



THE POCKET SCOPE



The Institute of Electrical and Electronics Engineers, Inc.

Volume 53, Number 8

April 2003

SCOPE NOTES

April Houston Section News

Where:
HESS (Houston Engineering and Scientific Society)
5430 Westheimer@Yorktown

When: Wednesday, April 23, 2003
6:00 - 6:30 p.m. Social
6:30 - 7:30 p.m. Dinner
7:30 - 8:30 p.m. Speaker

Cost:
\$FREE - IEEE Members with 48-hour advance reservations.
\$20.00 - non-members
\$5.00 - students
Call (713) 207-IEEE to make your reservations.

See Page 2 for
the Continuing
Education
Schedule!

IEEE WEB
ADDRESS
[http://
\(www.ieee-
houston.org\)](http://www.ieee-houston.org)

IEEE Houston Section
P.O. Box 460014
Houston, Texas
77056-8014

The Chairman's Message

Dwayne Lowry



The Region 5 Technical and Leadership Conference will be held in Baton Rouge April 11 – 13. Your Executive Committee is pledged to keep abreast of the happenings in IEEE Regional and National and will all attend this important annual event. Many of you will recall that the Houston and Galveston Sections cosponsored the Conference last year and for one, I can say that it will be a treat to be just an attendee without all the worries that come with hosting such an event. We'll report on the conference in next month's PocketScope.

Remember the April Section meeting. Todd Smithgall, Space Alliance's Chief Architect will make a presentation on the project he is heading entitled "Space Shuttle Cockpit Avionics Upgrade". Should be a good one.

OTC is growing once again into a big event here in Houston. In the late 70's and early 80's it was one of the main events to come to Houston. With the oil bust the show took a big hit, but over the past couple of years it is rebounding very strong. IEEE is one of the sponsors of the event and has a booth at the event. This is a great opportunity to meet members and bring them up to date on what's happening with IEEE here and nationally and to sign up new members to the organization. This year's show is at the Reliant Center on May 5-8 and we'll need several members to help man the booth. If you would like spend a few hours talking to fellow engineers please give Donald Dunn 281-452-8809 or John Lucey a call at 713-945-5923 or send an email to donald.dunn@ieee.org John.Lucey@CenterPointEnergy.com

Ned R. Southoff, Ph.D., Chair, IEEE-USA Nominations and Appointments Committee has issued a call for Nominations for several IEEE USA Positions to help in identifying U.S. IEEE members who may be interested in, and well-qualified for, service in the following IEEE-USA offices:

- IEEE-USA President-Elect (2005)
- IEEE-USA Member-at-Large (2005-2006)
- IEEE-USA Secretary-Treasurer (2004)
- IEEE-USA Vice President - Career Activities (2004)
- IEEE-USA Vice President - Member Activities (2004)
- IEEE-USA Vice President - Professional Activities (2004)
- IEEE-USA Vice President - Technology Policy Activities (2004)

These are the officers who direct the day-to-day operations of IEEE-USA, provide leadership for our volunteer committees, oversee their financial performance, and promote new entrepreneurial activities. Nominees must be IEEE Senior member grade or higher, and must be from IEEE Region 1-6. We are especially interested in nominations of Senior members who are also Graduates of the Last Decade (GOLD) members.

If you would like to be considered or know of someone that would please forward their names to me and I'll take it from there.

The Engineering department at the U of H has a new class for elite Senior Engineering Students and is looking for mentors in business for these students. This is a wonderful opportunity for practicing engineers to give back to the young engineers that will begin their careers in the next year. You may even find a

Continued Page 3

IEEE CONTINUING EDUCATION ON DEMAND

2002-2003 REGISTRATION FORM

Name:

Company:

Mailing Address: (where certificate will be delivered)

City/State:

Zip:

Email:

Telephone Voice:

Telephone Fax:

IEEE Membership Number:

Mail a copy of your completed registration form along with your check payable to **IEEE CED SEMINARS** at the following address:

IEEE CED SEMINARS
SANDY CROCKER
ABB Power T&D Company
P.O. BOX #42802
HOUSTON, TX. 77242

Registration receipts will be distributed **at the seminar**.

For a cancellation refund, telephone by the Friday before the seminar:
Contact Sandy Crocker at (713) 821-4020

IEEE Continuing Education On Demand Completion Certificate with Continuing Education Units (CEUs) is provided after receipt of both nightly questionnaires.

Please check the IEEE Houston Section website for the latest schedule and course information.

[http://\(www.ieee-houston.org\)](http://(www.ieee-houston.org))

IEEE CONTINUING EDUCATION ON DEMAND

The purpose of IEEE Houston Section Continuing Education On Demand is to provide a two-year repeating program sequence of practical industrial power application topics that supplement the daily work activities of the practicing graduate electrical engineer.

