

SCANFAX

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Volume 53, Issue 1



IEEE

Networking the World™

A publication of the
Institute of Electrical & Electronics Engineers
Chicago Section

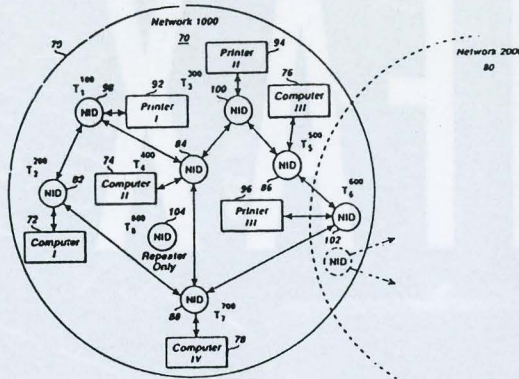


Medical Professionals Turn To The Internet

Programs provide quicker
access to patient information



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Meeting notices should be sent to graphics@slackattack.com.

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April 12-13, 2001

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CHAIRMAN'S MESSAGE

With the busy holiday season behind us, time may be available for other worthwhile pursuits. Among these, I hope you will count your IEEE activities. The Institute is an excellent vehicle for networking and professional development as well as a way to increase Non-Electrical Engineers knowledge and regard for our profession.

Several Societies have active programs from January through June. For example, IAS (Industrial Applications Society) has

dinner meetings scheduled for January, March, April, May and a Saturday Seminar on Harmonics scheduled for February. The seminar will cover identification, calculations and remediation methodologies. The speaker is with SKM, a company noted for their engineering software *DAPPER & KAPPER*.

See the Scanfax issues for Society announcements that include specific topics and speakers as well as meeting dates, times and locations. Some Societies with their own

web sites may also post their meetings thereon. The Computer Society and Fox Valley Sub-Section come to mind. You don't have to be a member of the host Society in order to attend the meeting.

In February the annual Engineers Week activities will occur. Typically, in addition to the National week of recognition, the Section co-sponsors and attends the Washington Awards Dinner where a person is recognized for their contribution to engineering. The Section also staffs local college career fairs. Last year the section participated in the IIT fairs held at the Rice Campus and at the main Chicago Campus (33rd and Federal). Volunteers are welcome to help staff the career fairs. Please contact any Section or Society Officers regarding your wish to participate.

Additionally, the Section Web Site Committee is meeting to establish a suitable vehicle for passing information electronically to our membership. If you are interested in helping with design or maintenance contact the Committee Chairman, Mr. George Thomas, at gthomas@ccontrol.com.

Lastly, I would remind all Society and Standing Committee Treasurers and Chairpersons that the by-law mandated end of year financial accounting is due to the Section Treasurer (P. Hennelly) no later than January 15, 2001. This report is to include a copy of the bank account end of year statement and a reconciliation of the year's income and expenses. Happy New Year!

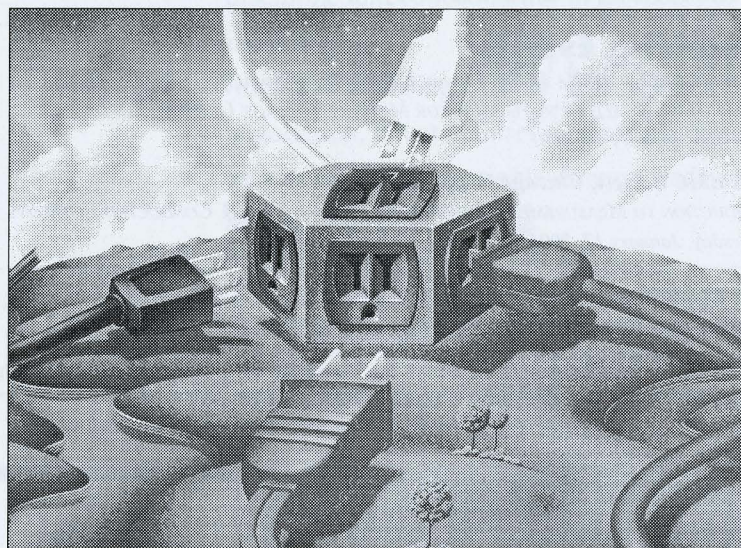
Patrick Murphy, EE, PE, Chairman
IEEE Chicago Section

CHICAGO SECTION EXECUTIVE
COMMITTEE MEETING
Tuesday, January 9, 6:30 pm

ATTENTION!
IEEE Chicago Section
Chapter Chairpersons

Meeting notices and schedules are published **FREE** in *SCANFAX*!

