



# THE POCKET SCOPE



The Institute of Electrical and Electronics Engineers, Inc.

Volume 56, Number 5

January 2006

## SCOPE NOTES

### February Houston Section News

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

**When:**  
Thursday, February 23, 2006  
6:00 - 6:30 p.m. Social  
6:30 - 7:30 p.m. Dinner  
7:30 - 8:30 p.m.

**Cost:**  
\$10.00 - IEEE Members with 48-  
hour advance reservations.  
\$20.00 - non-members  
\$5.00 - students  
Call (713) 207-IEEE to make  
your reservations.

See Page 3  
for the Continu-  
ing Education  
Schedule!

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

IEEE Houston Section  
P.O. Box  
460443  
Houston, Texas  
77056-8014



## The Chairman's Message

**Donald G. Dunn**

### The Chairman's Message

On behalf of the Houston Section Executive Committee (Excom), I would like to invite all members to take the opportunity this year to become active within the section. There are many activities within the section to enhance one's self both professional and personally. The Excom and myself are looking forward to again providing a broad spectrum of member activities in 2006. Pay close attention to our website ([www.ieee-houston.org](http://www.ieee-houston.org)) and e-mail updates for the upcoming activities. Our next section meeting is on February 23, 2006, at the HESS building.

The Houston Section CED program will be back in swing next month (February 2006) with several courses that cover new and exciting topics. Please take some time and visit the web site to see what will be offered this year. In addition, if there is subject material that you would like to see included in our CED program, please email the suggestions to Paul Barrett ([paulbarrett@double-e-engineering.com](mailto:paulbarrett@double-e-engineering.com)) for consideration.

The Houston Section will be manning booths at the SWEE-April 2006 and OTC-May 2006 this year promoting the IEEE. We need volunteers to help us man these booths and promote the IEEE. If you are interested contact one of the Excom members.

The Houston Section nominated numerous members for upgraded to Senior Member grade in 2005. IEEE has challenge the sections to exceed last years totals by nominating qualified members. I am looking for members who meet the following criteria: for elevation to Senior Member status, 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 you 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. The Houston Section is seeking new volunteers, as you all are aware the IEEE is a volunteer organization. We have had several people contact one of the Houston Section officers and a few have attended the monthly Excom meeting. Again, if you are interested in becoming active, please take the time to consider volunteering in some capacity; the return on time invested is well worth it. Contact one of the individuals within the section Excom committee and attend one of our planning meetings. The Excom meets at the HESS building the 4<sup>th</sup> Thursday of each month with the exception of a few summer months. We have many opportunities for you to contribute and to develop a larger network of professionals from which to draw.

## Chair Message-Cont.

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The Executive Committee and I hope each of you enjoyed a safe and happy holidays. We are looking forward to an exciting year in 2006 and as always we are looking for your feedback and comments.

Finally, as several of you may have noticed I will be serving as Section Chair again in 2006. In 2005, several of our Excom members have had personal commitments that preclude them from rotating to the next officer position.

The IEEE Houston Section Officers for 2006 are as follows:

Past Chair – Scott Ballew

Chair – Donald Dunn

Vice Chair - Polo Gutierrez

Secretary – Justin McCaskill

Treasurer – Gil Dolor

Director - Charles Benard

Donald G. Dunn

**Houston Section Chair**

## Houston Section Meeting

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Thursday, February 23, 2006

**Topic:**

To be announced

**Speaker: To be announced**

**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 \$15.00 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.

**IEEE CONTINUING EDUCATION ON DEMAND**

**2005-2006 REGISTRATION FORM**

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_ City/State: \_\_\_\_\_  
 Zip: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 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  
 PAT ROGERS  
 SOUTHWEST POWER / HUGHES SUPPLY CO.  
 425 BLUEBERRY STREET  
 HOUSTON, TX 77018  
[patricia.rogers@hughessupply.com](mailto:patricia.rogers@hughessupply.com)

Registration receipts will be available upon request **at the seminars.**  
 For a cancellation refund, telephone Pat Rogers by the Friday before the seminar at:  
 Phone: 713.696.9922  
 Fax: 713.696.9983  
 Email: [patricia.rogers@hughessupply.com](mailto:patricia.rogers@hughessupply.com)

IEEE Continuing Education on Demand Completion Certificate with Continuing Education Units (CEUs) is provided after receipt of both nightly questionnaires and seminar evaluation sheets.

Please direct seminar questions to Paul Barrett at 713.598.0790  
 Please check the IEEE Houston Section website for the latest schedule and course information.  
<http://www.ieee-houston.org>

**IEEE CONTINUING EDUCATION ON DEMAND**

The purpose of IEEE Houston Section Continuing Education on Demand is to provide modern 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.

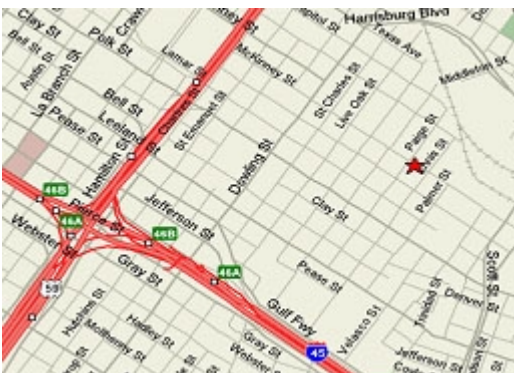
Instructors are application engineers, manufacturing specialists and expert consultants who provide a blend of diverse engineering perspectives.

