



Chairperson's Message by Santo Mazzola, chairman@IEEE.LI

Summer is over and by the time you read this we will officially be into the fall. It seems like our whole mindset changes when we go from summer to fall. I think that is the beauty of living in a region where we truly experience all four seasons. The change of seasons reinforces a good life motto that "change is constant." We must always adjust and cope with the reality of life, that "nothing stays the same."

At the recent **Region 1 Summer** meeting we were notified of this year's Region 1 Award winners. This year the Long Island Section won 8 awards; the most of any section in Region 1. I am really excited to congratulate the following **Long Island Section Region 1 Award Winners** who will receive their awards at our **Awards Banquet** to be held on **April 8th, 2010** at the **Hyatt Regency, Long Island**:

- **Kenneth C. Baron** – For Optimization of Battle-Space Image Processing for Dual Use Data Compression and Automatic Focus
- **Nikolaos Golas** - For Outstanding Service to the IEEE Long Island Section by Single-handedly Starting a Chapter of the Instrumentation and Measurement Society and for Selflessly Undertaking Many Other Section Tasks
- **Niel F Miele** - For Overall Managerial Excellence in Organization, Leadership, Design and Development Within an Engineering Organization
- **Ronald Pirich** - For Contributions to Aerospace Technology and the Modeling of Electromagnetic Effects of Systems Integration
- **Brian J. Quinn** - For Outstanding Contributions to the IEEE Long Island Section and its LISAT Conference while Serving as Treasurer
- **Richard Ronde** - For Managerial Leadership in the Development of Antennas, and Facilitating Borderless Operations Amongst BAE Systems, Sanders, and Wheeler-Hazeltine Legacy Antenna Technology Groups
- **Michael Schreiber** - For Outstanding Contributions to the Development of Advanced Waveform Generators for Identification Friend or Foe (IFF) Systems
- **David Sterner** - For Contributions to the Profession through Exemplary Service as the Long Island Section Pulse Newsletter Chair

All of the winners are to be heartily congratulated. I also wish to congratulate Jesse Taub, the Long Island Section Awards Committee chairman and his trusted Awards Committee for their excellent work. Jesse and his committee are again looking for LI award nominations. If you know of any deserving members doing excellent work please nominate them. Go to <http://www.IEEE.LI/awards/> for details.

Here at the Long Island Section we are also excited about Christina Nickolas, who is having the first Long Island Section Women In Engineering affinity group meeting on Tuesday October 26, 2009. There are more details inside this issue of the Pulse, please support Christina to make this meeting a success.

In closing, when discussing change, we usually resist change, we need to learn to embrace change and let it make us better. .

Best Regards,

Santo (Sandy) Mazzola, Chair IEEE Long Island Section
chairman@IEEE.LI

CALENDAR OF IEEE EVENTS

OCTOBER 2009

- 1** **Center of Excellence in Wireless & Information Technology (CEWIT) Conference**
Location: Marriott Islandia, Islandia, LI.
- 6** **Women in Engineering Society Meeting**
Topic: *Benefits of WIE Membership*
Speaker: **Christina Nickolas**
Location: Telephonics, Farmingdale, LI
Dinner 6:00 PM, Lecture 6:30 PM
- 7** **Long Island Consultants Network Meeting**
Topic: *How to use PowerPoint in Your Presentations*
Speaker: **Murray Kleiner**
Location: The Great Room, Briarcliffe College, Bethpage, LI
Time: 7:00 PM
- 26** **ExCom Meeting**
Location: Telephonics, Farmingdale, LI
Dinner 5:45 PM, Meeting 6:15 PM
- 29** **Circuits and Systems Society Meeting**
Topic: *Power Over the Ethernet (POE)*
Speaker: **Morty Eisen**
Location: BAE Systems, Greenlawn, LI
Refreshments 6:00 PM,
Lecture 6:30 PM
- 21** **ExCom Meeting**
Location: Telephonics, Farmingdale, LI
Dinner 5:45 PM, Meeting 6:15 PM
- 29** **Computer Society Meeting**
Topic: *Estimating Effort and Duration of Software Projects*
Speaker: **Pierre Bourque**
Location: Telephonics, Farmingdale, LI
Dinner 6:00 PM, Lecture 6:30 PM

NOVEMBER 2009

- 4** **Long Island Consultants Network Meeting**
Topic: *TBA* Speaker: **TBA**
Location: The Great Room, Briarcliffe College, Bethpage, LI
Time: 7:00 PM
- 30** **ExCom Meeting**
Location: Telephonics, Farmingdale, LI
Dinner 5:45 PM, Meeting 6:15 PM

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THE PULSE OF LONG ISLAND

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LET US HEAR FROM YOU

The PULSE encourages letters to the editor. Members of the IEEE Long Island Section are encouraged to write in about Pulse articles or about other topics of interest to Long Island engineers. While the IEEE Long Island Section greatly appreciates feedback, we cannot guarantee that all letters will be answered or published. Please direct comments to pulse@IEEE.LI or to a Section officer.

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Long Island Systems, Applications, and Technology (LISAT) Conference has Another Successful Year

by Dave Mesecher, LISAT 2010 General Chair

The **Long Island Systems, Applications, and Technologies (LISAT) Conference** once again successfully showcased technology being developed on Long Island. In its fifth year, **LISAT** continues to draw support and participation from local business, academia, and IEEE volunteers. The annual technical conference, which is run by the **Long Island Section of the Institute of Electrical and Electronics Engineers (IEEE)** and supported by **IEEE Region 1**, enjoyed its most well-attended year so far, with over 150 registrants.



Attendees register for LISAT conference

As in all previous years **LISAT** took place on the first Friday of May, graciously hosted once again on the campus of **SUNY Farmingdale College**, receiving tremendous and much-appreciated assistance from its faculty, staff, and students.



Exhibitors field questions in the LISAT Exhibits Hall

This year's conference featured a technical program consisting of four parallel tracks. Two of these tracks provided technical presentations by local technologist and technology students in various topics in systems, applications, and technologies. The third track included a **Continuing Education** session offering 6 hours of CE credit to licensed engineers. New to the conference this year was a fourth track presented by the Project Management Institute that had three lectures on project management applicable to the technology industry.

In addition to the technical program, LISAT held an impressive exhibits program, including exhibitors from industry, academia, and professional societies. There was even a **FIRST Robotics** entry demonstration by the local **Walt Whitman High School**. Over 25 exhibitors were represented in the Exhibits Hall.

As has become a proud tradition, LISAT once again offered academic scholarships to technology students of LISAT host, **Farmingdale College**. Five well-deserving Farmingdale scholarship recipients were honored during the opening ceremony of the conference. Also underscoring LISAT commitment to technology education, many of the presenters in the technology track were given by students from local colleges and universities. Moreover, this year, instead of having a separate student track, these student presentations were integrated into the main technical program, providing the students with the full experience of participating in a professional, peer-review, technology conference



SUNY Farmingdale IEEE Student Advisor and LISAT 2009 Facilities Chair, Prof. John Fiorillo, honors the 2009 LISAT scholarship recipients.

LISAT was once again the beneficiary of many financial supporters, including **InterDigital**, a major sponsor from the beginning.

Looking towards its sixth year for another exciting professional conference, LISAT anticipates participation from an even larger number of local technology companies, educational institutions, engineers, scientists, and technology students. LISAT will once again be the guest of SUNY Farmingdale, on May 7, 2010. The Call for Paper is currently in progress. If you are interested participating in this growing local technology conference, visit <http://ewh.ieee.org/conf/lisat/> for further information



Enthusiastic attendees of the Technology Track dialog with speaker

Think you can code?