DEADLINES:
December 25 for February Issue
January 25 for March Issue



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Patrick Murphy, E.E., P.E.
IEEE Chicago Section, Chairman

Medical Professionals

By Sandy Ryan

Turn To The Internet

Programs provide quicker access to patient information

Over the past 25 years, the dynamics of practicing modern medicine have changed and doctors generally need quick access to patient information. Newer web-based software programs facilitate the collection of information via the Internet. These programs allow doctors to quickly coordinate in depth patient information such as lab results, ECGs and treatment information that was once faxed or phoned between facilities.

Today's sophisticated testing and comprehensive analysis helps doctors reach a patient diagnosis. Gathering the resulting information often involves a lot of time. Staff is not available to personally deliver results to doctors. Through local, DSL, ISBN or cable lines, doctors are now able to access test results via the Internet from virtually anywhere.

In the past, researching specific medical information on the Internet often meant conducting searches through bulletin based med line systems. Since the information was accessed through a data base housed in a spec computer, it generally meant incurring high long distance charges. Users often had to compete for time on the source.

New programs offer greater collaboration between hospitals, physicians and specialists through conferencing to discuss lab results, specific procedures or to compare notes regarding patient diagnosis. Physicians can even log onto a site to observe surgery that is taking place 200 miles away.

The programs can save medical professionals, hospitals and staff valuable time and help avoid medication errors. Formularies are available on-line that help avoid ordering like named drugs. The chance of ordering the wrong meds for a patient are much slimmer. The programs offer safety nets such as flags. Flags go up asking if the information entered is what they wanted to achieve. Checks and balances are in place to ask physicians to confirm patient diagnosis and ordered prescriptions.

There are many web-based software programs available today and Eagle Innovations is just one example. Eagle software transfers information recorded at other care sites including radiology, laboratory and transcription results into a secure database. Authorized physicians and technicians can then access the data through a standard browser almost as fast as the results are posted.

Connie Kelly, software engineering manager for Eagle said the company offers two basic families of software.

"The first one is interface and integration software that ties electrocard systems on to one computer, even though the computer next to it is a charting computer on a windows-based system with different communication protocols," Kelly said. "We have software that facilitates communication between the two systems and

we have to make sure the hardwares connect and the drivers are compatible."

"The second (software) involves on-line reporting where information is harvested from various systems throughout the hospital and put into a data base. The database is available through the Internet by logging onto the application which saves having to call the hospital and have someone read the information. It also saves the hospital from providing a dial in for direct connection and gives more people cheaper access. We have a clinical browser

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Medical Professionals Turn To The Internet

where the information is made available across the Internet to medical professionals."

Eagle's Results For Doctors (R4D™) involves placing a "collector PC" onsite to gather raw results information that is then encrypted and sent through the Internet to Eagle's headquarters in Rolling Meadows, Illinois. There the information is decrypted, parsed, formatted and populated into an

Oracle database. The data may then be viewed through either Microsoft or Netscape browsers.

Eagle's software is based on creating a universal data collection, translations and distribution software suite. Which could reduce the time involved in bringing up an interface. Monthly charges for R4D™ range from \$60 to \$100 per user id and

involve no setup or hardware costs.

In the past the process of connecting computers to facilitate the flow of information between disparate applications was costly, expensive and involved hours of custom coding. Connections between applications were generally not reusable so when an application changed or was added, a new project began. It could take up to nine months to complete one interface at a cost of over \$100,000 for each interface.

Another economical feature of the software is the ability to continue using existing systems, not "portal partners." EDE is used to field the data and R4D™ posts results online in less than four weeks.

TECHNICAL SUMMARY

R4D™ can be accessed via Internet connection by any PC using Microsoft Internet Explorer 4.0 and above or Netscape Navigator 4.0 or above.

SECURITY User Ids and passwords are validated against the IP address or range of IP addresses of the PC being used to access the system. For use on a PC whose IP address is not in the validation table, a security key must be affixed to the parallel port of the PC. These keys are available at a nominal cost for those users who travel or who desire to access the system from multiple locations.

