



Scanfax

SCANFAX, 3413 N. KENNICOTT AVE.
ARLINGTON HEIGHTS, IL 60004

U.S. POSTAGE PAID
NON-PROFIT ORG.
Permit No. 479
Glen Ellyn, Illinois

Official Publication of the Chicago Section • Institute of Electrical & Electronics Engineers • April 1988

TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

For reservations call the IEEE office 255-3003
(unless otherwise indicated)

Copy Deadline for May Scanfax is March 28, 1988

MAR. 24	Parts ESS	IEEE RELIABILITY/ Institute of Environmental Sciences	Arthur's Restaurant Des Plaines, IL	Reg.: 6:30 PM Dinner: 7:00 PM Meeting: 8:00 PM
APR. 12	Monthly Meeting All Welcome	IEEE Executive Committee	Allen Bradley Co. 910 Pasquinelli Drive Westmont, IL	Meeting: 7:15 PM
APR. 13	Managing Automation for productivity	IEEE Northwest Subsection	Mr. Peter's Restaurant Mt. Prospect, IL	Social: 5:30 PM Dinner: 6:15 PM Meeting: 7:15 PM
APR. 13	Midland Cogeneration Project	Power Engineering Society	Carson Pirie Scott & Co. Highland Room/ Corporate Level Chicago, IL	Rec: 11:30 AM Lunch: 12:00 Noon Meeting: 12:45 PM
APR. 16	Recognition Dinner	IEEE Recognition Dinner	Westin Hotel 6100 River Road Rosemont, IL	Cocktails: 6:00 PM Dinner: 7:00 PM Donation: \$30.00 per person
APR. 21	Symbolic's new LISP chip	Computer Society (joint with ACM)	Xerox Corp. 3000 River Rd. Des Plaines, IL	Light Meal: 6:00 PM Meeting: 7:00 PM
APR. 27	Management Issues for 1990's	Joint Meeting Notice Eng. Man./ Prof. Comm. Chapter	Wilton Manor Schmale Rd. Wheaton, IL	Social: 6:00 PM Dinner: 7:00 PM Speaker: 8:00 PM
APR. 28	Trends In Local Area Networks (LANS)	Communications & Computer Societies	Wilton Manor 2200 Main St. Wheaton, IL	Social: 6:00 PM Dinner: 6:30 PM Meeting: 7:30 PM
MAY 11	Industrial Power Line Noise	IAS & IES	Mr. Peter's Restaurant Mt. Prospect, IL	Social: 5:30 PM Dinner: 6:15 PM Meeting: 7:15 PM

More EMI/RFI Protection

We offer a complete line of modular enclosures, equipment cabinets, and custom enclosures in virtually all shielding materials.

- Patented, Double-Electrically-Isolated construction for maximum protection against low-frequency magnetic and high-frequency electric fields
- Double sealed, single shield systems designed to accommodate conventional interior finishing for computer room and medical applications
- Modular interchangeable panel design permits modifications and relocation without specially trained personnel

Lindgren enclosures are **assembled, tested, and guaranteed** to meet your specifications before they are shipped

Call us for more information and applications assistance.
312-628-9100.



WANTED: A sales and applications electrical engineer. Should have several years experience with electrical wire and cable, field experience with a utility or electrical contractor, and be familiar with AEIC, UL and ICEA standards.

Mail response to:
Anixter Bros., Inc.
4711 Golf Road
Skokie, IL 60076
ATTN: Bill McFarland
VP-Electrical Wire & Cable Products

MUELLNER CONSULTANTS

on-site seminars software development

- C Language — LISP — CAD
- UNIX (trademark of AT&T)
- M68000/10/20 — Pascal
- 8086/88/286/386 — Graphics

Call: Dr. Muellner 312-279-4100, X206

SCANFAX, (Publication) number (ISSN 0018-1297), Apr. 1988
Volume 40, Number 8, SCANFAX is published monthly, except July and August by the Chicago Section Institute of Electrical and Electronics Engineers for the information of its members. Business Office is at 3413 N. Kennicott Ave., Arlington Heights, Illinois 60004, telephone number (312) 255-3003. Subscription rate for IEEE members collected in dues. \$1.50; others, \$10.00 per year. Third class postage paid at Glen Ellyn, Illinois.

Unless otherwise specified, Chicago Section IEEE neither endorses nor sanctions any positions or actions espoused in SCANFAX.

Bob Hofmann, Editor
Room 2B 220
AT&T Bell Labs
Naperville Rd.
Naperville, IL 60566
979-3627

James Carroll, Assoc. Editor
416-7277

C.A. Larsen, Copy Manager
C.A. Larsen & Associates
(312) 255-3003

Change of Address

Send change of address to Roseann Schulz, Member Services, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854-4150. Include your SPECTRUM mailing label if possible. We cannot forward this information for you, so please do not send it to the local office.

Power Electronics

POWERTRON, INC.

David Thimmesch (414) 425-3600
HALES CORNERS, WISCONSIN

Consulting Engineering Firm
specializing in the following areas of Power Electronics:

- ☐ Servo Systems
- ☐ Power Supplies
- ☐ Motor Drives
- ☐ UPS Systems
- ☐ Battery Systems
- ☐ Special Inverters

Services include Circuit Design and Analysis, System Analysis, Thermal and Reliability Analysis, EMI/RFI Evaluations and Technical Writing.

IEEE RELIABILITY SOCIETY AND INSTITUTE OF ENVIRONMENTAL SCIENCES PRESENTS PARTS SCREENING COMPARISON

The speaker for this meeting will be Shahim Golshan from Texas Instruments in Midland, Texas. Mr. Golshan is "Reliability Engineering Manager for TI Military Semiconductor Products. He is also a member of the IEEE, IES and technical chairman of the IES parts committee. His efforts in the parts committee are concentrated in the areas of parts screening and in determining different quality levels between suppliers. The presentation will cover the effectiveness between different device class screening of military semiconductors and potential tailoring methods.

