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Official Publication of the Chicago Section • Institute of Electrical & Electronics Engineers • Nov. 1987

TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

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

Copy Deadline for December Scanfax is October 26, 1987

OCT. 28	Satellite Systems & the Optical Fibre Challenge- A European View By Dr. Peter Clarricoats	Joint Chicago Chapter of IEEE Antennas & Propagation Society & Microwave Theory & Techniques Society	Louis Restaurant 351 E. Lake St. Addison, IL	Social: 5:50 PM Dinner: 6:30 PM Meeting: 7:30 PM
OCT. 28	Superconducting Supercolliders	Fox Valley Subsection	Wilton Manor Schmale Rd. Wheaton, IL	Social: 6:00 AM Dinner: 7:00 PM Meeting: 8:00 PM
NOV. 4	FCC, ANSI and CBEMA action on FCC Part 15	EMC Society	AT&T Bell Labs Naperville Rd.	7:30 PM Info-call 979-3627
NOV. 5	How To Find A Consultant	Engrng. Management/ Profes. Comms. Soc. EM/PC	Golden Ox Rest. 1758 N. Clybourn Chicago, IL	Social: 6:00 PM Dinner: 6:45 PM Meeting: 7:45 PM
NOV. 7	Tour of Fermi	Fox Valley Subsection All IEEE Members invited	Fermilab Near Batavia Wilson Hall	9:00 AM (For information, call 510-6372 or IEEE 255-3003)
NOV. 12	Large Batteries for Peak Shaving	Power Engineering Society	Carson Pirie Scott Wabash & Monroe Sts. Highland Room 8th Fl. Downtown Chicago	Social 11:30 AM Lunch: 12:00 Noon Meeting: 1:00 PM
NOV. 13	COMPUTING—WHAT'S NEW? 25th Anniversary Symposium ENTER (your__application, our__system)	Association for Computing Machinery ACM Chicago Chapter	Museum of Science and Industry 57th & South Shore Drive	Afternoon and Evening Program (For information, call: 312-684-4962)

Continued on Page 9

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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.

ELECTROMAGNETIC COMPATIBILITY SOCIETY

MEETING NOTICE

CHICAGO CHAPTER - IEEE EMC SOCIETY

WEDNESDAY - NOVEMBER 4, 1987 - 7:30 P.M.

SPEAKER - BOB HOFMANN - AT&T-BELL LABS

TOPICS - LATEST FCC, ANSI, & CBEMA ACTIONS ON PART 15
ANSI APPLIANCE NOISE COMMITTEE RESULTS

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SCANFAX DEADLINES

ISSUE	COPY DUE	MAILED ON
Dec.	Oct. 26	Nov. 15
Jan. 1988	Nov. 30	Dec. 15
Feb.	Dec. 28	Jan. 15
Mar.	Jan. 25	Feb. 15
Apr.	Feb. 29	Mar. 15
May	March 28	April 15
June	April 25	May 15

MONTHLY PROGRESS REPORT FROM YOUR VICE-CHAIRMAN

First of all, Hank Korman has asked for several more Recognition Dinner committee members. This committee normally meets monthly. Since no prior IEEE activity experience is necessary, we would like to ask some of our newer members—particularly recent graduates—to help make this important annual Section event another success. You meet congenial people and not overwork yourself.

Our Computer Society Chapter consisting of about 2000 members needs some volunteers to help our current Chapter Officers in arranging and publicizing a series of challenging meetings (and perhaps another tutorial like the highly successful UNIX and Prolog seminars). Just call me if you want to help.

We are pleased with your interest in the recent Section Technical meeting which started our 1987-88 activities.

Participate!
Joe Feitler

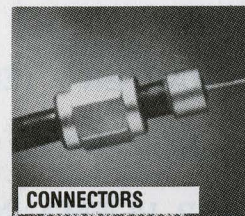
From Rebuilding Industrial America to Installing an LAN...



