

SCANFAX

May 2000

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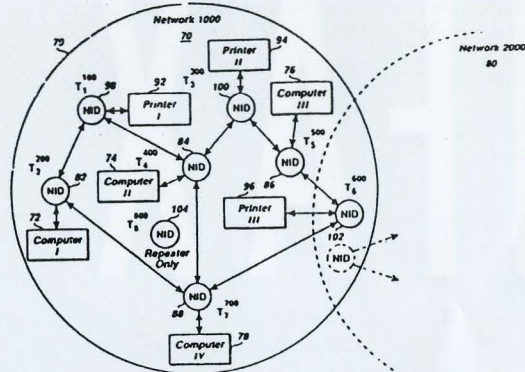
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The Miracle of Magnetics

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CHICAGO SECTION EXECUTIVE COMMITTEE MEETING
Tuesday, May 9, 7:15 pm

Northrop Grumman, 600 Hicks Rd., Rolling Meadows, Ill.
Call or e-mail E.G. Bogus to register. Provide name, employer, phone & citizenship.

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Chairman's Message

National Engineers Week 2000 was held February 20-26 and consisted of many activities that focused on increasing public awareness and appreciation of technology and the engineering profession. This annual weeklong event was founded in 1951 by the NSPE, which is a consortium of engineer-

ing, scientific, education societies, and major corporations. This year I had the opportunity to participate in three of the week's events—the Washington Award Banquet, the Chicagoland Engineering Luncheon, and the DuPage Engineers Week program. The Washington Award Banquet

Edward G. Bogus, PhD.
IEEE Chicago Section, Chairman

was held at the Union League Club of Chicago. I had the honor of representing the IEEE at this event. The Washington Award, which is presented by the Western Society of Engineers (WSE), was established in 1916 on a proposal by John W. Alvord, a past president of WSE. He also donated a fund to perpetuate the award. It is named after our nation's first president, who was an engineer, and it is the profession's oldest and most prestigious award. Each year it is conferred upon an engineer whose professional attainments have advanced the welfare of all peoples. Past recipients include Herbert Hoover, Orville Wright, Henry Ford, David Packard, Neil A. Armstrong, John Bardeen, and Leon Max Lederman, to name a few. This year the winner of the Washington Award was Donna Shirley. Ms. Shirley received this award for her lifelong commitment to aerospace engineering and for her leadership as manager of the Mars Exploration Program. That highly successful mission to Mars climaxed with the landing of the Pathfinder and Sojourner Rover on the planet and the insertion into orbit of the Mars Global Surveyor. These accomplishments are two of the U.S. space program's greatest successes and may provide some of the most important scientific data of the twentieth and twenty-first centuries. Ms. Shirley earned BS and MS degrees in aerospace engineering from the University of Southern California and a BA degree in journalism from the University of Oklahoma. She began her career as a flight instructor and then assumed engineering and management positions at the Jet Propulsion Lab (JPL). She was also the chief engineer on the \$1.6 billion Cassini Project to explore Saturn. In 1998, Ms. Shirley retired from JPL and is now president of Managing Creativity where

Continued on page 7.

The Miracle of Magnetics

By Terri Biloff

When we hear the word "magnetics," most of us think in terms of electromagnetics, a fundamental force of nature generally associated with gravity. While that's true, Western medicine is also experimenting with magnetics as it relates to bio-magnetic therapy.

Understanding human magnetic energy

To help understand magnetics and how they're used in the medical field, let's address the energy structures of the body. Every cell of our body contains small magnetic fields. Each atom in those cells has a nucleus of positively charged protons around which spin negatively charged electrons to generate a magnetic field. However, the earth's magnetic field is 100,000 times stronger than our body's. According to the theory called "free radicals," when an ailment or disease occurs, it's usually the result of negatively charged ions spinning out of control causing degenerative diseases.

Bio-magnetic healing provides a stimulus to restore the balance at a subatomic level and offset the harmful free radicals.

Fundamentals of magnetics for therapeutic uses

Primarily used by acupuncturists, magnets are sometimes used instead of needles because they provide painless relief and allow treatment to continue after a visit. Magnetics react to the body in many ways:

- Stimulate acupuncture points and meridians to help in reducing pain
- Help accelerate activity of red blood cells, because they contain iron atoms
- Increase blood flow
- Affect nerve signals

Magnetic energy has such an all-encompassing powerful effect that no single description can cover all the complex ways

it effects the mind and body. One theory is based on diseased cells losing their magnetic equilibrium. This may explain how topically applied magnets encourage normal function and positively influence the entire body-mind process. Another theory is that magnets exert a powerful attraction to the iron content in blood, penetrating skin and fatty tissue to the capillaries that feed directly into the bloodstream. By attracting iron and other inorganic molecules, circulation is increased. This increases oxygen and other vital nutrients, and regulates the pH of cells and tissues.

