



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

I was tooling around Wikipedia recently and discovered that Wikipedia identifies **Imhotep**, as the first engineer known by name. Engineering is one of the oldest professions in the world. Around 2550 BC, Imhotep, the first documented engineer, built the famous stepped pyramid of King Zoser located at Saqqarah, Egypt. We as engineers can draw our lineage back to Imhotep. Over time engineering tools changed and evolved but I suspect that engineering hasn't really changed that much. The dictionary definition of Engineering is given as the application of scientific and mathematical principles to practical ends such as design, manufacture, and operation of efficient and economical structures, machines, processes and systems. I have always felt that the layman's definition of an engineer is "someone who is a problem solver."

While we as engineers know we must continue to learn, evolve, improve, be more flexible, do things more efficiently, we must always remember it is about "solving problems."

The IEEE is celebrating 125 years of Engineering the Future. IEEE Region 1 southern area, the New Jersey and New York chapters invite members and non-members to Engineer Their Future through a one day event where participants will be given opportunities to network among themselves, enjoy technical tutorials, and listen to CTO's and university professors describe how Communications and Green Technologies are changing the way business is being done. The Region 1 Southern Area Industry Day will be held Feb 5, 2009 at **Telcordia Technologies** building situated at 444 Hoes Lane in Piscataway in front of IEEE headquarters. Details of the program and registration are posted at

http://ewh.ieee.org/r1/princeton-centraljersey/ieee_industry_day.htm The event is **FREE** for IEEE members. I recommend that you take advantage of this wonderful opportunity, you will be glad you did.

The IEEE Long Island Section is presenting the fifth annual **2009 IEEE Long Island Systems, Applications and Technology Conference LISAT2009** on Friday May 1st, at Farmingdale State College. More information is given on our website under the LISAT link. Many interesting presentations on applications, systems, and technology are given. I have seen the conference grow over the years and recommend it as a worthwhile learning experience.

In addition, the IEEE Long Island Section is holding our annual **2009 Awards Banquet** on Thursday March 26th, 2009 at the Hyatt Regency in Hauppauge. Details on attending are located in this issue including a registration form to purchase tickets and a Donor's List if you want to solicit your company to sponsor our Awards Banquet. Come and check in with some of your colleagues that you may not have seen in years.

February 15th through the 21st is **National Engineers Week 2009 (E-Week)**. E-Week was founded by the National Society of Professional Engineers in 1951. This year's annual Discover Engineering Family Day Festival usually attracts anywhere from 7000 to 8000 people. This year's Family Day is set for 21 February and will conclude U.S. Engineers Week (E-Week) activities in the nation's capital. For more information, and to see an array of exciting events and activities that are planned, go to the National Engineers Week Web site at <http://www.eweek.org>.

You can be nice to an engineer during E-Week, but it is also okay to be nice to engineers during the entire year.

Ciao!

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

CALENDAR OF IEEE EVENTS

FEBRUARY

4 Communications Society

Cooperative Wireless Communications
Speaker: Shivendra Panwar
Polytechnic NYU, Melville LI
Refreshments 6:00 PM, lecture 6:30 PM

26 Circuits and Systems Society

Voltage Feedback vs. Current Feedback Amplifiers
Speaker: Xavier Ramus
BAE Systems, Greenlawn NY
Refreshments 6:00 PM, lecture 6:30 PM

MARCH

25 MTT Society

Flexible Volterra-based Digital Pre-distortion for RF Power Amplifier Linearization
Speaker: Steve Taranovich
Location TBD
Refreshments 6:00 PM, lecture 6:30 PM

26 Long Island Section 2009 Awards Banquet

Hyatt Regency, Hauppauge LI
6:30 – 10:00 PM

MAY

1 LISAT - Long Island Systems Applications and Technology Conference

SUNY Farmingdale, LI
8:30 AM – 5:00 PM

27 MTT Society Meeting

X-Parameters: A new Paradigm for Interoperable Measurement, Modeling, and Simulation,
Speaker: Loren Betts
L-3 Hauppauge NY
Refreshments 6:00 PM, lecture 6:30 PM