The seminars are intended to stimulate further study and discussion for learning continuance throughout the working career. Topics apply to heavy industries: oil and gas, petro-chem, cogen, pulp and paper, etc.

Instructors are application engineers, manufacturing specialists and expert consultants who provide a blend of diverse engineering perspectives.

The cost of each seminar is \$120.00 for IEEE members. "Early Signup" is \$60.00 and the **check must be received the Friday before** the seminar start date. The cost for non-IEEE members is \$200.00. Signup the week of the seminar does not guarantee seminar presentation documents or meals. For IEEE membership application information, contact Sandy Crocker at (713) 821-4020.

The following 2002-2003 seminar schedule defines the topics, dates and times. A course syllabus is available on request. Minimum class size is twenty for each seminar. Seating is limited and filled on an as received basis. Presentation documents are provided. A buffet is served from 5:00PM-6:00PM.

Seminar location:

ABB Power T&D Company
P.O. BOX #42802
HOUSTON, TX. 77242
Contact Sandy Crocker
(713) 821-4020

Seminar Title	Code	Date	Amount
Residual Bus Auto Transfer System	111	Oct. 1/2	\$
Symmetrical Components	202	Oct. 15/16	\$
Elect. Safety In Ind. Workplace	921	Oct. 29/30	\$
Harmonics Theory And Applications	502	Nov. 12/13	\$
Harmonic Filters	503	Jan. 28/29	\$
CT/PT Application	308	Feb. 11/12	\$
Directional Power Current Relaying	307	Feb. 25/26	\$
Solid-State Starters	504	Mar. 11/12	\$
Relays and Meters Com. Sys. Integration	112	Mar. 25/26	\$
51V Gen Relay, Standby Gen. & UPS	316	Apr. 8/9	\$
Substation Design Appl. And Fund.	312	Apr. 22 /23	\$
Total Paid:			\$

Enter amount for each seminar:

IEEE member registration: \$120.00
IEEE member early signup: \$ 60.00
Non-member registration: \$200.00

Fall of 2002 IEEE Seminar Schedule

Residual Bus Automatic Transfer System (111)

James Bowen / Roy Cossé, Powell Elect. Mfg. Co.

Oct. 1/2, 2002 6:00-8:50PM

Reviews fundamentals of a traditional transfer scheme. A modern transfer approach provides guidance for enhanced residual transfer scheme applications. [0.5 CEU]

Symmetrical Components (202)

William Nichols, Siemens Westinghouse Technical Services

Oct. 15/16, 2002 6:00-8:50PM

Reviews basic theory and provides application examples for LL, LG, and LGL faults. Unbalanced voltage concerns are also discussed. [0.5 CEU]

Electrical Safety in Industrial Workplaces (921)

James Bowen, Powell Electrical Mfg. Co.

Oct. 29/30, 2002 6:00-8:50PM

Modern industrial facility safety concerns and NFPA70E are discussed. [0.5 CEU]

Harmonic Theory and Applications (502)

David Rice, GE Engineering Services

Nov. 12/13, 2002 6:00-8:50PM

Introduces basic harmonic concepts and typical industrial applications. [0.5 CEU]

Spring of 2003 IEEE Seminar Schedule

Harmonic Filters (503)

David Rice, GE Engineering Services, and Richard Harlow, Phaseco, Inc.

Jan. 28/29, 2003 6:00-8:50PM

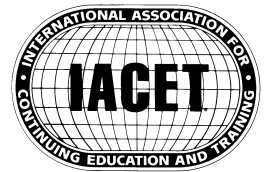
Discusses filter design, implementation, and typical application example concerns. [0.5 CEU]



IEEE
Houston
Section

2002-2003

Continuing
Education
On Demand

**CT / PT Application Seminar (308)**

Tony Zhao, Powell Electrical Mfg. Co.

Feb. 11/12, 2003 6:00-8:50PM

Discusses CT and PT ratings, selection criteria, ANSI Std. Ref. and typ. appl. considerations. [0.5 CEU]

Directional Power/Current Relaying & Meters (307)

William Nichols, Siemens Westinghouse Technical Services

Feb. 25/26, 2003 6:00-8:50PM

Reviews typical industrial directional power and directional current relaying applications. Directional metering topics are also included. [0.5 CEU]

Solid-State Starters (504)

Harold Haggarty, Benshaw Inc.

Mar. 11/12, 2003 6:00-8:50PM

Discusses traditional mtr. starting appl. and modern "soft-start" theory, appl. and selection. [0.5 CEU]

Relays and Meters**Communication Systems Integration (112)**

Martin Hildreth / Roy Cossé, Powell Elect. Mfg. Co.

Mar. 25/26, 2003 6:00-8:50PM

Reviews modern concepts and reasons for integrating diff. mfg. meters and relays into one communicating system. [0.5 CEU]

Generator 51V Relaying, Standby Generator and UPS Selectivity (316)

Roy Cossé, Powell Electrical Mfg. Co.

