



Scanfax

POSTMASTER:
SECOND CLASS POSTAGE
paid at Chicago, Illinois.

SCANFAX, 125 S. CLARK ST., CHICAGO, IL 60603

CHICAGO SECTION • IEEE • INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

June
MAY 1977

CALENDAR OF EVENTS

For reservations call the IEEE office at 236-4609
(Unless otherwise indicated)



- June 6-7 18th Annual Chicago Spring Conference on Consumer Electronics sponsored by IEEE BCCES & the Chicago Section of the IEEE. Marriott Motor Hotel, 8535 W. Higgins Rd., Rosemont, Ill.
- 8 "The Engineer & The Law," IAS/IECI, Nielsen's, 7330 W. North Ave., Elmwood Park, Ill. Social Hour 5:30 PM; Dinner 6:15 PM; Meeting 7:15 PM.
- 8 "Voice Scramblers for Mobile Radio Systems," VT Grp., Lancer Steak House, Meacham & Algonquin Rd., Schaumburg, Ill. Social Hour 6:30 PM; Dinner 7:00 PM; Program 8:00 PM. Call the IEEE meeting coordinator at 576-6567.
- 12-15 ICC '77 sponsored by the Comms. Soc. Conf. Bd. & Chicago Section IEEE. Ramada O'Hare Inn, Mannheim & Higgins Rds., Rosemont, Ill.
- 14 IEEE Executive Committee Meeting; Location and time to be announced.
- July 12 IEEE Executive Committee Meeting; Brown & Root Offices, 2001 Spring Rd., Oak Brook, Ill., 7:30 PM -- ALL WELCOME.
- 31 Boat Cruise on Lake Michigan, MTT/APS. Departure from Navy Pier 7:30 PM.
- Aug. 9 IEEE Executive Committee Meeting; Brown & Root Offices, 2001 Spring Rd., Oak Brook, Ill., 7:30 PM -- ALL WELCOME.

*PLEASE: Mark your two month Scanfax calendar for a desired meeting.
We cannot accelerate Postal Service or sending of meeting information.
Deadline for copy: One month before date of issue.*

VOICE SCRAMBLERS

The subject of the June Meeting of the Vehicular Technology Group will be "Voice Scramblers for Mobile Radio Systems". The speaker will be Mr. Tony Hennen of Motorola, who will give a summary of some of the various types of speech scramblers now on the market. Included will be the inverter, the band splitter, and one of the new digital types, with an explanation of the advantages and disadvantages of each type.

The meeting will be held on Wednesday, June 8, at the Lancer Steak House, Meacham and Algonquin Road in

Schaumburg. This is located approximately ½ mile west of the Algonquin Road (Hwy 62) and I-90 interchange.

Social hour begins at 6:30 PM, with dinner at 7:00 PM, and the program at 8:00 PM. The dinner will be Roast Sirloin of Beef, and the price of \$7.50 includes all the trimmings, tax, and tip. Student members with their IEEE identification pay only \$1.50 for the meal.

For reservations, please call the IEEE meeting coordinator at 576-6567. Visitors and guests are welcome.

Welcome Aboard

The Microwave Theory and Techniques Group and Antennas and Propagation Society invite you to a cruise aboard the luxuriously appointed S.S. Clipper Ship on Sunday — July 31, 1977. The Clipper is a 900 passenger vessel which smoothly sails the high seas of Lake Michigan and is Chicago's only excursion luxury liner. Departure will be from Navy Pier with cruise time from 7:30 PM to 11:00 PM.

Dr. Michael L. Burrows from MIT Lincoln Laboratory will be our guest speaker

(Continued on p. 2)

(Continued from p. 1)
and will astound everyone with his talk entitled "Ocean Communications" which will take place in the ship's theatre.
Make your reservations for this memorable experience by sending your check, made payable to MTT/APS and mail to Purser George Bowman, c/o Motorola PTP Products, 1301 East Algonquin

Purser George Bowman — c/o Motorola PTP Products, 1301 E. Algonquin Rd., Room 1313, Schaumburg, Ill. 60196.

Enclosed is my check in the amount of \$ _____ covering _____ reservations at \$13.04 per person for the MTT/APS cruise aboard the S.S. Clipper Ship Departing from Navy Pier on Sunday, July 31, 1977.