DATE:	March 24, 1988
PLACE:	Arthur's Restaurant NE corner of Elmhurst and Oakton Roads (North of Mobil gas station) Des Plaines, Illinois
TENTATIVE AGENDA:	6:00 PM - Registration 6:30 PM - Dinner (Roast Beef) 7:30 PM - Meeting
COST:	\$10.00 for Dinner
RESERVATIONS:	Call John Ray at 381-2400, X2262 by 3:00 PM March 23, 1988
INFORMATION:	Rod Garcia, 259-0740, X250 John Ray, 381-2400, X2262

An IEEE Officer's Position on "Plurality Voting" for IEEE Elections

In the March 1988 SCANFAX we quoted from an article in the December 17, 1987 issue of Electronics magazine on "approval plurality voting." The same magazine printed the following response as a letter to the editor in its February 18, 1988 issue (page 20) which is quoted here in its entirety:

To the editor: I want to take exception to your conclusion that, by the IEEE's adopting the approval plurality voting system, "Petition candidates are effectively being closed out . . ." [Electronics, Dec. 17, 1987, p. 32]. Rather, members can be assured that the candidate who is approved by most of the members will be the one elected to office.

Certainly, with three or more candidates, we will avoid the splintering of the majority. If most voters favor two of the candidates more than a third candidate, they won't be forced to choose between the two, so that the third candidate emerges with a victory based on the support of a minority of voters. The approval ballot allows members to vote for both of the candidates they favor.

On the other hand, approval plurality voting gives a fairer chance to insurgent candidates who appeal to a majority, rather than to "weaken 'third parties'." Under the current method of selection, voters often hesitate to support an insurgent for fear that he or she has no chance to win. As a result, third candidates often lose the votes of many who sympathize with them.

Henry L. Bachmann
1987 President, IEEE
New York, N. Y.

As stated in our prior article, we solicit our members' opinions, with an open invitation to express your thoughts in these pages. Furthermore, please do not hesitate to offer your inputs directly to your local and transnational IEEE Officers and/or to the appropriate IEEE publications.

Joe Feitler, Section Vice Chairman

SCANFAX
DEADLINES

ISSUE	COPY DUE	MAILED ON
May	March 28	April 15
June	April 25	May 15

Joint Meeting of the Chicago Chapters
Association for Computing Machinery (ACM)
IEEE Computer Society

DATE: Thursday, April 21, 1988

TOPIC: Symbolics' IVORY Microprocessor: a VLSI CPU for symbolic processing

SPEAKER: Neil Weste, Director of the VLSI Systems Group, Symbolics Inc.

LOCATION: XEROX Corporation, 3000 River Road, Des Plaines, IL
(west side of River Road between Higgins Road and Touhy Avenue;
north of Kennedy Expressway and south of I-294 Touhy Ave exit)

Reservations by noon of April 20, 1988 are required; please call
ACM's Evelyn Marsh at 684-4962 so our host, XEROX Corporation,
can make suitable arrangements.

Cost for light buffet: \$6.00 for ACM/SIGART/IEEE members
\$7.00 for nonmembers

SPECIAL NOTE:
In conformity with IEEE's rules, IEEE members and their
guests will be admitted without charge to attend the talk only
(that is, after 7:00 PM).

TIME: 6:00 PM - Cash bar; Meal Service starts
7:00 PM - Speaker

SYNOPSIS: The LISP programming language (originally developed over 20
years ago) has become one of the popular software tools for
handling Artificial Intelligence (AI) applications. Traditionally the user
input has been manipulated by interpreters which tend to operate
relatively slowly. The new LISP chip represents an ambitious
attempt to reduce execution time by replacing the software
algorithms by a significantly more efficient hardware implementation.
This novel approach cannot sacrifice the current flexibility and
analytic methods using systematic path searches (top-down and
bottom-up) and the various heuristic strategies most suitable to AI.
Our speaker will discuss Symbolics' approach for implementing this
IVORY chip.

Please contact Joe Feitler at 979-8023 if you would like more information or more detailed travel
directions.

IEEE ELECTION ISSUES

Participation in IEEE elections is one of the most important ways you can contribute to your professional society and influence its activities. In this issue you will find your Chicago Section Ballot. Please take the time to review the ballot and vote. Let the elected executive board know you are interested in the Section and that the time they spend to further your interests is worthwhile. We all appreciate your support and help.

IEEE elections, you may have noticed, are becoming more controversial at the national level. Several of the trade publications are outspoken about the new election rules instituted by the Board of Directors and seem to be of the opinion that the new rules tend to entrench the current board and dissolve the voting powers of the membership. (See March Scanfax, Vice Chairman report.) We would like to hear your opinion. Send a letter to the editor with your views.

I was quite pleased to receive in February a letter from Merrill Buckley, Jr., IEEE Executive Vice President, soliciting support in his effort to be put on the ballot for IEEE president elect during 1989. I support his effort and candidacy because he is appealing to the membership at the grass-roots level for his support and because he is well qualified. Merrill has served in many capacities including Regional Director, and Section Executive Committee to name just two. He is therefore aware of our needs on the local chapter and section level. His petition requires about 2300 signatures, which I hope he will have received by the time you read this.

As a final note, please note in the Scanfax calendar that our Section Executive committee meetings are open to all the membership. Please stop by and meet the executive committee, we welcome your observations and inputs on our performance. These meetings are business in nature and discuss Section finances, technical meetings and programs, and many other topics which effect the well being of the Section and its members.

