

SCANFAX

January 2003

Volume 55, Issue 1



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CHICAGO SECTION EXECUTIVE COMMITTEE MEETING

Tuesday, January 14, 6:30 p.m.

DeVry DuPage, Room TBA, 1221 N. Swift Rd., Addison, IL
No Registration Needed

ATTENTION

NEW BUSINESS OFFICE LOCATION:

The Institute of Electrical and Electronics Engineers Business Office has moved.
The new address and phone number are as follows:

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COMPUTING DEVICES

EVOLVE TO SATISFY EVERY NEED

BY PAUL ZUKOWSKI



It's a cell phone. It's a personal digital assistant. It's a handheld computer. Or is it all three?

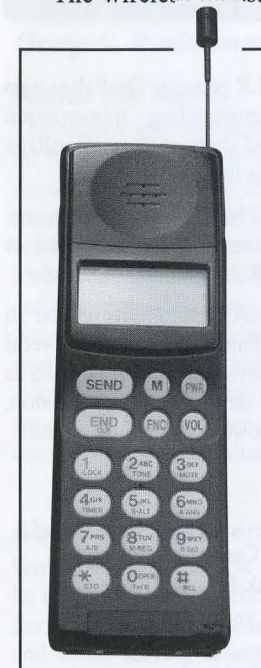
The merging of various devices and the blurring of the boundaries between these technologies is both potentially confusing to consumers and very exciting to the engineers who design them and the heavy users who crave them.

The holiday buying season just past will tell which of the new devices is catching on. It can be interesting to look at the future of mobile computing and communicating from the viewpoints of the three different industries that are seeing their devices merge: wireless telecom companies like Verizon and Sprint, PDA makers

like Palm and Handspring, and computer makers like HP and Dell with their operating system and processor partners, Microsoft and Intel.

Hold the Phone

The wireless industry is hoping for big sales over the holidays of their new phones with full-color screen, built-in cameras, faster Web browsing, and other enhanced features. The preceding year saw sluggish sales and a huge investment has been made to upgrade cell phone networks so they can carry more data at higher speeds. If consumers don't really want to do more than make



voice calls, it will be hard to make the investment pay off.

According to press reports, in Japan the rollout of advanced wireless services has disappointed NTT DoCoMo due to technical problems. In Europe the launch of the new data service has been postponed also due to technical kinks. The advanced XCDMA operating system used by Sprint and Verizon could prove to be superior to the enhanced GSM used by AT&T, Cingular, and most of the European carriers, as well as to the W-CDMA standard used by NTT DoCoMo.

Reading your Palm

At the low end of the price spectrum, personal digital assistants have become a commodity, with the Palm Zire priced at \$99, and retail sales are falling. On the upper end, the PDA makers are packing on features to appeal to the corporate market, which is steadily growing. These features include more memory, faster processing speeds, better screens, and built-in wireless connectivity. Many PDAs have had the ability to act as a cell phone, but now Wi-Fi is being added to many models, and HP has a model with Bluetooth technology.



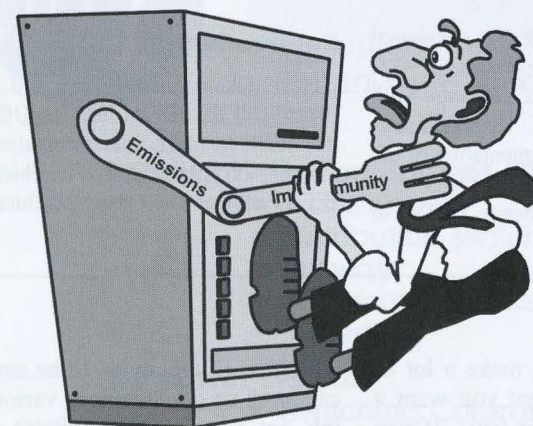
PDAs are getting so advanced, they can perform many of the functions that some companies used to use laptops computers for, such as field notebooks for sales reps or inspectors, at much lower costs.

A Computer in your Hand

Going beyond the Palm OS to the Microsoft Pocket PC 2002 OS, you get more of the functionality of a computer rather than just organizer and address book functions.

Continued on page 6 →

Introduction to Electromagnetic Compatibility Design Practices* - January 30-31 **Design Techniques for Controlling Radiated Emissions* - February 3-4**



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Donald L. Sweeney, with 15 years experience teaching EMC design classes and 30 years experience in the EMC & Electrical Engineering fields, will be offering two courses at the Hilton in Northbrook, IL Jan. 30-31 & Feb. 3-4, 2003.