If we consider that all functions of the body are essentially bio-magnetic, we can begin to understand how each body cell has a positive and negative bio-magnetic field and that cell division in itself is fundamentally a magnetic process.

Modern medicine has come to depend on such high-tech diagnostic procedures as the electrocardiogram (ECG), electroencephalogram (EEG), and electromyogram (EMG) to measure electrical activity in the heart, cerebral cortex and skeletal muscles. If there were no electrical energy in our body, such tests would not be possible.

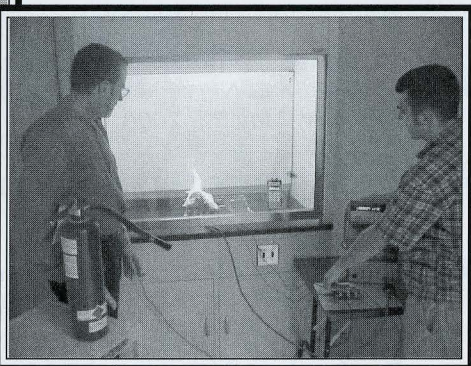
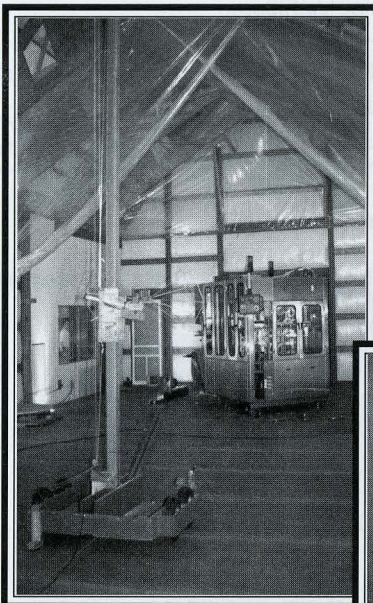
From the perspective of bio-magnetics, health is based on individual cells of the body vibrating at a characteristic normal frequency. Disease on the other hand represents an abnormal change in cellular vibration. Bio-magnetics is based on the principle of restoring cellular vibration.

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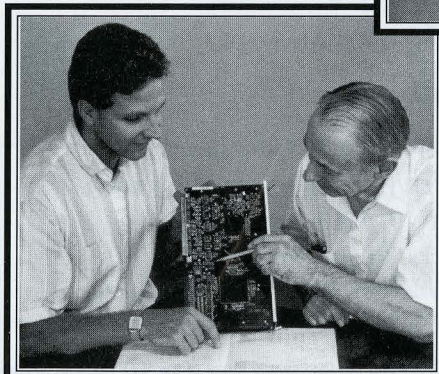
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THE MIRACLE OF MAGNETICS

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Magnetic field deficiencies

This condition was first identified in Japan in the 1950s. It is characterized by lack of energy, frequent headaches, chronic fatigue and dizziness.

In the 1960s this was documented by American scientists when astronauts experienced bone calcium loss, muscle cramps and physiological disturbances (above the earth's magnetic field) for an extended time. Since then an integral

aspect of space flight continues to involve documenting the effects of magnetic fields on living organisms.

The effects of working or living in concrete or steel structures further removes us from earth's direct magnetic forces. So too do automobiles, trains and other modes of travel where we are deprived of natural magnetism from the earth.

Since the magnetic energy of our planet is responsible for our natural biorhythms of life, its understandable then why our bodies react when we're shut off from these natural magnetic forces.

Therapeutic devices

1) Acu Band Magnets: Available in varying Gauss strengths (usually 3,000 to 9,000 Gauss) and different alloys. Acu Bands can be used for cold or flu symptoms, back pain, insomnia and other ailments. An experienced physician should determine the positions of the magnets.

2) Large Block Magnets: These are iron ferrite magnets that can be purchased in various sizes and Gauss. Usually available in 1,000 to 3,000 Gauss, large block magnets are mostly used for chronic pain and cancer conditions.

3) Magnet Mattresses and Mattress pads: Designed to provide restful sleep and stimulate energy, it promotes better circulation while sleeping. Because the Japanese have a long history of appreciation for natural health products it is estimated that one out of eight Japanese use some sort of magnetic sleep system.

