



# THE POCKET SCOPE



*The Institute of Electrical and Electronics Engineers, Inc.*

Volume 58, Number 1

September 2007

## SCOPE NOTES

### September Houston Section News

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

**When:**  
Thursday, September 27, 2007  
6:00 - 6:30 p.m. Social  
6:30 - 7:30 p.m. Dinner  
7:30 - 8:30 p.m.

**Cost:**  
\$15.00 - IEEE Members with 48-  
hour advance reservations.  
\$20.00 - non-members  
\$5.00 - students  
Call (713) 207-IEEE to make  
your reservations.



## The Chairman's Message

**Polo Gutierrez**

The Chairman's Message

See Page 3  
for the Continu-  
ing Education  
Schedule!

IEEE WEB  
ADDRESS

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

Polo Gutierrez  
**Houston Section Chair**

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

# Houston Section Meeting

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Thursday, February 25, 2007

## **Topic: Robust and Bandwidth Efficient Radio Architecture using KV Transform Technique for Burst Noise Handling in Mobile Ad Hoc Networks**

In this paper, we propose a new radio architecture that uses an analog transform coding technique called "KV Transform Coding" for correcting errors in very high noise channels in networks such as Mobile Ad Hoc Networks (MANET). It is based on an analog orthogonal and invertible transform for time-frequency variation analysis. It detects and corrects error samples and identifies the samples that cannot be corrected. It has the ability to correct errors at channel Bit Error Rate of  $< 1/100$  and allowing retransmission of a selective sample segment, it handles BER of  $< 1/10$ . In addition, because it allows dispersion of burst errors, it effectively handles multi-path effects on the user data.

The proposed radio architecture supports multi-service QoS and significant bandwidth savings by reducing the number of retransmissions when using KV transform technique. Since KV transform operates as an analog technique, the radio architecture can use analog modulation technique to save the bandwidth significantly. By using A/D converter at the transmit KV output and D/A converter at receive KV input, digital transmission can also be used. This paper presents the design of the radio architecture and comparative performance of the proposed design with that of performance of TCP protocol.

## **Speaker: Prof. Dhadesugoor R. Vaman**

Dhadesugoor R. Vaman has been working on the Management Controlled Mobile Ad Hoc Network (MANET) and Sensor Network Architectures, Cross-Layer Aware Network Management for Joint Power Control and Routing; Applications Quality of Service for multi-service applications; Bandwidth efficient dispersive transform coding technique to handle burst noise due to multi-path interference and achieve end-to-end QoS assurance. He has also worked on the non-GPS real time tracking of mobile elements in MANET. Since 1979, Dr. Vaman has been addressing many issues of wireless and wired network architectures including, VOIP, ADM/DSI for T1 Multiplexers, Integrated voice and data terminal for INMARSAT C applications, network management, broadband ISDN protocols, as Member, Technical Staff (COMSAT Labs and CONTEL), as a Professor of EECS, Stevens Institute of Technology (1984-1998) and later as the CEO of Megaxess, a start-up company. He led the company towards implementation of commercial products for Business ISPs to offer differentiated services based on assuring QoS for applications. He also was the Chairman of the IEEE 802.9 ISLAN standards committee and participated in ITU and ISO standards.

Since September 2002, he has returned to academic side of his career as the Texas Instrument Endowed Chair Professor of Electrical and Computer Engineering, Prairie View A&M University, where he became the Founding Director of Army Research Office (ARO) Center for Battlefield Communications (CeBCom) Research which focuses on the battlefield architectural issues. Dr. Vaman has published over 200 papers in journals, conferences (invited and non-invited) and other forums and workshops; has lectured widely both nationally and internationally; has been a key note speaker in many IEEE and other conferences, and industry forums.

More recently, he was a key note speaker in IEEE conference on "Enabling Technologies for Smart Appliances (ETSA-2005), Hyderabad, India. He earned his Ph.D. degree from the City University of New York; M.E.E from the City College of New York; M.Tech. and B.E. from the Regional Engineering College (Now called Deemed NIT), Warangal, India. Prior to his current position, he worked as the CEO of Megaxess, Professor of EECS and Founding Director of Advanced Telecommunications Institute, US Navy Center of Excellence in Telecommunications, Stevens Institute of Technology; Member, Technical Staff, COMSAT Laboratories and Network Analysis Corporation (CONTEL); and Systems Engineer, Space Applications Center, Indian Space Research Organization (ISRO), Ahmedabad, India.

