

SCANNER

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GlobeCom 2007 Planning Group Meets to Discuss Schedule, Topics

By Tim Weil
Washington Section Editor

With only 18 months to go before the IEEE Global Communications Conference (GlobeCom) convenes in Washington, D.C. on November 26–30, 2007, the planning committee has been picking up momentum and volunteers.

At its bimonthly planning meeting at the Lucent Bell Labs Network Reliability and Security Office during the last week of April, the committee discussed the conference calendar, technical symposia topics, conference theme, and ideas for commemorating the 50th anniversary of GlobeCom.

Critical dates are still tentative, but registration is expected to begin on September 1, 2006 and papers will be due around the beginning of March in 2007.

GlobeCom 2007's technical sessions will be presented in symposia, which have yet to be finalized. The tentative list includes topics similar to those of GlobeCom 2006 (to be held in San Francisco in late November), plus a new symposium topic on telecommunications policy. This topic will address evolving issues of spectrum access, standards, internet policy and associated concerns. The conference will also feature keynote presentations by leaders of the communications industry, and a full schedule of tutorials, workshops and targeted programs.

The conference theme is "Innovate Educate Accelerate." With special activities to highlight the 50th Anniversary of GlobeCom, it is anticipated that this will be a popular conference with over 800 international attendees from industry, government and academia.

GLOBECOM 2007
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Murty Polavarapu Receives 2005 RAB Award

The 2005 IEEE Regional Activities Board (RAB) Achievement Award was presented to Murty S. Polavarapu at the National Capital Area Annual Awards Banquet in April.

The prestigious award recognizes Polavarapu, the 2005 chair of the Northern Virginia Section, for his "outstanding contribution" in promoting IEEE to college and pre-college students within the IEEE Northern Virginia Section. The award consists of a \$250 cash prize and a plaque.

Polavarapu and Amarjeet Basra, the 2004 section chair, played key roles in inaugurating IEEE Clubs at Thomas Jefferson High School for Science and Technology in Alexandria in 2004, and at Woodson High School in Fairfax in 2005. The Northern Virginia Section's sponsorship of the IEEE Clubs is pioneering the concept within IEEE. Basra received a 2004 IEEE Regional Activities Board (RAB) Achievement Award, in recognition of his contributions.

The purpose of the RAB Achievement Award is to recognize individuals involved with RAB and/or the region-



Murty Polavarapu (center) accepts the RAB Achievement Award from Marc Apter (left), IEEE vice president for regional activities and 2005 RAB chair, and Thom Tullia, IEEE Region 2 director.

al network, for singular achievement in the development and completion of projects or activities directed to the fulfillment of RAB goals and objectives. The award is designed to recognize

substantive projects or achievements of a relatively short nature, usually one to three years, that leave an undeniable imprint on the fabric of regional operations.

IEEE Expands Continuing Education Options for Members

By Dr. Saj Durrani

In today's competitive environment, it is essential for engineers to stay current and enhance their educational capabilities by continuously learning new skills. IEEE Societies have traditionally recognized these needs by offering tutorials at their conferences, and by providing distinguished lecturers to their chapters. Recently, the IEEE Educational Activities Board (EAB), under the leadership of Dr. Moshe Kam of Drexel University, has initiated several additional programs.

EAB has also established Societies and Sections Outreach Committees (thus named SOOC and SEOC) to interact with other entities and meet the continuing education needs of IEEE members. As a member of SOOC, I attended the joint meeting of these committees in Newark, N.J. on May 12 and 13. The following are six of the many projects sponsored by EAB and various societies that

were discussed in the meeting.

Part of this write-up is based on my article published in a recent issue of the IEEE Aerospace and Electronic Systems Magazine, which you may have seen already. You are encouraged to go to the IEEE website for more information on these programs.

IEEE Expert NOW Program

Under this EAB-led program, previously called XELL, subject matter experts chosen by societies develop hour-long tutorials for online presentation. About 40 such modules are available now, with the help of a contractor firm. (See story, p. 7.) Contact Marilyn Catis at IEEE headquarters (mg.catis@ieee.org) for more information.