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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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***The IEEE is celebrating 125 years of
Engineering the Future!!!***

IEEE LI Section Selects Top Ten IEEE Benefits

by Nikolaos Golas, Pulse Associate Editor

At the end of October 2008 the IEEE Long Island Section sent a survey to its members. The survey was designed to try and find out what IEEE benefits our members valued as most important. It was requested that they rate up to ten benefits and to select the one that they thought was the most important as number one. In the following two months many of our members responded with their top ten selections. The data were compiled and analyzed and the Top Ten IEEE Benefits as voted by the IEEE Long Island Section follows:

Top Ten IEEE Benefits

-  **IEEE Spectrum Magazine** – The monthly, award-winning IEEE Spectrum magazine explores the creation, application and implications of new technologies
-  **IEEE e-Mail Alias** – Identifies you as part of the IEEE ‘family’. It provides virus protection and spam filtering
-  **The Institute Newsletter** – A monthly (4 print and 8 online issues) newsworthy newsletter covering IEEE activities both in professional and technical areas
-  **IEEE Xplore Digital Library** – Table-of-contents and abstracts of over 1.9 million documents
-  **Additional Benefits (add-ons) through the power of volume purchasing** – It includes Financial Services, Insurance Services, Home & Office Services and Travel Services
-  **Sections, Student Branches, & Technical Chapters** – Local, face-to-face meetings, Network with each other in the local membership community. Engage with others through informative technical meetings. It provides for recognition of accomplishments
-  **IEEE memberNet** – IEEE’s online membership directory, connecting membership worldwide. Offered as an exclusive benefit of membership with opt-in privacy protection
-  **myIEEE** – It’s a members-only personalized gateway into the IEEE membership, Connect with your local IEEE Section, Society memberships and conference updates, Direct and seamless access into membership your account and real-time job listings from the IEEE Job Site
-  **IEEE Job Site, Career Alert** – Locate career opportunities easily and confidentially, with a weekly email newsletter containing career advice
-  **Proceedings of the IEEE** – The leading authoritative resource for in-depth research, coverage, tutorial information and reviews of electrical and computer engineering technology

In addition, some of our members felt strongly enough about some benefits that there were not included in the survey that they used the ‘write-in’ entry of the survey to express their opinions. Some of the entries included the IEEE Consultants Network of Long Island, the Computer Society Digital Library which is a subset of IEEE Xplore but more affordable, the worldwide member to member networking availability, the IEEE representing (lobbying) for engineering interests and causes to the federal government, informative IEEE email notices, and many more. We would like to thank all of our members for participating!



Farmingdale
State College

**2009 IEEE Long Island Systems, Applications and Technology Conference -
LISAT2009***
Friday, 1 May 2009 – Farmingdale State College

***Attaining the Next Edge in Reliability and Resiliency for
Critical Electrical Infrastructure****

(Seminar Length: 2 Hours with Q & A: 0.2 CEUs; 2 PDHs)

Who Should Attend: Those interested in reliable electric power for critical facilities.

Speaker: Mr. Peter Curtis, *Founder*, Power Management Concepts, LLC

Abstract: Recent events including blackouts, natural disasters, and terrorist activity have heightened concerns about the reliability of electrical power for critical operations (backup systems for data centers) systems in buildings with seven-day, 24-hour environments. Mr. Curtis uniquely blends engineering, operations, and maintenance procedures for the critical electrical equipment such as standby generators, UPS systems, battery systems, automatic transfer switches, and fuel cells. Mr. Curtis discusses the risks associated with these systems, the possible solutions to mitigate downtime, the legal implications of downtime, as well as ways to properly communicate system and project needs to boardrooms and building administration to improve uptime, as every business' financial bottom line is contingent upon its degree of power reliability.

Speaker's Biography: Peter Curtis is the founder of Power Management Concepts, LLC. He is a 1983 graduate of New York Institute of Technology with a Bachelor of Science degree in Electro-Mechanical Computer Technology. Mr. Curtis received his Master of Science degree in Energy Management from New York Institute of Technology in 1994. Mr. Curtis has over twenty five years of experience working in the Mission Critical Facilities Engineering industry in the areas of Banking and Finance, Defense, Electric and Water Utilities, Energy Management and Education.