**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

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

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Registration receipts will be available upon request at the seminars.

For a cancellation refund, telephone Chris Austen by the Friday before the seminar at:

Phone: 713-230-5243  
 Fax: 713-923-9009  
 Email: [tchris@turtle.com](mailto:tchris@turtle.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, marine offshore, 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 numerous "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 2007-2008 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 2007 - 2008

Jacobs Engineering, Tower One  
 5995 Rogerdale Road  
 Houston, TX. 77072



## 2007-2008 REGISTRATION FORM

Seminar Title	Code	Date	Amount
Power Capacitor Applications	320	Oct. 2 / 3	\$
Electrical Safety in the Industrial Workplace	921	Oct. 16/17	\$
Synchronous Motor Basics	609	Oct. 30/31	\$
Maximized Distribution System Protection	304	Nov 13/14	\$
IEC 61850 Standard for Substation Automation	150	Feb. 5/ 6	\$
Harmonic Theory and Applications	502	Feb. 19/20	\$
HV Power Transformer Design, Dynamics and Testing	904	Mar. 4/ 5	\$
Advanced Directional & Differential Relay Protection Considerations	314	Mar. 18/19	\$
Advanced CT / PT Application Considerations	308	Apr. 8 / 9	\$
2008 NEC Industrial Updates	920	Apr. 22/23	\$
Total Paid:			\$

## Enter amount for each seminar:

IEEE member early signup: \$ 70.00  
 Non-member registration: \$175.00

## Fall of 2007 IEEE Seminar Schedule

## Power Capacitor Applications

John Harder, P.E., Consultant / IEEE Fellow

Oct. 2/3, 2007 6:00-8:50PM

A focused technical presentation on power capacitor and surge protection applications. [0.5 CEU]

## Electrical Safety in the Industrial Workplace

Danny Liggett, DuPont

Oct. 16/17, 2007 6:00-8:50PM

A detailed electrical safety presentation associated w/ industrial work areas, benefits of safety training and NFPA 70E guidelines. [0.5 CEU]

## Synchronous Motor Basics

Bob Krusemark, General Electric Motors

Oct 30-31, 2007 6:00-8:50PM

Technical review of MV & HV synchronous motor theory, design stds & application considerations. [0.5 CEU]

## Maximized Distribution System Protection

Wayne Hartmann, P.E., GE Multilin

Nov. 13/14, 2007 6:00-8:50PM

A technical study of advanced techniques and protective relay strategies for maximum protection of industrial distribution systems. [0.5 CEU]

## Spring of 2008 IEEE Seminar Schedule

## IEC 61850 Substation Automation

Mark Adamiak, P.E., GE Multilin - Automation



# IEEE

## IEEE Houston Section

### 2007-2008

## Continuing Education On Demand



Feb. 5/6, 2008 6:00-8:50PM

Definitive study of the IEC 61850 std and its component architecture for substation automation, software tools, protocols, configuration, communications. [0.5 CEU]

Harmonic Theory and Applications  
David Rice, GE Engineering Services

Dick Harlow, Phaseco

Feb. 19/20, 2008 6:00-8:50PM

Technical review of Harmonic Theory, application considerations, solution strategies, harmonic filter designs and applications. Case studies. [0.5 CEU]

## HV Power Transformers

Ilhen Gokcen, Areva T&D - Power Transformer

March 4/5, 2008 6:00-8:50PM

A technical presentation focused on HV power transformer design stds & considerations, inrush dynamics, cooling fluids, testing and commissioning. [0.5 CEU]

## Advanced Differential &amp; Directional Relay Protection

Bill Nichols, P.E., Siemens Energy & Automation

March 18/19, 2008 6:00-8:50PM

A detailed presentation of differential and directional relay protection strategies, considerations and case studies. [0.5 CEU]

## Advanced CT / PT Application Considerations

## IEEE Financial Advantage Program NEWS

# Important Information from the IEEE Financial Advantage Program

As a member of IEEE and the Control Systems Society, you are able to benefit from all that IEEE has to offer, including the IEEE Member Group Insurance Program. Here is some good news about your IEEE Group Term Life Insurance Plan:

Your IEEE Group Term Life Insurance just became less expensive. Insureds will receive a 30% premium credit on their 1 September 2007 bill. This premium credit is an increase from the 25% premium credit previously in effect. Future premium credits are not guaranteed; plan experience is reviewed on an ongoing basis to determine the amount of credit, if any.