The cost of each seminar is \$70.00 for IEEE members. Non-members \$140.00. The **check must be received the Friday before** the seminar start date. "Pay at the door" is discouraged due to many "no-shows". If you have a special situation contact Paul Barrett (713) 598-0790. Signing up the week of the seminar does not guarantee seminar presentation documents or meals.

The following 2005-2006 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 2005 - 2006

**Summit Electric**  
 2929 McKinney  
 Houston, TX. 77003



Seminar Title	Code	Date	Amount
Grounding Techniques, Industrial Power Sys	402	Oct. 4 / 5	\$
Electrical Safety in the Workplace	921	Oct. 18/19	\$
API Motor Standards Update	620	Nov. 1/ 2	\$
Protective Relay 5 ABB Relays	315	Nov 15/16	\$
HV Substations For Industrial Applications	125	Feb. 7/ 8	\$
MV Cable Considerations Thru 69kV	130	Feb. 21/22	\$
Protective Relaying for Large Generators	306	Mar. 7/ 8	\$
IEC Standards for Large Power Transformers	950	Mar. 21/22	\$
IEEE 1584 Arc Flash Calculations	340	Apr. 4 / 5	\$
Residual Bus Auto Transfer Schemes	140	Apr. 18/19	\$
Total Paid:			\$

Enter amount for each seminar:

IEEE member early signup: \$ 70.00  
 Non-member registration: \$140.00

**Fall of 2005 IEEE Seminar Schedule**  
**Grounding Techniques—Industrial Power Sys (402)**

**Jack Woodham, Jedson Engineering**  
**Tony Locker, Post Glover Resistors**  
 Oct. 4/5, 2005 6:00-8:50PM  
 Reviews and explores the four types of grounding for industrial power systems 480 – 4160 V. [0.5 CEU]

**Electrical Safety in the Workplace (921)**  
**Danny Ligget, E.I. DuPont Co.**  
 Oct. 18/19, 2005 6:00-8:50PM  
 A detailed focus is on electrical workplace safety coupled with comprehensive safety training. [0.5 CEU]

**API Motor Standards Update (620)**  
**David Rains, WEG & Doug Gehring, Siemens**  
 Nov. 1/2, 2005 6:00-8:50PM  
 An overview of large motor design considerations for compliance with latest API 541 and API 546. Review and comparison of IEEE 841 and API 541. [0.5 CEU]

**Protective Relay 5 – ABB Relays (315)**  
**Robert Wilson, ABB**  
 Nov. 15/16, 2005 6:00-8:50PM  
 Review of ABB protective relay design fundamentals and special application considerations. [0.5 CEU]

**Spring of 2006 IEEE Seminar Schedule**  
**HV Substations for Industrial Applications (125)**  
**Allen Xi & Charles Pulay, Burns & McDonnell Engrs**  
 Feb. 7/8, 2006 6:00-8:50PM  
 An overview of industrial substation design considerations, layout, protection, grounding and controls. Testing and commissioning considerations. [0.5 CEU]



**IEEE**  
**Houston**  
**Section**

**2005-2006**

**Continuing**  
**Education**  
**On Demand**



**MV Cable Considerations thru 69 KV (130)**  
**H.R. Stewart HRS Consulting**  
 Feb. 21/22, 2006 6:00-8:50PM  
 Review of design application considerations related to MV power cable projects. [0.5 CEU]

**Protective Relaying for Large Generators (306)**  
**Wayne Hartman, GE Multilin**  
 March 7/8, 2006 6:00-8:50PM  
 Reviews large generator design characteristics, application problems and reliable protective schemes. [0.5 CEU]

**IEC Standards for Large Power Transformers (950)**  
**Tom Malone & Martyn Hildreth. Areva T&D**  
 March 21/22, 2006 6:00-8:50PM  
 Detailed review of current IEC standards related to large power transformers. [0.5 CEU]

**IEEE 1584 Arc Flash Calculations (340)**  
**Jim Bowen, Powell Electrical Manufacturing Co. & Daleep Mohla, DCM Consulting**  
 April. 4/5, 2005 6:00-8:50PM  
 A two part study focuses on NFPA 70E flash hazard analysis requirements and IEEE 1584 formulas to satisfy 70E requirements. [0.5 CEU]

**Residual Bus Auto Transfer Schemes (140)**  
**Roy Cosse, Powell Electrical Systems Inc. & Robert Spiewak, PolAmex Engineering**  
 April 18/19, 2005 6:00-8:50PM  
*A focused review of the residual bus auto transfer schemes, examples, why they work and do not work. Traditional and modern applications. [0.5 CEU]*

# Senior Members

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## 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.

## IEEE Houston Section Officer Nominations

### EXECUTIVE OFFICERS NOMINATIONS FOR 2006

The following Houston Section members have been nominated by the Nominations Committee to serve as Executive Officers during the year 2006

**Past Chairman - Scott Ballew**  
**Chairman - Donald Dunn**  
**Vice-Chairman - Polo Gutierrez**  
**Secretary - Justin McCaskill**  
**Director - Charles Benard**  
**Treasurer - Gil Dolor**

Be sure to attend the December 1, 2005, IEEE Houston Section Meeting to participate in the election of the Officers. Nominations for these positions can also be made from the floor that evening.

The members of the Nominations Committee were: Gil Dolor, Justo Benitez and Dwayne Lowry.