As Vice President of Critical Systems at Bankers Trust/Deutsche Bank, Senior Engineer at Securities Industry Automation Company (SIAC) and as Superintendent of Electrical Construction at Suffolk County Water Authority, Mr. Curtis was responsible for critical systems, energy and data center engineering, and construction & preventative maintenance for multi-megawatt critical infrastructures. He is also an Associate Professor at New York Institute of Technology where he provides the following on-line and onsite educational courses: Facilities Operations and Management (with an emphasis in critical infrastructure); Energy Management; Energy Equipment Assessment; Fundamentals of Building Systems; and Energy Efficient Lighting. Mr. Curtis is a keynote speaker at semiannual conferences for the following organizations: 7 x 24 Exchange, International Facilities Management Association (IFMA), Association of Facilities Engineers (AFE), Data Center Dynamics and AFCOM. Mr. Curtis is a principal author for the IEEE, where he has written an online book entitled "An Introduction to Mission Critical Facilities Operations". In 2007 Wiley/IEEE published his second book "Maintaining Mission Critical Systems in a 24/7 Environment"; a best seller in its class.

**We have applied to the IEEE Education department and are
awaiting CEU approval**

Register for the LISAT2009 Conference at:

<http://ewh.ieee.org/conf/lisat/regform.htm>



**2009 IEEE Long Island Systems, Applications and Technology Conference -
LISAT2009***

Friday, 1 May 2009 – Farmingdale State College

Electric Incident Cause and Origin*

(Seminar Length: 6 Hours with Q & A: 0.6 CEUs; 6 PDHs)

Who Should Attend: Those interested in the origins and causes of electrical incidents.

Speaker: Mr. George Ello, *Division Manager, System Operations*, National Grid Electric Services, LLC

Abstract: Statistics say that 11% of structure fires nationally are caused by building electric system failures. All of these buildings are supplied, in one fashion or another, by an electric utility system. This class explores electrical failures from a forensics perspective, taking into account the consequences of electric power system design, including the establishment of ground points and ground systems. Apparatus failure modes are discussed, as well as how known electrical laws define how electrical failures are caused and how they progress. At the conclusion of the class, the attendees will be able to describe many electrical fault modes and be better able to determine the origin and cause of an electrical incident or failure.

Speaker's Biography: Mr. Ello is Division Manager in the System Operations Department of National Grid Electric Services, LLC. He is responsible for the operation of the electric distribution system in real time in all normal and emergency situations. Mr. Ello has a Bachelor of Science in Electrical Engineering from Manhattan College and a Master of Science in Environmental Technology from New York Institute of Technology. Mr. Ello is a New York State Certified Fire Investigator, Level II, the highest certification attainable. He is an instructor in Electrical Cause and Origin, basic and advanced, at the New York State Academy of Fire Science. He has served as a consultant to and instructor in the Academy of Fire Science for the creation and development of the curriculum for an advanced electric fire cause and origin class. Mr. Ello is also an instructor in Electrical Systems, Electric Hazards and Tactics for Firefighters, Gas Systems and Hazard Tactics, Arson Awareness, and Fire Police Tactics at the Suffolk County Fire Academy.

In addition, he has presented courses for Fire Investigators, Insurance Special Investigations Units ("SIU"), Fire Chiefs and firefighters, Arson Squads and Fire Marshals on the topic of Electric Incident Cause and Origin, a curriculum which is certified by both New York State and Connecticut state governments for investigator continuing education units. He has also instructed in Electric Distribution Engineering, authored texts in both electric fire cause and origin and distribution engineering, and published electric distribution engineering articles in Fire Findings magazine, and has lectured on electrical safety practices to the Long Island Contractors Association

Coordinator for the classes: Theodore G. Pappas, P.E.