4) Magnetized water: Magnetized water is known to strengthen and support the immune system. Normal water has a pH level of seven, while magnetized water can reach 9.5 pH once exposed to a 7,000 Gauss magnet. This high level of pH has been known to destroy cancer cells.

5) Magnetic insoles: Magnetic insoles fit inside shoes. Biopolar magnets are located throughout the surface of the insole. Used for foot problems and has been known to return blood circulation back up to the heart in a more efficient manner.

6) Electromagnets: Used by practitioners and hospitals to treat chronic disease and sprains. Sports therapists were among the first to introduce the use of magnets for healing injuries as it was found to cut in half, the healing time.

7) Magnetic jewelry: Available from 700 to 1,300 Gauss, necklaces are often used for sore throats, asthma and angina, while bracelets are used for blood pressure control.

8) Magnetic foil: Can be cut to various sizes and applied over large areas. A low-Gauss, metallic foil is commonly used for treatment of soft tissue rheumatism. ■

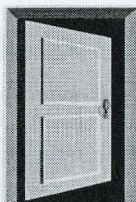
Note: The research for this article based on case studies from alternative medicine journals. This article is not a recommendation for treatment, nor does it suggest you stop current treatment of traditional medicine.

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CHAIRMAN'S MESSAGE

Continued from page 4

she lectures and consults on team management and creative techniques.

The 2000 Chicagoland Engineering Luncheon was held at the Palmer House Hilton in downtown Chicago. I represented the IEEE Chicago Section at that event. A program, with emcee Warner Saunders of NBC 5, followed the lunch.

The highlight of the program was the awards presentation during which Chicago area students received awards that they won in various engineering contests. These contests included the Future City Design competition, the State Science Fair, the Bridge Building Contest, the Poster/Essay competition, and the Mathcounts competition.

The program also featured several distinguished speakers. Tim Neuman, Vice President of CH2MHill, Dr. James J. Stukel, President of the University of Illinois, Dr. Stuart Cooper, Vice President for Academic Affairs at the Illinois Institute of Technology, and Jerry Palmer, Vice President of Caterpillar, made presentations that described the role of engineers and recognized the many contributions they have made to society.

The luncheon concluded with the recitation of the Engineers Creed lead by Mark Wylie, President of the Illinois Society of Professional Engineers.

On the last day of Engineers Week, the IEEE Chicago Section took its show on the road and participated in the DuPage Area Engineers Week program, which was held at the Illinois Institute of Technology Rice Campus.

Joining me at the IEEE booth were Pat Murphy, Chicago Section Vice-Chair/Treasurer, Connie Kelly, EMBS Chapter Chair, Jim Fancher, past director of Region 4, and Frank Krozel, EMC board member.

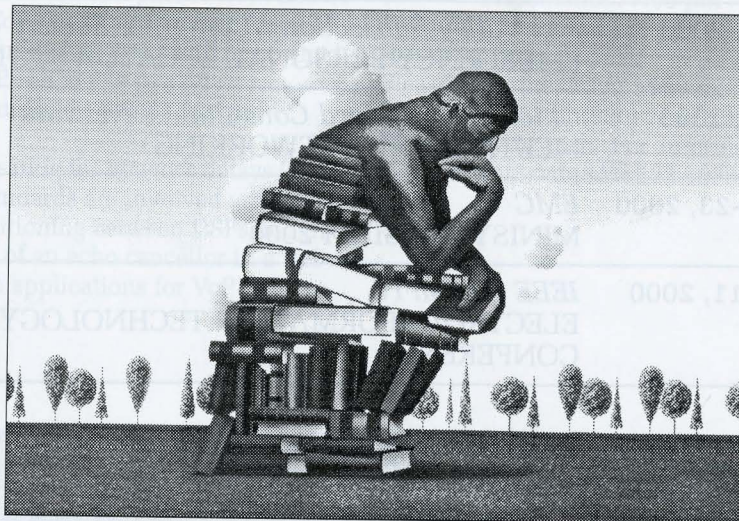
That Saturday afternoon event was a joint effort among professional engineering societies, the two area National Labs, local businesses, educational institutions, and communi-

ty organizations. The objective was to demonstrate what engineering is and what engineers do, in order to attract young people to careers in science, technology, and engineering.

The halls and classrooms of IIT were lined with exhibits by the professional societies. There were also presentations on flight simulations, cryogenics, robotics technology,

Smart Cards, and the Internet. A Scavenger hunt, organized by the Society of Women Engineers, helped the young people learn about engineering through personal conversations with the exhibitors.