Additional Online Courses

Some societies, including the Aerospace and Electronic Systems Society (AESS), plan to develop a few more online courses independently, instead of using a contractor. The topics will be chosen after receiving feedback

from chapters, and the courses will be available to all members at nominal cost. We will also try to persuade some universities or companies to let us use their studios to develop the courses free of charge or at nominal cost. Your help in persuading an entity to do this would be extremely valuable. Please contact me if you wish to suggest a topic or have some influence with local organizers.

Education Partners Program

IEEE has contracted with several universities and companies to let our members access additional educational material online. For information about the topics and costs, contact Celeste Torres at IEEE headquarters (c.torres@ieee.org). Several graduate level programs are included.

Visit www.ieee.org/web/education/partners/edupartners.html for a detailed list of partners.

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Editorial Policies and Procedures

Calendar Items and Announcements

Please submit calendar items in the format used in the Calendar of Events. You can send email to ncac-scanner@ieee.org. If possible, include a synopsis of the event and a biographical sketch of the presenter including academic background, current position, notable achievements, and IEEE and other professional affiliations.

Other contributions, such as reports on chapter events and other member activities, reviews of books by or of interest to members, are most welcome. Please submit them to the managing editor, electronically if possible, at ncac-scanner@ieee.org.

On the Web

eSCANNER Calendar of Events

The calendar is available at www.ieee.org/escanner. Check here for events submitted too late for print publication.

IEEE National Capital Area Virtual Community

Exchange ideas and participate in discussions with local IEEE members at www.ieee-communities.org/nca.

Advertising

Contact the advertising manager about ad rates and to place advertising orders. Ads must be submitted by the deadline below.

Deadlines

The editor reserves the right to set policies and procedures necessary to provide members with a newsletter that is informative and timely. Deadlines must be strictly adhered to keep the publication on schedule. If you are planning an event and have insufficient information by the deadline, please contact the managing editor.

The deadline for the upcoming issue will always be published on this page.

The deadline for the September-October issue is August 1, 2006

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CALENDAR OF *events*

Tuesday, July 4, 2006

There will be no meeting of the Washington Section Administrative Committee in July.

Wednesday, July 12, 2006

Northern Virginia Section Administrative Committee Meeting

Time: 6:30 pm
Place: Wickers Cafe, Tysons Corner Holiday Inn, 1960 Chain Bridge Road, McLean, VA
Directions: From I-495 or I-66, take Route 267 West. Exit at Route 123 West (Chain Bridge Road). Turn right on International Drive, then left on Greensboro Drive. Look for the Holiday Inn entrance on the left. Free parking.
More Info: All interested IEEE members are invited to attend.
Contact: Debra Meale at 703-492-0047 or nca-admin@ieee.org. Please include the term IEEE in the subject line of your email.

Sunday, July 16, 2006

Annual IEEE Northern Virginia Section Picnic

Sponsor: Northern Virginia Section, Graduates of the Last Decade, Women in Engineering, Communications Society
Place: Lake Fairfax, Reston, VA
Time: 12:00 noon to 4:00 pm
Directions: From the Beltway, take exit 47A (Route 7, Leesburg Pike) to Baron Cameron

Avenue. Turn left on Baron Cameron Avenue and take the second left onto Lake Fairfax Drive. Follow the signs to the picnic.

More Info: All section members (including student members) and their guests (including children) are invited. There is no charge. Hot dogs, hamburgers, and vegetarian burgers will be grilled, and cold sodas will also be provided. Optionally, a food item such as a dessert, or an outdoor game, would be appreciated. Please no alcohol.
Contact: In order that we may plan appropriately, please RSVP to Chuck Baldi at cbaldi@ieee.org or Syed Ahmed at syed.f.ahmed@ieee.org.

Tuesday, July 25, 2006

◆ Military Communications From Vietnam to Iraq: Issues and Challenges

Sponsors: Communications Society, Northern Virginia and Washington Chapters; Women in Engineering
Speaker: Maj. Gen. Charles G. Suttan, Jr., U.S. Army (Ret.)
Time: Dinner 6:00 pm; speaker 6:45 pm
Place: Mitre Corporation, Conference Auditorium, Building 1 (back entrance), 7525 Colshire Drive, McLean, VA
Directions: See www.mitre.org/about/locations/mitre1_map.html.
More Info: See Diamond story, below.
Cost: Free for IEEE members.
Contract: Please RSVP to Fred Seelig at fred.seelig@ieee.org.