Ed Barrett
Section Chairperson

JOINT MEETING OF THE CHICAGO CHAPTERS OF THE IEEE COMMUNICATIONS AND COMPUTER SOCIETIES

DATE: Thursday, April 28, 1988

PLACE: Wilton Manor, Main Street & Geneva Road, Wheaton, IL

TOPIC: Trends in Local Area Networks (LANs)

SPEAKER: Kenneth O. Zoline, Senior Staff Data Communications Analyst at Amoco Corporation

Mr. Zoline will highlight the meeting with a presentation on recent trends in Local Area Networks. LANs play an important role in providing system connectivity for minicomputers, mainframe computers, and personal computers.

Mr. Zoline holds an M.S. degree in Computer Science from IIT and a B.S. degree in Computer Science from the University of Illinois. He has conducted numerous lectures on networking and published several papers. He is an adjunct faculty member of IIT's Computer Science Department.

The meeting will be preceded by dinner; please make reservations with the IEEE Office (225-3003) by noon on April 26.

Social Hour (Cash Bar) at 6 pm

Dinner at 6:30 pm (dinner reservations are required)
(Cost: \$12 for IEEE/ACM members, \$14 for non-members)

Talk starts at 7:30 pm (No charge for attending the talk only)

Call either Ken Smolik at 416-4789 or Joe Feitler at 979-8023 if you need more information about the meeting or some travel directions.

* * * Please invite your friends to join us at this meeting. * * *

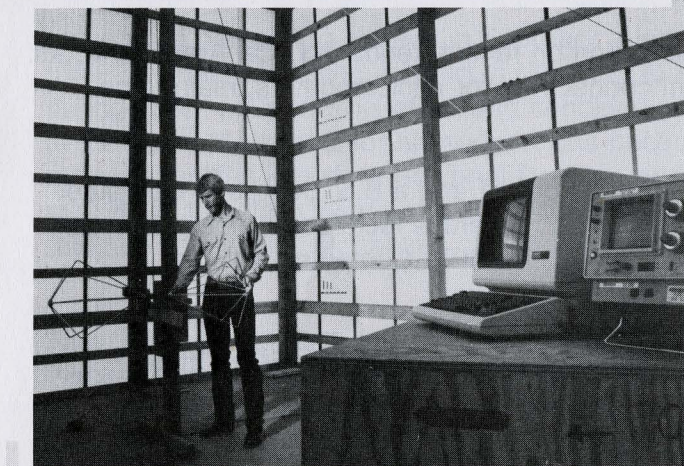
Look what makes D.L.S. the #1 test house for a growing number of engineers throughout the U.S.A.



Approved by the National Bureau of Standards

D.L.S. is proud to be recognized by the National Bureau of Standards as an accredited FCC test facility. Being approved by NBS is one of the best ways to assure clients of both the validity of our test results, and our adherence to the stringent requirements of the FCC. To obtain NBS approval, not only were our testing procedures and test equipment closely inspected, but also comprehensive investigations were held at our Glenview lab and open field site. In addition, the NBS also conducted in-depth interviews with our test engineers.

D.L.S. provides a wide array of testing and consulting services including FCC parts 2, 5, 15 (subparts J, H, and others), 18, and 68, and VDE including 0871 and 0875. In addition, D.L.S. also provides Mil Std 461 emissions and susceptibility testing and its commercial counterpart which includes MDS, Bell Stds., and others.



Two open field sites to serve you better

D.L.S.'s Genoa facility has been expanded to include a second test site. The site was carefully chosen because of the low ambient level of RF energy and because it meets the requirements of FCC Bulletin Ost 55. In addition, significant improvements have been made to our original all-weather test building. It is now totally climate controlled incorporating heating and air conditioning. We have also increased our electrical service so that we can continue to provide complete, professional testing to meet your growing demands.

In-depth problem solving

Because our highly trained and knowledgeable staff is regularly involved with radiated, conducted and susceptibility testing, their in-depth experience can be the key to solving your particular problem. Once the problem area has been identified, they utilize D.L.S.'s vast inventory of materials to bring your product into compliance. This results in the fast, efficient turn around time and cost effective solutions our customers have come to expect.

High quality testing

As you would expect from an NBS accredited test house, D.L.S. prides itself on its up-to-the-minute awareness of, and absolute conformity to, the latest rules and regulations. This total involvement assures you of thorough, professional test results you can depend on.



10350 Dearlove Road, Glenview, IL 60025 (312) 699-9060

OFFICIAL BALLOT

OFFICE	NAME	WRITE-IN
Chairman:	☐ Joe Feitler	☐ _____
Vice-Chairman:	☐ Robert Schrage	☐ _____
Treasurer:	☐ George Stout	☐ _____
Secretary:	☐ John Truitt	☐ _____
Member Services:	☐ Barry Brusso	☐ _____
Publications:	☐ Bob Hofmann	☐ _____
Professional Activities	☐ John Waters	☐ _____
Conferences:	☐ Howard Wolfman	☐ _____
Program:	☐ Len Cohen	☐ _____
Student Activities:	☐ Cara Lindell	☐ _____
Finance:	☐ Henry Dwyer	☐ _____
Special Events:	☐ Henry Korman	☐ _____
Awards:	☐ Dennis Lamont	☐ _____

This is the official election ballot of the Chicago Section of the IEEE. Please tear out this page, mark your choices, fold on the dotted lines, affix a 22 cent stamp, and mail to:

ELECTION BALLOT - IEEE CHICAGO SECTION
3413 North Kennicott Ave,
Arlington Heights, IL 60004

THIS ADDRESS IS PREPRINTED ON THE REVERSE SIDE

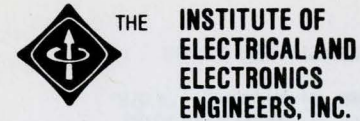
THIS BALLOT MUST BE RECEIVED BY THE IEEE NO LATER THAN APRIL 25, 1987.