# IEEE EAB News

## NEWS FROM IEEE EDUCATIONAL ACTIVITIES AND THE HISTORY CENTER

(1st Quarter 2006)

### STANDARDS EDUCATIONAL MATERIALS NOW AVAILABLE

The IEEE Standards in Education Web Portal has been developed in response to a need for more standards education in US undergraduate Electrical and Computer Engineering as well as Engineering Technology programs. It was created by the IEEE Standards in Education Task Force (SETF) with funding and cooperation received from the IEEE Foundation, the National Science Foundation, the IEEE Educational Activities Board, and the IEEE Standards Association. The materials developed are available within the web portal support open access training on the history, use, and applications of standards. Tutorials, case illustrations, a news and features section, and a glossary and reference guide are currently available. Additional tutorials and case illustrations are currently in development. Although these materials have been developed with the undergraduate student in mind, they are also helpful to anyone who is interested in learning more about standards. For more information about this effort or to access these materials, please visit [www.ieee.org/standardseducation](http://www.ieee.org/standardseducation) or contact Tara Gallus, [t.gallus@ieee.org](mailto:t.gallus@ieee.org).

### IEEE VIRTUAL MUSEUM

Look for a new exhibit on nanotechnology opening this month at IEEE's award-winning pre-university educational site (<http://www.ieee.org/museum>).

### IEEE TO HOST "SO YOU WANT TO BE AN ENGINEER?" EVENT AT DREXEL UNIVERSITY

IEEE will host "So you want to be an engineer?" - an engineering event for high school students in the Philadelphia area and their parents on 10 December 2005 on the campus of Drexel University.

High school students will be able to interact with current engineering students, learn why students entered engineering as well as what it's like to study engineering in college, and experience engineering through a short series of classroom workshops. Parents will be able to ask questions of admissions personnel from local universities during a panel discussion and interact with the university representatives in an Exhibit Area. Engineering students from local universities will demonstrate mobile and flying robots, model rockets, and engineering design projects in the Exhibit Area.

For more details or to register for the event visit [www.ieee.org/education/precollege/soyouwanttobeanengineer.html](http://www.ieee.org/education/precollege/soyouwanttobeanengineer.html).

### IEEE SECTIONS CONGRESS 2005

In October, The IEEE History Center had a booth at Sections Congress that was well attended. It is hope that this will lead to more Milestones proposals, more use by Sections of the IEEE Virtual Museum, and more historical activity at Sections in general.

### PARTNERSHIP AGREEMENT SIGNED WITH THOMSON

A Courseware Development and Distribution Agreement has been signed between IEEE and Thomson. The finalization of the agreement enables Thomson and IEEE to undertake an official product launch scheduled to take place in November, 2005. The length of the Agreement is for one year beginning on the effective date of September 30, 2005. A preliminary or soft launch began in July, 2005. During the soft launch, the Director of Continuing Education and staff from Educational Activities (EA) worked with Thomson to highlight the features and benefits and develop the selling process for Expert Now IEEE to Thomson regional sales teams. At this time feedback from the sales force of 155 Thomson sales account managers and learning consultants has been positive and our new product is seen as a potential solution for many of Thomson's existing clients. A significant number of the Thomson sales team has started to educate their client base about Expert Now IEEE.

For more information on Expert Now, please go to [www.ieee.org/education/Expert\\_Now\\_IEEE](http://www.ieee.org/education/Expert_Now_IEEE) or contact Marilyn Catis at +1 732 562 5323 or [mg.catis@ieee.org](mailto:mg.catis@ieee.org) or Tara Gallus at +1 732 562 5499 or [t.gallus@ieee.org](mailto:t.gallus@ieee.org).

# IEEE EAB News

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## MILESTONES

Sections are urged to get involved in local history, particularly through the Milestones Program which is designed to help Sections promote the importance of the engineer and engineering in their local communities (see [http://www.ieee.org/organizations/history\\_center/milestones\\_program.html](http://www.ieee.org/organizations/history_center/milestones_program.html)).

This year continues to be a record-breaking one for the program. Three nominations were approved by the IEEE ExCom at their October and November meetings: LCD Display (Princeton-Central Jersey Section, Region 1); WEIZAC Digital Computer (Israel Section, Region 8); and Alexander Bell's Voice over Wire (Boston Section, Region 1).

## SUMMARY RESULTS OF 2003 ALL SOCIETY RESEARCH AVAILABLE

In order to gain a better understanding of how to go about developing new educational products and services that would appeal to IEEE Societies and Councils, a summary report which highlights the results found in the 2003 All-Society Research Project specific to Societies' responses on continuing education has been developed. The findings have been shared with members of the Society Outreach Committee. Interested in a copy? Contact Marilyn Catis at [mg.catis@ieee.org](mailto:mg.catis@ieee.org).

If you have ideas for new continuing professional development products or services, contact Tamer Basar, SOOC Chair, at [t.basar@ieee.org](mailto:t.basar@ieee.org) or Marilyn Catis at [mg.catis@ieee.org](mailto:mg.catis@ieee.org).

## CALL FOR 2006 EAB AWARD NOMINATIONS

The IEEE Educational Activities Board is accepting nominations of IEEE members for its annual awards. The deadline for nominations is 30 April 2006. Awards include: IEEE EAB Section Professional Development Award, IEEE EAB Meritorious Achievement Award in Accreditation Activities, IEEE EAB Meritorious Achievement Award in Continuing Education, IEEE EAB Major Educational Innovation Award, IEEE EAB Pre-University Educator Award, IEEE EAB Meritorious Service Citation, and the IEEE EAB Employer Professional Development Award.