***Registration for the LISAT2009 Conference is \$125 (through April 1st) and \$150 thereafter for IEEE Members and Registered PE's. The registration fee for non-members who are not PE's is \$175 (through April 1st) and \$200 thereafter. All those wishing to have their CEUs recorded will be charged an additional \$25 (through April 1st) and \$30 thereafter.**

Revision 1C

**We have applied to the IEEE Education department and are
awaiting CEU approval**

Register for the LISAT2009 Conference at:

<http://ewh.ieee.org/conf/lisat/regform.htm>

Student Activities Spotlight: IEEE Stony Brook Branch

by **Michael J. Co, Student Activities Chairman**

One of the most important divisions within the organizational structure of IEEE is the Student Branches. IEEE student members are the building block of IEEE membership. After all, the other members in various grades (member, senior member, fellow, etc) were once engineering students and without putting heavy focus on recruiting students could tremendous consequences.

There are several universities and community colleges here in LI with engineering programs and my job is to help these student branches with their activities to keep them active. In this issue of the Pulse, I would like to put the spotlight in one of the solid local student branches- the Stony Brook Student Branch. I had the opportunity to meet with Ivan Pang, the president and Jason Chung, the secretary to discuss their potential activities for the spring. One of the achievements so far has been the renovation of the IEEE Student Lab located at Light Engineering building. I've seen the tremendous effort they put in cleaning, retiling, and getting more computers and equipment to better serve the electrical and computer engineering students. I asked the Ivan to write a short article about it.

For other Student Branches that wish to be featured in the future, kindly contact me at michael.co@ieee.org. I hope that the other Student Branches would be able to share with us their accomplishments!

IEEE Stony Brook Branch Activities

by **Ivan Pang, Branch President**

With a new set of officers in place, the IEEE Student Branch at Stony Brook University has rekindled the engineering spirit within the college. Stony Brook University, one of the nation's finest universities, has provided the IEEE Student Branch with their own personal laboratory for projects, references, and club activities. However, over the years, the student lab became decrepit due to overuse. The lab had decades-old book covered with dust, computers running on CRT monitors and Pentium I processors, and bits of pieces of unfinished projects scattered across the room. Worse of all, over half the light bulbs were out of order and the floor tiles were coming apart. Nevertheless, within the short fall term semester at Stony Brook University, the IEEE Student Branch has refurbished the laboratory with new rubber tiles and light bulbs that made the club room brighter than ever.

Despite having a run-down space at first, the IEEE Student Branch remained persistent in engaging engineers to do their best. The branch provided tutoring and last-minute cramming sessions for courses that used to dishearten a majority of freshman and sophomore engineers. The lab often remained open long hours to provide students with workspace to finish projects or request reference and help. With a new set of interested members, the officers of the student branch also offered basic introductory programming lessons in C, Visual Basics, and PHP.

The branch also provided exceptional opportunities such as participation in the Networking Mixer and the college's Engineering Fair. These activities provided IEEE members with the chance to personally meet employers, professors, and other engineering societies. This new professional quality of Stony Brook University's IEEE Student Branch has made a tremendous impact for its new members. With a new semester's beginning, the branch can be assured to continue this very quality and grow larger in membership

Trenton Computer Festival Call for Papers

The 34th Trenton Computer Festival (TCF) <http://www.tcf-nj.org> is scheduled for April 25th & 26th, 2009 with the TCF IT Professional Conference on Friday April 24th and continuing on Saturday April 25th, at The College of New Jersey.

TCF offers an opportunity for professionals and the public to both expand and share their computer/information-age experiences. A focus this year is Digital Innovative and Entrepreneurial Ideas and we are planning a special speaker track on innovation. We will also have a special speaker track on education-related topics, including STEM.

We are looking for talk and tutorial/workshop proposals for all forms of computer/digital/IT related topics including those from art, music, information, communications (video/podcasting), social networking, virtual life, gaming, robotics, etc. ITPC specific topics (for Friday April 24th) on IT Management, Industry and Development are also desired. As in prior years, a CD-digest of TCF presentations will be published. If you are interested in giving a talk, workshop or tutorial session, please fill out the Speaker Application form at:

http://www.tcf-nj.org/spkr_reg.html (for TCF) and/or http://www.tcf-nj.org/ITspkr_reg.html (for the IT Pro Conference)

SPECIAL NOTE: This year's IEEE Region 1 Student Conference and Micromouse Competition will be held at the College of New Jersey, coincident with the Trenton Computer Festival.