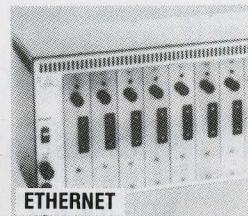
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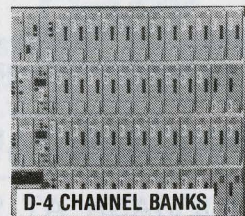
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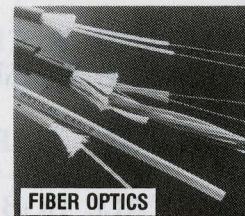
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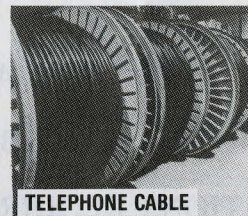
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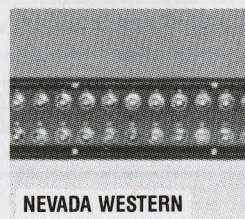
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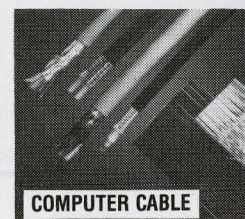
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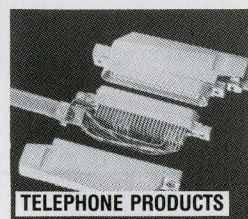
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POWER ENGINEERING SOCIETY

MEETING NOTICE

LUNCHEON MEETING

THURSDAY, NOVEMBER 12, 1987

SPEAKER: Charles K. McManus
Director of Stationary Marketing
EXIDE CORPORATION

TOPIC: Large Batteries for Peak Shaving

ABSTRACT: Lead acid storage batteries used for load leveling, peak shaving as well as peak demand/time of day metering redistribution will be discussed. Performance specifications for a storage battery under varying applications will be discussed as well as operating parameters and life expectancy goals. In addition, environmental concerns dealing with earthquakes, emissions and cell failure containment will be addressed. Requirements for proper maintenance of a battery used in these applications will be described. The economic feasibility of applying the technology to the customers side of the meter will also be discussed.

SPEAKER: Charles K. McManus attended the University of Pennsylvania. He has held several positions with Exide which include Production Supervisor, Contract Administrator, Market Manager for Stationary Products, Market Development Manager for Telecommunications and in 1935 he assumed his present position as Director of Stationary Marketing.

LOCATION: Carson Pirie, Scott & Co.
Highland Room-Corporate Level
Monroe & Wabash
Downtown Chicago

Cocktails: 11:30 A.M.
Lunch: 12:00 Noon
Meeting: 1:00 P.M.

Lunch is \$10.00 per person.
Advance Reservations should be made by calling Judy Larsen or Carolyn Glandt at 255-3003 before November 10th.

Power and Life

ILLINOIS INSTITUTE OF TECHNOLOGY
College of Engineering
Department of Electrical and Computer Engineering

AP/MTT - Society

Date: Monday, November 16, 1987

Title/Speaker: "Scientific and Engineering Applications of Microwave" by
Professor M.E. Brodwin

Society: Joint Chapter of Antennas & Propagation and Microwave Theory &
Techniques (AP/MTT-S)

Place: Louis Restaurant
351 E. Lake Street
Addison, IL

Time: Social - 5:30 p.m.
Dinner - 6:30 p.m.
Meeting - 7:30 p.m.

JOINT MEETING NOTICE

IEEE ENGINEERING MANAGEMENT/PROFESSIONAL COMMUNICATION CHAPTER
AMERICAN SOCIETY FOR ENGINEERING MANAGEMENT—CHICAGO SECTION

"How To Find A Consultant"

Ms. Pat Conway, Illinois Research Network

Our speaker for this meeting is the Chicago-area representative for the Illinois Resource Network (IRN). She will start with a brief presentation of IRN's activities and follow that with an on-line demonstration of the consultant-search process, using IRN's computerized search system.

Come to the meeting armed with specifications for a consultant; let IRN find one for you!

Date Thursday, November 5, 1987
Place Golden Ox Restaurant, 1578 N. Clyborn, Chicago
Times Socialize 6:00 PM
Dinner 6:45 PM (order from the menu)
Speaker 8:00 PM

For reservations, call 255-3003 by 4:00 PM Tuesday, November 3.

For further information, call Bill Everson (IEEE) at 294-8420 or John Horwath (ASEM) at 827-3131.



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Section Chairman's Corner

You may still have time! If you haven't voted yet take the time to do so before the fast approaching deadline. The region 4 office is contested and should be of interest to all of us in the Chicago Section. An amendment to the bylaws also is on the ballot that would require the Board of Directors to slate more than one candidate for an office. You may have noticed that this ballot had only one candidate for each national office. The enclosed election material gives reasons for and against such an amendment.

Elections at the national level always seem to have some controversy attached. Many local issues may also inflame some of our members in the Section. Make SCANFAX your vehicle to raise your concerns about IEEE locally or nationally. Tell us what role the Section might play in furthering all our interests. Letters to the editor are welcomed and will get due consideration for publication.