GET READY for...

IEEE**X**TREME PROGRAMMING COMPETITION^{3.0}

IEEEXtreme is a global 24-hour online contest where IEEE Student Branch teams solve a challenging set of programming problems.

WHO CAN COMPETE?

- Teams of up to three IEEE student or graduate student members from IEEE Student Branches.
- Student Branches can form multiple teams.

WHERE IS THE COMPETITION HELD?

- Student Branches will host the IEEEXtreme event for their local team, and all of the head-to-head competition will happen online.

WHAT IS REQUIRED AT THE VENUE?

- One computer per team with connection to the Internet.
- A proctor, who must be an IEEE Member of higher membership grade. Students cannot serve as proctors.

Takes place on 24 October 2009
For details visit www.ieee.org/xtreme



Help to Form a Chapter for the Society for the Social Implication of Technology (SSIT) on Long Island

by Vic Zourides, Organizer SSIT Chapter



Does technology drive society?

We grew out of the Stone Age with the Bronze Age; the Bronze Age gave way to the Iron Age. Electricity changed everything. Without electricity we might as well be back with George Washington and the time of the birth of America. Yes; Technology drives society. who is responsible for technology?

Certainly curious innovative people driven by a desire to delve into nature's secrets and control nature's possibilities. But what are the consequences? Certainly much good; certainly much uncertainty; certainly much grief. The good speaks for itself, the uncertainty is to be determined, the grief, war (the tools, the impact).

The IMPLICATIONS of technology are complex, ecstatic, troubling. We as engineers are called upon to create/use technology for society (the individual, the corporation, the public, the nation, the globe). We create, design and produce what is necessary. That's the easy part. The hard part is what WE DO NOT DO that?

We do not question, discuss, measure, and calculate the IMPLICATIONS. The Society for the Social Implication of Technology (SSIT) of the IEEE attempts to do what almost all of us do not do. Here are some of the scopes and issues that the Society covers:

- Health and safety implications of technology
- Engineering ethics and professional responsibility
- Engineering education in social implications of technology
- History of electrotechnology
- Technical expertise and public policy
- Social issues related to energy
- Social issues related to information technology
- Social issues related to telecommunications
- Systems analysis in public policy decisions
- Economic issues related to technology
- Peace technology
- Environmental implications of technology

That is why it is so important that each and every IEEE member become a member of this particular society. Join and start on this difficult road.

The Long Island Section is endeavoring to form a Chapter of the SSIT.

Twelve members are required. At present there are only 12 members on Long Island. We do not have all the required signatures, as of yet. But even if we did and we presently were able to form a Chapter, with only 12 members the situation is rather untenable. In addition, as stated above, every IEEE member should also belong to the SSIT.

There are two (2) ways to join;

1. Add the IEEE SSIT to your IEEE membership at:
http://www.ieee.org/go/SIT_add
You will need an IEEE User Name and a Password.
2. Supply the information below and send mail with payment to the indicated address:

() I am a member to IEEE and want to become a member of SSIT (\$26)

Include IEEE membership number _____.

Please supply the following information

Name: _____ Title: _____

Company or University: _____

Address/ City/State/Zip/Phone/Fax: _____

Signature: _____ Date: _____

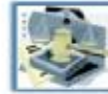
Enclose payment and send to:

IEEE Service Center

Cash Processing

445 Hoes Lane, Piscataway, NJ 08855

If you have any questions please contact Vic Zourides at 631-491-6638



LEGAL AFFAIRS

by Steve Rubin, Legal Affairs Chairman

Bilski Update: The briefs in the Bilski case have generally all been filed before the Supreme Court. (Bilski is the case relating to what types of processes are worthy of patent protection). One of the IEEE's members started drafting an amicus (friend of the court) brief advocating a particular position. He explained his position to the IEEE-USA Intellectual Property Law Committee. We felt his approach would benefit IEEE members and so we decided, with his consent, to assist him in drafting his brief.

We also requested an emergency meeting of the IEEE-USA board requesting that they empower us with the authority to co-sign the brief on behalf of IEEE-USA. This posed an interesting time dilemma. The brief was still being written and edited. Yet, the board requires notice to set up meetings. Further, the meeting scheduled was before the brief was finalized. So, we generated a list of bullet points on what we understood the brief would cover and expressed them to the board. The major issue was how the brief and Supreme Court ruling could affect IEEE members.

We felt that the positions in the brief would provide the most potential benefit to all members. In the special meeting, the board provided us with the authority to endorse the brief with the IEEE-USA name assuming the final product corresponded to the bullet points. The brief continued to be drafted and eventually yielded a great product. If you are interested I posted a copy of the brief on the legal affairs page at:

<http://www.ieee.li/legal/>

I also authored an article for the IEEE-USA discussing some of the complexities involved in trying to articulate the appropriate test what processes should be patentable. It is a more detailed version of some of the issues I've shared in this column. The article is available at:

<http://www.todaysengineer.org/2009/Sep/Bilski.asp>

Also of interest in the patent world, Microsoft lost a patent case relating to the use of its Word program. The case is not super exciting with regard to changes in patent law. However, what is of interest is that an injunction was granted against the sale of Microsoft Word. That means, a certain time after the injunction order, Microsoft was prohibited from selling that product. Not surprisingly, Microsoft quickly asked for the injunction to be temporarily lifted and for expedited review by the appellate court. Both of these requests were granted. Microsoft will be arguing its case before the appellate court in September.

Steve Rubin rubin@dilworthbarrese.com



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

CEWIT 2009 International Conference on Wireless & Information Technologies

"Wireless and IT Driving Healthcare, Energy and Infrastructure Transformation"

Thursday, October 1, 2009 Conference 8:00 AM - 5:00 PM
Industrial Networking Cocktail Reception 5:00 PM - 7:30 PM

About the Event: The CEWIT 2009 Conference is a one day event organized by the Center of Excellence in Wireless and Information Technology (CEWIT), at Stony Brook University. The conference is the 6th in its technical series and provides a platform for leading academic and business institutions to explore new technologies and their business potential. Over 500 participants from industry, academia and government including the international community are

expected to attend. The program includes four parallel tracks including emerging technologies, healthcare and medical devices, smart infrastructure and other industry solutions including showcasing of IT solutions from participating companies.

Who Should Attend? Wireless and information technology professionals, business development professionals, start-up and emerging companies seeking commercial partnerships, academic collaborations, and

investment, and entrepreneurs and investors looking for new opportunities.

Location: Marriott Long Island, 3635 Express Drive North, Islandia, New York 11749

Registration: Registration is required. Please visit the calendar page of the IEEE Long Island website www.IEEE.LI Click on the registration link and fill out the form.

INDUSTRY NEWS

Telephonics Wins Contract from the Sierra Nevada Corporation for Counter IED Jammer Production

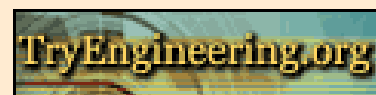
Telephonics Corporation announced that its Electronic Systems Division recently received a subcontract award from the Sierra Nevada Corporation (SNC) for production and support in respect of the Joint Counter Radio Controlled Improvised Explosive Device – Electronic Warfare (JCREW) 3.1 Program; which was awarded to SNC on 5 June 2009.

The initial value of this subcontract is in excess of \$9M with the first system delivery anticipated to be made in the fourth quarter FY 2009.