For award descriptions, honorarium details, and nominations packets, visit [http://www.ieee.org/portal/cms\\_docs/education/EABAwards/index.htm](http://www.ieee.org/portal/cms_docs/education/EABAwards/index.htm). For more information IEEE EAB Awards contact [eab-awards@ieee.org](mailto:eab-awards@ieee.org).

## IEEE Press Release - -

### IEEE HONORS PHOENIX HIGH SCHOOL TEACHERS ALLAN CAMERON AND FARIDODIN LAJVARDI FOR PROMOTING ENGINEERING CAREERS THROUGH HANDS-ON MENTORING PROGRAM

7 December 2005, PISCATAWAY, NJ -- Carl Hayden High School teachers Allan Cameron and Faridodin Lajvardi have received the IEEE Educational Activities Board (EAB) Pre-University Educator Award for their influence in fostering students' interest in engineering majors and careers. The two teachers were recognized for their hands-on mentoring program and instituting several technology-focused school organizations resulting in an increased number of Carl Hayden students receiving engineering scholarships and selecting the field as a major. With more than 365,000 members in over 150 countries, the IEEE is the world's largest professional society dedicated to the advancement of technology.

Cameron and Lajvardi joined forces in a common vision to motivate their students at Carl Hayden High School, Phoenix, AZ, to actively participate in engineering projects. A key part of their success is inviting engineers, scientists and inventors to work with students on their engineering projects not as lecturers, but as team members. As students interact with educated professionals, gaining information, insight and mentorship, they develop role models that further inspire them to pursue careers in engineering and technology.

Cameron and Lajvardi have been credited with: creating Carl Hayden High School's Amateur Radio Club which is nationally renowned as a "Special Service Club"; creating the first and longest running national high school full sized electric car program; creating a FIRST (For Inspiration and Recognition of Science and Technology) team: Falcon Robotics 842, and winning the FIRST Engineering Inspiration Award earlier this year. The team also won a first place award in a Marine Advanced Technology Education Center competition with its underwater, remotely operated vehicle. The high school team was chosen among a series of entrants from high schools and universities, finishing ahead of MIT.

# IEEE News

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## IN THIS ISSUE:

1. Medical Records: From Clipboard to Point-and-Click
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6. IEEE Xplore Adds New Features
7. Support the IEEE Foundation With an Estate Gift
8. Milestone Recognizes Early High-Voltage System

### 1. Medical Records: From Clipboard to Point-and-Click

The IEEE has joined forces with eight other medical and engineering societies to form an umbrella consortium, the Biotechnology Council. The council's primary goal is to standardize everything from medical terminology to networking protocols so that medical records can be stored electronically and sent instantly anywhere in the world — all with absolute privacy, security, and understandability. Read more at

<http://boldfish.ieee.org:80/u/1259/00086579>

### 2. Organize Tours to Technical Facilities

Engineers like to know how things work. The IEEE's local organizations can help feed that curiosity by arranging tours of nearby technical facilities, such as manufacturing and electric-power plants, satellite ground stations, and telecommunications facilities. Learn more at <http://boldfish.ieee.org:80/u/1260/00086579>

### 3. Voices of Innovation: The IEEE's Oral History Collection

Transcripts of more than 400 interviews with engineering pioneers such as the Institute of Radio Engineers' cofounder Alfred Goldsmith provide rare insight into the development of many key present-day technologies.

Find out more at <http://boldfish.ieee.org:80/u/1261/00086579>

### 4. IEEE Spectrum Goes Hollywood

This month, IEEE Spectrum Online unveils a bimonthly, Web-only column by author David Kushner covering behind-the-scenes science and engineering in Hollywood. Don't miss the first installment, "The Science of Pseudoscience" — on how studios try to accommodate an increasingly tech-savvy public by reaching out to entertainment-savvy technologists, at <http://boldfish.ieee.org:80/u/1263/00086579>

Interact daily in polls, blogs, and webcasts, and listen to IEEE Spectrum radio at <http://boldfish.ieee.org:80/u/1264/00086579>

### 5. Marketplace of Ideas: Man in Space

NASA Administrator Michael Griffin, an IEEE member, told the editorial board of USA Today in September that the space shuttle and the International Space Station were mistakes. The two projects, he said, are too expensive in terms of astronaut lives and dollars and haven't produced enough scientific knowledge. What do you think?

Weigh in at <mailto:institute@ieee.org>

### 6. IEEE Xplore Adds New Features

Searching for an IEEE book? Want to buy an IEEE standard? You can now do these things through

## IEEE News - Cont

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IEEE Xplore, thanks to features added in the digital library's latest upgrade. IEEE Xplore contains more than 1.2 million documents from IEEE journals, magazines, transactions, conference proceedings, and standards, as well as journals and conference proceedings from the Institution of Electrical Engineers in the United Kingdom. Learn more at <http://boldfish.ieee.org:80/u/1265/00086579>

### 7. Support the IEEE Foundation With an Estate Gift

Last year, more than US \$1 million was donated to the IEEE Foundation, the IEEE's philanthropic arm. The foundation supports projects that promote public awareness of engineering's long-reaching effects, bring the excitement of scientific discovery to young students, foster technological innovation, and preserve history. Nearly \$100 000 of that amount came from members who had bequeathed contributions to be made from their estates. Find out how at <http://boldfish.ieee.org:80/u/1267/00086579>