USER IDS A user ID may only be logged into the system from one location at a time. Simultaneous access of multiple users requires additional user IDs. The monthly fee is based on one user ID.

The software exceeds current HIPAA security drafts.

Other companies that have information on the Internet and Interface offerings include Software Technologies Corporation marketing an engine product called DataGate, New Era of Networking (NEON) and HCI's Cloverleaf. SMS Openlink and Sunquest's Flexilab are two examples of interface products typically purchased with the vendor's major offering.

Technical summary gathered from Eagle Innovations' website at www.eagleinnovations.com.

LUNCH MEETING

Chicago Chapter of the IEEE Power Engineering Society Total Power Quality Protection for Medium Voltage Critical Loads Wednesday, January 10, 2001

Bradford P. Roberts, P.E., Director of Marketing - Power Electronics, S&C Electric Company

About the Topic:

During the last decade every growth industry from auto assembly to semiconductor fabrication has spent billions on industrial automation hardware to improve product quality and increase productivity. This, coupled with plant expansions into countries where the utility power grid is taxed by rapid expansion, has created growing concern over the impact of a utility power problem that affects the "at risk" or "in-process" value of the business.

In many critical process industrial businesses, there is a belief that utility power providers have not kept pace with the supply of quality power. In fact, most utilities have spent millions of dollars to improve the quality of their supply. Today's sophisticated electrical loads require that the utility service be customized to provide an electrical power source matched to the needs of the load.

For critical load businesses, the mitigation of utility power problems is a "site-by-site" decision. The characteristics of the utility distribution system, geographic location and

weather conditions dictate the appropriate solution.

This presentation shows advances in power electronics that have made energy storage options available to large load (greater than 2 MW) users to improve power quality and reliability.

About the Speaker:

Brad Roberts is Director of Marketing for the Power Electronic Division of S&C Electric Company which specializes in high voltage switching and power protection.

Brad has over 30 years experience in the design and operation of critical power systems, ranging from single phase UPS systems to medium voltage applications. He began his engineering work as a systems reliability engineer in the Apollo Lunar Module Program at Cape Kennedy. He held senior management positions in two of the major UPS manufacturers during his career. Brad is a member of IEEE and has published over 20 technical journal articles on critical power system design.

Brad is a registered professional engineer and has a BSEE (Bachelor of Science in Electrical Engineering) degree from the University of Florida.

Location:

Chicago Bar Association
321 South Plymouth Court
(Near Jackson & Dearborn)
Chicago, IL 60604

Time:

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

Reservations:

Lunch tickets can be purchased in the lobby bookstore (\$10.50). Please call the IEEE Business Office at (800) 898-IEEE to make your reservation.

Information:

For more information, please visit the Chicago Chapter IEEE PES web site: www.ece.iit.edu/~flueck/chicago_pes/

EVENING MEETING

IEEE EMC Society, Chicago Chapter Introduction to Measurement Uncertainty for Radiated and Conducted Emissions Wednesday, January 17, 2001

H.R. (Bob) Hofmann, Distinguished Member of Technical Staff, Bell Laboratories

About the Topic:

This talk will be an introduction to the topic of measurement uncertainty in radiated and conducted emission measurements. It will use simple mathematics to show how the various components used in making measurements add to the total measurement uncertainty of the final results.

About the Speaker:

Biography - Bob Hofmann has been with

Bell Labs for 43 years, working on EMC issues for the past 22 years. He is the head of the Lucent/Bell Labs Corporate EMC Committee. He represents Lucent on ANSI accredited EMC Committee C63 and various C63 subcommittees, and is the Lucent representative to and vice-chair of ECMA EMC committee TC-20. He was the lead editor of ANSI C63.12-1999 and contributing editor to ANSI C63.4-1991, 1992, and 2000.