Apr. 8/9, 2003 6:00-8:50PM

Reviews MV/LV gen. 51V and stdb. gen. concerns. UPS dist. sys. selectivity is discussed. [0.5 CEU]

Substation Design and Application Fundamentals (312)

Donald Sevcik, Reliant Energy HL&P

April 22/23, 2003 6:00-8:50PM

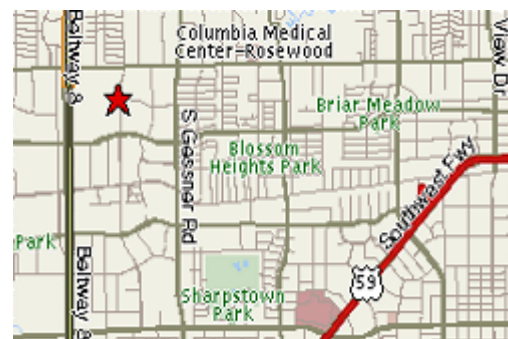
Reviews theory and appl. design basics. [0.5 CEU]

Guidelines for Applying IEC Standards to Electrical Distribution Systems (801)

Terence Hazel, Schneider Electric France

April 30/ May 1, 2002 6:00-8:50PM

[0.5 CEU]



April 23 Section Meeting

See the Houston Section web site to conform your reservation.

Title: Topic: Space Shuttle Cockpit Avionics Upgrade

The National Space Transportation System (the Space Shuttle) continues to evolve and improve after 21 years of reliable service. Its subsystems are periodically upgraded to improve reliability, safety and performance. The high crew workload in off-nominal situations increases the opportunity for human error, and has been identified as a significant potential contributor to future operational incidents. Studies of the Shuttle's cockpit interface, using experienced astronauts and novice astronaut candidates, have shown the need for enhancement to that interface, mainly in the areas of Situational Awareness and Systems Management. The nature of the enhancements exceeds the capability of the existing computing hardware, thus requiring a substantial upgrade to both the computers and the software that provide the human interface function. The Cockpit Avionics Upgrade (CAU) project addresses these needs with a comprehensive suite of data collection and processing hardware, extensive new access to the vehicle's instrumentation data streams, and new software to recognize, analyze and display vehicle and subsystem performance in such a way as to reduce crew workload during all flight phases and mission scenarios, especially during emergency situations. Some interesting challenges in this project have been found in selection and qualification of modern computing hardware with the needed performance and resistance to the space radiation environment.

Speaker: Todd Smithgall, United Space Alliance

Todd is Chief Architect of the Space Shuttle Cockpit Avionics Upgrade project. He is a 1983 graduate of Georgia Tech (BSEE/Computer Design). He began working in the Space Program in 1984 with IBM, continuing with Loral, Lockheed Martin, and now United Space Alliance (USA). Mr. Smithgall was the Lead Integration and Test Engineer for the 1991 upgrade of the Shuttle's quintuple-redundant flight control computers, and has contributed to other Shuttle and Space Station avionics development projects. From 1998 to 2000, he was USA's Subsystem Area Manager for Space Shuttle Avionics, overseeing the routine operation of the Space Shuttle fleet avionics systems. In early 2000, he joined and helped to organize the USA Space Shuttle Upgrades Office. He holds U.S. Patent 5,150,245 "Multiprocessor computer with optical data switch".

Where: HESS Building, 5430 Westheimer at Yorktown

Time: 6:00 - 6:30 PM Social - 6:30 - 7:30 PM Dinner - 7:30 - 8:30 PM Presentations

Cost: Dinner Free for members who register 48 hours prior to the event, \$20.00 for members who do not register 48 hours prior to the event and for non-members; \$5.00 for students (**see the website for more information**)

Chair Message-CONT

prospective employee! You can direct any questions about the program to Brad Miller at bradsmail@earthlink.net. Unfortunately, Brad says it is difficult to reach him at his office at school - though if you want to try the number is: 713-743-4186. But email is probably the best.

It's not surprising, but good news, nonetheless, to note that most members value their membership in IEEE. This is borne out by a recent study in which it was found that overall, 82 percent of the respondents to the 2002 Measures of Success survey indicated they are satisfied or highly satisfied with the IEEE. Publications ranked among the highest areas of member satisfaction in 2002 and membership renewal process also earned high marks, with 90.8 percent of respondents indicating satisfaction with it. You can read the rest of the results at

http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.featuresuccess§ion=41.