### 8. Milestone Recognizes Early High-Voltage System

In the 1960s, engineers at the electric power utility Hydro-Quebec, who were building one of the biggest hydroelectric generating complexes in North America, had a big problem: how to send all that electricity generated in the north on tributaries of the St. Lawrence River to the growing cities in the southern end of Quebec province. The solution was the world's first 735-kilovolt transmission system, now designated an IEEE Milestone in Electrical and Computing Engineering. Learn more at <http://boldfish.ieee.org:80/u/1268/00086579>

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The biweekly IEEE Tech Alert delivers the latest news in the world of electrotechnology to your inbox. IEEE Career Alert is your weekly report on jobs, education, management, and the engineering workplace.

<http://boldfish.ieee.org:80/u/1269/00086579>

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If you have questions or comments about The Institute Online Alert, please send a message to: <mailto:tialert@ieee.org>

## IEEE USA in Action Update

NEWS from IEEE-USA

1828 L Street, N.W., Suite 1202

Washington, D.C. 20036-5104

AchieveGlobal Joins IEEE-USA to Offer Online Courses in Leadership, Customer Service Skills  
WASHINGTON (14 December 2005) — IEEE-USA, in concert with AchieveGlobal, is offering online career development courses designed to equip IEEE members with leadership and customer service skills. “In today’s professional landscape, superior leadership and customer service skills are critical to achieving desired business results,” AchieveGlobal CEO Sharon Daniels said. “We’re pleased to join IEEE-USA in providing this opportunity to IEEE members.”

AchieveGlobal, an international provider of training and consulting services, offers course modules in “Giving and Receiving Constructive Feedback,” “Managing Your Priorities,” “Proactive Listening” and many others. The courses are approved for continuing education credit and based upon AchieveGlobal’s years of experience as a leader in the professional training industry.

In a unique arrangement, IEEE members can access these courses as individuals, without having to work for a company under contract with AchieveGlobal, and for less than the retail price. A specialized learning management system allows members to track their progress and course portfolio.

“We recognize that today’s engineers need more than just technical know-how; they also need interpersonal skills to succeed,” said Jean Eason, IEEE-USA’s vice president for career activities “Non-technical skills are increasingly desired by companies employing engineers.”

For more information and course registration, go to <http://salary.ieee.org>, log in using your IEEE Web Account, click on the Shop tab, and then click on “Career-Development Courses.” Based in Tampa, Fla., AchieveGlobal ([www.achieveglobal.com](http://www.achieveglobal.com)) provides research-based learning solutions that aid clients in developing leaders and acquiring, growing and retaining profitable customer relationships.

IEEE-USA advances the public good and promotes the careers and public policy interests of the more than 220,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE, the world’s largest technical professional society with 360,000 members in 150 countries. For more information, go to <http://www.ieeeusa.org>.

## IEEE USA News

NEWS from IEEE-USA

1828 L Street, N.W., Suite 1202

Washington, D.C. 20036-5104

IEEE-USA Commends Sens. Ensign, Lieberman for Introducing “National Innovation Act of 2005”

WASHINGTON (15 December 2005) — IEEE-USA commends Sens. John Ensign (R-Nev.) and Joseph Lieberman (D-Conn.) for introducing the “National Innovation Act of 2005” today on Capitol Hill. The legislation includes provisions that will strengthen U.S. competitiveness in the 21st Century.

The “National Innovation Act” responds to recommendations in the National Innovation Initiative Report “Innovate America,” published by the Council on Competitiveness in 2004. The Act focuses on three primary areas: increasing investment in basic research; improving science and technology talent; and developing a robust innovation infrastructure.

The legislation would, among other things, establish a President’s Council on Innovation; make permanent the Research and Experimentation Tax Credit; nearly double research funding for the National Science Foundation by FY 2011; authorize funding for new and existing Professional Science Master’s Degree Programs; and encourage the development of regional clusters of technology innovation.

For a summary of the legislation, go to <http://lieberman.senate.gov/documents/bills/051215niasummary.doc>

IEEE-USA advances the public good and promotes the careers and public policy interests of the more than 220,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE, the world’s largest technical professional society with 360,000 members in 150 countries. For more information, go to <http://www.ieeeusa.org>.

Contact: Chris McManes

Senior Public Relations Coordinator

Phone: + 1 202 530-8356

E-Mail: [c.mcmanes@ieee.org](mailto:c.mcmanes@ieee.org)

# IEEE CareerAlert

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IEEE CAREER ALERT for 14 Dec 2005

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

## IN THIS ISSUE:

1. Recovering From Mistakes
2. Making Friends in High Places
3. Joining the Public Sector
4. Google partnering with Irish Universities

### 1. Recovering From Mistakes

To err is human. But that doesn't mean making mistakes is any less painful. An IEEE Spectrum Careers article gives pointers on how to recover from mistakes as gracefully as possible and reduce the likelihood of them happening again. Strategies include taking at least some action — even if it's just notifying others — as soon as you discover a problem to prevent the situation growing worse and analyzing your mistakes to see if you should develop any new habits, such as using a calendar or re-reading email before sending, to eliminate their recurrence. <<http://www.spectrum.ieee.org/dec05/2344>>

