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CHICAGO SECTION · IEEE · INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

NOVEMBER, 1973

Quadraphonic Systems

Are you thinking of upgrading your present stereo system to a quadraphonic system? If so, better plan to attend the Fox Valley meeting on Wednesday, November 7. G. E. Owen, Jr., Motorola, Inc., will talk on "Quadraphonic Systems". Owen will describe the current status of these systems and will predict whether

the field will settle on a standard transmission-reception system in the near future.

Meeting will be held at the Back Door, West Chicago, Ill. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; meeting, 8:00 p.m. For reservations, call the IEEE office 263-5954.

WGN Tour

Tour the WGN Continental Broadcasting Company radio and television studios with the Northwest Subsection on November 14. See how radio and television programs are produced.

The evening will start at The Wishing Well Restaurant, 3836 N. Elston Ave., Chicago, with cocktails at 6:00 p.m. and dinner at 6:45 p.m. Parking is available across the street at the One Hour 'Martinizing' Cleaners. A five minute drive will take you to the WGN Studios at

2501 Bradley Place, where the tour will start at 8:00 p.m. Please use the visitor's parking lot and the west entrance to the building.

Because of limited facilities, only those who have made previous reservations for the dinner and tour or the tour can be accommodated. Reservations will be accepted from November 1 to November 13. Call 263-5954 for reservations. Make your reservations early so you don't miss a very interesting evening.

Health Service Problems & Control Engineers

On Thursday, November 29, Dr. James Dow, Rush-Presbyterian-St. Luke's Medical Center, will tell the Group on Automatic Control Theory about "Some Health Service System Problems of Interest to Control Engineers."

Dr. Dow is chairman of the Department of Biomedical Engineering and Professor of Biomedical Engineering at Rush-Presbyterian St. Luke's Medical Center. He is also Professor of Bio-engineering at the University of Illinois, Chicago Circle.

The meeting will be held at Menard's Black Steer Restaurant, 6446 W. North Ave., Chicago. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; meeting, 8:00 p.m. For reservations, call Dr. R. Priemer at 996-5491 or the Chicago IEEE office, 263-5954.

CALENDAR OF EVENTS

IEEE OFFICE: 263-5954

- Nov. 7 Quadraphonic Systems; Fox Valley Subsection; Back Door, West Chicago (Page 1)
- Nov. 8 Plastic Semiconductors — Are They Reliable? Reliability/Parts, Hybrids & Packaging; Nielsen's Restaurant, 6475 N. Mannheim Road, Rosemont (Page 3)
- Nov. 13 IEEE Executive Committee; Menard's Black Steer Restaurant, 6446 W. North Ave., Chicago
- Nov. 14 WGN Tour; Northwest Subsection; Wishing Well Restaurant and WGN, Chicago (Page 1)
- Nov. 21 "Why BELLBOY is Different; Vehicular Technology; Illinois Bell Telephone Company, 225 W. Randolph St., Chicago (Page 2)
- Nov. 27 Reliable (?) Microwave Power Sources; Microwave Theory and Techniques/Antennas and Propagation; Menard's Black Steer Restaurant, 6446 W. North Ave., Chicago (Page 2)
- Nov. 28 Energy Crisis '73; Power Engineering Society/Joliet Chapter, ISPE; White Fence Farm, Lemont (Page 3)
- Nov. 29 Health Service Problems and Control Engineers; Automatic Control Theory; Menard's Black Steer Restaurant, 6446 W. North Ave., Chicago (Page 1)
- Dec. 3-4 Chicago Fall Conference; O'Hare Inn, Rosemont (Page 4)
- Dec. 5 Electronic Surveillance; Fox Valley Subsection; Terrace Restaurant, Lombard (Page 3)
- Dec. 11 The Electromagnetic Pulse; Electromagnetic Compatibility, Black Steer Restaurant

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per 333.321 Postal Manual.

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Why BELLBOY is Different

On Thursday, November 21, Joseph H. Enenbach, Illinois Bell Telephone Company, will tell members and guests of the Group on Vehicular Technology and Communications "Why the Chicago Metropolitan BELLBOY is different."

The Chicago Metropolitan BELLBOY System is the largest such system to be offered by Bell and represents many interesting new innovations. Of particular interest is the mixture of equipment from a variety of manufacturers. Mr. Enenbach will trace the evolution of the BELLBOY system from the first market research activity in 1966 to its present operating status. He will point out how the engineering decisions set the criteria for the services that could be offered. He will describe the terminal, and show how it is integrated into the telephone network, as well as the network of the radiating sites and the transmission plan. Mr. Enenbach will also discuss receiver selection and administration.

Joseph H. Enenbach is the General Staff Engineer, Transmission, for Illinois Bell Telephone Company. He is responsible for transmission equipment and per-

formance standards for a wide variety of communications services, including voice, data, Picturephone, radio, and television. His previous Bell System experience includes a variety of departmental responsibilities and a tour in New York at A. T. & T. headquarters as Engineering Manager, Data Communications.