If you did not get a chance to attend the Engineers Week activities this year, be sure to plan on doing so next year, because it happens all over again February 18-24, 2001. ■



Calendar of Events

Date	Event
May 9, 2000	Chicago Section EXECUTIVE COMMITTEE MEETING
May 10, 2000	IEEE Power Engineering Society BULK ELECTRIC POWER SUPPLY IN THE MIDWEST
May 16, 2000	ED / CAS / SSC THE SURPRISING ROLE OF DSPs IN THE INTERNET TELEPHONE INITIATIVE
May 17, 2000	IAS / IES CITY OF CHICAGO PLAN REVIEW PROCESS
May 17, 2000	Fox Valley Subsection / Computer Society Chapter EMERGENCY PERSONAL LOCATOR SYSTEMS
May 22, 2000	Chicago / Rockford Consultants' Network MEETING AND NETWORKING
May 22-23, 2000	EMC MINISYMPOSIUM 2000
June 8-11, 2000	IEEE Region IV ELECTRO/INFORMATION TECHNOLOGY CONFERENCE

CHICAGO CHAPTER IEEE POWER ENGINEERING SOCIETY

Bulk Electric Power Supply in the Midwest

Wednesday,
May 10, 2000

EMCFest 2000

A Colloquium and Exhibition on

LOW COST, EASY TO USE, EMC
TEST TECHNIQUES FOR
PRODUCT DEVELOPMENT

Wednesday, May 9, 2000

DEARBORN INN
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8:30 am-5:00 pm Technical Sessions
5:00 pm-6:30 pm Reception, Exhibits

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diately following the Technical Sessions.

For further information:

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Co-Chair Technical Program
Ph: 248-354-2845
e-mail: k.williams@ieec.org
Home page:
<http://emc.eaton.com/emcfest2000.htm>

LUNCH MEETING

John Long, Midwest Generation EME

About the Speaker:

Mr. Long is the Vice President of Mid-
west Generation, an Edison International
Company.

Mr. Long was an employee of ComEd for
over 28 years. During that time, he held a
wide variety of technical and managerial
positions including Plant Manager of ComEd
of Indiana's State Line Generation Station,
System Electrical Engineering Manager,
Manager of Purchasing, Manager of Busi-
ness Development of Unicom Enterprises,
and Manager of Alliances.

His final position at ComEd, before join-
ing Midwest Generation, was Fossil Sup-
port Vice President. He was responsible for
managing the support functions behind
ComEd's eight fossil plants and various
peaking units, including Engineering and
Construction, MIS, Technical Services,
Business Support and Supply Management.

John holds a bachelors degree in Sys-
tems Engineering from the University of Illi-
nois at Chicago and an MBA from Lewis
University.

About the Topic:

Mr. Long will present an overview of
Midwest Generation's long term strategy
and goals to supply bulk power to the
midwest distribution and transmission
companies.

Location:

Chicago Bar Association, 321 South Ply-
mouth Court (near Jackson & Dearborn),
Chicago, IL 60604.

Time: Social: 11:30 am
Lunch: 12:00 pm (optional)
Presentation: 12:15 pm
Adjourn: 1:00 pm

Cost: Lunch tickets can be purchased in the
lobby bookstore (\$10.50).

Reservations: Please call the IEEE Busi-
ness Office at (800) 898-IEEE to make your
reservation. for more information, visit the
Chicago Chapter IEEE PES Web site:
www.ece.iit.edu/~flueck/chicago_pes/.

ED / CAS / SSC

The Surprising Role of DSPs in the Internet Telephony Initiative

Tuesday,
May 16, 2000

Stephan Reckie, Telogy Networks

About the Topic:

In the quest to combine voice, fax, and
data over one seamless network, Digital
Signal Processors (DSPs) are shaping up to
play an ever increasing role. The Voice
Over Packet (VoP) initiative has served as
the central challenge in the convergence
of digital and voice technologies. This pre-
sentation discusses the principles related
to implementing real-time voice- and fax-
over-packet networks. an overview of the
embedded software architecture is pre-
sented, and a system is described for send-
ing voice, fax image, data, and signaling
information over the packet network. A
working VoP demo system will be avail-
able. The following topics will be covered:

- Why VoP is a viable market
- Voice translation to a packetized
network
- Compensating for network delays (jitter)
- What standards are involved with VoP
- VoP partitioning between DSPs and μ Ps
- The role of an echo cancellor in a VoP
- Common applications for VoP

EVENING MEETING

About the Speaker:

Stephan Reckle is a district sales manager
with Telogy Networks.