The Chicago Section nominating committee chaired by Bert Orszula met in November to develop a slate of officers for the executive committee for the 1988 - 1989 term. The list of names was published in the January SCANFAX. No additional names were added at the Feb 9, section meeting. Please mark your choice with an X in the underlined space, or write in a candidates name and place an X to the left of the candidates name.

STAMP
HERE

IEEE ELECTION
LARSEN AND ASSOCIATES
SUITE B
3413 NORTH KENNICOTT AVE.
ARLINGTON HEIGHTS, IL 60004

Fold Here



IEEE RECOGNITION DINNER

DATE: SATURDAY, APRIL 16, 1988
PLACE: THE WESTIN HOTEL O'HARE-ASTOR-ADAMS BALLROOM
6100 RIVER ROAD
ROSEMONT, IL 60018

PROGRAM FOR THE EVENING

COCKTAILS 6:00 P.M.
& Hors D'oeuvres

DINNER 7:00 P.M.

DONATION: \$30.00 PER PERSON

AWARDS

FELLOW: Robert H. Harner – S&C Electric Co.
Robert C. Arzbaecher – Illinois Inst. of Technology
Paul K. Giloth – AT&T Bell Laboratories

STUDENT: To be announced

ENTERTAINMENT: Charles Dink Freeman
Humorist and America's most versatile storyteller

DANCING: To the 10-Piece Orchestra of JACK PRAGER
From Touch to Disco-Big Band Sound

You may wish to form a group for a table of 10.

DINNER COMMITTEE MEMBERS:

Chairman – Hank Korman, Gentry Technologies
V. Chrmn. – Frank Lakowski, United Chemi-Con
Secretary – N. R. Orszula
Treasurer – Cara Lindell, Commonwealth Edison
Arrangements – Bob Warzin, Allen Bradley
Tickets – George Gawell, Zenith Electronics
Solicitations – Frank Voltaggio, Northrop Corp.
Dave Williams, Northrop Corp.
Sheldon Isenberg, Northrop Corp.
Entertainment – Joe Venturella, Allen Bradley Co.

MAIL TO OR CALL: GEORGE GAWELL, TICKET CHAIRMAN, IEEE RECOGNITION DINNER.
ZENITH ELECTRONICS CORP, ROOM 233
1000 N. Milwaukee Ave.
Glenview, IL 60025
Tel: 312-391-8940

Enclosed is my check in the amount of \$_____ covering _____ tickets, at \$30.00 each for the 1988 IEEE Recognition Dinner at the Westin Hotel O'Hare, Rosemont, IL.

NAME: _____

FIRM: _____

ADDRESS: _____ PHONE: _____

CITY & STATE: _____ ZIP: _____

Make check payable to: IEEE Recognition Dinner. Please mail by April 4, 1988.

1988 IEEE CHICAGO SECTION SALARY AND FRINGE BENEFIT SURVEY

Please mark all of your responses on this sheet in the boxes provided. Your response must be received by June 30, 1988 to be tabulated. Please respond only if you are working in an engineering or engineering management position on a full-time basis, or if this would be your job if not currently unemployed.

1. TOTAL COMPENSATION - What was your ANNUALIZED salary as of APRIL 1988, 1987, 1986? DO NOT include overtime or bonus income and DO NOT include income from secondary employment (such as part-time teaching, part-time consulting, etc.) Enter integer dollars.

1988-[\$, .00] 1987-[\$, .00] 1986-[\$, .00]

2. ENGINEERING EXPERIENCE - How many years of experience have you had in electrical/electronic engineering and/or related fields? [] Years

3. LEVEL OF PROFESSIONAL RESPONSIBILITY - Which ONE professional level of responsibility best describes your present level of responsibility?

- ☐ Eng 1 GS-5 Asst. Eng (entry level) ±1 yrs exp.
- ☐ Eng 2 GS-7 Assoc. Eng (routine work) ±2 yrs exp.
- ☐ Eng 3 GS-9 Engineer (works independently) ±4 yrs exp.
- ☐ Eng 4 GS-11 Sr. Eng ±10 yrs exp. Supv O-2
- ☐ Eng 5 GS-12 Sr. Staff Eng (Prin Eng.) ±15 yrs exp. Supv O-3
- ☐ Eng 6 GS-13 Supv (research section Hd) ±18 yrs exp. Supv O-8
- ☐ Eng 7 GS-14 Dept Hd (research authority) ±22 yrs exp. Supv O-25
- ☐ Eng 8 GS-15 Project Mgr, Eng Dir ±26 yrs exp. Supv O-100
- ☐ Eng 9 Senior Corporate/Agency Management or Staff
- ☐ 10. Other, not covered by above.

NOTE: Grades 1 through 8 are described in IEEE national salary surveys and in the U.S. Department of Labor Professional Administrative, Technical and Clerical (PATC) Survey. GS numbers are General Services ratings used by Federal Government and correlated to the grades survey in accordance with the Department of Labor determinations.

4. DEGREE/LICENSE - Check up to 3 codes as applicable.

- ☐ 0. Less than Bachelor's Degree
- ☐ 1. Bachelor of Arts Degree
- ☐ 2. Bachelor of Engineering Technology Degree
- ☐ 3. Bachelor of Science or Engineering Degree
- ☐ 4. Master's Degree (not MSEE or MBA)
- ☐ 5. MBA Degree
- ☐ 6. MSEE Degree
- ☐ 7. Doctorate
- ☐ 8. PE

5. YOUR PRINCIPAL JOB FUNCTION - Check one.

- ☐ 1. General Corporate Management
- ☐ 2. Design & Development Engineering (ckts, components, equip systems)
- ☐ 3. Eng Services (evaluation, quality ctrl, reliability, stds, test)
- ☐ 4. Basic Research
- ☐ 5. Manufacturing & Production
- ☐ 6. Engineering Assistants (draftsman, lab assistant, technician)
- ☐ 7. Field Engineering, Customer Service
- ☐ 8. Purchasing & Procurement
- ☐ 9. Marketing including Sales
- ☐ 10. Advertising, Media or Public Relations
- ☐ 11. Personnel, Human Relations, etc.
- ☐ 12. Other

6. TECHNICAL SPECIALTY - Describe in a few words.

EXAMPLE: Antenna Design, Computer Repair, CS, etc.