“This important program comes at the heels of our successful execution of the challenging ramp-up and surge requirements in support of the CREW 2.0 (Duke) mounted jammer effort. Telephonics will leverage the lessons learned in support of SNC to ensure the success of the CREW 3.1 Program.” said Donald Pastor, President of the Electronic Systems Division.

“We are honored to have been selected for this program, particularly since it plays a critical role in keeping the young men and women in our armed forces out of harm’s way.”

Telephonics’ Electronic Systems Division (ESD) is a world leader in Integrated Security Systems and Products for the Homeland Security and Anti-Terrorism Force Protection market. Electronic Systems also specializes in both the Defense and Civil Air Traffic Control markets for advanced automation systems and secondary surveillance radars. ESD is recognized for its superior technology and ability to rapidly integrate sophisticated system solutions by incorporating state-of-the-art hardware and software designs.



The Long Island Chapter of the IEEE Women in Engineering (WIE) Affinity Group is presenting a seminar titled:

Benefits of WIE Membership

Tuesday, October 6, 2009 at 6:00PM

This seminar is free & all are invited. Dinner will be provided

Speaker: Christina Nickolas, Chairperson WIE

Abstract: Christina Nickolas will talk about her involvement in IEEE WIE and the mission and goals of this new affinity group in the Long Island Section.

Volunteer opportunities upcoming IEEE projects and WIE meetings will also be discussed. Find out how WIE is dedicated to important issues for Women Engineers including the development of programs and activities that promote the entry into and retention of women in engineering programs.

WIE recognizes outstanding achievements by women in electrical

and electronics engineering through IEEE Awards nominations. It organizes receptions at major technical conferences to enhance networking and to promote membership in WIE. It advocates women in leadership roles in IEEE governance and career advancement for women in the profession.

It provides assistance with the formation of new WIE Affinity Groups and supports ongoing activities and promotes IEEE Member Grade advancement for women to the grades of Senior Member and Fellow.

Speaker Bio: Christina Nickolas, P.E., graduated from Manhattan College with a BEEE and MSEE

degree. She is currently an Editor for Electronic Products Magazine. Prior to that she was a Staff Engineer at RFI Corp and a Project Engineer at Underwriters Laboratories.

Seminar Coordinator: Christina Nickolas, PE Chair of the IEEE Women in Engineering (WIE) Affinity Group, LI Section.

Location: Telephonics Corporation, 815 Broad Hollow Road, Farmingdale.

Registration: Required. Register by visiting the Calendar page of the IEEE Long Island Section webpage at:

<http://www.IEEE.LI/calendar/>

BAE Systems-Thales Team Demonstrates New Combat ID System That Helps Reduce Friendly-Fire Incidents

BAE Systems, and Thales recently demonstrated the newest version of their jointly developed combat identification system to U.S. Army officials at Aberdeen Proving Ground, Maryland, marking the first time the system was demonstrated with a large, crew-served weapon on a U.S. vehicle.

The new version of the combat identification, or CID, system prevents soldiers operating machine guns on armored High-Mobility Multipurpose Wheeled Vehicles from firing on friendly forces operating in other combat vehicles. During the demonstration, the CID system correctly identified moving and stationary friendly vehicles through smoke and fog and in tree lines.

"The general officers and civilian attendees who took the time to try the CID system all responded positively to its potential for preventing fratricide," said Sal Costa, head of identification solutions for BAE Systems. "They were uniformly impressed by its simplicity and effectiveness."

The demonstration tests consisted of a series of tactical vignettes developed to reflect potential real-life situations and how the CID system works with other technologies to reduce friendly-fire events among U.S. and coalition forces.

"Our team's innovative combat ID systems continue to show their potential to deliver a capability to the warfighter that improves combat effectiveness while minimizing the risk of friendly casualties," said Merry Michaux, director of Thales's Communications, Navigation, and Identification business.

The CID system consists of transponders that are mounted on vehicles and direct-fire weapon interrogators to help gunners determine if targets are friendly. The demonstration unit included a palm switch used to conduct the interrogation, a visual warning device mounted near the gun, and headphones for audible warnings that allow the gunner to see and hear the results without having to take his eyes off the target.

SAVE THE DATE!!!

LISAT2010

Friday, May 7, 2010

Long Island Systems,
Applications & Technology Conference
Farmingdale State University

Sponsored by the
IEEE Long Island Section
Farmingdale State University
Institute for
Research & Technology Transfer



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Review of Smart Grids featuring Jim Smith

by Matthew Nissen, P.E., Power and Energy Society Vice Chairman

On June 16th, 2009 the Power and Energy Society had its first meeting in recent years on Long Island, at Stony Brook University with over 40 attendees. Our featured guest speaker, Jim Smith, is the Assistant VP of Economic Development and the new Advanced Energy Research & Technology Center (AERTC) being constructed on campus. Also in attendance was Patricia Malone, Director of the Center for Emerging Technologies.

In an introduction to smart grids, Jim explained that they integrate electricity with communications and computer control to create a highly automated, responsive and resilient electric power delivery system. This intelligent, self-healing grid is designed to continuously send, receive and process data on system conditions, component health and power flows, as well as pass information among intelligent electronic devices, generators, system operators, marketers and consumers. The Department of Energy has set aside billions in funding for smart grid research, and there is additional funding in the recent stimulus act enacted by congress.

According to the US DOE, the main capabilities of Smart Grids are discussed below with my own explanations and commentary.

Motivating - Informed, involved, and active consumers - demand response and distributed energy resources. This would be implemented through time-of-day metering for more accurate pricing, with the option to shed loads automatically upon notification from the utility - ideally non-critical loads. This could also disconnect certain customers completely, but the core concept is to shed air-conditioning, appliances, and other non-essential loads during peak times and during critical events / periods to maintain grid stability or economic/environmental limits. Advanced Metering Infrastructure (AMI) is what this is commonly called - and includes the means of reporting directly to the utility.

Accommodating / Green - Many distributed energy resources with plug-and-play convenience, focus on renewables. This is a general statement that encompasses many technical issues, including network protection, real-time metering integrated with the utility dispatcher, accurate weather / renewable forecasting, peaking plants and energy storage systems (LNG, Diesel, batteries, pumped hydro, etc for times when renewables are not producing), interconnection compatible power quality IEEE std 1547, and distributed metering and pricing infrastructure for an unknown quantity of plug-and-play sources - the most common being plug-in hybrid electric vehicles (PHEVs).

Opportunistic - Mature, well-integrated wholesale markets, growth of new electricity markets for consumers. This is a combination of base-load, seasonal (hydro), peaking, renewables (forecast) markets, and demand response customers - the last one being initiated in pilot projects for all types of customers. With new technologies like PHEVs new markets emerge where generators can be connected at public and private parking lots or refueling stations - but there would have to be a transaction & metering terminal that includes real-time pricing information for each connected source.

Quality Focused - Power quality is a priority with a variety of quality/price options - rapid resolution of issues. Together with technological advances in SCADA and detection, flexible-AC-transmission, alternate feeders, many distributed generators and demand response customers that can be quickly dispatched, the reliability of the grid can be greatly improved. Pricing options are unclear - initially it would be peak or real-time for demand response, but it could also be incentives for distributed resources.

Efficient - Greatly expanded data acquisition of grid parameters - focus on prevention, minimizing impact to consumers.

Intelligent - Automatically detects and responds to problems - focus on prevention, minimizing impact to consumer. This is basically intelligent / automatic switches and breakers that can isolate problems and open alternate paths for energy flow.

Resilient to attack and natural disasters with rapid restoration capabilities. Once an event occurs, demand response could reduce the load to levels that would be tolerable for the remaining base-load capacity and distributed resources.