The Chicago Section is a member of the IEC, Illinois Engineering Council, an organization of engineering and related societies in the state. This group represents in Springfield the legislative interests of the engineering profession. A typical area of interest would be laws regarding professional engineering registration in the state. Currently the Chicago Section is represented by executive committee members Bert Orszula, John Waters, and Henry Dwyer. Should you have questions about the IEC or would like information on becoming involved please contact these individuals or myself either directly or through the Chicago Section Office at 312-255-3003.

Ed Barrett

Section Chairperson

CALENDAR OF EVENTS

Continued from front cover

NOV. 16	Microwave Applications	Joint Chapter AP/Mtt-S	Louis Restaurant 351 E. Lake Addison	Social 5:30 PM Dinner 6:30 PM Meeting 7:30 PM
NOV. 17	"Semi-Conductor Lasers"	Electron Devices Society Joint with North West Sub-Section	Mr. Peter's Banquets Mt. Prospect Plaza Mt. Prospect, IL Reservations in by 11/13 At Door	Social: 6:00 PM Dinner: 7:00 PM Meeting: 8:00 PM \$11.00 \$12.00
NOV. 19	Latest in ESS Screening Activities	Joint Meeting IEEE Reliability Section Institute of Environmental Sciences For Reservations call: John Ray (312) 381-2400 x2262	Arthurs Restaurant Elmhurst & Oakton Rd. (NE Corner) Des Plaines, IL	Social: 6:30 PM Dinner: 7:00 PM Meeting: 8:00 PM

B-70 — Sr. Elect. Proj. Engr. Nuclear & fossil power all aspects incl. I & C

B-84 — BSEE entry level position in software - C, assembler, Pascal, and Fortran

B-85 — BSEE UIUC - seeking entry level position
in communication systems

B-86 — I am seeking a position in computer hardware design and software development

B-87 — Sr. Proj. engr./Mgr. HiTech Fac. Power
anal. UPS DC plants B set + 20 yrs. exp.

B-88 — Confidential BSEE + entry level position
in electronic Eng. ex. comm. skills

B-89 — Entry level in EEE, testing control systems and digital applications

B-90 — Elec. Eng. Mgr. 19 yrs. high-Tech mil
Systems exp. includes servo controls

B-91 — Seeks design Engr. with electronics corp.
in Chicago area

B-92 — BSEE entry level position in electrical engineering. Int. in comm. field

B-93 — Seeking an entry level system design position in communications field

B-94 — BSEE looking for entry level position in electrical engineering

B-95 — BSEET entry level position in marketing or customer service

B-96 — BSEE entry level electl. Engr. position
license Engr. in training

B-97 — CAE/CAD/CAM sys. dev. engr. & proj. leader; BSEE, MSCS, + 15 yrs. exp.

B-98 — BSEET entry level position in the field of computer hardware/software

B-99 — BSEE IIT, seeking position with Chicago area electrical contractor

B100 — BSEET sales, consult on system installation routing of cables

B101 — MSEE seeks position in consumer/automotive electronics Chicago area

B102 — Plant or Mfg. Engr. Mgr. BSEE exp. in
instrum/Xducers/elec. mech. contr.

B103 — PhD, seeking position AI mfg. & design automation, controls, robotics

B104 — Temporary or permanent electrical engineering position (entry level)

B105 — MSEE entry level position in communication theory and fiber optics

B106 — BSEE, BSCS - looking for entry-level software eng Pursuing MSCS

B107 — BSEE - entry level pos. in electrical & electronic eng. Int. in Comm. field

B108 — BSEE - entry level position in communication field, Digital/Analog circuit

B109 — BSEE - IIT entry level comm systems engr
1 + yrs. coop and Tech exp.

If you are an IEEE member and unemployed, use the form on page 11. Send to: IEEE Placement Service • 3413 N. Kennicott Avenue • Arlington Heights, IL 60004.

NEW! IEEE CHICAGO SECTION PLACEMENT SERVICE - The Chicago Section is pleased to provide space, free of charge, for members who are seeking employment.

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.

Sample ads: AA - Hybrid Microcircuit Designer - thick and thin film.
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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.

IEEE CHICAGO SECTION
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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.

Each ad will run in three consecutive issues of Scanfax. Deadline is the 25th of the second month preceeding issue. For example, an application received on February 20 will be in the April issue; one received March 3 will be in the May issue. Scanfax is not published in July or August.

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Please note your ad in the 70 spaces provided:

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The IEEE waives any responsibility in determining the credibility, accuracy or qualifications of applicants or employers. Send this application to:

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INDUSTRY APPLICATIONS SOCIETY

INDUSTRIAL ELECTRONICS SOCIETY

• CHICAGO CHAPTER •

PROTECT

The Industry Application Society / Industrial Electronics Society, in cooperation with Bussmann, are sponsoring "PROTECT", a seminar on overcurrent protection.