IEEE now offers 10-year and 20-year level group term life insurance. You can lock in your rate for the full term. For more information about these plans' features, including rates and eligibility requirements, go to [www.ieeeinsurance.com](http://www.ieeeinsurance.com). The Group Term Life, 10-Year and 20-Year Level Plans are underwritten by New York Life Insurance Company.

A cost-saving tip: A smoker or non-smoker rate category appears on your premium notice. In order to qualify for a non-smoker rate, you must have not smoked tobacco in the past 12 months, and submit a signed non-smoker declaration form to Marsh, the Insurance Administrator. Details can be obtained at [www.ieeeinsurance.com](http://www.ieeeinsurance.com) or by calling 1-800-493-4333.

Your IEEE Group Term Life Insurance has increased the child death benefit from \$5,000 to \$10,000 effective 1 September 2007, at no additional cost to you.

Premium notices were mailed on 15 July for the September 2007 renewal. Even if you pay your premium automatically, you should take note of any mailed statements or renewal notices you receive. They may contain statement messages or updates to your rate. Remember, group term life insurance rates are tied to incremental 5-year age brackets.

**Important Reminder:** Only IEEE members in good standing are eligible to remain in the IEEE Group Insurance Program. IEEE membership renewals for 2008 must be paid by 31 December 2007. If you have any questions about your IEEE group term life insurance, please call the Administrator at 1-800-493-4333.

## Rice: ECE Affiliates Conference - September 13, 2007

**Subject:** Rice: ECE Affiliates Conference - September 13, 2007

**WHAT:** Annual ECE Corporate Affiliates Conference

**WHEN:** Thursday, September 13, 2007 8:00am-5:00pm

**WHERE:** Rice University, [Duncan Hall](#)

**WHO:** Corporate Affiliates, Industry Partners, Research Associates, and Academia

**PLUS:** You are invited to stay an extra day to visit the [Rice Career Fair](#) on September 13 and 14.

The [Computer Science Affiliates Meeting](#) is scheduled for Wednesday, September 12.

### Global Partnerships in Research and Education

The annual Rice University ECE Affiliates Conference provides exceptional opportunities to learn about the expanding vision for the Department of Electrical & Computer Engineering, discuss current and future researches challenges, and interact with ECE students to gain insight into their academic and career pursuits.

The conference [agenda](#) takes you around the globe to discover the latest innovations and the successful partnerships that are forming throughout the world. Hear about exciting trends in Japanese research, wireless systems research collaborations in Finland, biomedical applications, nanotechnology, and VLSI circuit simulation.

### Featured Speaker “[India Awakes - Opportunities for US High Technology Enterprise](#)”

Dr. Arogyaswami Paulraj  
Stanford University

CTO and Co-Founder Beceem Communications, Inc.

### WHATS NEW

A key new addition this year is [Demo Floor](#), which will feature live demos from the whole department.

Also our top undergrads will be featured significantly this year, so another excellent opportunity to recruit for internships and full-time positions.

### REGISTRATION IS NOW OPEN!

ECE Affiliates Meeting Registration - <http://cohesion.rice.edu/conferences/ece>

Registration is FREE to current members of the ECE Affiliates Program, as well as to faculty/students from other academic institutions. If you are not a current member, the cost is \$100 per attendee.

Please contact [ECE Affiliates](#) with any questions about the program or memberships.

For more information about the ECE Affiliates Program, visit our website at <http://www.ece.rice.edu/corp>

## IEEE USA Legislation Update

NEWS from IEEE-USA  
1828 L Street, N.W., Suite 1202  
Washington, D.C. 20036-5104

IEEE-USA President Urges Passage of Competitiveness Legislation to Help United States Maintain Global Leadership in Science and Technology

WASHINGTON (1 August 2007) — IEEE-USA President John Meredith urges the House and Senate to pass the conference report of the “America Competes Act” to help bolster our country’s global leadership in science and technology and promote U.S. competitiveness and innovation.