The two main issues with widespread implementation are cost and interoperability standards.

Although parts of the Smart Grid could be accomplished with minimal cost during the normal maintenance and replacement of equipment, utilities are not operating bi-directional networks where every line is metered and every device capable of remote control. This is certainly not in their budget, and some of the intelligent and resilient network protection and SCADA is very capital intensive. Additionally utilities today rely on customers to alert them of outages, unless of course they lose major parts of their network. The Advanced Metering Infrastructure (AMI) is making progress in trial runs with several utilities, primarily with meter replacements and wireless or broadband-over-power-line (BPL) communication with the utility. Both methods have limitations with security and infrastructure, but are assumed to have lower capital costs than hardwired data lines for metering. The smart grid movement is anticipated to drive a Utility IT boom because of the massive datacenter and IT upgrades that will be needed to communicate with the millions of devices that make up the grid, and possibly consumer appliances. One potential economy of scale is the initial rollout of AMI, with the infrastructure for later adding many more intelligent devices for the T&D networks. High priority networks and substations would receive the first intelligent upgrades, but this can be complicated with priorities of economics, reliability, and flexibility for renewables not always being in-line - utilities will have to find the points of intersection and greatest feasibility.

Interoperability standards have come a long way with open source computing, WiFi, Zigbee, BacNet, Modbus, LONworks, XML are just a few. Additionally, we don't have practical standards or hardware for short-duration power transactions by large numbers of users. Existing energy trading platforms can be expanded; the internet and credit card style transaction systems could be integrated into the platform for PHEVs, home appliances, and other mobile distributed resources. How will they work together? Which standards apply? Who has the authority over power flow, price, and duration? This must be a delicate balance between the utility, customers, and producers. Additionally, most of the public just wants the most reliable, best price energy and none of the hassle of energy management.

In one study conducted by PowerGrid Communications on a 600,000 meter utility, a selection of smart grid improvements had the potential for \$957 Million in savings over 10 years (a 74% ROI). While that number may sound impressive, another item became abundantly clear; ~50% of the savings were for adoptions of time-of-day meters and billing! Put simply, the shifting of consumer energy use from peak (6am-6pm) to off-peak (rest) had the greatest savings due to peak energy prices (probably on the spot market dominated by LNG). Many aspects of the smart grid are coming to fruition, as energy efficiency, reliability, and security become more important. Rising energy costs will ultimately govern which aspects get implemented - my money is on time-of-day metering and T&D automation. The most likely home appliances that could be dispatched would be HVAC systems, depending on geography and priority. It's going to be difficult to get consumers to change habits, but pricing incentives and the efficiency drive from sustainable development codes are coming into full effect.

Resources:

http://www.oe.energy.gov/DocumentsandMedia/DOE_SG_Book_Single_Pages.pdf

<http://www.smartgridcentral.com>

<http://www.aertc.org/>

The Long Island Chapter of the IEEE Circuits and Systems (CAS) Society is presenting a lecture titled:

An Introduction to Power over Ethernet and the IEEE 802.3af and the Upcoming 802.3at Standards

Thursday, October 29, 2009 at 6:30PM

This seminar is free & all are invited. Refreshments will be served at 6:00PM

Speaker: Morty Eisen, Technical Account Manager, Marcum Technology

Who Should Attend?

Anyone interested in the basics of Power over the Ethernet (PoE).

Abstract: Power over Ethernet or PoE technology describes a system to safely transfer electrical power, along with data, to remote devices over standard category 5 cable in an Ethernet network. PoE port shipments grew to 45 million in 2007 and are expected to jump to 145 million in 2011. This presentation will describe the key components of PoE and discuss existing applications for this technology. The current IEEE802.3af-2003 standard will be reviewed and the Power over Ethernet Plus (PoE Plus) or the proposed IEEE802.3at standard that promises to

deliver more power to enable a new breed of PoE devices and applications will be introduced. Paying attention to technologies, such as PoE, is a good way for engineers to keep their finger on the pulse of corporate technology and interests.

Speaker Bio: Morty Eisen is a Technical Account Manager at Marcum Technology, a LI based consulting and integration firm. Previously, he was a Channel Manager at PowerDsine, a leader in the PoE field and the primary contributor to the IEEE 802.3af standard. Mr. Eisen combines enterprise and channel experience with strong technical, project management, product development and marketing skills. Mr. Eisen holds a BSEE degree from Columbia University and a MSEE from the University of Massachusetts.

Seminar Coordinator: Arthur Williams, CAS Chairman. You can contact Mr. Arthur Williams at: awilliams@telebytebroadband.com

Location: BAE Systems, 450 Pulaski Road, Greenlawn, NY. The facility is located just east of Park Avenue (Suffolk County Rte. 35) on Pulaski Road. Please enter from the main entrance facing Pulaski Road.

Registration: Registrants must be US citizens. Registration is required. To register please visit the calendar page of the IEEE website,

<http://www.IEEE.LI/calendar/>,

Click on the registration link, and fill out the form.

Brain Teaser Challenge Solution

by Butch Shadwell

It seems I am being transformed into a power guy. I hope someone discovers a cure before it is too late. "Your challenge this month, should you choose to accept it, is to explain why most of the harmonic energy you find on the power mains is in the odd harmonics of the fundamental?"

Derek Paice sent me a very nice answer to this BTC, so I am going to give you his response - "Rotating machines are generally symmetrical in the sense that negative half cycles have a similar shape wave to that of the positive half cycles. Mathematically $f(\omega t + \pi) = -f(\omega t)$.

In a Fourier analysis of a total waveform like this, expressions for individual harmonics of number n include a multiplier of $\sin(n \times \pi/2)$. If n is an even number this expression becomes zero, hence there are few even harmonics from generators.

Individual loads can draw even harmonics, but IEEE Std 519 guideline discourages use of loads causing even harmonics of current, by limiting their tolerable amount to 25% of the allowable odd harmonics." But I bet you already knew that.

Brain Teaser Challenge

by Butch Shadwell

My biggest vice is that I volunteer too much, and my volunteer work has been dominating my time. I guess this column is one

of my volunteer jobs, now that I think about it. Anyway, some folks have asked me to mention that one of my big volunteer jobs is as the new international chair of the Humanitarian Technology Challenge, Reliable Electricity Committee. This project is sponsored by the United Nations Foundation and the IEEE. We are a large group of volunteer professionals and academicians who are dedicated to finding better ways to help people in need by the application of technology. These could be disaster victims or people who have never had infrastructure of any kind. Lighting, better food and water, communications, and better medical care are among our objectives.

I was recently asked about consulting on a project to collect deuterium from the ocean. We all know that deuterium is found in much higher concentrations in the sea than in the atmosphere. Perhaps the heavier molecules find it harder to make the transition from liquid to gas phase on the surface, so most of the evaporation is of the lighter isotopes. So the problem today is - how big a container do I need to hold 1 mole of H₂ at STP? Don't light a match.

Reply to Butch Shadwell at:

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Tel: 904-410-9751 Fax: 904-410-9750
3308 Queen Palm Dr., Jacksonville, FL32250

<http://www.shadtechserv.com>

Long Island's Early Electronics History

by Jesse Taub

In our Section's commemoration of the IEEE's 125th Anniversary, we continue to highlight significant contributions made by Long Island companies. This month's Pulse features Telephonics. In addition, to its long record of accomplishments, many of its engineers are active IEEE members. Our Section is grateful for the support that Telephonics has given to its activities....