Enenbach attended the University of Illinois and Illinois Institute of Technology, graduating from the latter with a BS in electrical engineering. He is a past president of the National Electronics Conference, served as chairman of the Chicago Section of the old AIEE, and served on the first IEEE Board of Directors. Enenbach is a registered Professional Engineer in Illinois.

Meeting will be held at Illinois Bell Telephone Company, 225 W. Randolph Street, Chicago. Buffet dinner, 6:30 p.m.; meeting, 7:30 p.m. For reservations, call IEEE office, 263-5954, by Wednesday, November 20. You must register to attend the meeting, even if you come after dinner — so remember to call the IEEE office!

Reliable (?) Microwave Power Sources

On Tuesday, November 27, Dr. John L. Allen, Naval Research Laboratories will describe "Reliable (?) Solid State Microwave Power Sources" at the meeting of the joint Groups on Microwave Theory and Techniques and Antennas and Propagation. Meeting will be held at Menard's Black Steer Restaurant, 6446 W. North Avenue, Chicago, Ill. Social hour, 6:00 p.m.; dinner, 6:30 p.m.; meeting, 7:30 p.m. For reservations, call 263-5954, by November 23.

Because microwave solid state power sources are used in military phased array radar, the armed services are particularly interested in their reliability. But how much was reliability stressed as microwave power transistors were developed?

Dr. Allen will summarize some of the salient points in the physics and technology needed in fabricating microwave power transistors, and will discuss potential failure modes. He will then describe current techniques for surmounting these difficulties and some recent progress in

verifying the validity of these "fixes". Allen will also point out certain unresolved questions about the validity of these tests.

John L. Allen received his BS in engineering science from Pennsylvania State University in 1958 and his MS in electrical engineering and PhD in communications biophysics from Massachusetts Institute of Technology in 1962 and 1968, respectively. While attending Pennsylvania State University, he was an engineer with HRB Singer, Inc. After graduating, he became a staff member at Lincoln Laboratory, MIT, advancing to the position of Associate Head, Radar Measurement Division. He joined the Research Department, Naval Research Laboratory, in 1971, as Associate Director of Research for Electronics.

Dr. Allen is a Fellow of IEEE and a member of Tau Beta Pi. He has served on study committees for various professional societies and for the Department of Defense.

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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.

Energy Crisis '73

Is there an energy crisis '73? If you were not able to attend the October 3 meeting of the IEEE Power Engineering Society, make plans now to attend the joint Power Engineering Society, Joliet chapter, ISPE, on Wednesday, November 28.

The panel discussion will open with a brief synopsis by each panelist, showing how he views the energy crisis from his vantage point. Discussion by the panel and questions from the audience will follow the introductory remarks.

Panelists include: T. (Ted) R. Eck, chief economist, Standard Oil Company of Indiana; George F. Marcus, fuel agent, Commonwealth Edison Company; John G. Morris, environmental engineering consultant; and A. T. (Bud) Wulff, energy conservation engineer, Northern Illinois Gas Company.

The meeting will be held at the White Fence Farm, Lemont, Ill. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; meeting, 8:00 p.m. For reservations, call the IEEE office, 263-5954, by Monday, November 26.

Plastic Semiconductors . . . Are They More Reliable?

On November 8th, the Groups on Reliability and Parts, Hybrids and Packaging will present a panel discussion on the present status of the reliability of plastic discreet devices and ICs. Members of the panel will represent both device manufacturers and users. All Chicago Area engineers, whether they are members of the IEEE or not, are cordially invited to attend this first meeting of the IEEE Reliability Group for the 1973-74 season.

The panel members are:
LARRY GALLACE, Manager Reliability Engineering Lab., RCA Solid State Division, who will discuss the techniques used to establish and control the reliability of plastic discreets and ICs.

SAMUEL CARRELL, Manager, Quality & Reliability Assurance Electronic Device Div., Texas Instruments, who will discuss reliability capabilities of plastic semiconductors.

DR. M. H. VALEK, Manager of Process Control, QRA Laboratories, Texas Instruments, who will discuss reliability factors effecting plastics and their relationship to device reliability.