Tuesday, August 1, 2006

Washington Section Administrative Committee Meeting

Time: Dinner at 6:00 pm; meeting at 6:30 pm
Place: Allie's American Grill, Bethesda Marriott, 5151 Pooks Hill Rd., Bethesda, MD
Directions: From the north, take I-270 south to Route 355 and exit at Wisconsin Ave. From I-495, take exit 34 (Wisconsin Ave.) to Pooks Hill Rd. Validated parking.
More Info: All interested IEEE members are welcome to attend.
Contact: Debra Meale at 703-492-0047 or nca-admin@ieee.org. Please include the term IEEE in the subject line of your email.

Wednesday, August 9, 2006

There will be no meeting of the Northern Virginia Section Administrative Committee in August.

A Salute to John Margosian

We wish our active member John Margosian a happy 90th birthday. Active in the Microwave Theory and Techniques Society and the Life Member Affinity Group, he has represented the IEEE at job fairs for years. He turned 90 on June 13th. If only more members were as involved as John!

Letter

Dear Editor:

In the article on the BP Solar Facility Tour (May-June 2006 *Scanner*), the statement appears, "After a payback period, the electrical energy delivered by a PV [photovoltaic] system is free." This statement is erroneous. The maintenance costs of a PV system, like those of any power system, are a continuing expense; the magnitude of these costs is unknown. In addition to maintenance of the PV equipment, there will be maintenance of the facilities needed to convert the DC output of the PV generator to AC for transmission to the power delivery system. What solar energy replaces is the primary energy now provided by fossil or other sources. Although sunlight energy is free, standby energy sources must be provided for use when sunlight is unavailable; the cost of such sources may not be negligible. Solar energy research should certainly be encouraged, but the entire electric energy infrastructure must be considered in a discussion of costs.

Norton Savage, P.E.
 Retired Life Member, IEEE

◆◆ DIAMOND STORY ◆◆

Tuesday, July 25, 2006

Military Communications From Vietnam to Iraq: Issues and Challenges

Military communications have evolved considerably over the last 45 years. During some periods of that 45 years, the state of technology and the equipment in the hands of soldiers, sailors, airmen and marines satisfactorily supported the war fighters in the conduct of operations. During other periods, the match between the technology and equipment available did not meet the challenges of supporting operational commanders. The purpose of this talk is to examine this evolution of military communications with the objective of identifying potential areas of research or engineering development to solve outstanding problems. The talk will focus primarily on the employment of ground forces and the ability of all sources of communications to support those forces at the strategic, operational and tactical levels of war.

Maj. Gen. Charles G. Suttan, Jr. has more than 38 years of experience in the field of information technology (IT), commanding and leading large organizations in the U.S. Army, the Department of Defense, and the IT professional services industry. He possesses operational experience and knowl-

edge of the doctrine and operational concepts for C4ISR systems from the Airborne Infantry Battalion level to the Joint and Combined level on a worldwide basis.

Gen. Suttan served as a presidential trip officer in the White House Communications Agency, as the senior Signal Officer and Theater Signal Commander for Army Central Command during Desert Shield and Desert Storm, as the Theater Signal Commander and CIO for the United States Army in Europe for four years following the fall of the Berlin Wall, and as the Commanding General of the Army Signal Command supporting all Army Component Commanders and the regional COCOMs on a worldwide basis.

After retirement from the Army, he managed a \$100M a year professional services business unit specializing in large-scale systems integration. In 2004, he retired a second time and currently is an adjunct research staff member at the Institute for Defense Analyses in the area of operational testing of C4 ground systems. He has been a member of the IEEE Communications Society since 1977 when he was an assistant professor of electrical engineering at West Point. He holds an M.S.E.E. from Stanford University, an M.B.A. from Long Island University, and a B.S. from West Point.