Name _____
Firm _____
Address _____ Phone _____
City _____ State _____ Zip _____

The Engineer and The Law

OR How To Obtain Legal Advice From A Top Lawyer Without Paying A Legal Fee

On Wednesday June 8, 1977, Mr. Anthony Zumner, Chicago Patent Attorney and President of the Illinois Society of Professional Engineers, will speak to the Chicago Chapter of the IEEE-IAS-IECI. His subject is, "What Every Engineer Should Know About Trade Secrets" Mr. Zumner will present examples of trade secrets and discuss the criteria used to determine what constitutes a trade secret, the things an engineer may do when he leaves an employer and the position the courts have taken in the past regarding trade secrets. He will bring this all together in a few simple ideas the engineer should remember to keep himself clear of litigation

Calumet Section Student Award

David Scott, a senior at Hammond High School was presented the Calumet Section IEEE special award for his project "Computer Talk" at the Calumet Regional Science Fair. He received a \$50.00 award from the section. Also, he and his parents were guests of the section at the last spring meeting. The Calumet Section furnished two judges for the judging of the special award: Joe Hero, Inland Steel Co. and Frank Palazolo, Youngstown Sheet & Tube Co.

Road, Room 3113, Schaumburg, Illinois 60196. The cost is \$13.04 per person which includes \$5.00 towards a full course dinner. *Deadline for reservations is JUNE 30, 1977.*

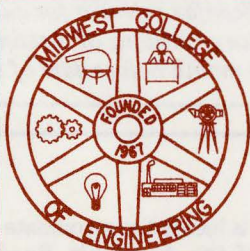
For your dancing pleasure we will have an orchestra and a dixieland band. Reserve now! Our trusty vessel requires 50 crewmates before sailing at 7½ bells.

Place: Nielsen's Village
7330 W. North Avenue
Elmwood Park, Ill.
(About 2 blocks west of Harlem)

Cocktail Hour: 5:30 PM
Dinner Time: 6:15 PM
Meeting Time: 7:15 PM

Reservations: Call (312) 236-4609

Note: Those who come for dinner (\$8 per person) receive complimentary liquid refreshments.



Midwest College of Engineering

BACHELOR'S AND MASTER'S DEGREE PROGRAMS IN ENGINEERING

AFTERNOON AND EVENING CLASSES AT
440 S. Finley Rd.,
Lombard, Illinois

FOR INFORMATION
PHONE 627-6850
"APPROVED FOR VETERANS"

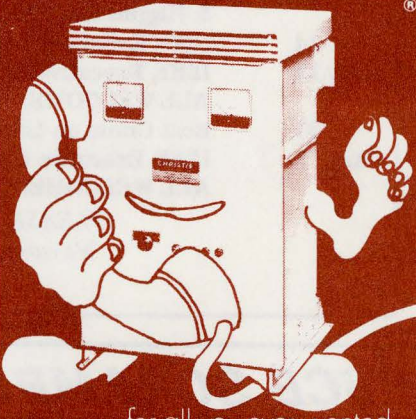
SCANFAX, June 1977 — Volume 29 Number 10. SCANFAX is published monthly, except July and August by the Chicago Section, Institute of Electrical and Electronic Engineers for the information of its members. Business office is at 125 S. Clark St., Chicago, Illinois 60603, telephone number (312) 236-4609. Subscription rate for IEEE members collected in dues, \$1.50; for others, \$3.00 per year. Second-class postage paid at Chicago, Illinois.

Change of Address
A change of address form is included in each issue of SPEC-TRUM. Your local post office will also supply you with cards; mail to Roseann Schulz, Member Services, IEEE Service Center, 445 Hoes Lane, Piscataway, N.J. 08854. Include your SPECTRUM mailing label if possible. We cannot forward this information for you, so please do not send it to the local office.

HOSPITAL ELECTRICAL SYSTEMS SEMINAR

The Chicago Chapter IAS-IECI will conduct this seminar on June 11, 1977 at Mercy Hospital — Chicago. A \$50.00 fee will include lunch and refreshments. For further information contact Eleanore Burda at the IEEE office 236-4609.

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

Midcon Announces Exhibit Plan to Industry

More than 8000 U.S. and overseas electronics manufacturers and suppliers will receive their formal invitations to MIDCON/77 this week. It marks the formal launching of preparation for the new mid-continent electronics show and convention, to be held November 8-10 in O'Hare Exposition Center and the nearby O'Hare Hyatt Regency Hotel.