This seminar is directed to Electronic and Power Design Engineers who use overcurrent protective devices.

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For further information, please contact either: John Waters or James Paul of Bussmann at (312) 534-2734

PROGRAM AGENDA

- Industry Standards: UL, CSA, IEC, VDE, and SEMKO.
- Component protection vs. component isolation (includes solid state devices, printed circuit board tracings, and motors).
- High-speed fuses for semiconductor protection — A new technology (AC/DC applications).
- Specifying and applying protective devices. To include fuses, circuit breakers, thermistors, and active circuits. Fuse vs. circuit breaker analysis.
- Packaging — New developments in printed circuit board, surface mount, and substrate fusing.
- Protection concepts for the future.

November 12, 1987
9:00 A.M. — 4:00 P.M.
Holiday Inn Crowne Plaza
Lisle, Illinois

PROGRAM SPEAKERS

BILL WATKINS, E.E., Brighton College, England. Senior Project Manager. Worked at Westinghouse as Senior Project Engineer for Transportation Rectifiers and large Industrial Rectifiers.

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WALTER H. CURTIS, E.E., Washington University. Chairman of International Electrotechnical Commission (IEC Subcommittee 32C) and Chairman of Society of Automotive Engineers.

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IEEE USAB HOT LINES

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IEEE Washington Office, 1111 19th Street, N.W., Suite 608, Washington, DC 20036, USA, (202) 785-0017

Vol. 3, No. 1 John J. Kelleher, Editor—Catherine Sadler, Associate Editor September 1987

You Can Make a Difference With Tax Reform: Communicate Your Opinion on Section 1706 to Congress

Unless corrections are made to the Tax Reform Act of 1986, hardships being imposed on consulting engineers, computer specialists and other technical services individuals may force many of them to become employees of client companies or find work in some other field. Time is running out.

Tax writers on the House Ways and Means and Senate Finance Committees have begun making "technical corrections" to the massive Tax Reform Act. Among the sections in most need of change is Section 1706, which became effective January 1, 1987 without hearings or meaningful debate. Section 1706 affects the tax status of consulting engineers, computer specialists and other technical services individuals and firms by eliminating the opportunity for them to write off investments in the equipment and facilities they need to provide consultation. It is having a chilling effect on the problem-solving, productivity and innovation, and new-business development that's so critical to the success of the high technology sector of this nation's economy.

IEEE is part of a broadly based coalition of concerned organizations that is working to promote prompt enactment of remedial legislation. In order to inform the membership, the United States Activities Board has issued an entity position statement, a legislative alert and an information report, which summarize major issues and describe recent developments that affect Section 1706. Copies of these detailed bulletins are available on request to the IEEE Washington Office.

IEEE members who have worked, currently work, or are thinking of working as consultants should communicate their concerns about the new law to their Senators and Representatives. Members of Congress are reluctant to change the law, but will do so if enough of their constituents tell them to. Your communication and correspondence can mean the difference between inaction and enactment of remedial legislation—or even the repeal of Section 1706.

What Happened

"Safe Harbor" provisions enacted in 1978 prevented the Internal Revenue Service from using common law tests to decide whether to treat consultants as employees or as independent contractors for income tax and Social Security purposes. The common law criteria are more appropriate for clerical and manufacturing service workers than for professionals involved in design, research and development tasks. Even when carefully applied, they cannot fairly distinguish employees from consultants. The "safe harbor" provisions made it possible for these workers to be classified as independent contractors if court decisions, IRS rulings or common industry practice established reasonable justification.

Section 1706 removes the "safe harbor" protections from technical services personnel. It allows the IRS to use the common law criteria to classify technical services workers as either employee or contractor, in order to fix the responsibility for payment of income, Social Security and unemployment taxes.

Section 1706 was originally touted as a revenue-producing mechanism. However, recent Congressional Research Service and

Office of Management and Budget estimates indicate that Section 1706 will be revenue-neutral at best. And rather than "leveling the playing field" as originally promised by its originators, the new law has altered the competitive balance in favor of the larger technical services firms at the expense of the many small companies and individuals who provide much of the driving force behind entrepreneurship and new-business development in the nation.