Accomplishments Celebrated at 2006 NCA Awards Banquet

A rainy night didn't dampen the enthusiasm at the National Capital Area Annual Awards Banquet, which was hosted by the Washington Section at the Rockville Doubletree Hotel on Saturday, April 22. Members and guests of the Northern Virginia and Washington Sections of the IEEE gathered to recognize the individuals and organizations who made the sections' achievements of the past year possible.

In addition to the awards presented to section volunteers, the newly-elected IEEE Fellows from the National Capital Area were recognized for their accomplishments. The IEEE winners from high-school science fairs received awards and cash prizes, and some of their prize-winning exhibits were on display.

The following are the 2006 award recipients:

Washington Section Awards

Administrative Award – **Kiki Ikossi** in recognition of dedicated service as 2005 Treasurer.

Administrative Award – **Richard Benjamin** in recognition of dedicated service as 2005 Secretary.

Chapter Chair of the Year – **Michael Gilliom** in recognition of leadership and dedicated service to the Control Systems Society Chapter.

Volunteer of the Year – **Harry Sauberman** for dedicated and distinguished service to the Washington Section.

Friend of IEEE Washington Section – **Fairchild Controls Corporation** for active support of the Washington Section, particularly Control Systems Society activities.

Capitol College Student Branch President – **Scott Porter**.

Catholic University of America Student Branch President – **Neil Smith**.

George Washington University Stu-



Ron Ticker (left), 2005 chair of the Washington Section, presents the section's Volunteer of the Year Award to Harry Sauberman.

dent Branch President – **Joyce Ng**.

Howard University Student Branch President – **Tiffany Crawford**.

University of District of Columbia Student Branch President – **Abdel-Aziz Bassabi**.

University of Maryland Student Branch President – **Josh Yeager**.

Montgomery County Science Fair – **John Silberholtz** – **First Place** – "The Application of Novel Improvements in Genetic Algorithms to Generalized Traveling Salesman Problem Heuristics."

Prince George's County Area Science Fair – **Jay Carson and Eletha Flores** – **First Place** – "Self Healing Struts."

Past Chair of the Washington Section – **Ron Ticker** in recognition and appreciation for distinguished service and outstanding leadership.

Northern Virginia Awards

Administrative Award – **Syed F. Ahmed** in recognition of dedicated

service as 2005 Treasurer.

Administrative Award – **Charles Sisung** in recognition of dedicated service as 2005 Secretary.

Volunteer of the Year – **Monica Mallini** for dedicated and distinguished service to the Northern Virginia Section.

Outstanding Chapter – **Computer Society Chapter** for providing an excellent speaker program and events for the Chapter members.

Friend of IEEE Northern Virginia Section – **Boeing** for support of Northern Virginia Section activities.

Sustaining Friend of IEEE Northern Virginia Section – **KEMA, Inc.** for sponsoring Power Engineering Society Chapter meetings.

Sustaining Friend of IEEE Northern Virginia Section – **Oracle Corporation** for hosting Northern Virginia Section events.

Sustaining Friend of IEEE Northern Virginia Section – **Virginia Tech Advanced Research Institute** for support of Northern Virginia Section activities and events.

Past Chair – **Charles Baldi** of Graduates of Last Decade Affinity Group.

George Mason University Student Branch President – **Bharat Sankaran**.

DeVry University Student Branch President – **Aubrey Humphrey**.

Fairfax County Regional Science and Engineering Fair – **Winston Yan** – **First Place** – "Sensitivity of 1/f Noise to Chemical Constituents."

Northern Virginia Regional Science and Engineering Fair – **William Dunlap** – **First Place** – "Wi-Fi and the Effect of Material Barriers."

Prince William – Manassas Regional Science Fair – **Robert Ford** – **First Place** – "Driven to Distraction 2.0."

Loudon County Regional Science and Engineering Fair – **Nathaniel Case** – **First Place** – "A Resonance Wave Tank Design that Enables Low

Cost Prototype Testing of Oscillating Wave Generators."

Past Chair of Northern Virginia Section – **Murty Polavarapu** in recognition and appreciation for distinguished service and outstanding leadership.