Location:

Lucent Technologies, Indian Hill South,
1200 E. Warrenville Rd., Naperville, IL.
Located 1/3 mile west of Naperville Rd. on
the south side of Warrenville Rd. Building
entrance is in rear facing I-88.

Time: Doors Open: 6:00 pm
Social (free sandwiches,
snacks, and beverages): 6:15 pm
Presentation: 7:00 pm

Reservations:

Please call the IEEE Message Center at
(800) 898-4333 or (630) 724-0200 by 1 pm
Monday, May 15th. For information, call
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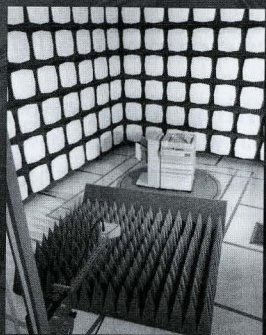
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IAS/IES

City of Chicago Plan Review Process

**Wednesday,
May 17, 2000**

LUNCH MEETING
Milton Patterson, Chief Electrical Inspector City of Chicago

About the Speaker:

Former Positions:

City of Chicago Bureau of Electrical Inspection
Inspector
Plan Examiner
Assistant Chief Electrical Inspector

Present Position:

Chief Electrical Inspector
City of Chicago

Mr. Patterson's department is responsible for plan review as required by the Chicago Electrical Code for all projects within the City of Chicago

About the Topic:

The plan review process includes plans prepared and submitted by Consulting Engineers, Contractors, and Manufacturers and is made to determine compliance with the requirements of the City of Chicago Electrical Code. All steps of the plan review process will be discussed. In addition, the required submittal information for electrical equipment, load calcula-

tions, and changes in the code will be discussed.

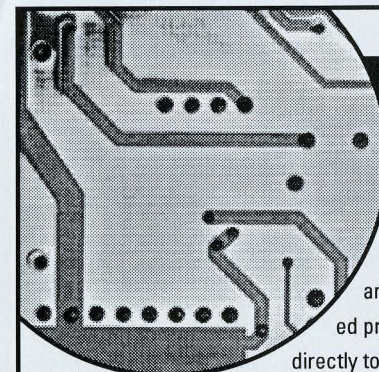
Location: Como Inn, 564 North Milwaukee Ave., Chicago, IL. The Como Inn is located on Milwaukee Ave. just off the Kennedy Expressway (I-90/94) near Grand Ave. and Halsted St.

Time: Social: 11:30 am
Lunch: 12:00 pm
Presentation: 12:15 pm

Cost: Your cost includes the presentation and your choice of chicken (\$20) or pasta (\$18) lunch.

Reservations: Please call the IEEE Business Office at (800) 898-IEEE or (630) 724-0200 with your entree preference on or before May 10th.

Note: For P.E. licenses that require continuing education for renewal, attendance at IEEE Technical Meetings is acceptable as one Professional Development Hour (PDH) per meeting. The upcoming 1999-2000 IEEE-IAS meeting dates are: Sept. 20th, Oct. 18th and Nov. 15th.



Technology Management

The Stuart School's M.S. in Operations & Technology Management program is designed to advance the careers of experienced working engineers, scientists, and other technical professionals. This AACSB-accredited program applies business and management concepts directly to the areas of service operations, manufacturing, TQM, logistics, R&D, new product development, MIS, and e-commerce.

The curriculum is cross-functional — integrating the many areas necessary for effective management in technology-driven organizations. Small interactive classes emphasize strategy, people skills, economic analysis, team building, project management, initiating change, and an integrated approach to problem-solving.

The program consists of 12 courses offered on Saturdays, over an 18 month period, in Wheeling, Illinois, near Palwaukee Airport.

For additional information, contact Professor Joel Goldhar, 312-906-6526, goldhar@stuart.iit.edu

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Enabling compression technology! Visual Communications Video Tutorial

presented by Drs. William A. Pearlman, John W. Woods,
and James W. Modestino, Center for Image Processing Research
at Rensselaer Polytechnic Institute

Sponsored by IEEE Educational Activities

Visual communications is a key element in modern information systems. Spurred on by developments in VLSI technology and the telecommunications revolution, digital documents, images, and video processing are becoming commonplace in our everyday lives. Fax machines, multimedia CD-ROMs, video conferencing, Internet, digital satellite TV, digital video, interactive TV, and HDTV are common examples. This 16-hour course has a depth unmatched in competing treatments. The goal of this tutorial is to prepare the viewer to become a user, implementer, modifier, and possibly creator of image and video compression and transmission algorithms.