7. EMPLOYER PROFILE - Check most applicable box.

- ☐ 0. Industry, R&D
- ☐ 1. Industry, Manufacturing
- ☐ 2. Industry, Data Processing
- ☐ 3. Industry, Engineering Services
- ☐ 4. Self Employed
- ☐ 5. Federal Government, Department of Defense
- ☐ 6. Federal Government, Non-Department of Defense
- ☐ 7. Other Government, State, Local, etc
- ☐ 8. University, Non-Profit Associations
- ☐ 9. Other

8. EMPLOYER SIZE

- A. Enter # of all employees at your facility []
- B. Enter # of all eng, scientists at your facility []
- C. Enter # of all employees, of your employer in U.S. []

9. HOLIDAYS - How many holidays and paid days off will you be eligible to take in calendar year 1988? []

10. VACATION - How many vacation days can you take in 1988? []

11. OTHER LEAVE - How many days of other leave can you take in 1988? []

12. OVERTIME - How many hours of overtime do you work in a YEAR? []

13. OVERTIME - Do you receive compensation for O.T.? (Check best response)

- ☐ 1. Yes, in Cash
- ☐ 2. Yes, in Comp Time Off
- ☐ 3. No, but get significant bonus
- ☐ 4. Rarely or never

PERSONAL PROFILE QUESTIONS - OPTIONAL (These assist IEEE in analyzing data)

14. YEARS WITH PRESENT EMPLOYER - How many years have you been with your present employer as of APRIL, 1988 [] (use your prior employer if you are currently unemployed).

15. AGE - Insert your age in years (round off) as of APRIL, 1988, []

16. ORIGIN - (EEO Classification) Check best response

- ☐ 1. White (not of Hispanic origin)
- ☐ 2. Black
- ☐ 3. Hispanic
- ☐ 4. Asian or Pacific Islander
- ☐ 5. American Indian or Alaskan Native
- ☐ 6. Other
- ☐ 7. Prefer not to answer question

17. SEX []-Male 2. Female []

18. CITIZENSHIP []-USA Citizen, []-Perm Resident, []-Other - Visitor

19. DURATION OF UNEMPLOYMENT - During the past 12 months, how long were you unemployed (in weeks)? []

20. Are you currently unemployed involuntarily and seeking a full-time engineering related job? []-Yes []-No

PLEASE REMOVE THESE SHEETS FROM SCANFAX, FOLD
WITH THE ADDRESS ON THE REVERSE SIDE OF THIS SHEET
ON THE OUTSIDE, AFFIX A 22 CENT STAMP, AND MAIL

SCANFAX SALARY SURVEY
LARSEN AND ASSOCIATES
SUITE B
3413 NORTH KENNICOTT AVE.
ARLINGTON HEIGHTS, IL 60004

Fold Here



Members who wish to participate should fill out the form below and send it to the IEEE office. Your one line description will be printed in the next three issues of Scanfax. Employers who are interested, can phone the IEEE office, (255-3003), and will be given your name and phone number. If you have noted "confidential" on the form, we will take the names and numbers of the company representatives that call and inform you who they are so that you may contact them.

We feel this is a positive step to help our members who are out of work. The program is intended for those who are at Member Grade and above.

The information on this form will be given to prospective employers who call unless you note "CONFIDENTIAL" on the top of the form. If you accept employment, please notify us immediately so that we may clear our files.

NAME _____ IEEE No. _____ EXPIRA. DATE _____
ADDRESS _____ IEEE GRADE _____
CITY/STATE _____ ZIP _____ PHONE _____

IEEE Placement Service
3413 N. Kennicott
Arlington Heights, IL 60004

ENGINEERED CABLE & CABLE ASSEMBLIES

ELECTRONICS

Shielded & Unshielded Cables • Molded RS-232 Interconnect Computer Cable Assemblies • Coax & Triaxial Cables • Custom Designed Cables

MICROWAVE

Semi Rigid Coax • Semi Rigid Coax Assemblies • Precision Delay Lines • Flexible Microwave Cables • Phase Matched Cables • Precise Microwave Adaptors

FIBER OPTICS

Single & Multimode Cables • Multi Channel Cables • Fiber Optic Coil Cords • Semi Rigid Cable & Assemblies • Precision Terminating Adaptors • Precision Attenuators • Jumpers & Pigtail Assemblies

ENGINEERING SERVICES

On Site Testing & Terminating • Semi Rigid Cable Routing Assistance



116 SHORE DRIVE
HINSDALE INDUSTRIAL PARK
HINSDALE, ILL. 60521
(312) 323-9121 TWX 910-651-0850
FAX (312) 323-9398



POWER ENGINEERING SOCIETY

MEETING NOTICE

LUNCHEON MEETING

WEDNESDAY, APRIL 13, 1988

SPEAKER: Chandrakant (Charlie) Shah
Principal Electrical Engineer
FLUOR DANIEL, INC.

TOPIC: Midland Cogeneration Project

ABSTRACT: In 1984, all work at the Midland Nuclear Power Plant was stopped. Started in 1970, Midland was 90% complete when financial and technical considerations required Consumers Power to cancel the project. Rejuvenated in 1987 as a cogeneration facility, the Midland Cogeneration Venture facility at Midland will utilize the existing facilities and add 12 gas turbines. The result is a combined cycle plant that will produce 1300 MW of power and supply 1,000,000 lbs/hr of steam to a neighboring chemical plant. The presentation will focus on the electrical systems of the cogeneration plant and its interconnection with the utility transmission system.