Fortunately for the consulting engineers and computer specialists who are most affected by Section 1706, remedial legislation has been introduced in both the House of Representatives and the Senate. Representative Judd Gregg (R-New Hampshire) of the House Ways and Means Committee, and Senator Dave Durenberger (R-Minnesota), member of the Senate Finance Committee, have introduced identical bills (HR792/S429) that call for a two-year delay in the effective date of Section 1706. This moratorium would give Congress time to hold hearings and to make a more rational decision about the tax status of technical services personnel.

In addition to these moratorium bills, Senators Alphonse D'Amato (R-New York) and Christopher Dodd (D-Connecticut) and Representatives Joseph R. DioGuardi (R-New York) and George J. Hochbreuckner (D-New York) have introduced bills calling for the outright repeal of Section 1706.

Support for both the moratorium and repeal bills is growing in Congress. House Ways and Means Committee Chairman Dan Rostenkowski (D-Illinois) has indicated that addition of Rep. Gregg's moratorium bill as an amendment to the technical corrections bill is possible, if a majority of Committee members agrees. So it's critical for you as IEEE members to communicate your concerns about Section 1706 to your Congressmen at once.

Communicating Effectively With Congress

If you have already contacted your Senators or Representatives about Section 1706, it's time to do so again. If you haven't called or written yet, you should do so immediately. It's especially important that members of the Senate Finance and House Ways and Means Committees who have not yet signed on as cosponsors be contacted by their constituents. Urge your Representatives and Senators to cosponsor the repeal or moratorium bills. If they are already cosponsors, thank them and urge them to persuade other Congressmen from your state to follow suit.

To be most effective, communications and correspondence with Members of Congress should be brief and to the point. In your calls and letters point out how Section 1706 of the Tax Reform Act of 1986 is affecting you and other technical services personnel. Tell them you want immediate relief with either a two-year moratorium or an outright repeal of Section 1706.

If you have any questions or need information about where your elected representatives stand on this issue, contact Vin O'Neill in the IEEE Washington Office, telephone (202) 785-0017. The Washington Office would also appreciate copies of your letters and feedback on the results of your communications.

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- Nationally known for their problem-solving abilities, our highly trained staff has extensive experience in solving radiated, conductive and susceptibility problems.
- DLS maintains a vast inventory of materials to quickly bring your product into compliance.
- Total conformity with the latest rules and regulations combined with comprehensive problem-solving experience means you won't be disappointed with a test that fails.

Convenient location

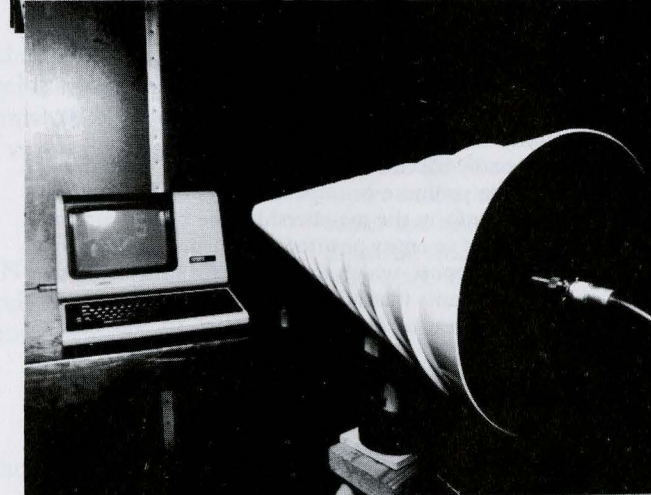
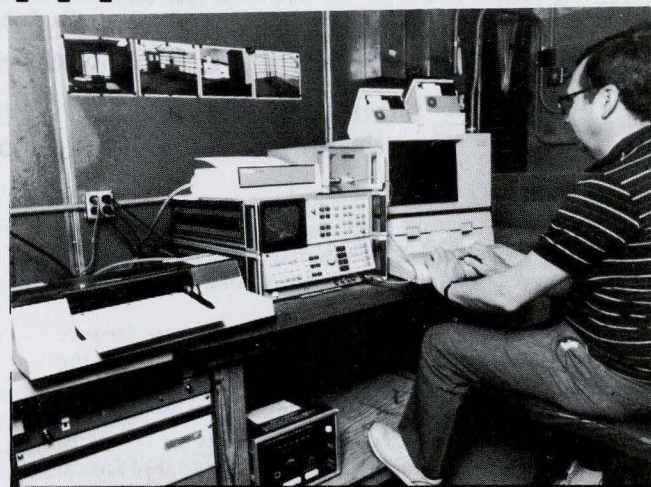
- DLS is conveniently located in Glenview, Illinois . . . only minutes away from O'Hare International Airport.