This video is a three-part modular course in image and video compression and transmission algorithms, which are enabling modern visual communications in fax, digital cameras, Internet, video telephone, digital video and TV, and HDTV. The course concentrates on the data compression algorithms and transmission techniques that make the telecommunication revolution possible. Dr. William Pearlman's image coding module covers the SPIHT coder, invented by Amir Said and Dr. Pearlman. The SPIHT coder has been rated by leading research laboratories as the best image coder currently available.

From this video you will learn:

- To understand underlying compression algorithms enabling modern visual communications
- How modern modulation and transmission methods mitigate effects of channel errors
- To understand transmission issues in ATM networks

Accompanying the full video course are over 700 pages of notes and the text, *HANDBOOK OF VISUAL COMMUNICATIONS* (Academic Press, 1995), edited by Hseuh-Ming Hang and John Woods. The viewer may earn 1.5 Continuing Education Units (CEUs) for the 16-hour tutorial and a certificate of achievement upon successful completion of the exam.

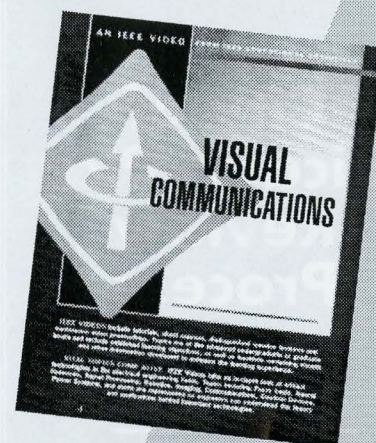
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Emergency Personal Locator Systems

**Wednesday,
May 17, 2000**

IEEE CHICAGO/ROCKFORD CONSULTANTS' NETWORK

Meeting and Networking

**Monday,
May 22, 2000**

J. Hoshen, Lucent Technologies

About the Topic:

New personal locator technologies, systems and services are likely to have a significant impact on society in the 21st century. Architectures are being developed in the US, Japan and Europe for providing commercial personal locator services to a broad range of users. Emerging innovative locator technologies such as assisted GPS, radio frequency fingerprinting and enhanced signal strength (ESS), as well as established technologies such as time difference of arrival (TDA), angle of arrival (AOA) are evolving. The US Federal Communications Commission (FCC) directive to provide Enhanced 911 (E911) services for wireless telephone users by October 1, 2001 is stimulating the development of these technologies. Existing and potential applications for personal locator services include tourists, security, children, offenders, pets, and medically and mentally impaired people. In the 21st century, personal locator systems are likely to have a significant impact in two areas of major social concerns: the aging of the developed world and crime control.

About the Speaker:

Joseph Hoshen is a member of the technical staff at Lucent Technologies, Naperville IL, where he has been active in communication and software processes. In

EVENING MEETING

1998, he received a grant from the National Institute of Justice (NIJ) to study wide area continuous offender monitoring systems. In February 2000 IEEE Spectrum, he co-authored an article outlining the future of personal locator services. J. Hoshen has also been affiliated with the University of Michigan where he developed the Hoshen-Kopelman algorithm, which is currently used to process large images and lattices in many areas of science and technology. He has been publishing and contributing on GPS, image processing, software engineering, and computational and statistical physics.

Location: Lucent Technologies Indian Hill South (Rear Door)—Conference Dining Room. On Warrenville Road, 2 lights west of Naperville Rd.

Time: Networking/Social: 7:00 pm
Presentation: 7:30 pm

Reservations: Call the IEEE office at (800) 898-4333 before 5pm on Monday, May 15. For further information, please send e-mail to Amitab Mishra at mishra@lucent.com. As always, the public is invited. To subscribe to the Fox Valley Section and Computer Society e-mail list, see our Web page at <http://www.computer.org/chapter/Chicago>.

EVENING MEETING

Peter Czutrin, Motorola

About the Topic:

There are recent attempts in the industry to merge Internet, mixed commerce and portability.

One emerging technology that enables these attempts is Smart Card technology. Peter Czutrin will give a presentation on Smart Card technology—a key transaction enabler that could fit in every economic segment.

General overview of the history, principal of operation of a Smart Card and applications will be presented.