Welcome to Chicago Section

New Members		New Associate
Charles A. Black	Raymond A. Hendel	Albert W. Horst
Arnold P. Consdorf	Ace McInturff	
Jay D. Haynes	Edward S. Pearson	
Transferred into Chicago		New Students
		William C. Goss
		James A. Langer

Fellow Members		
Timothy G. Boland	Raymond J. Heidel	Ved P. Nada
Edwin P. Crabbe, Jr.	Clive P. Hohberger	Einas M. Overn
Roberts W. Craine	Richard G. Johnson	James A. Polinski
John R. Edgren	Mark A. Kirchman	Jay V. Smith
Frederick R. Fromm	Steven Kravitz	Paul D. Smith
Robert B. Fuller	Daniel L. Lewis	Richard C. Stevens
Melvin E. Gabriel	Zalman Makower	S. N. Studer, Jr.
Mario J. Gonzalez, Jr.	Harvey Matthew	Leon B. Waguespack
Robert K. Green, Jr.	Douglas G. Meteisis	John D. Witacre
John A. Guetzke	M. Mohsin	J. R. Zweizig
Robert C. Hansen		
Transferred Students		Transferred Associates
Syed A. Ahmed	Martin B. Lundberg	Ronald J. Milkie
Dennis A. Dauenhauer	Larry C. Mazur	Glen A. Rieuf, Jr.
Robert L. Engram	William J. Rissman	Alson T. Staley
Edgardo R. Gonzales	Joseph Sveda	
David T. Jaeger	Richard S. Swain	Upgraded to Senior Member
Chang U Kim	Zane L. Swanson	Paul F. Carroll

Upgraded to Member	
Garry A. Bartelt	
Stephen Goss	
Gregory N. Hesse	
Raymond V. Lacek	
Chris L. Mierzwa	
Mark J. Sullivan	
Yang Shih-Chien	
Upgraded to Associate	
Douglas G. Elkins	
Billy W. Haynes	
William G. Oerly	
James D. Olszewski	
Terry H. Veldhuizen	

Electronic Surveillance

F. W. Romig, Westinghouse Electric Corp., will speak on "Electronic Surveillance, at the December 5 meeting of the Fox Valley subsection.

Meeting will be held at the Terrace Restaurant, Lombard, Ill. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; meeting, 8:00 p.m. For reservations, call IEEE office, 263-5954.

CHICAGO FALL CONFERENCE

on Broadcast and Television Receivers

DECEMBER 3 and 4, 1973
O'Hare Inn, Rosemont, Illinois
(Adjacent to O'Hare Airport)

MONDAY

DECEMBER 3, 1973

9:30 A.M. SESSION I

Session Chairman: John Bowler
Motorola, Inc.

An Approach To A Unified Chroma System

James E. Heter;
Sprague Electric Company

A New TV Video Sound Detector IC

Milton E. Wilcox;
Motorola, Inc., Semiconductor Products Division

A Receiver With Low Cost Frame Grabber for Still
Picture Television System

Hero-aki Nabeyama, Katsuo Mohri, and
Gentaro Miyazaki;
Hitachi Consumer Products

Integrated Circuit System for Channel Selection of
Varactor Tuned Television Receivers

Kim Giontzeneli;
Texas Instruments, Inc.

A Two I.C. Pal Chroma/Luma System

William B. Jett;
Motorola, Inc., Semiconductor Products Division

12:15 P.M. CONSUMER AWARDS LUNCHEON

2:30 P.M. SESSION II

Session Chairman: Henry Lee
General Electric Company

Integrated Quadraphonic DC Volume Control

John E. Hanna;
Motorola, Inc., Semiconductor Products Division

A Candidate for the Final Solution of the Sound
Channel in a TV Receiver

P. Menniti and B. Murari;
SGS Development Department

Auto-dyne AM/FM Tuner Using a Dual Gate MOSFET

C. Lee;
General Instrument Corporation,
Semiconductor Components Division

Active Multi-Channel Tone and Volume Controls

Ronald W. Lutz;
Sprague Electric Company

A Monolithic Stereo Decoder for the General Electric
4-Channel FM Stereo System

John G. Metro;
General Electric Company

6:00 P.M. COCKTAIL HOUR

Sponsored By: M. Gottlieb Associates, Inc.

TUESDAY

DECEMBER 4, 1973

9:30 A.M. SESSION III

Session Chairman: R. Knoll
Admiral Corporation

Monolithic Integrated Circuit For Vertical Deflection In
Television Receivers

A. Romano and L. Venutti;
SGS-ATES Semiconductor Corporation

Self Regulating Horizontal Deflection Systems Using
Transistors

Mick Maytum;
Texas Instrument, Ltd.

Color Television Brightness — Yesterday, Today, and
Tomorrow

R. W. Vogel;
GTE Sylvania Electric, Inc.

Plastic Encapsulated Signal and Power Transistor
Reliability

E. A. Herr, A. Fox, and T. S. Read;
General Electric Company

The ITR For Horizontal Deflection

W. E. Babcock;
RCA Corporation

2:30 P.M. SESSION IV

Session Chairman: L. T. Matzek;
Warwick Electronics Inc.

An Integrated Circuit Dual Timer

Chandru Idani;
Signetics Corporation

Systems Approach To Automated Assembly

Milt Ross and George Kotkiewicz;
AMP Incorporated

Camera

Helfon Hamoui;
Fairchild Semiconductor

Statistical Tolerancing Of Electronic Components and
Devices

E. Deger;
RCA Corporation