But don't take our word for it

- Ask the FCC or any one of our satisfied Mil Std customers. Call us today for additional information at (312) 699-9060 and we'll be happy to supply you with the answers you've been looking for in a high quality testing lab.



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SEMINAR

EMERGENCY AND STANDBY POWER
FOR INDUSTRIAL AND COMMERCIAL APPLICATIONS

Saturday, November 14, 1987

The IEEE Calumet Section will present a seminar based on the IEEE Orange Book, "Recommended Practice for Emergency and Standby Power Systems". The need for emergency power systems, system configuration, system hardware and system maintenance for Process Control Systems, Data Processing Systems, Life Support/Health Care Systems, and Communications Systems will be discussed.

The seminar will be held at the Northern Indiana Public Service Company office complex at the Southwest corner of U.S. 41 & U.S. 30 in Schererville, Indiana on Saturday, November 14, 1987 from 8:30 AM to 4:30 PM.

The cost of \$50. for IEEE members and \$75. for non-members includes a copy of the IEEE Orange Book, class notes, catered lunch, and refreshments.

Please use the registration form below. For additional information, call Mr. J.P.Wegner at (219) 853-5493.

SEMINAR - EMERGENCY AND STANDBY POWER FOR INDUSTRIAL AND COMMERCIAL APPLICATIONS

name _____ title _____

company _____ phone _____

address _____ city _____ state _____ zip _____

IEEE Membership number _____

() \$50. fee for IEEE member () \$75. Fee for non-member

mail this application with a check payable to IEEE Calumet Section to:

Mr. Gary D. Arnott
Treasurer - IEEE Calumet Section
724 N. Lafayette Avenue
Griffith, In 46319



IEEE/USAB

LEGISLATIVE ALERT

To develop and expand our capability to respond rapidly to key public policy issues affecting IEEE members, the engineering profession as a whole, and the national interest.

Let's Roll Back Section 1706

Section 1706 of the **Tax Reform Act** is having a devastating effect on thousands of individual providers of technical consulting services and many of the brokers who find work for them. Section 1706 also adversely affects many of the client companies that hire consulting engineers and computer specialists.

Because of the impact that this legislation is having on consulting engineers and computer specialists, IEEE's United States Activities Board (USAB) is working with other concerned organizations in a determined effort to persuade Congress to repeal or amend this ill-conceived and hastily-enacted provision of the tax code. Working together, we're making considerable progress: more than 100 members of the House and Senate have agreed to cosponsor legislation calling for a two-year delay in the effective date of Section 1706. Enactment of this legislation is needed to give Congress time to hold hearings and to determine the appropriate tax status of technical services personnel. But **we need your help** to insure our success.

IEEE's United States Activities Board urges you to **communicate your concerns now about Section 1706 to your representatives in the House and Senate**. Ask them to **support legislation delaying the effective date of Section 1706**: in the House, **H.R. 792**; and in the Senate, **S. 429**.

Use your own words to describe how Section 1706 is **adversely affecting consulting engineers and computer specialists**, drawing on such points as these:

- **Section 1706 singles out technical services personnel for discriminatory treatment through the use of outdated and subjective tests of employment status that do not apply to consultants in other fields.**
- **The effect of the law has been to disrupt productive business relationships between independent contractors and client companies.**

- **Section 1706 gives large technical services firms an unfair competitive advantage over small firms and individual consultants.**

- **Recent Treasury Department estimates indicate that the new law will, at best, be "revenue neutral"—hardly producing the additional revenues that were originally projected.**

You can reach the Washington offices of your Congressmen by **calling the U.S. Capitol** at (202) 224-3121. If your Senator or Representative is unavailable, ask to speak with the staff person assigned to tax issues.

Letters to U.S. Senators and Representatives should be addressed as follows: **for U.S. Senators**, "The Honorable _____, United States Senate, Washington, DC 20510, Dear Senator _____"; and **for U.S. Congressmen**, "The Honorable _____, U.S. House of Representatives, Washington, DC 20515, Dear Congressman _____".

In addition, you could **visit your representative** in the Nation's Capital or in your home state.

If you have any questions or need background information, **call Vin O'Neill** in the **IEEE Washington Office** at (202) 785-0017. And please let Vin know about any calls or letters, so he can follow up. Let's roll back Section 1706.



THE INSTITUTE OF ELECTRICAL
AND ELECTRONICS ENGINEERS, INC.

WASHINGTON OFFICE

1111 19th Street, N.W., Suite 608
Washington, DC 20036-3890, U.S.A.