For students to apply what they have learned from the classes to their specific products, they are encouraged to bring a product, or a schematic, to a free personal consultation offered by the instructor or his associate on February 1 or 5. Classes will also be offered in May, July and October.

For more information or to receive a brochure, call D.L.S. at 847-537-6400 or www.dlsemc.com.

*These are the same classes formerly offered by Don through the University of Wisconsin.

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EVENING MEETING

Chicago Chapter of the IEEE Power Engineering Society The FERC Standard Market Design and the Midwest Electricity Markets Wednesday, January 8, 2003

Roberto F. Paliza, Paliza Consulting

About the Topic:

With the advent of the FERC Standard Market Design, the Midwest Electricity Markets will be transformed in many ways. The FERC SMD is based on Locational Marginal Pricing (LMP) and Financial Transmission Rights (FTRs) which requires the implementation of a centralized dispatch and creation of a "spot" market. This is a significant change in the way that the Midwest electrical systems are currently operated and the way that market participants do business today.

The Midwest ISO and stakeholders have been working on the MISO market design, which is very compatible with the FERC SMD, for over two years and had an early start in this regard. However, the implementation of the FERC SMD is not the only change in the Midwest, the expansion of PJM LMP market into the territories of AEP, DPL, ComEd, and Illinois Power, will pose a unique challenge in coordinating two "tightly coupled" LMP markets.

Additionally, the creation of several Independent Transmission Companies in the Midwest such as TransLink, GridAmerica, National Grid, and International Transmission Company add another degree of complexity in the coordination of LMP/FTR markets across the MISO and PJM footprints.

This presentation will discuss the above aspects of the future Midwest markets from an unbiased standpoint and present the basics of LMP markets and Inter-RTO coordination.

About the Speaker:

Dr. Roberto F. Paliza is an independent consultant and has over 15 years of experience in the U.S. Electric Utility business. He received his M.Sc. and Ph.D. in Electric Power Systems from the University of Manchester Institute of Science and Technology (UMIST) in Manchester, U.K., and he is the author of several technical papers on power system operations and a senior member of the Institute of Electrical and Electronic Engineers (IEEE).

Dr. Paliza was a Principal Consultant in the Midwest ISO and the Technical Director for the combined MISO/SPP market. He led the design of the LMP/FTR Market System for MISO-SPP, and contributed to the development of the strategy and implementation plan for the MISO/PJM/SPP common market.

Before joining the Midwest ISO in April of 2000, Dr. Paliza worked for the Mid-American Interconnected Network (MAIN) Reliability Center in Lombard, Illinois. At MAIN, he led the team of engineers responsible for the initial development of the infrastructure and operational procedures to implement regional ATC calculations, OASIS postings, and security coordination.

While working for MAIN, Dr. Paliza developed inter-regional coordination procedures for ATC calculation and reliability data exchange with MAPP, SPP, ECAR, and SERC. He was instrumental in the design and implementation of the NERC Interchange Distribution Calculator (IDC) and System Data Exchange (SDX) to

support the NERC TLR process. Dr. Paliza also worked on design engineering, transmission capability studies, and daily studies of voltage stability assessment in the MAIN region.

Dr. Paliza represented MAIN and MISO in several NERC committees and forums, and is familiar with the NERC reliability standards.

Before joining the MAIN reliability center in February 1997, Dr. Paliza worked for several Energy Management Systems (EMS) vendors as a lead in the design, development, integration, and testing of EMS power system applications.

Location:

ComEd Commercial Center
1919 Swift Drive, Oak Brook, IL
(near the I-290 and I-294 interchange)

Time:

5:30 PM Social
6:30 PM Dinner
7:30 PM Presentation
8:30 PM Adjourn

Reservations:

Dinner tickets can be purchased at the door. Please call the IEEE Business Office at (800) 898-IEEE to make your reservation. For more information, please visit the Chicago Chapter IEEE PES web site: <http://peschicago.org>



Continued from page 5

It's a distinction that can make a lot of difference depending on what you want a handheld computer to do for you. If you want to work on files from the office, you'll appreciate having Pocket versions of Word, Excel, Internet Explorer, and MSN Messenger. Several manufacturers have models out that run Pocket applications.

Going one step further are the new Tablet computers that four manufacturers have introduced. They promise the power of desktop in a tablet form. Some have keyboards, some don't. All allow anything

written with the stylus to be saved, so you can mark up documents in various colors of ink, jot notes on PowerPoint slides, and even send e-mail in your own handwriting.