For mid-level software professionals, passing the IEEE Computer Society Certified Software Development Professional (CSDP) exam could give them the edge on the competition. The test is being given from 1 April to 30 June at Prometric Testing Centers in various cities in the United States and Canada. Candidates also can take the test at centers in Brazil, China, Hungary, India, Ireland, Japan and Russia. Members can even take a pencil-and-paper version on 2 May at the Software Technology Conference in Salt Lake City, Utah, USA. To apply for the exam, visit

http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.deadlinescs§ion=2

56th Annual Conference for Protective Relay Engineers

CONFERENCE FOR PROTECTIVE RELAY ENGINEERS
TEXAS A&M UNIVERSITY
College Station, Texas
April 8-10, 2003

The Planning Committee of the 56th Annual Conference for Protective Relay Engineers invites you to attend the conference at Texas A&M University on April 8-10, 2003. The Protective Relay Conference provides a forum for engineers to discuss protection technology and related subjects. Both tutorial presentations on fundamental concepts and papers on new technology are included. The program will include the following:

- ◆ New protection equipment descriptions
- ◆ Relay application ideas and new concepts
- ◆ Case Studies and "Horror Stories"
(When the relays worked - and when they didn't!)

Registration Information: Pre-Registration: \$185 (begins January 2, 2002)
After March 14, 2003 : \$210

Manufacturers: For hospitality suites, please contact Lydia Godfrey at the College Station Hilton and Conference Center at (979) 694-4903

*This conference offers **Continuing Education Credits***

Web site: <http://engineering.tamu.edu/prorelay/>

For Information:

Dr. B. Don Russell
Regents Professor
College of Engineering
Texas A&M University
College Station, TX 77843-3126
(979) 845-7912

For Registration:

Ms. Jacque Hand
Conference Registration
2nd Floor Rudder Tower
Texas A&M University
College Station, TX 77843-1232
(979) 845-7692

In Conjunction with the 56th Conference for Protective Relay Engineers

A

PRE-CONFERENCE SPECIAL OFFERING

"Tutorial on Distributed Generation"

Monday, April 7, 2003...1:30 - 5:00 p.m...College Station Hilton – Brazos Amphitheater

Moderator: Gerald Dalke, Basler Electric

Presenters: Ken Behrendt, Schweitzer Engineering Labs; Dale Finney, GE Power Management; Don Hornak, Basler Electric; Chuck Mozina, Beckwith Electric; and Bob Pettigrew, SGS Witter

This three-hour tutorial will resolve mysteries of Distributed Generation (DG), even if you have limited knowledge of protective relaying. Topics to be presented are: Why DG is a popular yet sometimes controversial topic; Distributed Generator Operating Technologies; P1547 Interconnection Draft Standard progress of approval and it's "Who, What, When and Where" features plus, REC Implementation of DG; Basics of Interconnect Protection and Islanding Detection Methods; Grounding of the Intertie Connection and Real World Application Cases.

Senior Membership

Looking for Senior Member Nominations

READ THIS SECTION TO BECOME A SENIOR MEMBER IN THE IEEE.

A goal of our Region is to sponsor as many Senior Members as possible and I am asking your help. The IEEE criteria for Senior Member status is ten years of professional practice including five years of significant performance, and references. (See the nominator letter and application form for clarification on the IEEE website.) If you know an IEEE member who qualifies for Senior Membership, I would like you to nominate him or her by forwarding their nomination to one of the Houston Section Excom members. If you qualify and are not a senior member please reply to one of the Section Excom members. If your are retired and have met the criteria at one time lets get you nominated. Section meetings are the best networking tool to achieve Senior membership. As an alternative process, you can direct the prospective Senior Member to one of the Houston Section Excom Members. We have a list of several Fellows and Senior Members which we can use for references. The Section will nominate all those qualified who provide a resume and significant performance vita.

Senior Membership in IEEE promotes the value of membership and enhances the status of the member. The is an achievement award lets honor our deserving members.

MAY 2003 OTC SHOW

CALL FOR VOLUNTEERS

The Houston Section will be manning a booth at the Offshore Technology Conference (OTC) May 5-8, 2003 at the Reliant Arena. We need volunteers to help us man this booth, promote the IEEE, and sign-up new members.

If you are interested contact [Donald Dunn](#) 281-452-8809.

IEEE CAREER ALERT

IEEE CAREER ALERT for 12 March 2003

Your weekly report on jobs, education, management, and the engineering workplace, from the editors of IEEE Spectrum

IN THIS ISSUE:

1. A New Wrinkle on Visas
2. Getting the Most from Job Fairs
3. Training Discounts for Unemployed Engineers
4. Software Certification Tests Begin

1. A New Wrinkle on Visas

Though H1-B visas are much in the news these days, Business Week recently reported on another type of visa that in some cases is being used as a substitute: the L-1 visa. The visa is intended for "intracompany transfers by multinational corporations," the article states, but "many employers looking to slash costs have discovered that they can use [outsourcing] firms that hire L-1s to dump high-paid Americans in favor of cheaper workers from abroad." Read on at http://www.businessweek.com/careers/content/mar2003/ca2003036_6655.htm