For more information on TCF, contact Allen Katz, TCF Speaker Program Chair at a.katz@ieee.org, telephone: 609-771-2666, fax: 609-631-0177, or US Mail: Dr. Allen Katz, Dept. of Electrical/Computer Engineering, The College of New Jersey, PO Box 7718, Ewing, NJ 08628-0718.

For the IT Pro events, contact David Soll, ITPC Chair, dsoll@osisoft.com, tel: (215) 854-3461.



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IEEE

NJ Coast, Princeton/Central Jersey, North Jersey
and New York Sections Present

Region 1 Southern Area IEEE-Industry Day
February 5, 2009
444 Hoes Lane
Piscataway NJ, adjacent to IEEE HQ

Engineering your future
How communications is transforming the
industry
How Green is Transforming Industry

**Learn new skills and network with
executives & engineers from adjacent
industries where your skills are applicable **



The program includes:

- Continental Breakfast,
- Talk from IEEE foundation
- Confirmed Keynote Talks from CTO/VPs
- And more talks by leaders that shape the industry
- Lunch provided
- Vertical Tracks on Communications and Green
- Communications Technologies (IMS, SIP, Wireless, Security)
- Panel: How IEEE Can Best Serve Industry
- Wine and Cheese hour



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Contact [email: industry-ros@research.telcordia.com](mailto:industry-ros@research.telcordia.com)

Registration and more information at the following URL:

http://ewh.ieee.org/r1/princeton-centraljersey/ieee_industry_day.htm

IEEE Members – Free!! – A \$150 value compared to similar seminars
Non Members – \$40 – Subsidized by IEEE as value to community
(can be applied towards IEEE membership if registered now)

2009 AWARDS BANQUET DONOR SCHEDULE

If you would like to help the IEEE Long Island Section defray some of the costs of the 2009 Awards Banquet you may consider requesting sponsorship from your company. Your company's ad can be preferably in color and you can see some examples in our 2008 Awards Banquet Program at:

http://www.IEEE.LI/awards/program_2008.pdf

In addition, there is a Donor Honor Roll online at the bottom of the 2008 IEEE Long Island Section Awards Ceremony webpage at:

http://www.IEEE.LI/awards/awards_ceremony_2008.htm

We appreciate your help in making our 2009 Awards Banquet a success!

<u>DONOR LEVEL</u>	<u>COST</u>	<u>ACKNOWLEDGEMENT</u>
<i>Platinum Donor</i>	\$2500	<ul style="list-style-type: none">• One table (10-12 people)• Full page ad in banquet program and a listing in the Donor Honor Roll• One year listing in the LI Section Newsletter, The Pulse• Additional tables for \$1000/each• Four registrations to 2009 LISAT
<i>Gold Donor</i>	\$2000	<ul style="list-style-type: none">• One table (10-12 people)• Half-page ad in banquet program and a listing in the Donor Honor Roll• Additional tables for \$1000• Four registrations to 2009 LISAT
<i>Silver Donor</i>	\$1500	<ul style="list-style-type: none">• Six complementary tickets• Quarter-page ad in banquet program and a listing in the Donor Honor Roll• Two registrations to 2009 LISAT
<i>Bronze Donor</i>	\$1000	<ul style="list-style-type: none">• Four complementary tickets• Listing in the Donor Honor Roll• Two registrations to 2009 LISAT
<i>Advertisement Option A</i>	\$750	<ul style="list-style-type: none">• Full page ad in banquet program• Listing in the Donor Honor Roll
<i>Advertisement Option B</i>	\$500	<ul style="list-style-type: none">• Half page ad in banquet program• Listing in the Donor Honor Roll
<i>Advertisement Option C</i>	\$250	<ul style="list-style-type: none">• Quarter page ad in banquet program• Listing in the Donor Honor Roll
<i>Reception Co-donor</i>	\$500	<ul style="list-style-type: none">• Poster (2' x 1.5', supplied by cosponsor) displayed at banquet serving table• Listing in the Donor Honor Roll

Please note that advertising space is limited, and is offered on a first come, first served basis. You must act promptly to ensure that your advertising will be included. The deadline for inclusion in the Banquet Program is March 1, 2009. Payment is due at time of order. Contact our Long Island Section Chairman Sandy Mazzola at: chairman@IEEE.LI



The Executive Committee of the IEEE Long Island Section wants to make our members aware of the following opportunity for those that have been displaced or are unemployed.