IEEE RELIABILITY SOCIETY AND INSTITUTE OF ENVIRONMENTAL SCIENCES PRESENTS THE LATEST IN SCREENING (ESC) ACTIVITIES

The speaker for this meeting will be Andrew Hauter from Rockwell/Collins, Avionics Division, Cedar Rapids, Iowa. Mr. Hauter is a member of the Institute of Environmental Sciences (IES) and a technical representative on the committee for Environmental Stress Screening of Electronic Hardware for the Reliability Division of IES. Mr. Hauter has 25 years experience in the field of Reliability/Quality.

Date: November 19, 1987

Place: Arthur's Restaurant
NW corner of Elmhurst and Oakton Rd.
(North of gas station)
Des Plaines, IL

Agenda: 6:30 PM Registration
7:00 PM Dinner (\$10)
8:00 PM Meeting

Cost: \$10 for Dinner

Reservations: Call John Ray at 381-2400 ext. 2262
by noon November 18, 1987

Information: Rod Garcia 259-0740 ext. 308
John Ray 381-2400 ext. 2262

Important Notice from the Editor

Information to go into Scanfax must reach me by the deadline on Page 2. It must be double-spaced standard size type, 10 or 12 characters per inch. I cannot accept late materials, and will refuse all small size type font materials.

H. R. Hofmann

Fox Valley November Meeting

TOUR OF FERMI LAB November 7th, 1987, 9:00 AM

There will be a limited number of people able to participate, so make reservations at 255-3003. The tour will meet at Fermi Lab.

Fox Valley December Meeting

The Fox Valley Subsection will be hosting a presentation by Dr. Bruce H. Brundage of the University of Illinois at Chicago in the area of Biomedical Engineering. The topic of discussion will focus on:

"Ultra-Fast Computed Tomography"

More details will be provided in the monthly mailer from the Fox Valley Subsection. The presentation will take place at Wilton Manor at the North-West corner of Main Street and Schmale Road in Wheaton. Reservations will be accepted for dinner and/or meeting at 255-3003. The price of dinner will be \$10.00 (Non-IEEE members, \$11.00), the meeting is free.

Industry Applications Society Industrial Electronics Society

- Topic:** Thursday, November 12, 1987
U.L. Testing of Industrial Control Panels and U.L.
vs other standards—a comparison
- Speakers:** Bob Baird—Underwriter Laboratories, Inc.
Heinz Rosen—Underwriters Laboratories, Inc.
- Location:** Underwriters Laboratories, Inc.
Facilities, Northbrook, IL
333 Pfingston Rd.
Buffet Dinner—6:00 p.m.
Programs—7:00 p.m.



IEEE

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.
UNITED STATES ACTIVITIES BOARD

Announces the 16th Annual Competition for

1988–1989

Congressional Fellowships

**A CONGRESSIONAL INTERNSHIP
FOR MEMBERS OF IEEE**

PROGRAM: Electrical and Electronics Engineers and Allied Scientists are competitively selected to serve a one-year term on the personal staff of individual Senators or Representatives or on the professional staff of Congressional Committees. The program includes an orientation session with other Science-Engineering Fellows sponsored by the American Association for the Advancement of Science (AAAS).

PURPOSE: To make practical contributions to more effective use of scientific and technical knowledge in government, to educate the scientific communities regarding the public policy process, and to broaden the perspective of both the scientific and governmental communities regarding the value of such science-government interaction.

CRITERIA: Fellows shall be selected based on technical competence, on ability to serve in a public environment and on evidence of service to the Institute and the profession. Specifically *excluded* as selection criteria shall be age, sex, creed, race, ethnic background, and partisan political affiliations. However, the Fellow must be a U.S. citizen at the time of selection and must have been in the IEEE at Member grade or higher for at least four years. Additional criteria may be established by the selection committee.

AWARDS: IEEE plans to award two Congressional Fellowships for the 1988–1989 term. Additional funding sources may permit expansion of awards.

APPLICATION: Further information and application forms can be obtained by calling W. Thomas Suttle (202) 785-0017 at the IEEE Washington, D.C. Office or by writing:

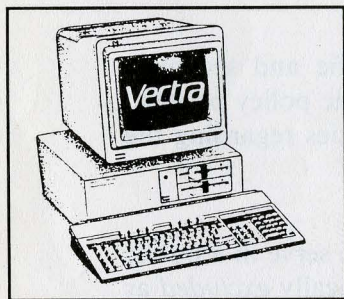
Secretary, Congressional Fellows Program
The Institute of Electrical and Electronics Engineers, Inc.
1111 Nineteenth St., N.W.
Suite 608
Washington, D.C. 20036

Applications must be postmarked no later than March 31, 1988 to be eligible for consideration.