“We commend the conferees for recognizing the vital role that science and technology research and development plays in strengthening U.S. economic well-being, energy independence and national security,” Meredith said. “Our nation’s innovation infrastructure and ability to compete with emerging nations will greatly benefit from this legislation.”

The final version of the three-year, \$43.3 billion bill, based on H.R. 2272 and S. 761, passed Tuesday. The House is expected to vote on the measure Thursday, the Senate on Friday.

The “America Competes Act” would, among other things, authorize significant funding increases for research and development; strengthen educational opportunities at the elementary through graduate school level in science, technology, engineering and mathematics; increase funds to improve the skills of math and science teachers; and provide college scholarships for hundreds of future math and science teachers. The bill puts research programs at the National Science Foundation, the National Institute of Standards and Technology and the Department of Energy on track to double their budgets during the next decade.

The legislation is based on recommendations contained in the National Academies’ “Rising Above the Gathering Storm” report and the Council on Competitiveness’ “Innovate America” report. Sen. Lamar Alexander (R-Tenn.) and House Science and Technology Committee Chairman Bart Gordon (D-Tenn.) led their respective chamber’s conference teams.

“Keeping America competitive will help us keep good jobs on our nation’s shores and ensure our ability to compete in a global marketplace,” Gordon said. “That process begins with a high-quality educational system and follows with ideas and investments in people here at home.”

For more on the “America Competes Act,” go to [http://science.house.gov/legislation/leg\\_highlights\\_detail.aspx?NewsID=1938](http://science.house.gov/legislation/leg_highlights_detail.aspx?NewsID=1938)

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 215,000 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 370,000 members in 160 countries. See <http://www.ieeeusa.org>.

Contact: Chris McManes  
IEEE-USA Senior Public Relations Coordinator  
Phone: + 1 202 530-8356  
E-Mail: [c.mcmanes@ieee.org](mailto:c.mcmanes@ieee.org)

# IEEE Career Alert

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IEEE CAREER ALERT for 1 Aug 2007

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

## IN THIS ISSUE:

1. How to Land the Job When Qualifications Are Not Enough
2. Advancing Your Career: A Team Effort
3. Examine the Patient Before Making a Diagnosis
4. Canadian IT Industry Fails to Sow New IT Crop

### 1. How to Land the Job When Qualifications Are Not Enough

If you got to choose who you work with, you'd probably select your friends, right? Though hiring managers may not be able to choose their buddies exclusively, a big factor in their final decisions is, according to a California Job Journal article, "the unquantifiable but all-important likeability factor." The article offers six tips for landing the job when your qualifications are a small factor in who gets the offer. They include dressing the part, since people like to hire people who look like them and clothes are the easiest way to project that "sameness." Read on at:

<[http://www.jobjournal.com/article\\_printer.asp?artid=2069](http://www.jobjournal.com/article_printer.asp?artid=2069)>

### 2. Advancing Your Career: A Team Effort

You're the quarterback of your career, out front making the big plays that secure victories for your team and accolades for yourself. But you won't last long without good blockers—the people whose role is to protect your blind side. A Chronicle of Higher Education article applicable to all professionals suggests enlisting the help of several people to guard you from dangers you can't see by letting them vet your papers or presentations before submission. They can vastly improve your scholarship by reminding you that, "nothing goes without saying, that coded language is the refuge of the lazy and weak, and that people outside your field may well find your material interesting, if you help them along the way." Read on at: <<http://chronicle.com/jobs/news/2007/07/2007072701c/careers.html>>

### 3. Examine the Patient Before Making a Diagnosis

Are you the person who begins just about every conversation with your colleagues with, "Back at my old company, we did it like..."? Guess what? You're probably the most ignored person at your office. A Business Week article warns that it is considered presumptuous and arrogant to step into a new company and suggest changes before taking time to learn the culture and history that explain why things are done the way they are. Even if you're a senior manager or executive brought in for the express purpose of initiating change, don't forget that what worked at Company A may not work at Company B. Read on at:

<[http://www.businessweek.com/careers/content/jun2007/ca20070607\\_981821.htm?chan=careers\\_careers+index+page\\_career+insight+from+liz+ryan](http://www.businessweek.com/careers/content/jun2007/ca20070607_981821.htm?chan=careers_careers+index+page_career+insight+from+liz+ryan)>

### 4. Canadian IT Industry Fails to Sow New IT Crop

If a surfeit of new IT graduates can be called a bumpercrop, then the Canadian IT industry may be setting the stage for paltry harvests in the future by shunning those fresh out of school. Two-thirds of respondents to IT World Canada's 2007 Salary Survey reported that they expect to hire new staff this year. But only 19 percent are looking to fill their openings with newly minted IT grads. This industry-wide pursuit of IT professionals who can hit the ground running, although good news for experienced IT workers, is exacerbating falling enrollment in computer science courses and may lead to future IT skills shortages. Read on at:

<<http://www.itworldcanada.com/Pages/Docbase/ViewArticle.aspx?id=idgml-9196f07b-9ccf-482c-befc-1b339a40153d>>

## IEEE Career Alert - Cont

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### Announcement

Come visit the Newly Redesigned IEEE Job Site!

Features you're sure to visit time and time again:

- Read the latest news from The Wall Street Journal's CareerJournal.com.
- Take our poll on this month's hot topic.
- Take advantage of IEEE-USA's career-related services and offerings.

Check it out at : <http://www.ieee.org/jobs>

Send us your feedback at [candidatejobsite@ieee.org](mailto:candidatejobsite@ieee.org).

### Manage Your Subscription to IEEE Career Alert

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 homepage at <<http://www.spectrum.ieee.org>>

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service, please send an email to <<mailto:spectrumcareerseditor@ieee.org>>

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## IEEE Career Alert

IEEE CAREER ALERT for 15 Aug 2007

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

### IN THIS ISSUE:

1. The Skills That Pay the Bills
2. Niche Job Sites Becoming Preferred Listings
3. Positions in Tech Support Provide IT On-Ramp
4. Companies Use Perks to Keep Indian Tech Pros in Place

#### 1. The Skills That Pay the Bills

Though we hear frequent accounts of technical professionals enduring long job searches, a Computer World article says it's a job hunter's market if you come equipped with the right skills. The article lists several areas of expertise that, according to Kevin Scott, senior engineering manager at Google, "companies are snapping up as fast as they can grab them." No matter the specialty, the most highly prized candidates seem to be the ones who understand how their wireless designs, software applications, or other technical contributions will operate in the context of a network. For more on what hiring managers are seeking, see:

<[http://www.computerworld.com/action/article.do?command=viewArticleBasic&taxonomyName=Careers&articleId=299652&taxonomyId=10&intsrc=kc\\_li\\_story](http://www.computerworld.com/action/article.do?command=viewArticleBasic&taxonomyName=Careers&articleId=299652&taxonomyId=10&intsrc=kc_li_story)>

#### 2. Niche Job Sites Becoming Preferred Listings

The big job boards like Monster.com and Careerbuilder.com have helped countless technical professionals find jobs. But employers are increasingly listing their toughest-to-fill positions on small niche job sites that focus on, say, a specific career field or geographical location. These sites, including the careers pages of professional associations (such as the IEEE Job Site), have become popular destinations for job hunters because they don't have to sift through hundreds of postings to find the handful that match their qualifications. There are even sites that highlight the niche job boards that get the most traffic and are most frequently updated. For more on finding job sites in your niche, see:

<[http://www.careerjournal.com/jobhunting/usingnet/20070515-needleman.html?cj\\_pos=home\\_whatnew\\_minor](http://www.careerjournal.com/jobhunting/usingnet/20070515-needleman.html?cj_pos=home_whatnew_minor)>

#### 3. Positions in Tech Support Provide IT On-Ramp

For career changers, help-desk support positions, which are expected to remain plentiful for the foreseeable future, are an excellent on-ramp to an IT career.