SPEAKER: Chandrakant (Charlie) Shah graduated from Illinois Institute of Technology with a MSEE degree in 1970. He is a registered Professional Engineer in Illinois. Charlie has worked for Fluor Daniel for the past 17 years in various capacities. He is presently the lead electrical engineer on the Midland Cogeneration Project. Fluor Daniel provides engineering, design, procurement, construction, project management, maintenance and training services to utility, industrial, commercial, natural resources, energy and government clients, worldwide.

LOCATION:	Carson Pirie, Scott & Co.	Reception:	11:30 A.M.
	Highland Room - Corporate Level	Lunch:	12:00 Noon
	Monroe & Wabash (Downtown Chicago)	Meeting:	12:45 P.M.

Lunch is \$11.00 per person. Advance reservations should be made by calling Judy Larsen or Carolyn Glandt at 255-3003 before April 11, 1988.

Power and Life

PLACEMENT SERVICE

The Chicago Section is now offering a Placement Service for its members free of charge. The program is intended for those who are Member Grade and above and is a positive step to help our members who are unemployed. If interested in any of the applicants listed below, call the IEEE office (255-3003) for their name and phone number. If marked "confidential," the applicant will be contacted by the IEEE office so that he/she may contact the prospective employer.

B131 — Microprocessor based system designer - hardware & software.

B132 — Bradley EET Grad - 5/88 Technical Sales, product design, B95, B98, B100, B104.

B133 — BSEE IIT seeking position in communication systems SRF Design.

B134 — MSEE Entry level position in communication and computer field.

B135 — MSEE seeks position in consumer/ Automotive Electronics Chicago area.

B136 — BSEET enthusiastic w/3 yrs in Aerospace test requirements Comm/Aerospace.

B137 — BSEET Entry level position in communication and/or Data systems.

B138 — BSEET entry level position in computer field or control system.

B139 — PHD, seeking microwave Eng., measure, sintering, Heat., Plasma position.

B140 — MSEE vic seeking position in computer hardware/software design.

B141 — BSEE seeking entry level position. Software: FORTRAN, PASCAL & ASSEMBLY.

B142 — MSEE RD, tech mgmt.; electron systems, CKTS device physics. PHD - PHYS.

B143 — BSEE IIT seeking entry level position in electronics engineering.

B144 — BSEE Bradley seeking entry level pos. in control sys. w/Microprocess.

B145 — BSEE/MBA seeks technical/program management position in Chicago area.

If you are an IEEE member and unemployed, use the form on page 15. Send to: IEEE Placement Service • 3413 N. Kennicott Avenue • Arlington Heights, IL 60004.

CHICAGO SECTION WINS REGION 4 AWARDS

Region 4 Awards Chairman, Dennis Lamont, announced at the February 6, 1988 Region 4 meeting that the Chicago Section was the winner of the 1987 Region 4 "Exemplary Section" Award.

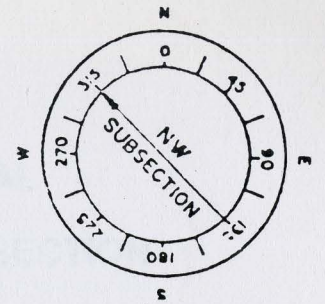
The Chicago Section is the first recipient of this award. The award will be presented annually to the outstanding Section in Region 4 who through their efforts has shown exemplary performance in carrying out the objectives of IEEE through the implementation of Section programs.

The Section will be presented this award by a Region 4 Representative at the recognition dinner on April 16.

Northwest Subsection



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



Industrial Applications Society
Industrial Electronics Society

Volume 18 - NO. 2

March 1988

MANAGING AUTOMATION FOR PRODUCTIVITY

Productivity improvement is mandatory if a company or a nation is to remain competitive. Most productivity improvement results from the introduction of new technology. There is a wide range of process technologies available that have the potential to improve productivity and competitiveness. Management must evaluate the available technologies, select those which are appropriate, and follow through to introduce these changes.

Our speaker will be Dr. Keith E. McKee, Director of the Manufacturing Productivity Center (MPC). Dr. McKee has over 35 years of experience involving technology applications with emphasis on manufacturing. He has served in industry with line responsibility for design, quality assurance, and manufacturing activities. For over 25 years he has had management responsibility for various groups of technologists.

Since 1977 the Manufacturing Productivity Center has served as a focal point to bring to bear the resources of the Illinois Institute of Technology and the IIT Research Institute to help U.S. industry retain and regain its competitive position. MPC involves 200 IIT center staff members whose primary activities relate to manufacturing technology and productivity.

The meeting will be a joint meeting of the Northwest Subsection and IAS/IES and will be held on April 13, 1988 at MR. PETER'S BANQUETS.

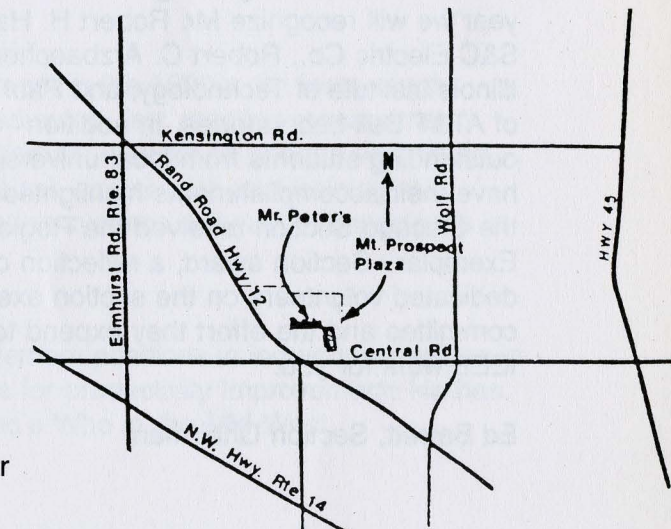
We invite you to bring your spouse or a friend to this timely and informative meeting.