2. Getting the Most from Job Fairs

Many a weary job hunter has concluded that job fairs are a demoralizing zoo, and that one's chances of actually getting called back by a company are close to zero. But career experts say there are strategies for making the job-fair experience not only less painful, but also fruitful. A recent article, from the Wall Street Journal's Career Journal, has some useful advice:

<http://www.careerjournal.com/jobhunting/strategies/20030311-needleman.html>

And for more advice (hey, it's free), see

<http://www.spectrum.ieee.org/careers/careerstemplate.jsp?ArticleId=c110502>

3. Training Discounts for Unemployed Engineers

Besser Associates, a provider of technical courses in RF, wireless, digital communications, and networking, is now offering a 75% discount off its standard tuition prices to unemployed members of the IEEE. (Non-members received a 60% discount.) Courses are taught at Besser's Sunnyvale, Calif., and 5 other U.S. locations, as well as online and through videos, software, and CD-ROMs. The course catalog and registration information can be accessed at <http://www.bessercourse.com/News.htm>

4. Software Certification Test Begins

Want a competitive edge when you're bidding on a software engineering project? You could get it by becoming an IEEE Computer Society Certified Software Development Professional (CSDP). To obtain this designation, you must pass a certification exam meant for mid-level software professionals. The test is being given from 1 April to 30 June at Prometric Testing Centers in various cities in the United States and Canada. The test will also be administered at centers in Brazil, China, Hungary, India, Ireland, Japan and Russia. To find out more, see

[http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.deadlinescs\\$ion=2](http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.deadlinescs$ion=2)

+++++ANNOUNCEMENT+++++

The IEEE Job Site, available exclusively to IEEE members, can help you locate career opportunities easily and confidentially. Just complete a profile of your qualifications and requirements, and you'll be notified via mail when a suitable job becomes available. Top employers know that IEEE members are the most qualified electrotechnology and information-technology professionals in the world. Take a few minutes to register with the IEEE Job Site and check out your career options today! <http://www.ieee.org/jobs>

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IEEE Career Alert is prepared weekly by the editors of IEEE Spectrum, the flagship magazine of the Institute of Electrical and Electronics Engineers, read by more than 360,000 people worldwide. You'll find IEEE Spectrum's home page at: <http://www.spectrum.ieee.org>

IEEE CAREER ALERT

IEEE CAREER ALERT for 19 March 2003

Your weekly report on jobs, education, management, and the engineering workplace, from the editors of IEEE Spectrum

IN THIS ISSUE:

1. Careers in Science and Technology Policy
2. Hot Policy Issues for Engineers
3. Keeping Abreast of the Issues
4. Procrastinate No More

1. Careers in Science and Technology Policy

The policy establishment is dominated by attorneys and politicians-competent people who, for the most part, have a limited ability to understand the science and technology underlying their policy decisions. As a result, trained scientists and engineers who go into public policy find their skills much in demand. The transition is easier than you might think. Read on at

<<http://www.spectrum.ieee.org/careers/careerstemplate.jsp?ArticleId=c030503>>

2. Hot Policy Issues for Engineers

Where can scientists and engineers lend their expertise in setting policy? R&D priorities, science and engineering workforce issues, intellectual property, and international issues are some of the most important areas, writes John F. Sargent, a senior policy analyst at the U.S. Department of Commerce. Read how he went from systems engineering into politics and policy at

<<http://www.spectrum.ieee.org/careers/careerstemplate.jsp?ArticleId=c030603>>

3. Keeping Abreast of the Issues

Even if you're not prepared to plunge headlong into public affairs, it still pays to keep abreast of the issues, especially those that concern your profession. The IEEE-USA's Public Policy program keeps tabs on U.S. government policy of relevance to engineering. Even if you disagree with some of their stances on the issues, it's a good resource for staying informed: <<http://www.ieeeusa.org/forum/>>

4. Procrastinate No More

What makes procrastination so painful is that even after the many hours, days, or weeks spent not doing the task at hand, plus all the attendant guilt, anxiety and self-loathing, you still have to do that one thing you'd been avoiding all along. Most of the time, the price for procrastination is not too high. But when it becomes a habit, and holds you back in your life or work, then it's time to make a change:

<<http://www.careerjournal.com/myc/climbingladder/20030306-raudsepp.html>>

+++++ANNOUNCEMENT+++++

The IEEE Job Site, available exclusively to IEEE members, can help you locate career opportunities easily and confidentially. Just complete a profile of your qualifications and requirements, and you'll be notified via email when a suitable job becomes available. Top employers know that IEEE members are the most qualified electrotechnology and information-technology professionals in the world. Take a few minutes to register with the IEEE Job Site and check out your career options today! <<http://www.ieee.org/jobs>>

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IEEE Career Alert is prepared weekly by the editors of IEEE Spectrum, the flagship magazine of the Institute of Electrical and Electronics Engineers, read by more than 360,000 people worldwide. You'll find IEEE Spectrum's home page at: <<http://www.spectrum.ieee.org>>

IEEE INSTITUTE ONLINE

Here's your monthly report on news from around the IEEE from the editors of The Institute. The most current version of The Institute can always be found at

<<http://www.ieee.org/theinstitute>>

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FREQUENCY DEVICES INC.