Stony Brook University has partnered with the Nassau and Suffolk Departments of Labor and Total Systems Education, Ltd. to offer Professional Certificate Programs in both Project Management (PMI) and Business Analysis (IIBA). *****For Nassau and Suffolk residents who have lost their jobs, or have been displaced total funding is available for this training***** These programs are designed for displaced and employed workers from Long Island's diverse environment: healthcare, engineering, small business, finance, construction, manufacturing, pharmaceuticals, technology, etc. As you can see from the list below, there are multiple tracks and courses available.

All project management courses are certified by PMI to award PDUs and Contact Hours. PM001 PP&C is approved for 24 PDHs. Other courses soon to be PDH certified.

Contact Karen Oaks at Stony Brook for more details and to learn how to apply for the training and funding.

PROFESSIONAL CERTIFICATE PROGRAMS

***** Funding is available for displaced or unemployed Long Island residents *****

PROJECT MANAGEMENT (PMI® Compliant)

Who Should Attend: Anyone who leads or directs programs, projects or pieces of projects.

CERTIFICATE NAME:	Days of Training
• Project Management – Plus Certificate (with PMI PMP and CAPM Exam Preparation)	15
• Project Management – Plus Certificate (for previously certified PMPs or CAPMs)	10
• Project Management – Foundations Certificate	7

BUSINESS ANALYSIS (IIBA™ Compliant)

Who Should Attend: Business Analysts, Requirements Analyst, Systems Analyst, Business Consultant, Business Process Analysts, Business Architects, and anyone who determines project needs.

PROGRAM TRACKS Course or Certificate Name:	Days of Training
• Business Analysis – Plus Certificate	15
• Business Analysis – Core Certificate	8

For course descriptions, schedule of classes, fees and funding eligibility contact Karen Oaks at SBUCET@stonybrook.edu.



Stony Brook University, Corporate Education & Training
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Fax: 631.632.7376
SBUCET@stonybrook.edu
www.licet.org

Message from the Legal Affairs Chairman

With this huge economic mess going on, why should you consider spending more money on a patent application? What good is a patent anyway?

Let me start with what a patent is not. It is not a right to practice your invention. It is a right to exclude others from making, using or selling the invention defined by the claims. Consequently, it can be a deterrent, preventing others from misappropriating your invention. If someone infringes on your patent, you can sue and request damages in the form of a royalty, lost profits, or even an injunction - prohibiting your competitor from practicing the invention.

A patent and a patent application are property rights. They can be sold completely (i.e. assigned) or partially, such as by licensing. Licenses are limited by your imagination. There are licenses based on geography, product use or duration. Licenses can charge a royalty depending on the amount of goods sold. Companies can cross-license patent portfolios.

Recently, new entities have developed even more interesting ways to monetize patents. Patents can be pooled together and sold as a collection. That collection may be sold to a corporation and the corporation can issue shares based on the value of the pool. There are companies that buy patents for the purpose of suing others (sometimes inappropriately called "patent trolls") or for the purpose of preventing their constituent shareholders from being sued. Patents can be auctioned off on an auction block. Law firms can partner with a patent owner and assert a patent on a contingency or partial contingency basis.

Most fundamentally, patents and patent applications are assets. Even if your company never makes a product, or never becomes a company, you may own an asset in the form of a patent or patent application. Investment capital can be based on those assets. Some companies (universities are a good example) may never make a commercial product but depend heavily on the revenue stream of their intellectual property. IBM has a business unit focused on monetizing its intellectual property. That unit is said to make over a billion (\$1B) a year in profits.

So, to answer my initial question, there are a myriad of benefits from patent protection which could result in value many times what you might pay for a patent application.