DATE: Wednesday, April 13, 1988

PLACE: Mr. Peter's Banquets
1018 E. Mt. Prospect Plaza
Rand and Central Roads
Mt. Prospect, IL

TIME: 6:00 Social Hour - Cash Bar
7:00 Dinner - \$12
8:00 Meeting - All Welcome

RESERVATIONS: Call Judy Larsen or Carolyn Glandt at 255-3003.
Please call on or before April 11.



CHICAGO SECTION NEWS

Engineers week has come and gone and the Chicago Section was active as usual during the week. Highlights included the Washington Award presented to F. James McDonald, retired president of General Motors and an engineer. Mr. McDonald, the 65th recipient of the award, follows in the footsteps of many notables such as Herbert Hoover, Orville Wright, Henry Ford, David Packard and Neil Armstrong to name just a few. The award is conferred each year upon an engineer whose professional attainments, in the judgement of the Washington Award Commission, have preeminently advanced the welfare of mankind. The award is made at a banquet of the members and guests of the seven participating societies. Currently the IEEE members of the award commission are James Owens and Dennis Lamont.

At the other end of the spectrum five members of the Chicago Section represented the Electrical Engineering profession at an open house at IIT West for high school students, and teachers. This enthusiastic group (IEEE, students, and faculty) resulted in several new IEEE members, and a better understanding of the opportunities in electrical engineering, and an understanding of what real engineers do in the real world. The Chicago Section was represented by Bev Barnes, Bob Schrage, Howard Wolfman, Joe Feitler, and Ed Barrett.

As you are probably aware the Chicago Section recognizes the achievements of the local members at the Recognition Dinner. This annual event acknowledges the contributions of the section members that have been elevated to Fellow Grade, the highest grade in IEEE. This year we will recognize Mr. Robert H. Harner of S&C Electric Co., Robert C. Arzbaeher of Illinois Institute of Technology, and Paul K. Giloth of AT&T Bell Laboratories. In addition outstanding students from local universities will have their accomplishments highlighted. Finally, the Chicago Section received the Region 4 Exemplary Section award, a reflection on the dedicated volunteers on the section executive committee and the effort they expend to make IEEE work for you.

Ed Barrett, Section Chairman



FAILURE ANALYSIS SERVICES

TIMELY, COST EFFECTIVE RESOLUTION
OF QUALITY AND RELIABILITY PROBLEMS
WITH ELECTRONIC COMPONENTS.

AVAILABLE SERVICES INCLUDE:

- > Physical Failure Analysis
- > Microscopy, Optical and SEM
- > X-Ray Analysis, Energy and Wavelength Dispersive
- > Electrical Microprobing

FOR A BROCHURE OR QUOTE CALL:

P. WALKER
(312)-391-7000
Zenith Electronics Corporation
1000 Milwaukee Avenue
Glenview, IL. 60025

JOINT MEETING NOTICE ENGINEERING MANAGEMENT/PROFESSIONAL COMMUNICATION CHAPTER FOX VALLEY SUBSECTION & ASME FOX VALLEY SECTION

TOPIC:	Management Issues for the 1990's
DATE:	April 27, 1988
SPEAKER:	Gregory N. Weismantle, Vice-President Louis Allen & Associates
PLACE:	Wilton Manor, Schmale Rd., Wheaton
TIME/COST:	Social: 6:00 P.M., Cash Bar Dinner: 7:00 P.M., \$10 Speaker: 8:00 P.M., Free
RESERVATIONS:	Call 255-3002 or 255-3003 to make reservations for Dinner and/or Meeting, by 4/25/88.

A joint meeting will be held with Engineering Management/Professional Communication Chapter, Fox Valley Subsection and ASME Fox Valley Section in April. The topic will be "Management Issues for the 1990's" presented by Gregory N. Weismantle, Vice-President, Louis Allen & Associates of St. Charles, IL.

Four major forces will influence the practices of management in the 1990's. An increasingly competitive world-wide market place will require well coordinated, fast reacting management teams. Organizations will place a premium on self-management in order to operate with fewer layers. Advancement opportunities will be fewer, so appraisal, career path and training will become more important. Finally, computer based information systems will gain in importance in planning, budgeting and training.

Mr. Weismantle has a wide range of line and staff management positions in industry as well as in the consulting field. He has developed software programs for productivity improvement. He has degrees from Notre Dame and Loyola and is listed in Who's Who in the Mid-West.

ATTENTION FOX VALLEY SUBSECTION MEMBERS

Fox Valley Subsection activities have had a large number of "no-shows" in the last 2 years. If you make a reservation for a dinner or a tour and later discover that you can't attend, please cancel your reservation. Our Arrangements Chairman asks the Wilton Manor to prepare meals based on the number of dinner reservations that have been made. The subsection has had to pay for several uneaten meals due to people who made dinner reservations and did not attend. These unnecessary expenses add to the IEEE's cost of serving its members, leading to dues eventually having to be increased. IEEE's monthly dinner meetings do not realize a profit!

Fox Valley Subsection has over 2,000 members. When a tour group is limited to 40 people, anyone who makes a reservation and does not attend has deprived another member of this opportunity. A waiting list is usually maintained for members who were not able to reserve a position on the tour initially. Poorly attended tours will give the subsection an unfavorable reputation among the companies and institutions which host the tours.

The subsection expects to have free admission tickets to A/E/C Systems '88.