### 2. Making Friends in High Places

Maybe there's been a merger. Maybe a stockholder revolt has prompted resignations. Whatever the reason, you're now reporting to new senior managers who didn't hire you, don't know your record, and have no reason to trust you — yet. A Computerworld.com article shows how IT managers can establish good working relationships with new executives and increase their chances of not being swept away if the leadership decides to clean house. Tips include trying to place yourself in the new arrivals' shoes and making sure you're speaking in terms and concepts they can understand. Read more at:

<<http://www.computerworld.com/managementtopics/management/story/0,10801,106866,00.html?SKC=careers-106866>>

### 3. Joining the Public Sector

For many people, working in government sounds like a recipe for a mediocre career: the rough and tumble of the private sector is where the real challenges are. But it's the search for a challenge — and greater meaning — that has driven the IT pros interviewed for a Network World article to move into the public sector. As well as the satisfaction of working to improve their communities, interviewees also noted enjoying the increased responsibility that can come from working in a government-scale organization. There are also unique problems: politics is overt and can cause huge headaches for managers, and fulfilling the obligations of democratic transparency can make some feel they are working in a fishbowl. Find out more at:

<<http://www.networkworld.com/careers/2005/120505-man.html>>

### 4. Google partnering with Irish Universities?

Search giant Google is looking to expand its R&D efforts in Ireland, according to

## IEEE Career Alert-Cont.

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SiliconRepublic.com. It is reported that Google intends to create 600 jobs in Dublin, and plans are in the works to collaborate with Irish universities and colleges on new projects to compliment Google's existing R&D efforts in Ireland. Read on at: <<http://www.siliconrepublic.com/news/news.nv?storyid=single5813>>

### 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. IEEE Job Site was named one of the top online recruitment sites by

Weddle's Guide to Employment Web Sites. And 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 USA EYE on Washington

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The latest issue of EOW is now available on-line. For complete text and links, please visit: <http://ieeusa.com/policy/eyeonwashington/2005/05eow21.asp>

Highlights include:

Senate Clears Deficit Reduction Bill, Approves H-1B Visa Increase - 3 NOV:

The Senate passed a sweeping five year, \$35 billion deficit reduction package, but its fate remains unclear as the House prepares to open debate on a vastly different \$54 billion version. Republican leaders hope to adjourn for the year at the end of November and are reluctant to prolong the session to resolve differences over budget details that face no hard deadline this year.

The Senate bill (S 1932), approved on a 52 to 47 vote, finds its savings through cuts in Medicare and Medicaid, farm aid program and student lender subsidies. It adds revenues by, among other things, increasing pension insurance premiums, radio spectrum sales and employment-based visa fees. Of special interest to IEEE-USA members, the Senate bill boosts revenues by raising the numbers of foreign professionals who can be admitted to work in the United States on certain employment-based visas. In any year in which the annual 65,000 H-1B cap is reached, for example, the bill will allow employers to petition for an additional 30,000 H-1B temporary visas in exchange for an extra \$500 per visa fee. The current 140,000 annual cap on immigrant (legal permanent resident) visas available to extra-ordinary ability professionals, advanced degree professionals and baccalaureate degree professionals would also be boosted by up to 90,000 visas a year with an extra \$500 per visa fee.

Multi-national corporations that wish to transfer foreign employees to work temporarily in the United States on L (Intra-company transfer) visas will have to pay an additional \$750 fee. An IEEE-USA backed amendment introduced by Senator Robert Byrd (D-WV) and supported by Senator Jeff Sessions (R-AL) was defeated 84 to 14. The Byrd amendment would have substituted a simple House Judiciary Committee proposal calling for a \$1,500 increase in L visa fees for the more complex EB/H-1B/L visa proposal included in S 1932 as passed by the Senate. If you would like to read the record of the floor debate, please visit our web site at <http://ieeusa.com/policy/reports/ByrdAmendment.pdf>

Latest Draft of Telecom Bill Gives Bells More of What They Want - The Bells appear to be getting what they want in the latest draft of the House Energy and Commerce Committee's legislation - circulated by the committee after they collected industry comments - aimed at updating telecommunications laws for the Internet era.

House Energy & Commerce Committee Cites Abuses in E-Rate Program, Vows Crack-down House Recognized October as National Cyber Security Awareness Month Digital Switchover Date is Subject to Pop Culture as Well as Political Wishes - Wariness, the Superbowl, indecisiveness, ... whatever is preventing it, Congress can't put it off forever. Ultimately, the House and Senate must agree on a specific date for the digital TV switchover.

House Passed Iran Nonproliferation Act To help U.S. Space Program Senate Bill Would Create Venture Capital Program Under The SBANSF Director Congratulates 2005 Nobel Prize Winners If NASA Were Bound by Sarbanes-Oxley, CFO Would Not Certify the Agency's Finances - According to a new GAO report, NASA has made very little progress in reforming its troubled financial management system. NASA's Chief Financial Officer, Gwendolyn Sykes, testified before a joint hearing of the House Science Subcommittee on Space and Aeronautics, and the Government Reform Subcommittee on Government Management, Finance, and Accountability, that she would not certify the agency's financial statements if she were bound by Sarbanes-Oxley, the

## EYE on Washington-Cont

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federal law that provides severe penalties to private sector officials for financial misstatements.

USTR Report Says Japan's Tech Sectors Are More Open - 2 NOV: The Office of the U.S. Trade Representative issued a report today saying that reforms in Japan continue to expand market access for foreign U.S. firms that offer telecommunications services and e-commerce, and the reforms are improving U.S.-Japanese cooperation on intellectual property rights, according to a new report.