"NEW" DSP Hardware Solution

SPPDF-01 FIR Filter Development Suite w/ MatLabTM - GUI

CLICK HERE: <<http://www.freqdev.com/dm/ieeesppdf01.html>>

IN THIS ISSUE:

1. Web Sites Spell Out ABCs for Volunteers
2. Tech Consultants Earn More Bucks, Survey Shows
3. Most Members Satisfied With Products and Services
4. Conference Challenges View of Software Engineering
5. Software Certification Tests Begin 1 April
6. Marketplace of Ideas: Should Cybercriminals Log Off Permanently?
7. Prescription Card Offers Half Off on Generics
8. Managing Your Subscription to The Institute Online Alert

A word about the links in this email:

Because the URLs are rather lengthy, some email programs might not capture an entire URL for direct clicking. Note that the complete link, contained between the < > symbols, should be selected when clicking or copying and pasting into a browser window.

1. Web Sites Spell Out ABCs for Volunteers

New volunteers can find the IEEE's complexity overwhelming. But there are Web sites that can help you run a Section, publish an article or develop a standard. If you're not yet sure about volunteering, there are even sites that can help you get better acquainted with the organization. Find them at

<[http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.featurevolvsites\\$ion=4](http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.featurevolvsites$ion=4)>

2. Tech Consultants Earn More Bucks, Survey Shows

Many members have found that consulting can be lucrative. A survey by the Alliance of IEEE Consultants' Network shows that consultants with up to 20 years of technical experience made the most money, with a median annual income of US\$120 000. That's compared to the median salary of \$93 100 for electrotechnology and information technology specialists. Read the rest of the survey findings at

<[http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.newsconssurvey\\$ion=5](http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.newsconssurvey$ion=5)>

3. Most Members Satisfied With Products and Services

Overall, 82 percent of the respondents to the 2002 Measures of Success survey indicated they are satisfied or highly satisfied with the IEEE. Publications ranked among the highest areas of member satisfaction in 2002 and membership renewal process also earned high marks, with 90.8 percent of respondents indicating satisfaction with it. Read the rest of the results at

<[http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.featuresuccess\\$ion=41](http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.featuresuccess$ion=41)>

SPONSORED BY:

Melexis co-operates with Microchip, Chandler, Ariz., USA, on integrated RF + Microcontroller ICs. Andreas Laute, manager of Wireless Communication comments: "The fact that Melexis was selected as a development partner by Microchip proves the strength of our RF product range for the 300 to 930 MHz industrial-scientific-medical (ISM) band and automotive applications." Visit: <<http://www.melexis.com/ieee/>>

4. Conference Challenges View of Software Engineering

Software engineers are hobbled by 30-year-old habits, Computer Society Member Bertrand Meyer and IEEE Fellow Eugene Spafford say. These two speakers will challenge software engineers to rethink computer component development and information security procedures in their keynote addresses at the IEEE Computer Society-sponsored International Conference on Software Engineering being held on 3-10 May in Portland, Oregon, USA. Learn more at

<[http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.confsoftware\\$ion=42](http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.confsoftware$ion=42)>

IEEE INSTITUTE ONLINE-CONT

5. Software Certification Tests Begin 1 April

For mid-level software professionals, passing the IEEE Computer Society Certified Software Development Professional (CSDP) exam could give them the edge on the competition. The test is being given from 1 April to 30 June at Prometric Testing Centers in various cities in the United States and Canada. Candidates also can take the test at centers in Brazil, China, Hungary, India, Ireland, Japan and Russia. Members can even take a pencil-and-paper version on 2 May at the Software Technology Conference in Salt Lake City, Utah, USA. To apply for the exam, visit

<[http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.deadlinescs\\$ion=2](http://www.theinstitute.ieee.org/inst_art.jsp?isno=03031&arnumber=03031_3w.deadlinescs$ion=2)>

6. Marketplace of Ideas: Should Cybercriminals Log Off Permanently?

As cybercriminals like Kevin Mitnick complete their sentences and enter probation, law enforcement has to decide if it is reasonable and fair to prohibit them from using the Internet. Some say barring a person from the Internet can severely impede their daily life. Others argue that convicted armed bank robbers are not allowed to own guns so cybercriminals should be separated from their weapons too. If a person is convicted of using the Internet to commit a crime, should he or she be permanently barred from surfing the Web? Give us your opinion at