Whether your cell phone grows to become a PDA or your Pocket PC gets Wi-Fi, it seems clear that all these devices overlap and will continue to evolve so that no matter what your portable computing and communicating needs are, there will be a device to satisfy them. ■

EVENING MEETING

IEEE Fox Valley Subsection and IIT-Rice Campus The Great Census of the Cosmos and the Sloan Digital Sky Survey Wednesday, January 15, 2003

Gary S. Ruderman, Sloan Digital Sky Survey

About the Topic:

The science and significance of the Sloan Digital Sky Survey for the nonscientist. Nearly a decade ago, the Sloan Foundation backed the idea of a photometric and spectrographic camera attached to new 2.5-meter telescope to catalog 25 percent of the northern sky. This is the first collaboration of its kind: more than 10 institutions around the world; more than 100 scientists analyzing more than 10,000 laptops worth of information...so far. The challenge is not only in the cosmos but also down to earth in the new science of storing and evaluating the data.

About the Speaker:

Gary S. Ruderman is the newly appointed public information officer for the Sloan Digital Sky Survey. Ruderman is a widely known reporter and editor serving newspapers and magazines

around the world. He has written on science topics for the *Chicago Tribune*, *i-Street* magazine and other online and off-line publications. Ruderman received his Masters degree from Boston University in International Press, was president of the Headline Club, the Chicago Chapter of the Society of Professional Journalists, and a member of the International Press Institute.

Location:

IIT's Rice Campus
201 East Loop Road
Wheaton, IL

Take Rt.56/Butterfield Rd. to first stoplight east of intersection of Butterfield & Naperville roads. Turn north onto East Loop Road (Grady's Restaurant and Phillip's 66 Gas Station on the corners); the campus will be on your right about

a block north of Butterfield Road. More detailed directions and a map are available at <http://www.rice.iit.edu/directions.html>

Time:

6:00 PM Networking time
7:00 PM Presentation

Reservations:

Reservations are not required.
The Fox Valley subsection web page is at www.ieee.org/foxvalley/

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EVENING MEETING

IEEE - IAS/IES Dinner Presentation
Soft Starting Methods for Low and Medium Voltage Motors
Wednesday, January 15, 2003

Andy Minster P.E., Benshaw, Inc.

About the Topic:

Andy's presentation will address application considerations for soft starting motors including:

- Electrical and Mechanical Reasons for Soft Starting Motors
- Characteristics of Across the Line, Wye-Delta, Auto-Transformer, Part Winding, Adjustable Frequency Drives and Solid State Reduced Voltage Starters
- Selection Guidelines

About the Speaker:

Education: BSME, University of Wisconsin - Milwaukee

Present Position: Territory Manager for Benshaw, Inc.

Mr. Minster is an applications controls engineer with 20 years of experience applying electro-mechanical motor controls, adjustable frequency drives, DC drives, eddy current drives and

solid state reduced voltage starters. His focus is upgrading existing motor controls and applying and designing new motor controls with emphasis on value engineering. Andy's experience in motor control includes application engineering, field service, panel building supervision, and customer service.

Time:

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

Location:

Costa's (Greentown)
340 S Halsted St.
Chicago, IL

Costa's is located in Greektown on the corner of Van Buren and Halsted. For detailed directions and a map, see www.iaschicago.com

Reservations:

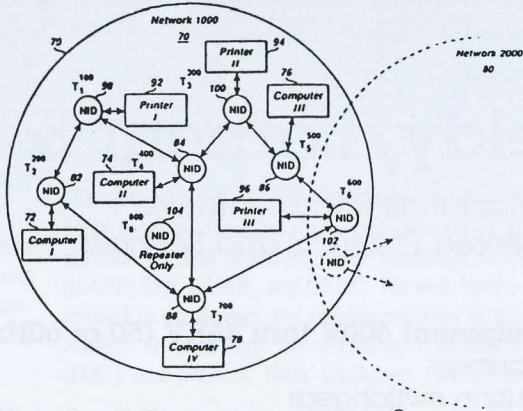
Please call the IEEE Business Office at (800) 898-IEEE or (312) 253-4333 with your reservation. Please note any special meal requests at the time of the reservation. You can also make your reservations online at www.iaschicago.com

Cost:

Your cost includes the presentation and a four-course dinner with a choice of the main entry - Roast lamb, Chicken, or Fish. (Vegetarian or special dietary meals available upon request). Cost is \$25 IEEE Member and \$30 non-member. Valet parking is included with your meal.