2007 Congressional & State Department Fellowships IEEE Student Members Encouraged to Apply for 2006 WISE Program - Next summer, the IEEE will sponsor three outstanding student members to participate in the 2006 Washington Internships for Students of Engineering (WISE) Program. The select candidates will spend nine weeks in Washington, D.C., learning how engineers contribute to the legislative the decision-making process. For more information, visit [www.wise-intern.org](http://www.wise-intern.org), or contact Sharon Richardson at [s.richardson@ieee.org](mailto:s.richardson@ieee.org). The application deadline is December 16, 2005.

WISE Program Seeks Senior Science & Technology Public Policy Advisor to Engineering Students (Nine Week Summer Position) - An outstanding individual capable of teaching and mentoring engineering students on the interaction between engineering, technology, and public policy is sought to serve as Advisor-In-Residence (AIR) for the 2006 WISE Program (Washington Internships for Students of Engineering). For more information, please visit: <http://www.wise-intern.org/advisor.html> View a PDF of the announcement, here: <http://www.wise-intern.org/FMR/WISEAdvisor.pdf>

Telecom Regulation Updates - TX, NJ, MI Rhode Island Action Plan Calls for Improvements in Science and Math Education

Louisiana Negotiating For E-Voting System

New Virginia E-Recycling Plant Will Add Jobs to the Area

Massachusetts Lawmakers Concerned About Proposed Implementation of IT Standards

What's New @ IEEE-USA's Eye on Washington highlights important federal legislative and regulatory developments that affect U.S. engineers and their careers. In addition to this biweekly newsletter, subscribers receive legislative bulletins and action alerts on IEEE-USA priority issues, including: retirement security, employment benefits, research & development funding, computers and information policy, immigration reform, intellectual property protection and privacy of health/medical information.

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## IEEE USA News

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### IEEE-USA Applauds Rep. Pascrell for Introducing H-1B Reform Legislation

WASHINGTON (21 November 2005) — IEEE-USA applauds Rep. Bill Pascrell (D-N.J.) for introducing legislation that attempts to correct some of the "serious problems" in the H-1B temporary visa program.

Rep. Pascrell's bill, H.R. 43278, the "Defend the American Dream Act of 2005," introduced on 17 November, is designed to provide greater workforce protections for U.S. citizens and H-1B visa holders. It would require all employers, not just so-called "H-1B-dependent companies," to attest to good-faith efforts to actively recruit U.S. workers for jobs employers propose to fill with H-1B workers. And it prohibits the outplacement (i.e., outsourcing, leasing or contracting) of H-1B workers by H-1B employers to other companies.

"In report after report, government investigators have found serious weaknesses and failings in the H-1B program," IEEE-USA President Gerard A. Alphonse said. "Contrary to the law's intent, the program can be used to fill any job at almost any wage, and the vast majority of employers are not required to recruit American workers first. IEEE-USA applauds Rep. Pascrell for drafting a bill that addresses these serious problems."

In evaluating the H-1B program for the FY 2006 budget cycle, the federal Office of Management and Budget found, "The [current H-1B] statute waives a labor market test, does not require submission of supporting documentation by employers, [and] limits the Department of Labor's authority to review or question [applications]... [leaving] the program vulnerable to fraud or abuse." According to IEEE-USA, Rep. Pascrell's bill will fix these flaws and ensure that the statute aligns with the intent of the program.

The bill also seeks to strengthen prevailing wage protections for foreign workers because, as viewed by IEEE-USA, the current protections are ineffective and can be easily taken advantage of by employers seeking to pay lower wages than they would pay to comparably skilled Americans. Rep. Pascrell highlighted the bill at a news conference held earlier today (on 21 Nov.) in Paterson, N.J. IEEE-USA advances the public good and promotes the careers and public policy interests of the more than 220,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE, the world's largest technical professional society with 360,000 members in 150 countries. For more information, go to <http://www.ieeeusa.org>.

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## IEEE USA News

Here's your monthly report from IEEE-USA on building careers and shaping public policy, from the editors of IEEE-USA Today's Engineer in Washington, D.C. The current version of Today's Engineer Online can always be found at: <http://www.todaysengineer.org>

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5. IEEE-USA Applauds Rep. Pascrell for Introducing H-1B Reform Legislation
6. Internet Pioneers Honored At White House Ceremony
7. IEEE Members Among 2004 National Medal of Technology Recipients
8. Thomson NETg Joins IEEE's Education Partners Program, Adds 4,000 Courses

Subscription info and your member number are at the end of the email.

1. December 2005 "IEEE-USA Today's Engineer Online"

The latest edition of IEEE-USA Today's Engineer Online includes features on "Regional, State and Local Initiatives for Nanotech R&D and Commercialization"; "Personal Professional Liability Coverage for Consulting and Moonlighting Engineers"; "Spectrum Allocation and the Digital Television Transition"; "The Governance Board and You"; and more. Also catch a "Backscatter" column on "Ghosts"; an "Engineering Hall of Fame" column on Aleksandr Popov; and the latest "World Bytes" column on "Thoughts That Inspire."