Mailing of the exhibit prospectus this week follows more than two years planning by MIDCON's sponsors, national and regional elements of the Institute of Electrical and Electronics Engineers and the Electronic Representatives Association, it was noted by Paul F. Carroll, MIDCON show director. Carroll, who is president Semiconductor Specialists of Chicago, is one of 12 electronics executives serving on the MIDCON board of directors.

"The industry has needed a strong, broad-based show and convention in Chicago for a long time," Carroll said, adding, "but it has to be one that reflects the diversity of the industrial market for electronics in the midwest. The plans for MIDCON are built around first-hand knowledge of this high-production terri-

tory and the rapid growth in electronics applications."

In its premiere presentation, MIDCON expectations are for about 175 exhibiting companies in 300 booth units, Carroll said. At the same time as the prospectus mailing, a MIDCON "call" for technical and professional sessions was issued. Sessions are to be held in the O'Hare Hyatt Regency Hotel concurrently with the exposition.

Fourteen volunteer committees have been appointed and are at work, he said. Eventual committee membership will reach a total of about 200 persons. Professional show and convention management is being provided by Electrical and Electronics Exhibitions Inc., the same organization that produces Wescon in California and Electro in New York or Boston each year. In 1978, MIDCON is scheduled for presentation in Dallas.

As are Wescon and Electro, MIDCON is a non-profit event, sponsored by regional members of IEEE and ERA. Sponsors are Chicago and Dallas Sections and Regions IV and V, IEEE; the Chicagoland and Southwest Chapters of ERA, and the Mid-USA ERA Council.

CHICAGO SPRING CONFERENCE

The Chicago Spring Conference on Broadcast and TV Receivers will be held June 6-7, 1977 at the Marriott Motor Hotel, 8535 West Higgins Road, Chicago,

Illinois. A morning session, starting at 9:00 AM and an afternoon session, starting at 2:00 PM are planned each day. For further information, call the IEEE Office, 236-4609.



Edward Koncel (center) is congratulated by Byron Lee (left), vice-president of his present department, and Ludwig Lischer, vice-president of his former department, on being named a Fellow by IEEE.

selected an IEEE Fellow

Edward Koncel Jr., a staff assistant in Generating Stations Maintenance, was elevated to a Fellow by the Institute of Electrical and Electronic Engineers (IEEE), Power Engineering Society, at its winter meeting. The Fellow grade is one of unusual professional distinction and conferred to a person of outstanding and extraordinary qualification and experience who has made important individual contributions to electrical or electronic engineering or related fields.

Ed's selection to this elite grade was made by the Fellow Committee of IEEE and approved by its board of directors "for innovations in technical and economic development of a major electric utility and for pioneering the computerized accounting of nuclear fuel."

Election to an IEEE Fellow is a prestigious occasion. Being nominated for the honor does not automatically guarantee it. Only about one half of the candidates survive the committee's rigorous evaluations.

EMI/EMC SEMINARS

● MOBILE COMMUNICATION SYSTEMS

CHICAGO, ILLINOIS — SEPT. 20-22, 1977 — FEE: \$395/STUDENT

This 3-day seminar emphasizes performance prediction and design of land-mobile services. System factors covered include performance, cost, propagation modes, terrain conditions, ambient electromagnetic and manmade noise, antenna types and tower heights, transmitter and receiver characteristics, and required quality and range of service.

● MICROWAVE SOLID-STATE COMMUNICATION SYSTEMS AND CIRCUITS

WASHINGTON, D. C. — OCT. 18-20, 1977 — FEE: \$395/STUDENT

This 3-day course covers the design of microwave solid-state circuits for application in radar, communications, navigation, and countermeasure equipments and systems. Included in the analysis and design are frequency multipliers, mixers, upconverters, parametric amplifiers, phase modulators, diode switches and other varactor, PIN, IMPATT & GUNN devices.

SUMMER/FALL 1977 TRAINING SEMINAR SCHEDULE								
COURSE TITLES	LOCATIONS	SEATTLE, WASHINGTON	OTTAWA, CANADA	SAN FRANCISCO, CALIFORNIA	WASHINGTON, D. C.	CHICAGO, ILLINOIS	SAN DIEGO, CALIFORNIA	BOSTON, MASSACHUSETTS
EMC—DESIGN & MEASUREMENT			AUG. 8-12	SEPT. 26-30	OCT. 24-28			
GROUNDING & SHIELDING		JULY 26-28			SEPT. 13-15		OCT. 4-6	NOV. 15-17
EMI CONTROL FOR EDP EQUIPMENT								OCT. 4-7
MOBILE COMMUNICATIONS						SEPT. 20-22		
MICROWAVE COMMUNICATIONS & CIRCUITS					OCT. 18-20			

FOR REGISTRATION AND MORE INFORMATION, CONTACT:

DON WHITE CONSULTANTS, INC. DEPARTMENT: ADV-75
14800 SPRINGFIELD ROAD
GERMANTOWN, MARYLAND 20767 U. S. A.