Steve Rubin Steve@RubinPLaw.com

Telephonics Corporation Receives a \$2M Follow-on Contract from the US Air Force for TruLink® Wireless Intercommunication Systems

FARMINGDALE, NEW YORK, January 13, 2009 – Telephonics Corporation, a wholly owned subsidiary of the Griffon Corporation (NYSE:GFF); announced today that it has been awarded a \$2M follow-on contract from the U.S. Air Force (USAF) for TruLink® Wireless Intercommunication Systems. The TruLink system will be used by Aeromedical Evacuation (AE) teams to provide clear voice communications between team members, thereby enhancing the safe transport and care of patients aboard military aircraft. TruLink enables the AE medical crew director, flight nurse and medical technicians to move freely around the aircraft, untethered by restrictive and dangerous cords, while maintaining clear voice communication with each other in the high noise environment of an aircraft.

"We are pleased to continue to provide these systems that enhance the operational safety and capability of the personnel during these critical Aeromedical Evacuation missions", stated Phil Nicholas, President of Telephonics' Communication Systems Division. "The TruLink wireless voice communication system continues to be used across the Army, Navy, Air Force and U.S. Coast Guard to enhance the safety of our military personnel during dangerous and critical operational missions."

LISAT2009

Exhibitor Spotlight

Texas Instruments

Steve Taranovich will present the Texas Instruments' Low Power Wireless Technology/Zigbee as well as Green Power Supply Techniques. In particular Digital Power Supply advantages in keeping with Medical Electronics and Green Building Technologies

2009 AWARDS BANQUET

Thursday, March 26

The IEEE Long Island Section 2009 Awards Banquet will be held this year at the Hyatt Regency on Thursday March 26 from 6:30 PM to 10:00 PM. We will be honoring the recipients of the Long Island Section awards, as well as the recipients of the Region 1 awards.

The Hyatt Regency is located at 1717 Motor Parkway, Hauppauge, NY. 11788. As is tradition, the Long Island Section will be subsidizing the cost of admission, allowing us to offer this memorable commemorative affair to our members and their guests for a minimum cost. So mark your calendars and set aside Thursday Evening March 26th, and join us for good food, good talk, and good friends.

Registration Form

2009 Awards Banquet

(Member and Member's guests - \$30 each, Non-Members - \$60 each)

Make checks payable to "IEEE Long Island Section"

Send form to:

Jon Garruba
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Brookhaven, NY 11719-9764

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Brain Teaser Challenge

By Butch Shadwell

When I was a kid I used to dream about being one the first humans on Mars. I figured the moon would have been done before I was ready to go up. It seems that I am quickly getting too old for the Mars trip too at this point. Oh well, I can still imagine what it would have been like.

Traveling to Mars poses so many difficult problems, not the least of which is shielding the passengers aboard the spaceship from solar radiation. If there should be a major solar flare in the direction of the ship while we were in interplanetary space the crew could easily be exposed to a lethal dose of radiation.

So just in case NASA calls me to design a radiation shield for the interplanetary vehicle, I thought I would do a few calculations. We know that the earth is protected from the solar wind (charged particles from the sun) by the earth's magnetic field. Over most of the planet, these magnetic lines of force (the B field) run roughly parallel to the surface of the planet north to south, except at the magnetic poles where the lines of force originate and terminate.

If a positively charged particle approached the earth from the sun, would it tend to be deflected to the east or the west? Maybe we could put a big bar magnet in our space craft to help protect the occupants.

Reply to Butch Shadwell at:

b.shadwell@ieee.org,

904-223-4510 (fax), 904-223-4465 (v),

3308 Queen Palm Dr., Jacksonville, FL
32250-2328.

<http://www.shadtechserv.com>

The names of correct respondents may be mentioned in the solution column.