About the Speaker:

Peter Czutrin is a consultant and system architect for Motorola. Mr. Czutrin has over 20 years experience in power distribution, test instrumentation design, telephony and communication system design. He previously was a design engineer for GI, ANC and US Robotics. He consults manufacturers on product architecture and product submittal for CE approval.

Mr. Czutrin is a licensed P.E. in Illinois and 12 year member in IEEE. He obtained a BASS degree from the Technion IS and a BSEE from IIT.

Location:

Palatine Public Library, 700 North Court, Palatine, IL 847-358-1216.

Time: 7:30–9:00 pm

Preceding the meeting, we will be getting together for our group dinner. We will meet at Bakers Square at 6:15 pm. It is located at 270 E. Northwest Highway and North Court, just south of the library.

Members and non-members are invited to join us for the optional informal dinner and meeting. We order individually from the menu. We plan to finish dinner by 7:20 pm. The meeting is two blocks from Bakers Square. Reservations are not required.

In addition to networking and sharing leads and referrals, there is usually a guest speaker. The Network can be reached at: g.l.blank@ieee.org.

2ND ANNUAL
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EMC Mini Symposium

May 22 & 23, 2000

The Chicago IEEE EMC Society Chapter is presenting a two-day Electromagnetic Compatibility Minisymposium. The event will consist of an EMC tutorial followed by presentations on EMC matters and design fundamentals for domestic and international EMC regulations. In addition, the exhibitors are invited to do actual demonstrations on their equipment or product, and invite technical questions.

The purpose of this event is to offer EMC and regulatory information to individuals interested in the field of EMC who would not normally attend one of the national or international EMC meetings. In addition to the symposium, there will be over twenty vendor exhibits highlighting EMC related products, test equipment, and services. Exhibitors include technical representatives from test facilities, test equipment

and simulator companies, component suppliers, EMC modeling vendors, and consultants.

Topics will be announced shortly. Please check our Web page for details: <http://www.ewh.ieee.org/soc/emcs/chicago>.

Location: Holiday Inn, 860 West Irving Park Rd., Itasca, IL (630-773-2340). Package discounts available which include hotel arrangements.

Admission: \$30 per person for IEEE members. Admission fee includes breakfast rolls, coffee, lunch, and entry into a raffle for a few door prizes. Last year a Palm Pilot was given out to one lucky attendee.

Members and non-members of the IEEE EMC Society are invited to all chapter activities and meetings.

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Electro/ Information Technology Conference

June 8-11, 2000

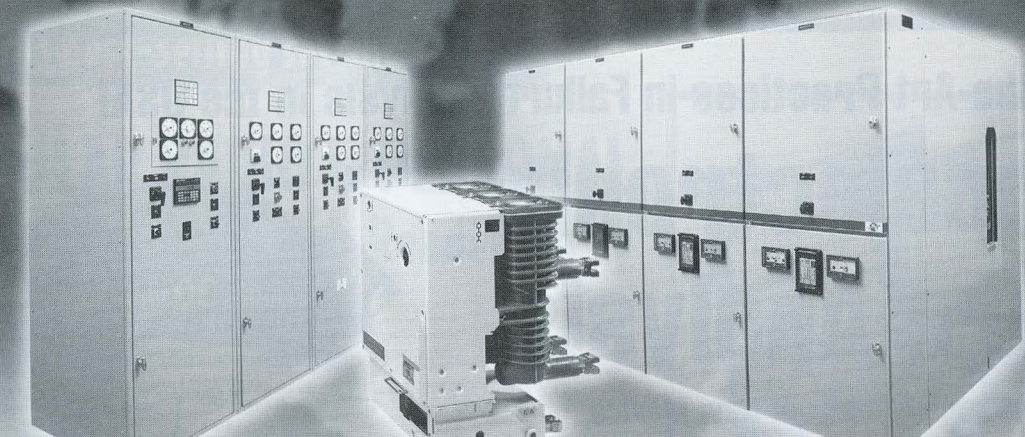
The Electro/Information Technology Conference, sponsored by the IEEE Region IV, is the first technical conference focusing on presenting basic/applied research results in the fields of electrical and computer engineering as they relate to Information Technology. This conference is a first attempt to have an annual conference for the IEEE where researchers and industrial colleagues can present their latest findings. There will also be exhibits where the leading-edge electro/information technology tools and products will be showcased. At this time three workshops are planned for June 8 (noon-5 p.m. approximately.) Paper sessions (average of 4 papers each) will present results in Soft Computing, Wireless Communications, Wavelet Transforms, Micro Electromechanical Systems & Mechatronics, Reconfigurable Systems, Middleware Architecture in the IT World, Power Electronics, Electronic Design Automation, Solid State, Consumer Electronics (including Automotive), Intelligent Control, Mathematical Modeling, Error Reduction, and Reliability/Ethical Issues. The advance program, to be available soon, will include Thursday afternoon arrival, workshops, reception; Friday paper sessions, main plenary, panel discussion, exhibits, banquet; Saturday paper sessions, panel discussions, exhibits, and other activities.

