the needs and wishes of the membership; in relating our technology to the needs of society; in running the IEEE.

Remember that IEEE is a member organization run by volunteers with a minimum of paid staff. A member organization must function substantially different from a business enterprise or a political unit. In the latter, the winning majority, within certain legal limits, assumes a mandate to pursue their programs even at the expense of the minority. In the business case, the management directs operations of the organization for the benefit of the stockholders with a minimum of advice and counsel from the employees. As a member organization, however, IEEE management must see the advice and counsel of its members and provide to all elements of the membership the maximum service of the type desired and needed within the constraints of financial resources and legal limitations. The numerous questionnaires many of you have received in recent years are a part of the attempt by IEEE management to obtain your advice and counsel. WE NEED YOUR HELP in promptly responding to these queries so we can obtain a true cross-section of member opinion on important issues facing our profession.

It has been my observation that IEEE attempts to be democratic in its operation and to follow the wishes and needs of the membership, always keeping in mind the wishes and needs of the minority. There is no so-called "Eastern Establishment" or "Headquarters Clique" that makes the decisions. IEEE policy decisions are made by the member-elected



representatives to the Board of Directors and some Directors-at-Large appointed by the elected Board. IEEE is your organization and, if your needs are not met, it is your responsibility to make sure your needs are known at your local Section and Chapter level as well as to your Regional and Divisional representatives.

But a squeaking wheel is not enough. You have heard it said that in a democratic society the people get the kind of government they deserve. A similar thing can be said of IEEE. Rather than always letting Jack and John So-and-So do it, you bear a responsibility to support and help direct IEEE activities so as to make IEEE a more viable, meaningful, and enduring organization for you and for your professional descendants. If local, regional, or international activities do not meet your needs or are not going in the directions you feel the profession should be going, then WE NEED YOUR HELP. You can help by getting out, working, and making sure your point of view is heard so at least some of the activities of IEEE do meet your needs and desires. If you feel your attempts are not being given adequate consideration, it is a relatively easy task to get on the ballot for a Section, Chapter, Region, or International office. Constitutions and ByLaws of all IEEE units describe how to do this. There is no need for an IEEE member to sulk or drop out of the organization because the leadership won't listen to him. All he need do to effect a change is to convince enough of his peers as to the wisdom of his views.

It is an understatement to say that a volunteer run organization such as IEEE is always in need of the talents of new people. These new people, however, should represent the breadth of the IEEE and not simply be a few vocal activists espousing a philosophy many others can not accept. You, as members, have a responsibility to insure this. Here is an excellent opportunity for many of you—particularly those of you who have never

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taken an active role in IEEE affairs—to do so. At this time when new Section and Chapter Officers will soon assume their new duties, volunteer to help. Don't be bashful because WE NEED YOUR HELP at all levels. A volunteer organization cannot survive as a meaningful institution without the active assistance of its membership. The personal return for this help is high even though the monetary pay is negligible. I speak from experience.

Alvin A. Read
Region IV Director

Generating and Handling High RF Power at UHF Telephone Frequencies

William P. Kusack, WFLD-TV, will speak to the Fox Valley Subsection on April 4 at Talley Ho Restaurant, West Chicago, Ill. He will discuss "The Concept and Design of Generation and Handling High RF Power at UHF Television Frequencies." This discussion will be a review of the actual installation of the WFLD-TV transmitter antenna at the John Hancock Building, Chicago. Call 263-5954 for reservations.

William P. Kusack, vice president in charge of engineering at WFLD-TV, Chicago, is a graduate of RCA Institutes, Chicago, and the Technische, Hochschule, Munich, Germany, where he received the degree of Electrical Engineering. Except for service in the U.S.N.R. during World War II, during which he organized the first US Navy radar training school and wrote part of the Eddy Test, he has been associated with television broadcast stations. He has been vice president, and member of the board of directors of WFLD-TV since 1966.

His memberships include the IEEE, the Society of Motion Picture and Television Engineers, and the American Radio Relay League. He is a member of the Chicago Broadcast Antenna Committee, composed of the chief engineers of the major television stations in Chicago who broadcast from atop the 100-story John Hancock Building, and served as chairman of the Committee from 1965 through 1969.

Kusack has been awarded the following Emmys by the National Academy of Arts and Sciences for "outstanding engineering achievements: 1964-For development of miniaturized mobile video tape recording unit used in television broadcasting; 1967-For excellence in development of a new concept in studio control room design; 1968-For innovation in design in the handling of high transmitter power in the UHF spectrum; 1969-For outstanding engineering achievements as chairman of the John Hancock Antenna Committee.