History of Electronics at Telephonics Corporation

Since its founding on Long Island in 1933 as manufacturer/supplier of audio headsets and microphones, Telephonics has evolved into a broad based, advanced technology company. It specializes in cutting-edge radar, air traffic management and communication systems technology that serves the military and commercial markets worldwide. From the beginning, Telephonics' Communication Systems Division (CSD) has specialized in secure airborne intercommunication systems and related products. Today, CSD is a worldwide leader in wired and wireless communication products dedicated to meeting the challenges of both military and commercial applications. CSD's communication products serve a wide variety of fixed-wing aircraft, helicopters and ground control shelters that allow users to communicate voice and data rapidly, accurately and securely.

In 1977, Telephonics established Telephonics Large Scale Integration (TLSI) to satisfy internal requirements for more advanced, complex and increasingly sophisticated custom integrated circuits. TLSI has grown steadily since then into a leading supplier of custom Application Specific Integrated Circuits (ASICs) to the automotive, security and communications equipment marketplaces.

To further expand its radar capabilities, Telephonics acquired the Command Systems Division of AIL, a division of the Eaton Corporation in 1988. Command Systems brought to Telephonics its distinguished history dating to the earliest days of Radar, Identification Friend or Foe and Air Traffic Control technology. In 2007, Command Systems was changed to Radar Systems Division (RSD.) RSD continues to develop and deliver the most advanced maritime surveillance, search & rescue and weather avoidance and Identification Friend or Foe (IFF) systems available on the market.

In February 2005, Telephonics purchased Systems Engineering Group, Inc. (SEG). SEG operates as a wholly owned subsidiary. It provides engineering for air and missile defense, radar, missile and combat systems analysis and software development to the US Navy, US Marine Corps, and the Missile Defense Agency. The acquisition enhances Telephonics' electronic systems and sub-systems for critical defense applications by expanding the research and development and professional support services.

To increase its market presence in Homeland Security and Air Traffic Management, Telephonics re-organized its divisions and created the Electronic Systems Division (ESD) in 2007. ESD focuses on Anti-Terrorism/Force Protection (ATFP), Air Traffic Management/Air Defense and offers over 70 years of manufacturing experience.

With a solid business footing in its traditional defense segment and expanding presence in the commercial and international markets, Telephonics is well positioned to meet the high-technology demands of the future.

Get Your Next Job at indeed.com

by Ahmad Haque IEEE LI Section IEEE-USA Liaison

Indeed.com is one of the fastest growing websites for job search. This site allows job seekers to track jobs on some 1,500 sites from industry sites to corporate job boards.



Besides US, International jobs are tracked as well. There are tutorial videos available to guide job seekers on how to use Indeed to search for jobs. But you won't submit your resume here or chat on discussion boards. I will share my experience in using indeed.com for job search. Even though not required it is beneficial to sign up myindeed.com discussed later.

Signing up myindeed.com, very easy process needs email address and a password. The advantages of sign up allow us to save the search on visited and applied jobs. It also let us to set up an email Job Alerts sent once a day. I think getting job alerts is very handy, since indeed.com provides tracking jobs information from other job sites, we get job information available in other sites from one source like headline news in desktop.

Indeed.com has the most comprehensive and effective search engine for jobs. Indeed's simple interface lets users type in job keywords and what city they want to work in. The search is not a case sensitive. The result is a list of jobs in your area. But that is just where the search begins. Users can narrow the search by salary range, title, company, and distinguish between recruiters looking for applicants and companies searching for employees.

Browse jobs will let you select the state and major cities within that state to search for jobs; I ran some searches on their search engine by confining to the local jobs market here on Long Island, NY. The search returned a large number of jobs. I narrowed down the search by using the text link on left hand column that returned a subset of the original search.

The search categories included are by salary estimate, title, company, location, job type. There is a section called "Job Trends" which provides the latest information on the local job market condition such as statistics on job market situations in general and the companies that are hiring. Unfortunately, I was not able to find similar information on local engineering jobs. Indeed has a feature that lets users request to look only at the jobs that have been added to the site since they last visited. Another useful section is "Salary" which lists the average salary of jobs with related title in particular locations. Its salary search is based on salary information extracted from millions of jobs within last 12 months.

There is a disadvantage as well. The indeed.com shows jobs that may not exist, old or bogus. Since it picks up job information from other job boards or company's career website, if those sites have not been updated for a while, the old posting shows up with date refresh as new after 30 days. I came across couple of jobs posting as a new, called them and found that these jobs do not exist.

To find your next job check:

<http://www.indeed.com/>

Northrop Grumman Successfully Demonstrates Interoperability between Manned and Unmanned Platforms

Northrop Grumman Corporation successfully demonstrated Joint STARS and E-2 Hawkeye interoperability between manned and unmanned platforms during a recent virtual joint military demonstration involving U.S. and coalition forces. The demonstration, Empire Challenge 2009 (EC09), was executed by U.S. Joint Forces Command (USJFCOM) and aimed at demonstrating how U.S. and coalition forces can better work together to collect, analyze and share relevant reconnaissance information.

"The ability to collect and share real-time ISR at the theatre and the tactical level quickly and accurately is crucial to ensuring battle commanders have the enhanced situational awareness required for successful mission completion," said Tom Vice, vice president of Battle Management and Engagement Systems division for Northrop Grumman Aerospace Systems sector. "During Empire Challenge, we successfully demonstrated how manned command and control aircraft can direct and manage unmanned aircraft to enhance image collection and target identification. We will take what we've learned through this collaborative exercise to continue to mature our ISR capabilities to ensure our warfighters have the mission critical information they need when they need it."

During the month-long exercise, virtual physics-based and operational flight program simulations of multiple Northrop Grumman platforms, including the E-8C Joint Surveillance Target Attack Radar System (Joint STARS) and E-2 Hawkeye Airborne Early Warning and Control (AEW&C) aircraft, worked collaboratively to achieve interoperability between multiple manned and unmanned aircraft via an airborne Web services architecture.

One key element to the success of this interoperability was an E-2 Hawkeye developmental test bed. The test bed is based on the robust capability of the U.S. Navy's E-2 Hawkeye mission computing system which enabled it to successfully operate the Electrical Optical (EO) sensor onboard both manned and unmanned aerial vehicles (UAVs) in response to requests from ground commanders. Using machine-to-machine command interfaces, the E-2 test bed was able to cue each UAV simulator to provide imagery of both static and dynamic ground tracks for target identification. The image request messages were transmitted via machine-to-machine interfaces, replacing the need for voice and manual chat resulting in an increased response time.

The virtual Joint STARS integrated the Battle Management Command and Control (BMC2) architecture providing constellation management

along with UAV control and multi-level security capability sets which enabled the platform to demonstrate an expansion of its current ISR role to include automated UAV image collection and development of target quality solutions to support strike engagements.

Sensor imagery received from the UAVs via Joint STARS was provided to an image analyst who examined each image and determined which should be included in the image product library (IPL). Images in the IPL were used to populate the Global Command and Control System (GCCS). Once threats were identified, the E-2 test bed managed airborne attack assets, including F-18s and EA-6Bs, to conduct precision strike missions against those threats, based on Joint STARS ground tracks and correlated imagery supporting threat identification. The net effect of this ISR sensor tasking and command and control network was a reduction in both the 'kill-chain,' the time it takes to find, identify, and engage a target, and the operator workload required to accomplish the task.

In addition to the virtual Joint STARS and E-2 Hawkeye platforms, other Northrop Grumman assets participating virtually in Empire Challenge 09 included the RQ-4 Global Hawk unmanned aircraft reconnaissance system, MQ-8B Fire Scout vertical takeoff and landing unmanned system, and the MQ-5B Hunter medium altitude unmanned aerial system.