Though the most sought after candidates are those with computer science degrees, demand has been so great that a certification in, say, A+ with Windows applications or a Microsoft Certified Systems Engineer designation—or a host of other credentials that can be earned in as little as six months—is enough to land an entry-level job so you can begin to gain experience. Read on at:

<[http://www.jobjournal.com/article\\_printer.asp?artid=2090](http://www.jobjournal.com/article_printer.asp?artid=2090)>

#### 4. Companies Use Perks to Keep Indian Tech Pros in Place

Indian technology companies and foreign multinationals, awakening to the fact that India's supply of top-notch engineering and IT talent is not inexhaustible, are locked in a battle to attract and retain the best and brightest. This ongoing fight has driven up salaries and caused companies to offer a host of perks. For

## IEEE Career Alert -Cont

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example, Infosys Technologies' 135-hectare (334-acre) campus in Mysore features a movie theater and an activity center with a gym, swimming pool, and bowling alley. Infosys is also among the ranks of companies offering its employees thousands of online courses, from languages to Harvard Business School classes. For more on Indian IT's perk packages, see: <[http://www.businessweek.com/magazine/content/07\\_34/b4047406.htm](http://www.businessweek.com/magazine/content/07_34/b4047406.htm)>

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If you have problems, questions, or comments about this service, please send an email to  
<<mailto:spectrumcareerseditor@ieee.org>>

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## IEEE “Institute News”

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Here’s your report on news around the IEEE, from the editors of The Institute. The current version of The Institute can always be found at <<http://www.ieee.org/theinstitute>>

### IN THIS ISSUE:

1. IEEE Honors Diverse Set of Visionaries
2. System Upgrade Leads to One-Stop Shopping
3. Action Calendar: IEEE Board of Directors
4. Marketplace of Ideas: Are Google Maps Too Close for Comfort?
5. Frances E. Allen: First Woman to Receive the Turing Award
6. IEEE Students Branch Out at Summer Congresses
7. Mentoring: It Works!
8. New Tool for Saying No to Plagiarism
9. Proceedings Stays Timely After 95 Years
10. Career Security for Technology Professionals
11. Discount Available for Embedded Systems Conference

#### 1. IEEE Honors Diverse Set of Visionaries

One word can sum up this year’s IEEE awards recipients: visionaries. Their dreams led to developments in such modern technologies as wireless communications, HDTV, Earth observation systems, and DVD players. Read about the awards recipients at <http://bmsmail3.ieee.org:80/u/6775/00086579>

#### 2. System Upgrade Leads to One-Stop Shopping

The IEEE has launched a new online shopping area ([shop.ieee.org](http://shop.ieee.org)) as part of a major upgrade to its core business management system. Individuals can now join the IEEE and its societies; renew their memberships; buy conference proceedings, standards, and other products; and subscribe to IEEE publications in one online session. Learn more at <http://bmsmail3.ieee.org:80/u/6776/00086579>

#### 3. Action Calendar: IEEE Board of Directors

At its June meeting, the Board approved a new rolling submission process for projects submitted to the New Initiatives Committee. It also contributed money to the IEEE Foundation to support a new scholarship, named to honor a former IEEE executive director, and approved the selection of this year’s recipient of the Eric Herz Outstanding Staff Member Award. For more information, visit <http://bmsmail3.ieee.org:80/u/6777/00086579>

#### . Marketplace of Ideas: Are Google Maps Too Close for Comfort?

Google recently unveiled a free map service called Street View, which shows ground-level views of specific locations. Type in an address, and you can zoom in on a photo of that site and whatever is there—a house, parked cars, or even people. The service has stirred up concerns over loss of privacy, with some worried that their address, their car’s license plate, or even their face will show up online. For example, the site has shown women sunbathing on a school campus. Google says the photos are taken in public locations, so they’re no different from what someone would see walking down the street. What do you think of Google’s Street View service? Weigh in at <<mailto:institute@ieee.org>>

And read responses to May’s question, which asked how you would feel about your behavior being monitored by cameras installed throughout your city, with the aim of deterring criminal activity. Answers ranged from being all for the initiative for safety’s sake to comparing such monitoring to a Big Brother regime. See what members had to say at <http://bmsmail3.ieee.org:80/u/6779/00086579>

#### 5. Frances E. Allen: First Woman to Receive the Turing Award

Winning the top U.S. computer science award is a great honor, but being the first woman to receive it is even more special, says Frances E. Allen, recipient of the 2007 Turing Award. Read about her and her career at <http://bmsmail3.ieee.org:80/u/6780/00086579>