Fox Valley Slates Ladies Night

Sunday, May 6 is the date for the Fox Valley Subsection's annual Ladies Night. Location is Shady Lane Farms, Marengo, Ill. Dinner is at 2:30 p.m.; play at 4:30 p.m. Make reservations now by calling 263-5954.

Consumerism and Engineering Design

Edward P. Reavey will discuss "Impact of Consumerism on Engineering Design" at the Monday, June 11 luncheon of the Chicago Spring Conference. Reavey is vice president and general manager of the Consumer Products Division, Motorola, Inc.

The 1973 Spring Conference will take place on Monday and Tuesday, June 11 and 12, at the Marriott Motor Hotel, 8538 W. Higgins Road, Chicago, Ill. Many interesting papers will be presented and a full set of exhibits will show engineers what is new in broadcast receiver and TV technology.

Speaker for the luncheon on Tuesday, June 12, will be Bernard V. Vonderschmitt, vice president and general manager, Semiconductor Division, RCA.

Nominees For Officers and Exec Committee

The following slate of officers and Executive Committee will be presented at the May 22 regular Section meeting. Chairman, Richard Bulley; vice-chairman, James F. Ralston; secretary, Daniel J. Veith; treasurer, Joseph Feitler. Executive Committee nominees are James Beal, Mahlon Burkhard, Charles Heermans, Bob Lowew, Paul Jahn, George Mack, and Don Owen.

Additional nominees may be made from the floor at the May 22 meeting. The Nominating Committee consisted of the three past presidents of the Section, George Spisak, Robert Nunamaker, and William Kusner.

American Power Conference

The 35th Annual Meeting of the American Power Conference will be held May 8-10 at the Pick-Congress Hotel, Chicago, Ill. Registration fee of \$40.00 entitles the registrant to receive a copy of the Proceedings and to attend all sessions.

Of particular interest to IEEE members will be the joint American Power Conference/IEEE luncheon on Wednesday, May 9 at 12:15 p.m. J.B. Owens, president of the IEEE Power Engineering Society will preside. The featured speaker will be Richard E. Balzhiser, assistant director, Office of Science and Technology, The White House. Tickets for the luncheon are \$6.00 per person.

Hospital Electrical Safety

Richard W. Nalbert, Sorgel Electric Corporation, will talk on "Hospital Electrical Safety" at the April 11 joint meeting of the Engineering in Medicine & Biology and the IAS-IECI Groups. The meeting will be at Nielsen's Village, 7330 W. North Avenue. Social Hour, 5:30 p.m.; dinner, 6:15 p.m.; meeting, 7:15 p.m. Dinner is \$7.00 to members and \$8.00 to nonmembers. All of those who come for dinner will receive complimentary liquid refreshments. Call (312) 263-5954.

During his talk, Nalbert will discuss isolating and grounding systems as they apply to present hospital standards. He will cover the National Electric Code Article 517, NFPA-56A, and the most recent revisions to NFPA-76B. His presentation will be followed by a question and answer period.

Richard W. Nalbert has been active in the design and application of hospital isolating systems for the past 12 years. He is the Manager of Medical Equipment, Sorgel Electric Corporation, Subsidiary of Square D Company. He is the Sorgel representative to, and chairman of NEMA Health Care Facility Protection Group. He is also a member of the NFPA-76B Committee on the "Safe Use of Electricity in Hospitals." Nalbert has recently served on two UL Ad Hoc Committees, formed to establish standards for hospital isolating equipment. He has been associated with Sorgel Electric Corporation for six years and was previously with the Hevi-Duty Electric Company.



RECOGNITION DINNER

SATURDAY, MAY 12, 1973

Join your associates for a great evening at the Arlington Park Towers' Paramount Ball Room. Past Dinners have been a roaring success, so don't miss this one.

Recognition this year goes to Dr. Oskar Friedrich Doehler "for contributions and technical leadership in the field of high-power microwave tubes and especially crossed field devices," and to Dr. Stephen Yau "for contributions to switching theory, the reliability of computing systems, and engineering education."

Tickets are only \$12.50 per person—and for that you get:

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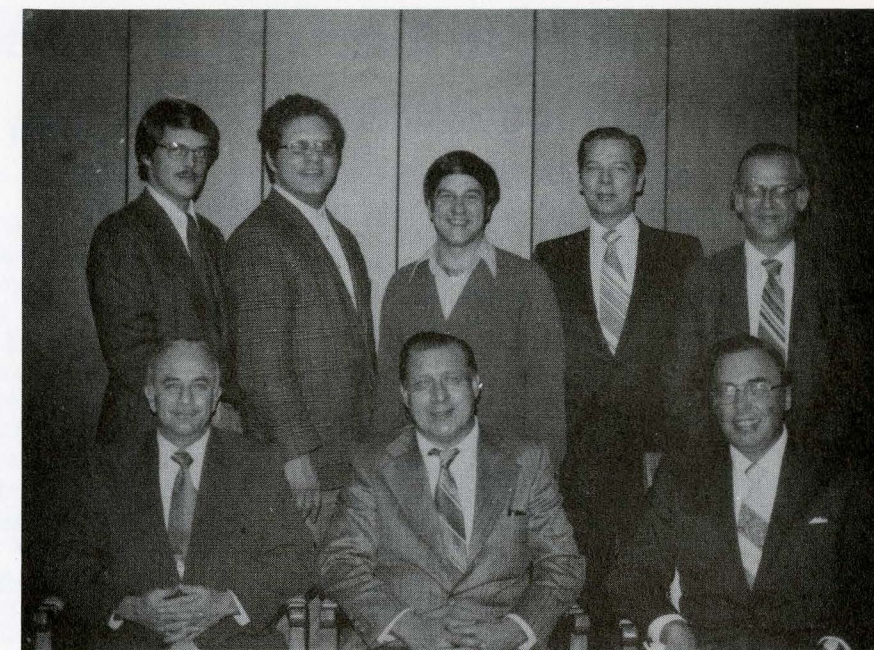
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SATURDAY, MAY 12, 1973

ARLINGTON PARK TOWERS — PARAMOUNT BALL ROOM

(Non-IEEE members are also invited)



IEEE Recognition Dinner Committee: (seated left to right) J. Puca, Motorola Inc.; H. Korman, Universal Marketing; H. Setton, University of Illinois; (standing left to right) C. Erickson, Victor Comptometer Corp.; D. Remson, Victor Comptometer Corp.; R. Warzin, Allen-Bradley Co.; G. Argall, Leo Burnett Co. Inc.; N. Frihart, Motorola Inc. Members not present when picture was taken: P. Brown, Solitron Inc.; T. Burris, TRW Inc.; R. Ciesla, Commonwealth Edison; G. Spisak, Commonwealth Edison.

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Did you know this:

Virginia H. Knauer, special assistant to President Nixon for consumer affairs, will be the featured speaker at the IEEE Appliance Technical Conference luncheon, June 19, Conrad Hilton Hotel, Chicago, Ill. She has held this White House advisory post since 1969 and holds several other important positions as an advisor and government representative. Mrs. Knauer is expected to discuss reliability, durability and quality considerations for the industry.

* * * * *

G.S. Parshalle, executive vice president, Sunbeam Corp., and president, Consumer Products Group, will be the keynote speaker at the 24th Annual Appliance Technical Conference, Conrad Hilton Hotel, Chicago, Ill., June 19-20. The conference, sponsored by the Domestic Appliance Industry, IEEE, is expected to draw close to 500 appliance engineers from companies throughout the U.S. and Canada.

Parshalle recently proposed a new form of appliance certification to the industry and is expected to comment on the appliance engineers' role in providing consumer benefits and satisfaction.

* * * * *

The U.S. Dept. of Labor (Manpower Administration) sponsors the "National Registry For Engineers" at 800 Capitol Mall, Sacramento, CA 95814, which is used by private industry and by Government Agencies to invite potential candidates for employment. The list is kept up to date by a periodic letter with a postcard to keep the registration in the file. There is no fee for this service; applications for registration usually may be obtained from State Employment offices.

APATHY THAT SERIOUS?

You may want to be active in IEEE affairs, to meet people and have something to say or do about its operation. For the next three months you can be involved in interesting committee activities, if, you can find time to visit the upcoming Power Conference, or the Chicago Spring Conference, or have secretarial services or duplicating equipment avail-

Holonyak Receives Liebmann Award

Dr. Nick Holonyak, Jr. received the IEEE's Morris N. Liebmann Award "for outstanding contribution to the field of visible light emitting diodes and diode lasers." The Award, consisting of a certificate and one thousand dollars, was presented to Dr. Holonyak at the International Solid-State Circuits Conference.

Dr. Holonyak, Jr. has been a professor in the Department of Electrical Engineering and Materials Research Laboratory, University of Illinois, Urbana, since 1963. He is a fellow in both IEEE and the American Physical Society.

Scanning Symposium

The Sixth Annual Scanning Electron Microscope Symposium, sponsored by ITT Research Institute, will meet April 24 and 25 in Chicago. A comprehensive review of developments in instrumentation, accessories, techniques, and interpretation for current and potential users of SEM is presented.

Invited review papers will treat the subjects: electron sources, comparative TEM and SEM techniques, x-ray analyses with SEM, contamination in SEM, and low magnification in SEM.