The virtual, human-in-the-loop wargaming environment utilized in Empire Challenge was built by Northrop Grumman and developed with the company's Cyber Warfare Integration Network (CWIN). Based at the USJFCOM Joint Intelligence Laboratory (JIL) in Suffolk, Va., the virtual platforms were linked to the "live-fly" exercise at the Naval Air Weapons Station (NAWS) in China Lake, Calif., as well as the Combined Air Operations Center-Experimental at Langley Air Force Base, Va.

"By providing this virtual modeling and simulation environment, Northrop Grumman added an increased level of complexity to the demonstrations," said Chris Frangos, chief architect, Systems Engineering Integration & Test (SEIT) director for Northrop Grumman Aerospace Systems. "The ultimate goal of the exercise was to gain a better understanding of the challenges that irregular warfare brings to our warfighters and how Northrop Grumman platforms, technologies and architectures provide solutions to these challenges."

Nominate an IEEE Fellow for 2011

The nomination period is now open for the IEEE Fellow Class of 2011 and will continue through 1 March 2010. Nominees for Fellow must be an IEEE Senior Member or IEEE Life Senior Member with contributions that have advanced engineering, science, and technology, bringing significant value to society. Members can be nominated in one of four categories: application engineer/practitioner, educator, research engineer/scientist, or technical leader.

Please visit the IEEE Fellow Web page for more information, detailed instructions for preparing the application, and required forms. Please use the online application for nomination. Using the online process, once you have submitted the completed application, notification is automatically sent to references and endorsers, alerting them that they have been asked to help with the nomination. This online application will save you a great deal of time, and you can monitor replies throughout the entire process. Check at:

<http://www.ieee.org/web/membership/fellows/>

Email the IEEE Fellow Staff with any questions at: fellows@ieee.org

IEEE.tv Wins Four Aegis Awards

IEEE.tv's special-interest programming about technology and engineering has won several awards for their work. These awards grade each program on such areas as shooting, editing, use of music, etc. and are judged by top video production professionals.

IEEE.tv has been selected as a winner in two categories, and a finalist in two other categories, in the 19th Annual Aegis Awards competition. The Aegis Awards are the video industry's premier competition for peer recognition of outstanding video productions and non-network TV commercials. The winning programs were "Care Innovations: Responsibility for Being Green," "IEEE Robot Challenge," "Nerd Girls," and the "2008 IEEE Honors Ceremony." Please visit the Award Winning Programs web page to view these productions.

http://www.ieee.org/web/membership/IEEEtv/sub/tv_awards.html

IEEE and IEEE-USA Seek Nominations for 2010 "New Faces of Engineering" Recognition Program

The Engineers Week (EWeek) "New Faces of Engineering" program recognizes engineers new to the profession with outstanding educational and career accomplishments. The program is open to IEEE members worldwide.

"New Faces" is designed to promote the importance of technical education, celebrate engineering careers and recognize significant contributions to the engineering profession and society. Each year, the EWeek Web site (www.eweek.org) features the photos and biographies of five notable young engineers from each EWeek sponsoring society. Each society's top nominee is recognized during EWeek in a full-page ad in USA Today

EWeek 2010 is 14-20 February.

To be eligible for recognition, engineers must be 30 or younger as of 31 December 2009, have a degree in engineering from a recognized U.S. college or university or equivalent international educational institution. Degrees in engineering technology, science, computer science and similar disciplines do not qualify; a degree in computer engineering is acceptable. Nominees must be a member of a sponsoring EWeek partner.

Judges will evaluate nominees based on their educational attainment, engineering achievements and participation and accomplishments in professional and technical society activities. Particular consideration is given to work (e.g. volunteering, publishing, conference presentations) in IEEE technical societies.

IEEE nominations can be submitted through IEEE regional directors, section and GOLD chairs, or independently, and should be directed to Helen Hall at h.hall@ieee.org. Self-nominations are not permitted. The nomination form and more information are available at: www.ieeeusa.org/communications/eweek/newfaces/default.asp

The deadline for all IEEE nominations is 13 October 2009

The "New Faces of Engineering" program was the American Society of Heating, Refrigerating and Air Conditioning Engineers' legacy project for EWeek 2003. The program is now in its eighth year. Among the IEEE/IEEE-USA's "New Faces" were Deborah Zwitter, IBM Corporation (2003); Dr. Mark Hersam, Northwestern University (2005); and Dr. Carlos Cordeiro, Philips Research North America (2007)

Sponsored by more than 100 engineering, science and education societies, as well as major corporations dedicated to increasing public awareness and appreciation of engineering, EWeek is celebrated annually by thousands of engineers, engineering students, teachers and leaders in government and business. The IEEE served as lead society during EWeek 1993 and 2004.

The ExxonMobil Corporation and the American Society of Civil Engineers are serving as EWeek 2010 co-chairs.

IEEE Humanitarian Technology Fund Awards First Two Grants

The IEEE Foundation recently awarded 12 grants totaling US \$146,467 to projects that help further the goals of the IEEE. The grants were awarded from 3 distinct funds: the IEEE Foundation General Fund, the IEEE Life Member Fund, and the IEEE Humanitarian Technology Fund (HTF). The first two grants to be awarded from the HTF clearly support the development and application of innovative uses of technology for humanitarian causes and support IEEE's activities in working to benefit humanity..

The Brown University Engineers without Borders Chapter was awarded US\$15,000 to help fund the Rainwater for Humanity project Brown University Engineers Without Borders in Kuttanad, India. The project entails the construction of rainwater storage reservoirs and catchment systems with built-in purification devices to capture rain from existing rooftops. The project also includes a training program for local women which will empower them to eventually manage the reservoirs on their own.

<http://students.brown.edu/ewb/>

In addition, US\$4,000 were awarded to the Virginia State University to support its Wireless Messaging Device for Disaster Relief. The project is intended to combat instances of communication failure that hinder relief efforts during natural or man-made disasters.

<http://www.nsf.gov/eng/iip/iucrc/directory/wicat.jsp>

Submit a grant application or donate to the IEEE Humanitarian Technology Fund by visiting:

<http://www.ieeefoundation.org>

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IEEE Ratifies 802.11n, Wireless LAN Specification to Provide Significantly Improved Data Throughput and Range

The IEEE today announced that its Standards Board has ratified the IEEE 802.11n™-2009 amendment, defining mechanisms that provide significantly improved data rates and ranges for wireless local area networks (WLANs). This new amendment to the IEEE 802.11 base standard is designed to help the data communications industry address the escalating demands placed on enterprise, home and public WLANs with the rise of higher-bandwidth file transfers and next-generation multimedia applications. WLANs based on IEEE 802.11 are widely deployed, with more than 1 million units shipping per day.

The IEEE 802.11 standard defines how to design interoperable WLAN equipment that provides a variety of capabilities including a wide range of data rates, quality of service, reliability, range optimization, device link options, network management and security.

The 560-page 802.11n amendment "WLAN Enhancements for Higher Throughput " will enable rollout of significantly more scalable WLANs that deliver 10-fold-greater data rates than previously defined while ensuring co-existence with legacy systems and security implementations.

More than 400 individuals from equipment and silicon suppliers, service providers, systems integrators, consultant organizations and academic institutions from more than 20 countries participated in a seven-year effort leading to IEEE 802.11n's ratification. Publication of the amendment is scheduled for mid-October.