Joint Awards

Scanner Team – **Peter Sypher, Tim Weil, Kerry Hartman, Elsie Grant, Robb Rourke and Rex Klopfenstein**.

Past Chair – **Amarjeet Basra** of Industry Applications Society Chapter.

Past Chair – **Sirak Belayneh** of Power Engineering Society Chapter.

Past Chair – **Michael Cardinale** of Society for Social Implications of Technology Chapter.

Past Chair – **John Margosian** of Life Members Affinity Group.

Past Chair – **Sai Chiang** of National Capital Area Consultants' Network.

Special Awards

Dedicated Service Award – **Jerome Gibbon** for his leadership and distinguished service to IEEE, Region 2 and the Washington Section.

James F. Strother Meritorious Service Award – **Marc Apter** for his leadership and distinguished service to IEEE, Region 2 and the Northern Virginia Section.

IEEE Regional Activities Board Achievement Award – **Murty Polavarapu** for outstanding contributions promoting IEEE to college and pre-college students within the IEEE Northern Virginia Section. (See story, p. 1)

2006 IEEE Fellows

Paul Bernhardt – for contributions to artificial modification of space plasmas with high power radio waves.

Charles Holland – for leadership in computational science and engineering.

Luis Kun – for contributions to health care information infrastructure.

Charles Luther – for leadership in microwave remote sensing.

Armand Makowski – for contributions to traffic modeling and performance evaluation in communication and computer networks.

James Moore – for leadership in software engineering standardization and contributions to the codification of software engineering.

David Seiler – for leadership in the development of critical metrology and measurement science at the micro and nano levels.

Usha Varshney – for technical leadership in sensor technologies and systems.

Gerald Witt – for the promotion of research in compound semiconductor devices.



Murty Polavarapu, 2005 chair of the Northern Virginia Section, congratulates the section's Volunteer of the Year, Monica Mallini.

Photovoltaic Economics Depend on System Design, Incentives, Pricing

By Monica A. Mallini, P.E.

The IEEE members who attended a tour of the BP Solar plant in Frederick, Maryland last fall learned about the state of the solar energy industry, including current and future photovoltaic (PV) technology, from BP Solar hosts Bill Poulin and Jean Posbic. An article in the May-June *Scanner* presented an overview of the subject and delved into Mr. Posbic's solar PV primer. This article focuses on solar PV economics.

Why solar PV? The benefits include peak load reduction, which offsets the need for utilities to run expensive gas-fired peaking units. Reduced grid congestion is particularly important in large metropolitan areas, like Washington and Northern Virginia, where locating additional transmission and distribution resources is both expensive and either very difficult or impossible. Other benefits to owners and society include reduced energy price volatility, enhanced security and reliability (especially on the consumer side), increased protection of critical infrastructure, and improved air quality. The limiting factor of the technol-

ogy is its high initial cost, as compared to conventional energy sources.

Photovoltaic systems can be designed for a variety of applications, and a well-designed system has a long service life with relatively low maintenance requirements. As a general rule, each kilowatt of peak installed capacity requires a surface area of 8 to 12 square meters, a considerable amount of rooftop real estate. A 3 kW roof array can easily cost \$24,000 and it generates about 4.5 MWh per year, a third of the annual electricity consumption of a typical single family household. When this cost is amortized over 15 years (at 5 percent interest), the PV energy produced averages 30 cents per kWh over a 25-year life.

A solar PV module, consisting of a sealed package of individual quality-matched solar cells electrically configured to reach desired voltage and current, can achieve practical efficiency up to about 15 percent, with a theoretical maximum of 30 percent. Efficiency dictates performance of the system and helps determine whether the investment is attractive. An efficiency improvement from 15 percent to 16 percent, due to advances in

the technology, will reduce the average lifetime cost of energy for our hypothetical system from 30 cents to 28 cents per kWh. These modules are the building blocks of a complete PV power system, which may also include a DC-AC inverter, batteries, system controllers, power conditioning equipment, and balance of system wiring and hardware.