The symposium will be preceded by the Workshop on Electron-Specimen Interaction: Theory for Scanning Electron Microscopy, April 23, and followed by the Workshop on Scanning Electron Microscopy in Pathology, April 25 to 27, interspersed with four tutorial sessions. The technical sessions and equipment exhibit will be held at the Pick-Congress Hotel in Chicago from April 23 through April 27, 1973. The symposium, workshops and tutorial papers and their reviews will be published and available to the registrants at the meeting.

Advanced registration is requested. Telephone 312/225-9630.

able. These committee activities are in membership and advertising areas where some sales ideas can be implemented. Please phone or send me a note so we can get with it.

Don Haines, member of the Executive Committee, can be reached at 832-4611 anytime, or write to Consultronics, P.O. Box 637, Elmhurst, Ill. 60126.

Engineering & Science Center

The Chicago Engineering and Science Center has reached a stage where its Board of Directors has now been able to present to the National Science Foundation a proposal requesting their cooperative support under the new Experimental R&D Incentives Program designed to augment the application of science and technology to the civic sector. The NSF having given a preliminary expression of interest, the Center Board is now preparing a formal request for a grant sufficient to develop and evaluate the objectives and plans in sufficient detail to: define the physical facilities of the Center; determine its operating procedures; specify the professional and personal services to be provided; and to develop and implement complete financing.

Present efforts are directed toward locating the Center in a new building to be constructed as part of a major development in Chicago's central business district. The Center will include an information center, auditorium, meeting rooms, offices for engineering and scientific societies, and an array of personal and social amenities normally associated with such an institutional center.

The Center is dedicated to enhancing the role of the individual engineer and scientist as an essential human resource. It will concentrate on the collective applications of the disciplines, and provide services to assist firms, institutions, and agencies engaged in technology. It will provide the mechanisms essential to the successful application of technologically oriented professions to the economic, environmental, and social well-being of society. As an interdisciplinary, business-oriented institution it will provide services not now available to or among the professional societies.

The work to be accomplished under the requested National Science Foundation grant would be planned for completion in mid-summer of 1973.

Representatives of the National Science Foundation have commented enthusiastically on the unique features to be included, and look forward to having the Center become a prototype for similar developments in other urban areas.

MIDWEST ACOUSTICS CONFERENCE

SATURDAY, APRIL 7, 1973

NORRIS CENTER, NORTHWESTERN UNIVERSITY
1835 SHERIDAN ROAD, EVANSTON, ILLINOIS

- 9:00 a.m. **Introduction to the Conference**
José Peña, MAC President, GTE Automatic Electric Laboratories, Northlake, Illinois.
- 9:05 a.m. **Introductory Talk — Historical Review of Loudspeaker Development and Evaluation**
Paul Klipsch, President, Klipsch and Associates Inc., Hope, Arkansas.
- 9:35 a.m. **Objective Measurement of Loudspeakers**
Introduction to the Technical Session
Daniel Queen, Daniel Queen Associates, Chicago, Illinois.
Measurement of Loudspeaker Parameters
J. Robert Ashley, Department of Electrical Engineering, University of Colorado, Colorado Springs, Colorado.
- 10—Minute Coffee Break**
- Free—Field Measurements of Loudspeakers
Ed Long, Quadraflex Industries, Emeryville, California.
Reverberant Field Measurements of Loudspeakers
Daniel Queen, Daniel Queen Associates, Chicago, Illinois.
- 11:40 a.m. **Room Effects on Loudspeaker Performance**
George Augspurger, Perception, Inc., Los Angeles, California.
- 12:30 p.m. **3—Hour Break for Exhibitors' Demonstrations; Discussions with Speakers; N.U. Audiology Lab Tour; Lunch**
- 3:30 p.m. **Psychoacoustical Aspects of Loudspeaker Evaluation**
Raymond F. Carhart, Chairman, Department of Audiology, Northwestern University, Evanston, Illinois.
- 4:15 p.m. **Subjective Loudspeaker Evaluation Techniques**
Can a Layman Subjectively Evaluate Loudspeakers?
C. G. McProud, AUDIO MAGAZINE.
The Impossible Dream — Measuring Sound of a Speaker
Julian D. Hirsch, Hirsch-Houck Laboratories, New Rochelle, New York.
- 10—Minute Coffee Break**
- 5:25 p.m. **Panel Discussion: Subjective Versus Objective Loudspeaker Evaluation**
Moderator: Robert Schulein, Shure Brothers, Evanston, Illinois.
Panel Members: Robert Ashley, George Augspurger, Raymond Carhart, Julian Hirsch, Paul Klipsch, Ed Long, C. G. McProud.
- 6:25 p.m. **Closing Comments**
José Peña, MAC President.

Registration: \$4.00

Welcome To New Members

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