"This was an extraordinarily wide-ranging technical challenge that required the sustained effort and concentration of a terrific variety of participants. When we started in 2002, many of the technologies addressed in 802.11n were university research topics and had not been implemented," said Bruce Kraemer, Chair of the IEEE Wireless LAN Working Group. "The performance improvements achieved via IEEE 802.11n stand to transform the WLAN user experience, and ratification of the amendment sets the stage for a new wave of application innovation and creation of new market opportunities."

Added Paul Nikolich, IEEE 802 LAN/MAN Standards Committee Chairman: "Everyone involved in the 802.11n process—and no one more than Bruce Kraemer, whose strong leadership has been instrumental from the start—deserves congratulations because this is a key data communications milestone and a good example of the consensus building environment 802 provides for its participants. The amendment will enable a dramatic leap forward in WLAN scalability with only a modest associated rise in costs for the industry and end users."

For further information on IEEE 802.11n, visit:

<http://standards.ieee.org/prod-serv/80211n.html>

To purchase documents, visit: <http://shop.ieee.org>

IEEE-USA and IEEE Computer Society to Develop Professional Exam for Software Engineering

IEEE-USA and the IEEE Computer Society will be working together to develop an examination requested by state licensure boards for prospective use in licensing software engineering professionals.

The National Council of Examiners of Engineering and Surveying (NCEES) approved the development of a Principles and Practice of Engineering examination PE exam for software engineering in August.

NCEES develops and administers the engineering and surveying competency exams used for licensing purposes in all U.S. jurisdictions.

NCEES had received requests for the software engineering exam from engineering licensure boards in 10 states, a requirement that must be met prior to beginning the development of a new exam. Projects affecting public safety require licensed engineers to verify that the engineering was done properly.

Software engineers agree. Nearly two-thirds (62.9 percent) of respondents to a September 2008 survey of software engineers conducted by the Computer Society said that they should be licensed if they practice in areas affecting public health, safety and welfare. In addition, 61.5 percent supported development of a path to software engineering licensure through the NCEES Model Law.

The Computer Society has been laying the foundation for greater professionalism in the software engineering field with "The Guide to the Software Engineering Body of Knowledge," or SWEBOK

<http://www2.computer.org/portal/web/swebok>

a 2004 guide that established a baseline for knowledge in the field and is now being updated. Under the new ISO/IEC 24773 standard approved in October 2008, all software certifications must conform to SWEBOK. The Computer Society's two certifications the entry-level Certified Software Developer Associate credential and the mid-career Certified Software Developer Professional credential

<http://www2.computer.org/portal/web/getcertified>

are the first two certifications that conform to the new ISO/IEC 24773 standard.

NCEES expects the software engineering PE exam to take between 24 and 30 months to develop. The Computer Society, NCEES, the National Society of Professional Engineers, IEEE-USA and the Texas Board of Professional Engineers will share the cost of developing and maintaining the exam, and will provide subject matter experts to help develop it.

IEEE-USA eBook Reaches Out to Unemployed Engineers

"The Best of Today's Engineer on Career Survival" available from IEEE-USA eBooks, is a compilation of articles designed to assist engineers who need help searching for a new job, getting in the front door, maintaining their competitiveness and managing their finances while they search. The eBook contains such titles as:

- What Are Engineering Employers Looking For?
- Converting Gatekeepers to Greeters
- Picking a Good Boss &
- Sine Qua Non: Networking
- Building Your Network Purposefully Before You Need a Job
- Seeking a New Job? Think Like an Employer
- Cold Calling Your Way to a New Job
- Transitioning Jobs, Managing Your Finances
- Five Steps to a New Job & Jump Start Your Job Search
- Globalization and Your Career: Building Career Resilience
- Career Makeover for Engineers in the 21st Century
- Finding Employment in an Economic Downturn
- Six Ways to Maximize Job Search Success

You can purchase your copy of "The Best of Today's Engineer on Career Survival" at www.ieeeusa.org/communications/ebooks for the IEEE member price: \$4.95. Non-member price is \$19.95.

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- More than 500 participants from industry, academia and government including the international community.
- 30 local, national, and global exhibitors showcasing the latest technologies.
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Keynotes

Kevin Law, *LIPA*

Siavash Alamouti, *Mobile Wireless Group, Intel*

Rod Pettigrew, *NIBIB, National Institutes of Health*

Speakers

Ron Ambrosio, *IBM*

Christine Ballas, *Mass. Commonwealth*

An Chen, *Qualcomm*

Anita D'Amico, *Applied Visions*

Stephen E. Dellutri, *CosmoCom*

Tian He, *University of Minnesota*

Florence Hudson, *IBM*

John Hummel, *Perot Systems*

Joseph Jasinski, *IBM*

Craig Lehmann, *Stony Brook University*

Jeffrey Opet, *NYSTEC and NYCDEP*

A. Yavuz Oruc, *University of Maryland*

Minalkumar Patel, *Care Management Int.*

Hector Rodriguez, *Microsoft*

Eugene Sayan, *Softheon*

Ivan Seskar, *WinLab, Rutgers University*

Amit Sinha, *Motorola*

Jane Snowdon, *IBM*

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Inventing the New World of Wireless and IT

Informal Memorial for David W. Sterner

On Saturday July 11th an informal memorial gathering for Dave Sterner took place from 1:00-5:00 PM at his residence at on Southside Avenue in Freeport. As many of you know Dave passed away while vacationing at Cozumel, Mexico. Since Dave loved food and barbecues, food was served at his memorial. Friend from the IEEE and the other civic organizations that Dave was a member of brought their favorite dish, and shared their favorite Dave stories with everybody. A computer was available inside Dave's house where people could write their Dave stories. Bob Sterner (Dave's brother) did most of the cooking. The house was open and Dave's mementos were neatly arranged for everyone to peruse them. In lieu of flowers the family asked that contributions may be made in his name to:

<http://www.DiversAlertNetwork.org>

Check the accompanying pictures from the memorial along with a list of what a complex man Dave Sterner was. It was prepared by his sister Mary Sterner Lawson.

The Many Facets of David W. Sterner

IEEE Senior Member
Avid Reader & Farm Owner



Punster & Anthropologist
Classical Music Lover & Altar Boy



Gilbert and Sullivan Aficionado
Blood Donor & Down-Hill Skier

Pianist & Swimmer
Bridge Player & Cross-Country Skier



Chess Player & Lover Of Fiery Foods
Stamp Collector & Eagle Scout



Diver & Photographer
Public Servant & Bicyclist

Family Historian & Home Owner
Avid Letter Writer & Linguist



Occasional Sketch Artist
Amateur Radio Operator



World Traveler & Breadmaker / Piemaker
Archaeologist & US Air Force Veteran

Did You Know?

Just a few fun, informative and interesting facts and tidbits about the IEEE

Contributed by Sandy Mazzola,
Chairman, IEEE Long Island Section

Free e-mail Alias - Did you know?

The IEEE provides a free no charge e-mail alias to members. This benefit identifies you as an IEEE member with an @ieee.org email address while forwarding all incoming mail to your real Internet account. Register at:
<http://elecomm.ieee.org>

IEEE LI Section - Did you know?

The IEEE Long Island Section has a monthly ExCom (Executive Committee) meeting. It is an open meeting. It is an excellent opportunity to see what the IEEE has to offer. If you wish to attend please contact:
chairman@IEEE.LI

Technical Information - Did you know?

The IEEE is the world's largest technical society, bringing Members access to the industry's most essential Technical Information, networking opportunities, and career development tools.

Networking - Did you know?

When attending a local IEEE section technical presentation the person next to you may well be a manager looking to hire folks in the field being presented. IEEE members attend local events at little or no cost. It is an opportunity to network.