## IEEE “Institute News” - Cont

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### 6. IEEE Students Branch Out at Summer Congresses

When school lets out for the summer, IEEE student branches do not skip a beat. This year, congresses were held in England and Pakistan, with the goals of keeping students active in the IEEE and easing their transition from college to the professional world. There's more at

<http://bmsmail3.ieee.org:80/u/6781/00086579>

### 7. Mentoring: It Works!

In our fast-paced world of ever-shorter product life cycles, throwaway merchandise, and—increasingly—throwaway employees, experience is often perceived to be of little value. Happily, this short-sighted attitude has not found a home at the IEEE, where a mentoring program whose chief asset is its members' experience is proving to be popular and successful.

Read on at <http://bmsmail3.ieee.org:80/u/6783/00086579>

### 8. New Tool for Saying No to Plagiarism

Plagiarists, beware! In the next few weeks the IEEE will begin testing a new plagiarism detection tool it is helping develop with CrossRef, an independent association of scientific, technical, and medical publishers. The product, CrossCheck, compares new manuscripts with published materials in its database. For more information, go to <http://bmsmail3.ieee.org:80/u/6784/00086579>

### 9. Proceedings Stays Timely After 95 Years

Nearly a century old, Proceedings of the IEEE is still one of the institute's most popular journals. It's one of the most cited in other scientific, medical, and technical publications, and it recently had a facelift. Learn more at <http://bmsmail3.ieee.org:80/u/6785/00086579>

### 10. Career Security for Technology Professionals

On 11 October, hear career advice from industry experts in the fields of medical electronics and computer security and learn about education programs that can help move you into the ranks of management. There also will be live Q&A sessions and a virtual exhibition hall where you can network with representatives from leading educational institutions. Register for Career Security for Technology Professionals, a new IEEE Spectrum Career Accelerator Forum, at

<http://bmsmail3.ieee.org:80/u/6786/00086579>

### 11. Discount Available for Embedded Systems Conference

Members will receive a 10 percent discount when registering for the Embedded Systems Conference Boston, to be held 18 to 21 September, together with the RFID World Boston and SD (Software Development) Best Practices conferences. Use code UX28 to save the 10 percent on top of the early-bird registration specials at

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## IEEE-USA EYE on Wahington

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The latest issue of Eye on Washington is available on-line. Highlights are below. To view the full text with links, please visit: <http://ieeekusa.org/policy/eyeonwashington/2007/07eow08.asp>

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### CAPITOL HILL WATCH

Its officially summer in Washington, and Congress has left until after labor day. Prior to the recess, they came close to completing work on many big items, including an energy bill and patent reform. The first competitiveness legislation actually made it all the way to the White House where it became law this week. Both energy and patent legislation now await full House and Senate action. While there was talk of wanting to quickly move patent reform legislation to completion, too many stakeholders - from universities and associations to small companies - object to substantial aspects of the bills. IEEE-USA is currently working on a statement that will convey our concerns for several sections as well as the hope that Congress will take some more time to explore the impact of current patent reform legislation on individual inventors and small businesses. On another note, immigration reform legislation seems to have died another death this year and any hopes of a new law will most likely need to wait until 2008 or even after the presidential election cycle.

President Signs Competitiveness Legislation - After overwhelmingly passing the House and unanimously passing the Senate, a comprehensive package of legislation – H.R. 2272, the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science Act (COMPETES) – finally became law this week. The COMPETES ACT is consistent with the goals of the White House’s American Competitiveness Initiative (ACI) which was unveiled in January 2006 after several years worth of reports warning that the U.S. was falling behind in its ability to compete globally. Among other things, the COMPETES Act: authorizes \$33.6 billion over FY 2008-2010 for STEM education programs; establishes the Advanced Research Projects-Agency (ARPA-E) under the Department of Energy (DOE); and creates of a new Technology Innovation Program at the Department of Commerce, replacing the Advanced Technology Program. As IEEE-USA’s Managing Director reported to our Board of Directors, “I am pleased to report that IEEE-USA realized one of its major public policy priorities for the 110th Congress ... with the President’s signature of the America COMPETES Act (H.R. 2272) ( <http://thomas.loc.gov/cgi-bin/bdquery/z?d110:h.r.02272:>)...”