PHONE: (301) 948-0028
OR: (301) 840-0300

TELEX: 89-2766 DWCI-GTWN

ICC '77 TECHNICAL PROGRAM

9:00 A.M. — 12:00 Noon 2:00 P.M. — 5:00 P.M.

MONDAY	1. U.S. CTS Technological Experiment Evaluation	5. Digital Microwave—A Tighter Squeeze	9A. Digital Signal Processing Implementations 9B. Multiplex Speech and Data Transmission Techniques	14. Tutorial—Part I Digital Switching	JUNE13
	2. Time Division Multiplexed PABX's	6. Advanced Satellite Communications Signal Processing	10. Teletraffic Theory and Practice	15. Digital Radio and Propagation	
	3. More Bit Rate Per Hertz	7. Environmental Effects on Telephone Systems	11. Telecommunications and Urban Life	16. Satellite Communications System Performance	
	4A. Networking for Electronic Funds Transfer 4B. Digital Coding of Video Signals	8. Antennas and Propagation for Satellite Communication	12. Computer Communications I	17. Panel Discussion: Protocol and Interface Standards for Accessing Public Data Networks	
			13. New Techniques for Speech Coding		
8:00 P.M.—10:30 P.M. CONFERENCE BANQUET—Speaker: Mr. William M. Ellinghaus					
TUESDAY	18. The L5E Coaxial System	23. Tutorial—Part II Digital Switching	27. No. 3 EAX System—A Time Division Digital Tandem Switch	31. Military Satellite Communications Systems	JUNE14
	19. Display-Based Telecommunication Services	24. Satellite and Terrestrial Radio Modulation Techniques	28. Record Communication Systems	32. Expanding the Circuit Capacity of 1.5 Megabit Wire Pair Cable Facilities	
	20. Communication Switching I	25. Advanced Satellite Communications Network Design & Control	29. Recent Results in Multiple-User Information Theory	33. Shaped Beam Satellite Antennas	
	21. Communication Theory	26. Putting the Digital Telecommunications Network Together	30. Computer Communications III	34. Communications Systems Operation in Today's Electromagnetic Environment	
	22. Computer Communications II				
12:00 Noon—1:30 P.M. CONFERENCE LUNCHEON—Speaker: Mr. Robert J. Gressens					
WEDNESDAY	35. The DDD Network Goes Electronic	39. The Promise of Picture Coding	43. Memories for Communication—Technology and Applications	47. Application of Microprocessors in Data Communications	JUNE15
	36. Panel Discussion: Shopping & Banking Electronically	40. High Capacity Microwave Systems	44. Communication Switching II	48. Adaptive Processing for Jam Resistant Radio Communications	
	37. Second Generation Multiple Access Theory for Satellites	41. European Communication Satellite Development	45. Recent Advances in TDMA	49. Interference To and From Communications Satellite Systems	
	38. Integrating Voice and Data Communication on a Common Network	42. Electromagnetic Interference—Did You Ever Swim in Lake Erie?	46. The Narrowing Gap Between Computer Architecture and the Design of Digital Communication Systems	50. Subjective Assessment of Voiceband Codecs—An Invited Tutorial	

Semiconductor  *Specialists INC.*

SEMICONDUCTOR

Motorola
Signetics
Monsanto
Mostek
Plessey
Raytheon
Siliconix

Texas Instruments
G.E. Semiconductor
Westinghouse
NEC Microcomputer
ITT Semiconductor
TI Computer Products

Fairchild
RCA
STC
Siemens
G.I.

WE CAN SERVE YOU

Augat Sockets & Panels
Thermalloy Heatsinks
ITT Capacitors
Siemens Capacitors
G.E. Capacitors

*Microprocessor Kits and Engineering Services

ACCESSORIES

TI Sockets & Panels
G.E. Controls
Martin Research μ P Kits
DMC μ P Power Supplies
Motorola μ P Clocks

**Call SEMI SPECS/CHICAGO at
312/279-1000**

Commonwealth Edison
Working for you.