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Discover the Benefits of Membership

A monthly column by Nikolaos Golas, Membership Development Chairman

IEEE & IEEE-USA Job & Career Resources

IEEE CAREER SITE

Employment and Career Services

One stop shopping for Career and Employment Services. Finding IEEE services that can help you land a job or improve your skills just got a little easier. The Careers section of the IEEE Web site now lists 30 employment-related resources, including job listings, career advice, continuing-education programs, and networking opportunities. The career and employment assistance services are probably IEEE's best-kept secrets, and most of them are free. Although many of the services have been set up by IEEE-USA, they're all available to every member.

<http://www.ieee.org/web/careers/home/>

JOB HUNTING

IEEE Job Site

You can Post your Resume, use the Resume builder, perform an Employer Search, and receive Job Posting Alerts. It collects 5 Million job leads from 160,000 Websites and it has a powerful search engine.

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

IEEE Student Job Site

Leads college students and recent grads to entry-level jobs, internships, and other opportunities. View help-wanted listings, job fairs, and other announcements posted by employers, IEEE student branches, and the AfterCollege job network, which collects openings from its own national listings and from the IEEE Job Site.

<http://www.ieee.org/web/membership/benefits/products/studentjobs.html>

Employment Navigator

It's a free member employment navigator service. Use your IEEE member web account and access the new and enhanced Employment Navigator, a career-development service exclusively for IEEE members. Employment Navigator collects the roughly 5 million leads of job leads from more than 100,000 Web sites and places them in a single searchable database.

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

Entrepreneurs' Village

Online Community that delivers knowledge, experience and support to IEEE's U.S. members who want start and grow entrepreneurial businesses. You are invited to serve as a mentor or simply as a member of the Entrepreneurs' Village. Start posting discussion items, take advantage of links to articles, resources and meet other entrepreneurs on our site. In addition the service covers business knowledge, marketing, venture capital and legal issues

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

Salary Service

Compares what you're earning, or what you're being offered, to what others are getting in similar circumstances.

<http://salaryapp.ieeeusa.org/rt>

CAREER ADVICE

Career Navigator

It helps members with employment assistance and career development, including how to manage network relationships, future transitions, organize key career information such as resumes, reference letters and interview responses, and manage the complexities of a job search.

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

Career Webinars

Offer advice for finding your next job, negotiating a salary, and understanding workplace ethics, as well as other helpful strategies. If you're concerned about career mobility, job advancement, and opportunities for growth, register for an upcoming webinar or watch webinars in the archives. These are free Webinars that provide insights into multiple career options that can lead to life-long career satisfaction and success for engineers and include Resume Writing Skills, Networking/Online Social Networking, Interviewing Skills, Entrepreneurship and more.

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

Career Alert

Weekly e-mail newsletter publishes articles on jobs, education, management, and the engineering workplace culled from various news sources and compiled by IEEE Spectrum editors.

<http://www.spectrum.ieee.org/static/newsletters>

Career Checkup

Continuous career development is important for all technical professionals. The Career Checkup is an online tool which can assist you along your career development path. Like your annual physical checkup, a career checkup at least once a year can help to keep your career healthy and vibrant.

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

CONTINUING EDUCATION

IEEE Expert Now

Offers interactive courses based on tutorials and workshops presented at IEEE conferences around the world. Courses have been developed by experts in a wide range of engineering technologies, including computer engineering, power systems, biometrics, and vehicular technology.

http://www.ieee.org/web/education/Expert_Now_IEEE/

Education Partners Program

Offers online degree programs, certifications, and courses at up to a 10 percent discount from universities and educational organizations including Drexel University, Purdue University, and Inquest Learning.

<http://www.ieee.org/web/education/partners/eduPartners.html>





LISAT2010

Farmingdale
State College

Sixth Annual IEEE Long Island Systems, Applications and Technology Conference
Friday, May 7, 2010

The Institute for Research & Technology Transfer at Farmingdale State College
State University of New York - Farmingdale, NY

CALL FOR PAPERS, PRESENTATIONS, EXHIBITORS and STUDENT PAPERS

The Long Island Systems, Applications and Technology (LISAT) Conference features several parallel professional tracks including topics in Systems, Applications, and Technology, along with an Exhibit Hall. We are currently soliciting submissions for participation in both the Technical Program and the Exhibit Hall, and are interested in papers, presentations, and exhibits that showcase the development and use of technology by local organizations.

LISAT 2010 will also provide the opportunity for select student papers to be presented. Undergraduate and graduate students are encouraged to submit papers in an area of their interest or current work.

Preliminary acceptance to the Technical Program will be based on a 300-to-500-word abstract. Authors of accepted abstracts will be required to provide a six (6) page IEEE standard manuscript (in MS Word format) for publication in IEEE *Xplore*, and will be required to make a power point presentation at the conference. Manuscripts are subject to the LISAT Technical Program Committee's peer review and may require revision prior to final acceptance. Important dates for the Technical Program are:

Oct 31, 2009:	Abstracts due (300-to-500 words)
Nov 15, 2009:	Notification of accepted abstracts
Nov 30, 2009:	Biographies of authors and ½-page presentation outlines due
Jan 15, 2010:	Manuscripts for publication (MS Word) and copyright releases due
Jan 30, 2010:	Notification of final acceptance of manuscripts
Feb 15, 2010:	Presenter Registration Fee and two (2) sentence presentation descriptions due
Apr 1, 2010:	Power Point slide presentation due
May 7, 2010:	LISAT2010 Conference

All submissions must include the author's full names, affiliations, postal addresses, phone numbers, and email addresses. Submissions should be emailed to the LISAT Technical Program Committee at LISATprogram@ieee.org. Detailed instructions on submission, manuscript and presentation templates, and information on the conference, is available on the LISAT web site at <http://ewh.ieee.org/conf/lisat>

At least one author of *each* paper/presentation must register for the Conference and will be expected to provide a 20-minute presentation at the conference followed by 5 minutes of Q&A. Longer presentations will be considered. One presenting author will be allowed to register at a discounted rate. A limited number of tutorial and application presentations which will not be published by the IEEE may also be accepted

While LISAT welcomes a wide variety of papers in systems, applications, and technology, some examples of topics of particular interest are: *Homeland Defense, Alternate Energy Sources, Green Building Technologies, Mobile Communications, Microwave Technology, Electromagnetic Compatibility, Mobile Ad Hoc Networking, Network Security, Sensor Fusion, Antenna Systems and Processing, Radio Locationing, Radar Systems and Techniques, and Medical Electronics.*

For information on **Exhibiting** at LISAT, please contact: Fred Kruger at f.m.kruger@ieee.org

For all other information contact LISAT2010 Conference Chair: Dave Mesecher at d.mesecher@ieee.org or Conference Co-Chair Charles Rubenstein at c.rubenstein@ieee.org

LISAT is sponsored by the IEEE Long Island Section and its Technical Society Chapters and IEEE Region 1, in cooperation with the Institute for Research & Technology Transfer (IRTT) at the Farmingdale State College (SUNY).

Releases and Approvals: This conference will be unclassified and attended by both US and non-US persons. It is the author's responsibility to obtain all required company and government releases and approvals prior to making a paper submission. A statement that such releases and approvals have been obtained as well as a completed IEEE Copyright Form (signed by the submitting author) must accompany the manuscript of each accepted paper.

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In order for the nomination to be valid, the ballot must have the member's name and his/her IEEE membership number. Please send completed ballots from October 1st 2009 through December 1st 2009 to our Tellers Committee Chairman at:

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