IEEE-USA directly helped to champion two provisions: reauthorization of the Noyce Scholarships, and inclusion of a title strengthening the federal focus on high-performance computer research and development. IEEE-USA was one of many organizations working proactively over the past three years in support of this legislation, both directly and in coalition. IEEE-USA sent numerous letters to Congress, marshaled our members for over 150 grassroots visits in support of the bill (many as part of our annual Congressional Visits Days), issued grassroots alerts, co-sponsored congressional briefings (including the initial November 2005 briefing to Congress on the NAS’ “Gathering Storm” report and its recommendations), written articles, issued press releases, and provided testimony to Congress earlier this April on competitiveness and the importance of basic research. IEEE-USA was also a signatory to the American Innovation Proclamation and worked in partnership with other organizations through the Task Force on the Future of American Innovation, the Computer Research and Innovation Coalition, the Science, Technology, Engineering and Math (STEM) Coalition, and the Council on Competitiveness, to support this legislation.

House Passes Energy Bill Containing Renewable Energy Benefits - Just before recessing for the month-long summer break, the House passed a comprehensive energy bill (H.R. 3221) including a renewable portfolio standard (RPS, sometimes called RES or renewable electricity standard).

The federal RPS mandates that 15 percent of retail electricity come from renewable resources by 2020. Many states and localities already have an RPS. In 1999, then Texas Governor George W. Bush engineered and signed an RPS mandate for Texas. The President is continuing his support by pushing for the alternative-fuels mandate.

## IEEE -USA EYE on Wahington - Cont.

### WHITE HOUSE & EXECUTIVE AGENCY WATCH

National Science Foundation to Host Reception Honoring 2005 and 2006 Medal of Science Laureates - For more information on the National Medal of Science, and for photographs and biographical information on its 2005 and 2006 laureates, visit: <http://www.nsf.gov/od/nms/medal.jsp>.

Science Secretary Vows No Cost Overruns While Discussing ITER Project - During a recent briefing to the Fusion Energy Sciences Advisory Committee on ITER's status, Energy Under Secretary for Science Ray Orbach vowed, "The Office of Science will not have cost overruns." ITER is an experimental fusion reactor to be built in France by China, the European Union, India, Japan, Korea, Russia, and the United States. The Interim ITER Council recently held a meeting in Tokyo attended by both Orbach and former IEEE-USA President and current Chair of the IEEE-USA Government Fellows Committee, Ned Sauthoff. Dr. Sauthoff serves as the director of the U.S. ITER Project Office.

### REPORTS, SPEECHES & DOCUMENTS OF NOTE

Technology Trends and Small Business - Access the Intuit Future of Small Business report on technology trends. <http://www.intuit.com/futureofsmallbusiness/>

The Economist's IT Industry Competitive Index Ranks 64 Countries, U.S. on Top  
Student Results Show Benefits of Math and Science Partnerships - For a full press release, visit: [http://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=109725](http://www.nsf.gov/news/news_summ.jsp?cntn_id=109725)

### NESTA Report: Hidden Innovation

GAO Reports - Federal Support for Small Manufacturers

NSF Reports - Family-Related Issues Top List of Reasons for Migration of Immigrant Scientists and Engineers to the U.S. URL:

[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=pr07073](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=pr07073)

### LATEST IEEE-USA & IEEE ACTIVITIES

IEEE-USA Co-Sponsoring Symposium on Plug-in Hybrid Electric Vehicles - On September 19th, IEEE-USA is co-sponsoring – with the IEEE New Technology Directions Committee, the Set America Free Coalition, the IEEE Power Electronics Society, the IEEE Society on Social Implications of Technology, the IEEE Vehicular Technology Society, the IEEE Computational Intelligence Society and the IEEE Power Engineering Society – a symposium on the technology and policy challenges of commercializing PHEVs at the Omni Shoreham Hotel in Washington, DC.

Plug-in Hybrids: Accelerating Progress 2007 will bring together leaders in the manufacturing industry, electric utilities, universities, national laboratories and non-profits to explore what is needed to accelerate commercial use of plug-in vehicle technology. Demonstration vehicles will be on display. In July, IEEE-USA also co-sponsored a congressional briefing on PHEVs.

What's New @ IEEE-USAs 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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