Location:

Lucent Technologies
Naperville and Warrenville Roads
Naperville, IL

Time:

7:30 PM

Information:

<http://www.ewh.ieee.org/soc/emcs/chicago>

CAUTION



January 1, 2001

EN 61000-3-2:1995 Harmonic Current
and EN61000-3-3:1995 Flicker
Requirement became mandatory

July 1, 2001 three standards become mandatory:

- EN50082-1:1997 EMC Generic Domestic Immunity Standard
- EN61326:1997 Product Family Standard for Manufacturers of Measurement Control and Laboratory Equipment
- EN55024:1998 Immunity Product Standard for Information Technology Equipment (ITE)



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EVENING MEETING

IEEE-IAS/IES DINNER PRESENTATION Backup Generator Selection, Switching and Application Wednesday, January 17, 2001

Scott Orsini, Sales Engineer, Patten Power Systems

About the Topic:

Backup generators, often combined with uninterruptible power systems (UPSs), are the foundation from which critical electrical loads are served during utility outages. Scott will discuss how to select and separate if necessary, the loads that should be carried on an electrical backup system, how to size and switch the backup generator and UPS. The presentation will also cover methods for optimizing the economics of the system without sacrificing reliability, and highlight common errors that occur in designing a backup electrical system. After the presentation there will be an opportunity for questions and to discuss specific applications in greater detail.

About the Speaker:

Mr. Orsini is responsible for the Sales Engineering of diesel and gas generator

systems. For fifteen years he has worked with the Caterpillar product and the last five for Patten Power Systems serving Northern Illinois, focusing on application and installation of generator systems. Designs and technical implementation have included on-site electric power generation from 250 kw, to paralleling power systems up to 16-megawatts. A graduate of Massasoit State College, Massachusetts; he is currently continuing his education at DePaul University. IEEE member since 1998.

Location:

The Como Inn
564 North Milwaukee Ave.
Chicago, IL

Directions:

The COMO INN is located on Milwaukee Avenue just off the Kennedy Expressway (I-90/94) near Grand Ave. and Halsted St.

Time:

5:30 Social
6:00 Dinner
7:00 Presentation

Reservations:

Your cost includes the presentation and your choice of chicken (\$25 IEEE Member/\$30 non-member) or pasta (\$20 IEEE Member/\$25 non-member) 4 course dinner.

Information:

Please call the IEEE Business Office at 800-898-IEEE or 630-724-0200 with your entrée preference before Jan. 15th if possible.

EVENING MEETING

Chicago/Rockford IEEE Consultants' Network Meeting Acceptance and Maintenance Testing of Electrical Power Equipment Monday, January 29, 2001

Bill Hall, Asgard Technologies

About the Topic:

Bill will be speaking on "Acceptance and Maintenance Testing of Electrical Power Equipment". Since this is a very broad subject, the primary focus of this presentation will be insulation testing. The topics to be covered include dc insulation testing such as insulation resistance, polarization index, and step resistance testing as applied to cables, transformers, circuit breakers and other electrical equipment. Also included will be ac insulation testing, or insulation power factor testing.

About the Speaker:

Bill Hall is an electrical engineering consultant with more than 30 years experience in the design, installation, operation and maintenance of electrical power systems for industrial and commercial buildings.

Location:

Dinner: Bakers Square
270 E. Northwest Highway and
North Court, just south of the library.
Meeting: Palatine Public Library
700 North Court, Palatine, IL

Time:

6:15 PM-Dinner
7:30 - 9:00 PM-Meeting

Reservations:

Reservations are not required. There is no charge for attendance at the meeting. Both members and non-members are invited.

Information:

e-mail: g.l.blank@ieee.org
and at our web site
<http://www.drblank.com/coaction.htm>

IEEE-IAS Chicago Chapter Power Systems Harmonic Analysis Saturday, February 17, 2001

Lonnie C. Lindell, General Manager, SKM Systems Analysis, Inc.

About the speaker:

Lonnie C. Lindell is the General Manager of SKM Systems Analysis, Inc., an electrical engineering company specializing in power system analysis software development. He received a BS from the Iowa State University School of Engineering and an MBA from the University of Phoenix. He has over 15 years' experience in the application of engineering computer software, and is an active educator and published author. He is a member of the IEEE.