The exact configuration depends on the specific requirements of an installation. The simplest configuration, a direct-coupled system, supplies a load that operates only during sunlight hours, such as circulation pumps for a solar thermal heating system. In this case, there is no need for energy storage or DC-AC inversion, and system design is focused on impedance matching. A grid-independent stand-alone system depends on a properly sized battery bank as a critical component and must manage system loads carefully. A PV system that sells power back to the utility may omit batteries and use the interconnected power grid to replace energy storage and supply backup power needs.

Many states encourage or require utilities to implement "net metering,"

the single-meter tracking of electricity sales between a customer and the utility. The meter can spin in either direction, and the customer is billed only for net electricity consumed. This is advantageous to the customer because it guarantees that excess energy can be sold to the utility for the full retail price.

Some states and countries are willing to encourage PV adoption with incentives. California, New Jersey and New York are leaders in incentive programs in the United States. New Jersey offers a rebate of \$5.30 per watt of installed capacity. With this incentive, the same hypothetical 3 kW system will produce energy for the owner at a cost of only 10 cents per kWh. Japan, with 1 GW of grid connected solar PV, has provided an incentive for rooftop PV installations for several years with a 20 percent rebate. Germany takes a different approach. An earlier program of interest-free loans has been sweetened with more substantial payments for energy produced. German PV owners may sell all the PV energy produced for 20 years for 60 cents (and up) per kWh. German installations use two kilowatt-hour meters, one to record the owner's electricity consumption, and a separate meter to track PV energy sold back to the grid. As a result of its incentive program, Germany has catapulted to first place in worldwide installed PV capacity. A 60-cent purchase incentive will roughly pay for the amortized cost of the 3 kW example system and the energy to replace what is sold back to the grid for 15 years, resulting in a zero net cost of the system and the energy it produces. After the 15-year loan is paid off, the owner will make a profit of more than \$2,000 per year until the incentive ends.

A second type of phenomenon also contributes to PV adoption. Half of the states have adopted renewable portfolio standards (RPS), flexible, market-driven policies designed to encourage the use of renewable energy. Typically, electricity retailers are required to demonstrate that they have provided or sponsored an amount of renewable energy generation equivalent to some percentage of their sales. California's aggressive RPS mandates 20 percent renewable energy by 2017. Compliance is proven through the ownership of renewable energy credits, tradable certificates of proof that are a separate commodity from the energy itself. An electricity retailer or generator may invest in renewable energy projects, and these projects will generate credits that can satisfy that generator's compliance or be traded on the renewable energy credits market. Alternatively, the retailer may choose to purchase some or all of the necessary credits



BP Solar Tour—An informative tour of the BP Solar facility in Frederick, Maryland, followed by lunch at a local restaurant, provided the impetus for new friendships between IEEE members with common interests in the renewable energy field. The 200 kW peak solar photovoltaic array visible in the photo was installed in 1982 and allowed the plant to disconnect from the grid and run entirely off self-generated solar energy for five years. Today, the plant's energy demand is a thousand times greater than the array capacity.

PHOTOVOLTAIC ECONOMICS
continues on page 6



The Next Generation—DeVry University students (left to right) Ryan Niles; Lin Zheng, vice president of the IEEE Student Branch; and Aubrey Humphrey, president, share a moment at the IEEE NCA Annual Awards Banquet in April.

PHOTOVOLTAIC ECONOMICS

continued from page 5

from projects that it does not own. Individual PV owners may sell their credits individually or enroll as members of a PV registry, aggregating their credits with other PV owners. The going rate for PV credits is dictated by the market, but a typical price may be around \$100 per MWh, a nice bonus for residential PV owners. If the PV market eventually becomes saturated, the market price of credits will naturally fall toward zero, and RPS programs will have satisfied their objectives.

Green pricing programs have also driven increased demand for PV energy. When given a choice to pay a premium price for electricity that includes

a stated percentage of renewable energy in the mix of resources, many residential and corporate customers will opt to use "green energy" as a marketing strategy, or simply because it's the right thing to do. It has been demonstrated that enough people are willing to pay premium prices for green energy to make it profitable for power companies to buy kilowatt-hours from rooftop and commercial PV owners for attractive prices.

With efficiency improvements at the module level, ramp-up of polycrystalline silicon production capacity, planned development-scale PV system installations, and growth of state incentive programs, PV will make sense for more homeowners and businesses. When "grid parity" is eventually achieved, forecast growth in the U.S. solar industry is estimated to exceed \$6 billion per year.