Farnsworth Computer Center Offers You Design Tools For PCB Layout



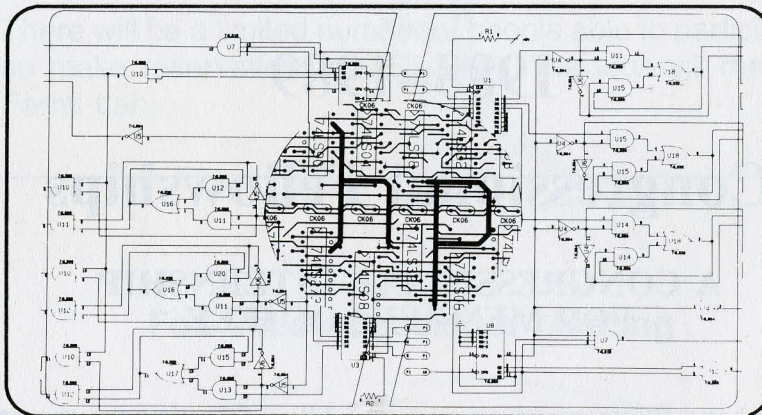
Farnsworth Computer Center offers you HP's high performance computers, printers, and plotters for your electronic design needs. Computer aided design systems from Farnsworth Computer include one year warranty on all components and an optional 24 hour loaner service is available to ensure minimum down time in the event that something does go wrong.



HP Vectra/P-CAD System

This Farnsworth system includes everything necessary to run any P-CAD software module. Also available are 15 and 19 inch high resolution monitors, higher capacity hard drives and a variety of add-ons to increase the performance of your system.

- HP Vectra with 640K
- 1.2MB Floppy Disk
- 20MB Hard Disk Drive
- Keyboard, MS-DOS
- Conographics Color Card
- Microvitek RGB Monitor
- 1 Parallel and 2 Serial Ports

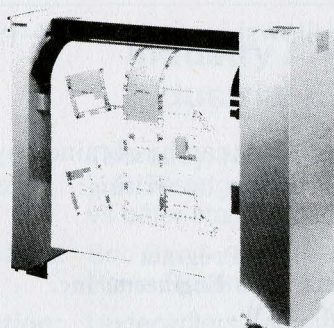


p-cad
PERSONAL CAD SYSTEMS, INC.

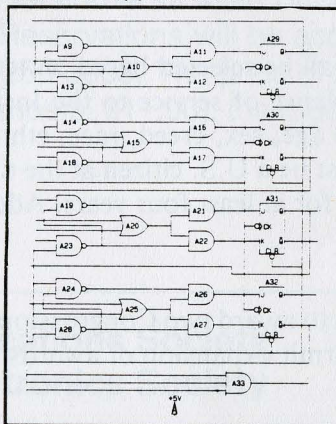
HP Plotter Family

Hewlett-Packard plotters offer speed, accuracy, and reliability that are unsurpassed in the industry. If you can't afford to do without your plotter, you can't afford to do without an HP plotter.

- 7475 - A and B sizes, 6 pen carrousel, 38 cm/sec
- DraftPro - C and D sizes, 8 pens, 40 cm/sec
- DraftMaster - A thru E size, 8 pens, 60 cm/sec



P-CAD has established itself as the leading PC based electronic design software with a 52% market share. Find out why by attending one of Farnsworth's free P-CAD seminars. Call 941-3444 to make an appointment.

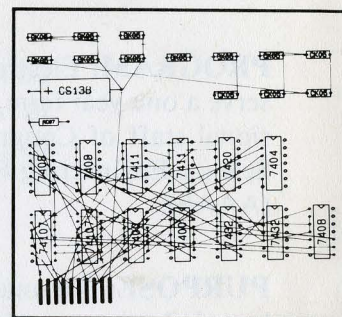


Schematic Capture

- Hierarchical levels can have:
 - 500 components
 - 600 nets
 - 8000 pins
- Standard component libraries
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- User defined macros
- Integration with PCB design

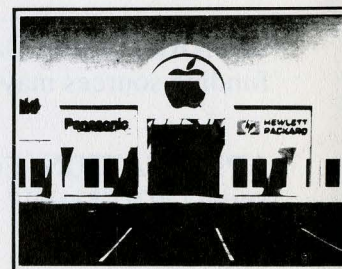
PCB Layout

- True support of surface mount
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- 1 mil trace widths
- 100 user definable layers
- Multiple trace widths
- Multiple pad types



Auto Routing

- 32 routing layers
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- Completely re-entrant router
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