We are happy to announce that following scholars/researchers have agreed to be keynote/invited speakers at the conference: Fazlollah Reza, McGill University (Information Theory); Martha Sloan, Michigan Technological University (Computers); Mark J. T. Smith, Georgia Institute of Technology (Wavelets); and Lotfi Zadeh, UC Berkeley (Soft Computing).

In addition, President Elson S. Floyd of Western Michigan University will join IEEE Region IV host organization to welcome conference participants and to moderate one of the panel discussion sessions.

Registration: Regular Advance (by May 19) Registration Fee of \$300 (please see our Web site, www.ewh.ieee.org/reg/4/eit2000.htm, for forms and latest information and other categories) will include paper sessions, workshop(s), panel discussions, exhibits admission, Friday banquet (with speaker), reception, breaks and conference proceedings. For hotel reservation, (773) 693-3164, you need to mention E/IT Conference to get special rate of \$129 per night. For further information, contact Dr. Hossein Mousavinezhad, General Chair, hossein.mousavinezhad@ieee.org

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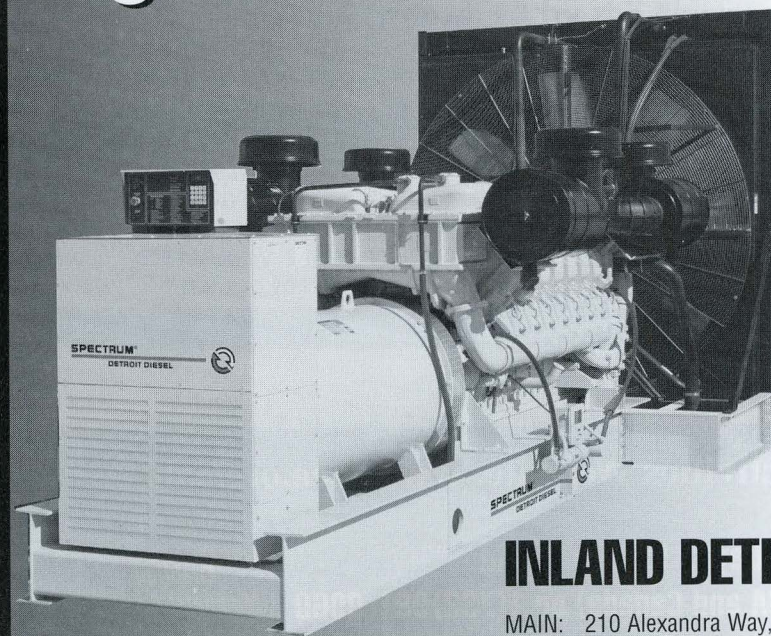


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Managers and practicing engineers within failure analysis departments will benefit from the materials covered in this extensive course. Viewers should have a basic knowledge of transistor devices (MOSFET) and IC technology. This set consists of all thirty lectures on videotape, presentation notes, plus the textbook, *MICROELECTRONIC FAILURE ANALYSIS DESK REFERENCE*, Third Edition (ASM International, 1993).

This video course covers:

- Technical Foundations of FA
- Etching: wet, dry, focused ion beam (FIB)
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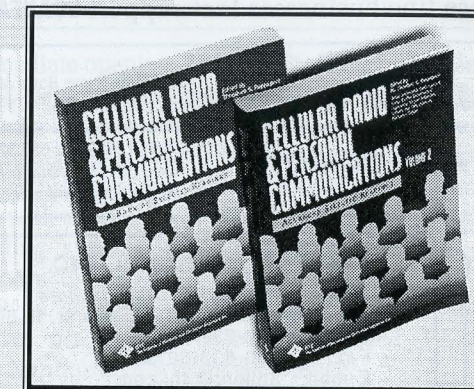
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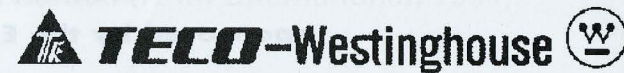
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