A RUNNING ACCOUNT FROM YOUR SECTION VICE CHAIRMAN

First of all your Section, Subsection, and Chapter Officers sincerely hope that most of you are planning to attend our Recognition Dinner this month. We are looking forward to receiving Region 4's award as its best Section which will be presented by our Region's IEEE Director, Jim Holte. Many thanks to our Chairperson Ed Barrett for his conscientious presentation to the judges. Incidentally, Ed became one of four winners as the best section spokesperson at the February Region 4 meeting where this selection used the "Plurality Voting" method recently adopted by the IEEE Board of Directors as an amendment to the IEEE Bylaws. A vigorous discussion ensued among the attendees which seemed to produce a generally unfavorable consensus for this new voting process. We anticipate many more lively discussions of this topic among our members, but we would like to hear from you: our SCANFAX Editor Bob Hofmann is looking for your personal inputs as soon as possible.

Recent phone calls from our members proved rather interesting—two callers wanted to set up a Laser Optics Chapter. One also needed advice on retrieving some articles from IEEE publications written about ten years ago. So please keep telling us about your professional interests which could be served by establishing some new Chapters or by reviving some of our inactive ones.

We hope that you will come to the various technical meetings and also share in selecting and/or conducting them. Some of these gatherings may attract a large crowd (100 people), but some may have a very small attendance (4 persons)—and we had good weather for both of these recent events!

Finally, please help us remain a Section operating on a democratic basis by voting for next year's Section Officers and elected committee chairpeople whose terms of office will start on July 1, 1988.

See you at the recognition dinner.

Joe Feitler

Interested In A Local LEOS Chapter?

All IEEE members participating in the areas of lasers, optics, electro-optics, and opto-electronics (and those interested in finding out more about these rapidly growing technologies) are invited to help form and participate in a local (Chicago/Western Suburbs) Chapter of the Lasers and Electro-Optical Society (LEOS).

All those interested in forming such a Chapter, or in simply obtaining additional information on the same; are urged to contact Ravi Jain, Amoco Research Center, F-4, P.O. Box 400, Naperville, IL 60566 (Tel. # 420-4576 (off) 393-7847 (res.)).

Mailing in the following information to Ravi at the above address by April 10 will help expedite matters.

Name: _____

Company Name: _____

Address: _____

Tel # (off) _____ (res) _____

IEEE Membership No. (see SCANFAX address label) _____

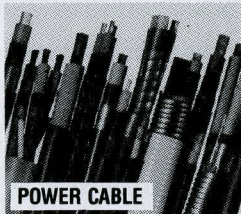
Present IEEE Society affiliations: _____

LEO-related areas of work _____

Topics of interest (for seminars/courses/meetings)

Will you be available to participate in the organization of the Chapter or to assist in some of its activities? Yes ____ No ____

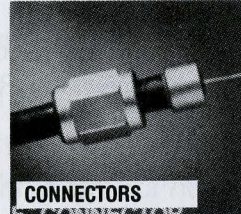
From Rebuilding Industrial America to Installing an LAN...



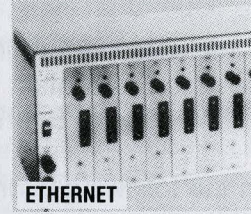
POWER CABLE



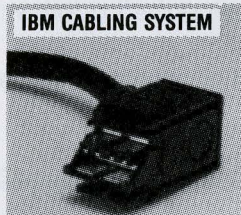
COAXIAL CABLE



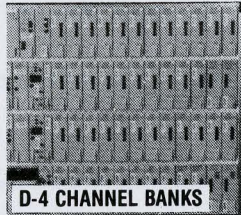
CONNECTORS



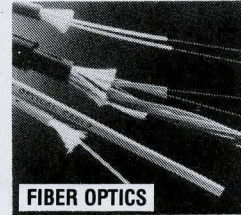
ETHERNET



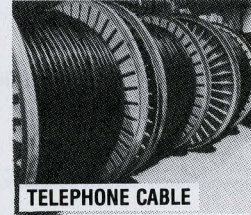
IBM CABLING SYSTEM



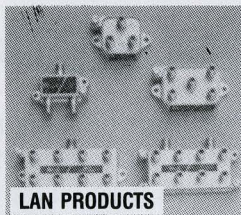
D-4 CHANNEL BANKS



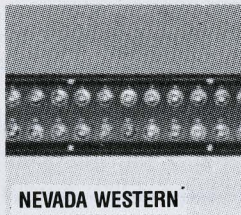
FIBER OPTICS



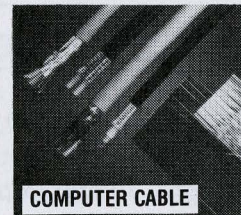
TELEPHONE CABLE



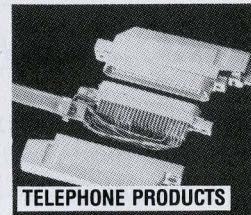
LAN PRODUCTS



NEVADA WESTERN



COMPUTER CABLE



TELEPHONE PRODUCTS

... **ANIXTER** is your answer for power cables, building wire and Business Communications Products.

Anixter is America's #1 source for electrical and electronic wire and cable and business communications products.

An on-line, real time computer system

provides customers with instantaneous access to Anixter's huge inventory—deliveries are made within hours of receipt of the initial order.

For the Anixter stocking location in your area, consult the Yellow Pages under "Wire" or under "Telephone Equipment and Systems."

ANIXTER®

Wiring Systems Specialists

Voice • Video • Data • Power

CORPORATE HEADQUARTERS: ANIXTER BROS., INC. • 4711 Golf Road, Skokie, IL 60076 • (312) 677-2600 — Telex 289464

©1987 Anixter Bros., Inc.