<[http://www.theinstitute.ieee.org/inst_art2.jsp?isno=03031\\$ion=20](http://www.theinstitute.ieee.org/inst_art2.jsp?isno=03031$ion=20)>

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The International Signal Processing Conference & Expo (GSPx) is where top companies, design engineers and industry analysts will meet 1-3 April, 2003 in Dallas, Texas, USA. It will feature 350 papers on signal processing applications, 6 CEOs, 14 tutorials/workshops, and 60 exhibiting companies. THIS IS THE EVENT YOU MUST ATTEND!<<http://www.GSPx.com>>

7. Prescription Card Offers Half Off on Generics

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IEEE WHAT'S NEW

WHAT'S NEW @ IEEE FOR MEMBERS

VOLUME 4 NUMBER 3 MARCH 2003

An HTML version of this newsletter can be viewed on our online archive at <<http://www.ieee.org/products/whats-new/wmmem0303.htm>>

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1. IEEE MEMBERS HAVE OPTIONS FOR ACCESSING TECHNICAL INFORMATION ONLINE

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2. EUROPE FORMING WORLD'S LARGEST POLYMER ELECTRONICS R&D PROGRAM

A recent article in EETimes reported that leading European electronics companies and research institutes have organized to create the largest polymer electronics R&D program ever in order to "strengthen the competitiveness of the European economy." According to the article, initial goals of the project, called PolyApply, include "pushing recent polymer advances into products that include organic displays, RF tags, ICs, solar cells, memories, sensors and actuators." Through the end of April, companies and institutions outside of the European Union are being offered a chance to join the project by submitting a written application. To read more, visit: <<http://www.eetimes.com/semi/news/OEG20030221S0051>>

3. IEEE BRINGS BIOMEDICAL ENGINEERING TO FOREFRONT WITH NEW COLLECTION

IEEE information will be available in an entirely new way beginning this month with the launch of the IEEE Biomedical Engineering Library. This new online collection includes approximately 40,000 articles and papers in the area of biomedical engineering, selected by keyword from the full range of IEEE and IEE periodicals and conference proceedings. Also included are relevant IEEE Standards. This is the first subject-based IEEE online collection. Other online products include specific types of publications, like journals or

IEEE WHAT'S NEW-CONT

3. CONTINUED -conference proceedings, or are based on the publications of specific IEEE Societies. The IEEE Biomedical Engineering Library will be available 31 March. For more information, visit:

<<http://www.ieee.org/products/onlinepubs/biomed/biomed.html>>

Corporate, government and academic institutions may be eligible for a free trial of the IEEE Biomedical Engineering Library. Request more information today at:

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4. ANYTHING CAN BE A TRADEMARK - MOST OF THE TIME Intellectual property can be tricky business, and knowing the basics is critical for today's engineers. Just about anything capable of distinguishing one company's products or services from a competitor's can be a trademark, provided it doesn't serve a utilitarian function. The U.S. Supreme Court even confirmed that a particular color can serve as a valid trademark. So, what passes as a trademark? Today's Engineer provides a primer on trademarks and some insights into when they can and cannot be utilized to prevent others from using a confusingly similar mark. Read more:

<<http://www.todayseengineer.org/Feb03/trademarks.asp>>

5. IEEE SOCIETIES OFFER ACCESS TO MORE THAN 500 LECTURERS WORLDWIDE

The IEEE Distinguished Lecturer Program now provides worldwide access to more than 500 lecturers offered by 32 IEEE Societies. The program assists IEEE Sections and Chapters in planning higher quality programs for their membership and in educating IEEE members. To find out more about the IEEE Distinguished Lecturer Program, or to receive a list of lecturers available from a particular technical field or IEEE Society, visit: <<http://www.ieee.org/organizations/tab/cialectweb2.html>>

6. JOIN IEEE-USA FOR 8TH ANNUAL CONGRESSIONAL VISITS DAY

As the U.S. Congress gears up to debate the President's budget proposal, the science, engineering and technology community prepares to present its case for the importance of federal investments in R&D. U.S. IEEE members are invited to join with hundreds of other engineers and scientists for the 2003 Congressional Visits Day on 2 to 3 April in Washington, DC, for a series of meetings with congressional decision makers. Visit:

<<http://www.ieeeusa.org/forum/cvd/index.html>>

7. BOOK HELPS PROFESSIONALS WITH BUSINESS AND TECHNICAL REPORTS

Professionals in business, government and technical fields often need help in organizing and writing reports. Intended to be a quick-reference handbook, "Writing Reports to Get Results: Quick, Effective Results Using the Pyramid Method" offers expert tips and ideas for organizing thoughts, structuring reports, and adding spice to technical papers. The book, now being offered by Wiley-IEEE Press, also provides tips on a number of other topics, such as: constructing reference lists, the use of numbers, abbreviations and metric symbols, and preparing illustrations for insertion into a report. Available now:

<<http://www.wiley.com/remtitleinternational.cgi?isbn=0471143421>>

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BACKSCATTER: ENGINEERS CAN'T WRITE? SAYS WHO? - One tired, old criticism of engineers is that they can't write. Writing comprehensible technical papers certainly isn't easy, but former IEEE Spectrum editor Don Christiansen thinks engineers can break some of the habits that too often yield inaccessible, abstruse documents that even other engineers can't understand.