Agenda:

7:30 am Admission and
Continental Breakfast
8:00 am Session I: Definition of
Harmonics - Related Terminology -
Problems caused by Harmonics -

Solutions to Harmonic problems
10:00 am Session II: Measurements Vs
Predictive Calculations - Data
Required for Predictive
Calculations - Example/Exercise
using Hand Calculations methods
12:00 pm Lunch
12:30 pm Session III: Example using
Computer Simulation - Effects of
Capacitors, Filters and Loading
2:45 pm Session IV: Comparison between
IEEE and IEC Standards -
Summary - Q&A - Feedback and
Evaluation of Seminar

Location:

Holiday Inn Glen Ellyn
Williamsburg Room
1250 Roosevelt Road, Glen Ellyn, IL

Fees:

- IEEE Member Registration \$75.00
(Provide your IEEE member Number)
- IEEE Non-Member Registration \$125.00
- Late Registration \$10.00 (after 17 January 2001)
- Continuing Education Unit (CEU)
Registration \$10.00

Reservations:

Please make checks payable to "IEEE-IAS Chicago Chapter," and mail with your name and address to IEEE-IAS Chicago Chapter Attn: David E. Mertz, PE, HOH Engineers, Inc. 180 North Wabash Avenue, Chicago, IL 60601. Registrations will not be accepted without payment. Attendance limited to the first 120 registrants. 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 Communications Society-Chicago Chapter Communication Symposium on Internet Telephony Network & Services April 12-13, 2001

Theme: Exploiting Leading Edge Internet Network Technologies

About the Topic:

The emphasis of this symposium is on new approaches and trends in today's communication technology. The symposium intends to stimulate an environment to enable effective information exchange and learning among network professionals at service-providers and vendor organizations who need to stay up-to-date on the latest industry development.

Topics include but are not limited to the following:

I. Internet Telephony Networks:

- Wireless IP Networks
- Standards and Interoperability Issues
- Quality of Service
- Security and Network Reliability
- Mobility Management

II. Internet Telephony Services:

- Wireless Multimedia Services
- Location Based Service
- Billing Services
- Network Management Services

Sponsors:

- IEEE Communications Society -
Chicago Chapter
- Lucent Technologies -
Bell Labs Innovations
- Motorola Inc.
- University of Illinois at Chicago

Location:

University of Illinois at Chicago
Chicago, Illinois

Important Deadlines:

Abstract Due:Jan. 5, 2001
Notification of Acceptance: ..Jan. 26, 2001
Full Presentation and/or Paper due:
.....March 9, 2001

Abstract/Paper/Presentation Viewgraph Submission:

Authors are requested submit 3 copies of abstract. Your abstract, 400-500 words, should be informative, containing (a) a title with author's names(s) and affiliation(s); (b) the presentation objective; (c) brief statements of methods; (d) a summary of the results; (e) the conclusions.

Information:

Dr. Weider D. Yu
Lucent Technologies -
Bell Labs Innovations
2000 N. Naperville Road .
Naperville, IL, 60566-7033
Phone: (630) 224-4511
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Employment Opportunities

Engineering EOE

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The successful candidate will possess at least a Master's degree in electrical or computer engineering (or a closely-related field), with a minimum of 3 years engineering experience. Excellent communications and organizational skills are a must. Experience in the design, development, and delivery of technical curricula would be preferred. Experience with the use of technology in the teaching and learning process, including use of the Internet in supplementing classroom learning, would be a plus.

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CALENDAR OF EVENTS

Date	Event
January 9	Chicago Section Executive Committee Meeting
January 10	IEEE Power Engineering Society TOTAL POWER QUALITY PROTECTION FOR MEDIUM VOLTAGE CRITICAL LOADS
January 17	IEEE-IAS/IES Dinner Presentation BACKUP GENERATOR SELECTION, SWITCHING AND APPLICATION
January 17	IEEE EMC Society, Chicago Chapter INTRODUCTION TO MEASUREMENT UNCERTAINTY FOR RADIATED AND CONDUCTED EMISSIONS
January 29	Chicago/Rockford IEEE Consultants' Network Meeting ACCEPTANCE AND MAINTENANCE TESTING OF ELECTRICAL POWER EQUIPMENT
February 17	IEEE-IAS Chicago Chapter POWER SYSTEMS HARMONIC ANALYSIS
April 12-13	The Communications Society, Chicago Chapter COMMUNICATION SYMPOSIUM ON INTERNET TELEPHONY NETWORKS & SERVICES

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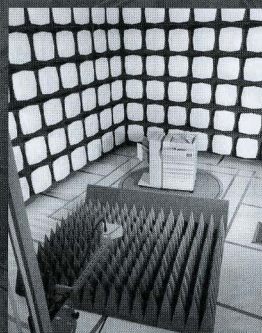
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