According to Mr. Posbic, one of the most commonly asked questions about photovoltaic technology is why it makes sense to lose money by paying more for PV energy than the retail cost of electricity. To answer, he offered three observations. First, the 10 cents per kWh that we see on our electric bills is not an accurate reflection of the cost of energy. Next, all energy costs are not equal. PV is not in competition with base loaded units; PV displaces gas fired peaking units, which are expensive to build and expensive to operate. Finally, the utility stands to save money by avoiding the capital cost of expansion when it can purchase electricity from the consumer, even above retail electricity rates.

The BP Solar tour was sponsored by the Washington and Northern Virginia chapter of the Nuclear and Plasma Sciences Society.

Monica Mallini is chair of the Industry Applications Society, Washington and Northern Virginia Chapter.

Professional Communication Society Chapter Petition is Being Circulated

The IEEE Professional Communication Society (PCS) is starting a new chapter for members in the Northern Virginia, Washington, and Baltimore sections.

A chapter formation petition is circulating, and signatures are needed from PCS members in all three sections. To sign the petition, please contact Monica Mallini at m.a.mallini@ieee.org or

Wally Lee at w.h.lee@ieee.org.

If you are not a member of PCS, please consider joining and participating in the new chapter as a charter member. Mid-year dues are in effect, so you can join now for only \$15.

This is a wonderful opportunity to benefit from interesting programs and networking opportunities. An active PCS chapter is like having a Member Professional Awareness Conference (M-PAC) every month!

Life Members Share Feynman Stories

The Life Members Affinity Group met on April 5 at the Dolley Madison Library in McLean, Virginia to hear John Boghosian, a retired physicist, describe his experience as a student of Dr. Richard Feynman.

While working at Hughes Aircraft, Boghosian attended an 18-month course in mathematical physics taught by Feynman. Several members in attendance also knew Feynman, and following the presentation, they shared some interesting stories about this fascinating man.

Feynman, who died in 1988, was a Manhattan Project scientist, a professor at the California Institute of Technology, and a Nobel Laureate. While serving on the presidential commission that investigated the 1986 explosion of the Space Shuttle Challenger, he captured the public's attention by using a glass of ice water to stage a visual demonstration of the O-ring failure.

New Senior Members

Congratulations to the following new Senior Members:

Michael Ackerman (W)
Sid Ahmed Boukabara (W)
Dennis Caffi (NV)
Monica Carley (NV)
Marc Currie (W)
Barbara Kenny (NV)
Qiang Lu (NV)
Lijun Ma (W)
Barry Shender (W)
Guohui Yuan (W)

If you are interested in becoming a Senior Member, please consult www.ieee.org/seniormember for qualification requirements. For help with references, contact Michael Cardinale at cardinal@ieee.org for Northern Virginia (NV) Section members, or Howard Needham at howardn@ieee.org for Washington (W) Section members.

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The Expert Now modules are currently available only as a bundle to corporations, for a fee which depends on the number of employees who will access the modules online. However, the Educational Activities Board (EAB) is considering a change of policy, which would allow individual IEEE members to access specific modules for a fee of about \$70 per module. Currently, members can sample certain modules free of cost, by following the procedures described on the website.

For additional information on Expert Now course offerings and free trials for members, www.ieee.org/web/education/home/index.html.

This information in this story came from Institute Online, with contributions by Dave Booth and Saj Durrani.

Conference to Focus on Critical Infrastructures

The joint chapters of the Industry Applications Society and Power Engineering Society are helping sponsor the Third International Conference on Critical Infrastructures (CRIS 2006), to be held September 25 to 27, 2006 in Alexandria, Virginia.

The primary sponsor of the conference is the CRIS Institute, an international association formed in January 2001 to help develop the knowledge necessary to increase the dependability of critical infrastructures.

The conference will present innovative papers dealing with critical infrastructures – in particular electric power networks, communication networks, and computer networks. Their interdependence and recent technical advances in integrating the infrastructures for improved operation, robustness, and security are of particular interest. A list of the papers for each session and their synopsis is available at the conference website.