<<http://www.todayseengineer.org/Feb03/backscatter.asp>>

8. E-FAP: ANOTHER WAY TO MAXIMIZE YOUR IEEE MEMBER BENEFITS

This month, the IEEE Financial Advantage Program (FAP) launches e-FAP, a free opt-in e-mail newsletter. Subscribers will receive the most up-to-date information and opportunities concerning the over 30 products and services available to IEEE members and their families, including insurance, financial, business and home services, available from FAP. To subscribe to the e-FAP newsletter or to learn more about the IEEE Financial Advantage Program, go to: <<http://www.ieee.org/fap>>

IEEE WHAT'S NEW-CONT

9. "FATHER OF THE INTERNET" TO GIVE KEYNOTE SPEECH AT COMMUNICATIONS CONFERENCE

Professor Leonard Kleinrock, creator of the basic principles of packet switching and reverently considered one of the "Fathers of the Internet," will give the keynote speech entitled "The Internet: A Pervasive Global Nervous System" at the 38th IEEE International Conference on Communications. The conference, being held in Anchorage, Alaska, USA from 11 to 15 May, will discuss the state-of-the-art research and development taking place in all areas of communications. For more information, visit: <http://www.icc2003.com/> Don't miss the next conference you need for your career. IEEE sponsors more than 300 technical conferences and workshops each year, highlighting the latest technological advances. Find events through the IEEE ConferenceSearch Web site at <http://www.ieee.org/conferencesearch/>

10. DIGITAL AUDIO'S FINAL FRONTIER: IEEE SPECTRUM REPORTS

Analog technology still dominates in audio power amplifiers - but not for long. Amps based on digital principles are already having a profound effect on equipment efficiency and size. They are also beginning to set the standard for sound quality. Known as Class D amplifiers, these devices have the potential to waste very little power. In the March issue of IEEE Spectrum, Bruno Putzeys of Philips Digital Systems Laboratories, describes Class D amps and explains in detail how they differ from conventional amps, as well as discusses technical problems they have faced, and shows how these problems have been solved in the past and the different ways they are likely to be solved in the future. Read more: <http://www.spectrum.ieee.org/WEBONLY/publicfeature/mar03/dig.html>

11. IEEE-SA RELEASES COLLECTION ON POWER DISTRIBUTION & REGULATING TRANSFORMERS

The special edition CD-ROM of the IEEE Standards Collection, "Power Distribution & Regulating Transformers," has recently been released by IEEE-SA. The collection contains all IEEE and ANSI standards, plus erratas or interpretations, and approved IEEE drafts on power distribution and regulating transformers. These ensure safe and reliable electric power service to consumers worldwide. Topics covered include Class 1E transformers, oil-immersed transformers, overhead-type distribution transformers, underground type three-phase distribution transformers and sealed dry-type transformers. For more information: <http://shop.ieee.org/store/product.asp?prodno=SC111>

12. MENTORS CAN MAKE A DIFFERENCE IN YOUR CAREER

Whether they're parents, teachers or colleagues, mentors avail themselves to us in many forms throughout our lives. If we choose to accept it, their input can prove invaluable, especially when it comes to making difficult decisions related to our professional development. How do you choose mentors, and are you in a position to mentor others? Read more, in IEEE-USA's Today's Engineer: <http://www.todaysengineer.org/Feb03/mentors.asp>

13. PROCEEDINGS OF 2002 INTERNATIONAL ELECTRON DEVICES MEETING NOW AVAILABLE

The proceedings of the 2002 International Devices Meeting (IEDM) have been released and are now available from the IEEE Online Catalog & Store. Topics include CMOS and solid-state devices, integrated circuits and manufacturing, and quantum electronics and compound semiconductors. To find out more, or to purchase, visit: <http://shop.ieee.org/store/product.asp?prodno=CH37358>

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The **Pocket Scope** is the newsletter of the Houston Section of the Institute of Electrical and Electronics Engineer (IEEE). The Houston Section address is: IEEE Houston Section, P.O. Box 460014, Houston, Texas 77056-8014.

The **Pocket Scope** is published eight times a year (monthly, September to May, except December). It is distributed to over 3000 professionals in the electrical engineering field in the greater Houston area.

Advertising rates are listed on the IEEE Houston Section website and include publishing in The Pocket Scope, ad on the website, and within the monthly e-mail update.

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