Information:

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.



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EVENING MEETING

IEEE Chicago/Rockford Consultant's Network
Considerations in Setting Consulting Fees
Tuesday, January 21, 2003

About the Topic:

In addition to networking and sharing leads and referrals, there is usually a guest speaker. On January 21, 2003, instead of a speaker, we plan to have an open discussion on "Considerations in Setting Consulting Fees." Members will share ideas and methods they have used successfully for setting client fees. We will investigate the various direct and support task aspects as well as the issues of reasonableness and competitiveness in developing a fee structure. Members and non-members are invited to both the meeting and the optional dinner. (Reservations are NOT required).

Meeting Location:

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

Dinner Location:

Bakers Square
270 E. Northwest Hwy
(at the corner of North Court St.)
just south of the library

Time:

- 6:15 PM Optional Group Dinner at Bakers Square (Order off the menu - reservations not required)
7:30 PM Meeting - Open Discussion
9:00 PM Adjourn

Information:

Information about the network can be obtained by e-mail to either benmiller@worldnet.att.net or JAuerConsulting@worldnet.att.net, or visit our website: <http://www.drblank.com/coaction.htm>

See you on JANUARY 21, 2003, and bring consultants and those who aspire to be consultants for a pleasant and informative evening of networking.

Meetings are usually held on the last Monday of odd-numbered months; however, please note the change in standard plan for the JANUARY 2003 meeting.

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PRESS RELEASE

19th Annual DuPage Area Engineers Week Expo

"100 Years of Aviation!" What could be a more exciting theme for our 19th Annual DuPage Area Engineers Week Expo and related events. A variety of activities is planned, culminating in the Expo on Saturday, February 22, 2003 at the Rice Campus of Illinois Institute of Technology, 201 East Loop Road, Wheaton.

Thursday, February 20, is "Introduce a Girl to Engineering" day. The Gender Equity Office at College of DuPage, together with the DuPage Girl Scout Council, is sponsoring a program for area high school girls at Molex Incorporated. Heather Sobecki (sobecki@cdnet.cod.edu) is the contact for this program.

On the evening of Thursday, February 20, the DuPage Area E-Week Steering Committee will sponsor our annual Speaker's Forum, which will introduce the aviation theme. Our speakers will be from Wright Redux, the Glen Ellyn group who are building a flyable replica of the Wright Flyer, and from Packer Engineering, the Naperville firm that is building the engine. Whether you are an aviator, a passenger, or just a spectator, this will be a fascinating look at aviation history and present achievement.

Thursday's Forum will be preceded by a buffet at 6:30 pm with the program beginning at 7:30 pm. If you wish to join us for dinner, please contact Barbara Kozi (kozi@iit.edu or (630)682-6040) to make a reservation. The cost is \$10. The program itself is free.

Saturday, February 22, will be the capstone event, with presentations from aviation science to ham radio to cryogenics and lasers. Fifteen or more engineering societies and a number of corporations will be represented with hands-on activities and information about engineering. While many will relate to aviation, there will also be many other displays as well. SciTech, Rube Goldberg, and other favorites will also be back. The Saturday program is free and no reservation is required. Families are encouraged to come and enjoy the proceedings.

Please join us for one or more of these activities. And check out our Web site from time to time to see what's new: www.rice.iit.edu/engineer-week/ If you wish further information, contact Barbara Kozi at (630)682-6040 or kozi@iit.edu.

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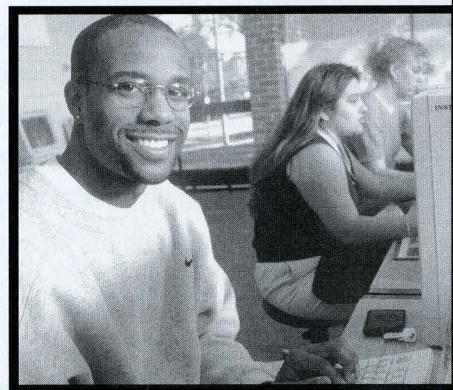
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All classes are scheduled part-time, in the evening. Challenging, innovative, intensely practical: at Elmhurst, you will get more than a master's.



More than a master's...



For information or to arrange a campus interview, call us at (630) 617-3030, or e-mail us at gradadm@elmhurst.edu. The College is located at 190 Prospect Avenue, Elmhurst, Illinois 60126.