Sessions planned for the conference include

modeling of critical infrastructure interdependencies; infrastructure security assessment; communication infrastructure; response to catastrophic failures; wide area measurements and their applications; and enhanced use of distributed or alternative energy.

The conference will be held in the Hilton Hotel, in Old Town Alexandria, Virginia. Early registration is June 15 to August 1. For more information, please visit the conference website at www.cris2006.com.

Oceanic Engineering Society

James Barbera, former chair of the Washington and Northern Virginia chapter of the Oceanic Engineering Society, is now president of the Society. Mike Goldberg is the new chair of the local chapter. Plans for a chapter meeting on ocean policy are underway. Check the eScanner website for details.



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GLOBECOM 2007

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Currently there are 10 subcommittees working in diverse areas, including the technical program, publications, marketing, patronage, and a telecommunications business forum. The leadership team involves Communications Society members and IEEE volunteers from prominent area firms and local universities. Lucent Bell Labs is in the forefront of local businesses, having donated meeting space for planning, technical committee chairs and speakers for next year's event. Coordinating efforts also involve staff from the Communications Society's headquarters in New York, who specialize in meeting management and work with the annual GlobeCom event.

GlobeCom is one of the IEEE Communications Society's flagship conferences, with full programs of technical and professional activities spanning the entire range of hot topics in voice, data, image, quality of service, home networking, signal processing, wireless, optical and multimedia communications.

Organizing efforts for GlobeCom 2007 have been ongoing since 2004 when the Northern Virginia, Washington and Baltimore sections won

their joint bid to host the conference, which is held in a different city each year (see the March-April 2004 *Scanner*, page 1). The winning proposal was presented to the national selection committee by Doug Holly, Fred Seelig and Dr. William Wu, who is the general chair of GlobeCom 2007.

Some of the largest companies in the communications industry are headquartered in the Washington-Baltimore region, and the area has a rich history of hosting Communications Society meetings, including the upcoming Conference on Sensor, Mesh, and Ad Hoc Communications and Networks (SECON) in late September.

For more information on GlobeCom 2007 activities and volunteer opportunities, please contact a member of the planning committee: Doug Holly (dougholly@ieee.org), Fred Seelig (fred.seelig@ieee.org), Dennis Moen (dennis.moen@ieee.org) or Jerry Gibbon (j.t.Gibbon@ieee.org).

This article is the first in a series of Scanner stories following the work of the organizing committee and helping build local participation in this important event.

CONTINUING EDUCATION

continued from page 1

MOAs with Federally Funded R&D Centers and Industry

As a parallel effort similar to the Education Partners Program, Robert O'Donnell, AESS associate vice president for education, has negotiated an agreement with Lincoln Labs, which allows us to use radar courses developed by the laboratory free of charge. These will be available when some administrative details have been worked out. AESS is also trying to establish Memoranda of Agreement (MOAs) with certain major firms, which would allow our members to access advanced technical material generated by them. Jim Leonard, current AESS President, pioneered this effort by developing an MOA with Boeing, where he works. I assume other societies are conducting similar efforts.

Distinguished Lectures/Tutorial Programs (DL/TP)

This is a new program of the AESS initiated by me, which was approved by its Board of Governors in April 2006. The program combines some features of our Distinguished Lecturers Program (DLP)

and the tutorials offered at various conferences. Since the conferences are held only in major cities, many of our members cannot benefit from them. Under the Distinguished Tutorial Program (DTP), a section will be able to invite one of our Distinguished Instructors (DIs) to give a one-day tutorial at no cost to the section. The AESS will pay the DI's travel costs and an honorarium, while the section will only have to take care of local arrangements. Tutorials are currently available on automated testing, design of small satellites for education, digital avionics, GPS, navigation, radar technology, and systems. Additional topics will be chosen depending on the demand and on the availability of DIs.

Efforts at the Local Level

In closing, I urge all members to speak to your chapter and section officers about your continuing education needs, and also contact me (s.durrani@ieee.org) if you have any suggestions on how we can better serve you.

Saj Durrani is AESS's Vice President for Education.

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