Read "IEEE-USA Today's Engineer Online" at: <http://www.todaysengineer.org>

2. Special Offer: Introduce Your Employer to IEEE-USA's Salary Service

For a limited time, employers can receive a \$100 discount on an annual subscription to the IEEE-USA Salary Service Premium version if they are referred by an IEEE member. For more information, visit:

<http://www.ieeeusa.org/careers/salaryoffer>

3. IEEE-USA To Launch Precollege Teacher Grant Program in January

In January 2006, IEEE-USA's Precollege Education Committee (PEC) is unveiling its new Precollege Teacher Grant Program. These grants offer small amounts of funding (up to a maximum of \$1,500) to teachers and engineers who partner to introduce engineering to students. The teacher must work with an IEEE member to develop or implement a project or program. For more details, visit: <http://www.ieeeusa.org/volunteers/committees/pec/teacher-grants.html>

4. IEEE-USA President Addresses Workforce Issues "Computerworld" Column

In "Seeing the Light on H-1B Visas," IEEE-USA President Gerard A. Alphonse writes that to ensure the United States' continuing technological leadership, "IEEE-USA has long favored the permanent immigration of skilled foreign-born engineers and scientists as a much better solution than using temporary H-1B visas."

Writing in the 21 November issue of "Computerworld" magazine, Alphonse characterizes the H-1B program as "plagued by myth and abuse," and cites examples of how flaws in the program hurt U.S. workers and H-1B visa holders. He encourages Congress not to add more H-1B visas to a "flawed system."

You can read the column at:

<http://www.computerworld.com/governmenttopics/government/legislation/story/0,10801,106343,00.html>

5. IEEE-USA Applauds Rep. Pascrell for Introducing H-1B Reform Legislation

IEEE-USA applauds Rep. Bill Pascrell (D-N.J.) for introducing legislation that attempts to correct some of the "serious problems" in the H-1B temporary visa program. Read the related IEEE-USA news release at:

<http://www.ieeeusa.org/communications/releases/2005/112105pr.asp>

6. Internet Pioneers Honored At White House Ceremony

IEEE Fellows Vinton Cerf and Robert Kahn were awarded the Presidential Medal of Freedom for designing the "software code that is used to transmit data over the Internet." The Freedom Medal is the nation's highest civil award, and may be awarded by the president to "any person who has made an especially meritorious contribu-

## IEEE USA News - Cont

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tion to the security or national interests of the United States, or world peace, or cultural or other significant public or private endeavors.”

For the IEEE History Center Legacies on Cerf and Kahn, visit:

<[http://www.ieee.org/organizations/history\\_center/legacies/cerf.html](http://www.ieee.org/organizations/history_center/legacies/cerf.html)>

<[http://www.ieee.org/organizations/history\\_center/legacies/kahn.html](http://www.ieee.org/organizations/history_center/legacies/kahn.html)>

For the related White House news release, visit:

<<http://www.whitehouse.gov/news/releases/2005/11/20051103-5.html>>

### 7. IEEE Members Among 2004 National Medal of Technology Recipients

President Bush named two IEEE members, Life Senior Member Ralph Henry Baer and Life Fellow Roger Lee Easton, as recipients of the 2004 National Medal of Technology. The medal is the nation's highest honor for technology research, awarded by the President to individuals who have made lasting contributions to America's competitiveness, standard of living, and quality of life through technological innovation.

For more information, visit <<http://www.nationalacademies.org/headlines/20051116.html>>

### 8. Thomson NETg Joins IEEE's Education Partners Program

Thomson NETg, a global provider of knowledge-on-demand has signed an agreement to partner with the IEEE. As a Partner in the IEEE Education Partners Program (IEEE-EPP) IEEE members have access to an additional 4,000 courses at a 10 percent discount. Thomson NETg offers courses on Information Technology & Desktop, Business & Professional Development, Compliance, as well as Technical and Professional Certification. In addition to English, some courses are available in Chinese, French, German and Spanish. IEEE members will have access to regional learning consultants who can help with proper course/program selection. Thomson NETg, with more than 35 years experience, delivers an innovative learning environment that combines the latest advances in learning theory with state-of-the-art internet technology. For more information, visit: <<http://www.netg.com/ieee>>

Through IEEE-EPP, IEEE members currently have access to some 6,000 courses from more than a dozen providers to help them meet their continuing education, certificate and graduate degree needs. IEEE Educational Activities Board (EAB) volunteers have established a review process to ensure that Partners meet certain quality standards. All Partners have established special web portals through which IEEE members can access course catalogs, register for courses, and receive the IEEE discount. EAB is continually adding new Partners. For access to all IEEE-EPP Partners go to <<http://www.ieee.org/education/epp>>. (Your IEEE web account user name and password are necessary to access the Partners' web sites.)

### REMINDERS, RESOURCES & RECOGNITIONS

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What's New @ IEEE-USA Eye on Washington (Vol. 2005, No. 23 - 2 Dec.)

<<http://ieeusa.com/policy/eyeonwashington/2005/05eow23.asp>>

Applications for 2006 WISE Program Due 16 December

<<http://www.wise-intern.org/>>

Applications for 2006 Mass Media Fellows Due 16 January 2006

<<http://ehrweb.aaas.org/massmedia.htm>>

IEEE-USA In the News

<<http://www.ieeeusa.org/communications/inthenews>>

IEEE-USA Promoting Public Awareness of Engineering brochure (PDF)

<<http://www.ieeeusa.org/communications/files/PAbrochure.pdf>>

Questions or comments about "IEEE-USA Today's Engineer E-mail Update" should be directed to:

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IEEE members make change of address notices via the IEEE website: [www.ieee.org](http://www.ieee.org).

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