Celebrating 125 Years
of Engineering the Future

**THE INSTITUTE OF ELECTRICAL
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Is Proud to Announce the

IEEE LONG ISLAND SECTION ANNUAL AWARDS BANQUET

Thursday March 26th, 2009 at 6:30 PM

Hyatt Regency Long Island at Wind Watch Golf Club, Hauppauge, NY

Dr. Ilan Ben-Zvi, Brookhaven National Laboratory, Fellow Award *for leadership in superconducting accelerators, high brightness electron sources and free electron lasers.*

Dr. Konstantin K. Likharev, Stony Brook University Fellow Award *for contributions to superconducting digital electronics and single-electron tunneling devices.*

Dr. Yuanyuan Yang, Stony Brook University, Fellow Award *for contributions to parallel and distributive computing systems*

Dr. Veljko Radeka, Long Island Section Harold Wheeler Award *for outstanding leadership and accomplishments in detector development which enabled discoveries in many areas of science and technology in a career of sustained productivity spanning over 50 years.*

James Colotti, Telephonics Corporation, Long Island Section Alex Gruenwald Award *for development of the Long Island Section IEEE's outstanding website and for contributing to the growth of the Section's Microwave Theory and Techniques Society chapter.*

David Mesecher, Northrop Grumman Corp, Long Island Section Charles Hirsch Award *for innovative signal processing techniques applied to adaptive filtering, smart antennas and emitter location.*

Dr. Sina Rabbany, Hofstra University, Long Island Section Athanasios Papoulis Award *for noteworthy contributions to biomedical engineering education and Hofstra's Medical School Curriculum.*

Dr. Monica F. Bugallo, Stony Brook University, Long Island Section Outstanding Young Engineer Award *for development and application of computational methods for sequential signal processing.*

Craig Aarseth, Telephonics, Region 1 Award *for Technical Innovations in Radar and Landing System Architecture Design.*

Robert Barat, Region 1 Award *for Leadership in Radar Systems and Software Engineering.*

Dr. Babak Beheshti, Region 1 Award *for Providing Technical Leadership in the Development of State-of-the Art Reconfigurable Wireless Technologies.*

William C. DeAgro, Northrop Grumman Corp, Region 1 Award *for Dedicated Efforts in Technological Innovation in the Submission of Patent Ideas with Most Recent Patent on Multipath Height Finding.*

Dr. Frederick M. Kruger, Region 1 Award *for Contributions to the Profession Through Exemplary Service as the LISAT Conference Exhibits Chair.*

Dr. Stefan A. Robila, Montclair State University, Region 1 Award *for Contributions to the Engineering Profession in Exemplary Service as the LISAT Conference Proceedings Chair.*

Daniel A. Rogers, Telephonics Corporation, Region 1 Award *for Contributions to the Profession Through Exemplary Service as the LISAT Conference Technical Program Committee Co-Chair.*

Craig Romano, BAE Systems, Region Award 1 *for Technical Leadership in the Development of state-of-the-Art Low RCS Antennas.*

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

Voltage Feedback vs. Current Feedback Amplifiers: Advantages and Limitations

Speaker: Xavier Ramus, MSEE

Thursday February 26 at 6:30pm

(This seminar is free and all are invited. Refreshments will be served at 6pm.)

0.2 CEU UNITS, PENDING

Who Should Attend?

Anyone interested in op amp design and application, especially in the high speed area.

Abstract:

Practical analytical models for both voltage feedback and current feedback amplifiers will be developed and used as a tool to demonstrate usage and limitations of both architectures.

Presented applications include trans-impedance, ADC drivers and DAC output amplifiers.

Speaker Bio:

Xavier Ramus is a system and applications engineer for high-speed amplifier products at TI-Tucson, AZ. His main focus is wireline communications such as xDSL and PLC. He has an MSEE from ESME-Sudria (Paris, France) and an MSEE from San Jose State University (San Jose, CA). His spare-time interests include history, antiques and running.

Location:

This lecture will be held at BAE Systems located at 450 Pulaski Road, Greenlawn, NY. The facility is located just east of Park Ave (Suffolk County Rte 35) on Pulaski Road. The presentation will begin at 6:30 PM. Pizza will be served starting at 6:00 PM.

Registrants must be US citizens. Please enter from the main entrance facing Pulaski Road.

Registration:

To register please visit the calendar page of the IEEE Long Island Website, www.IEEE.LI, click on the registration link, and fill out the form.

For further information contact Arthur Williams, CAS Chairman at

awilliams@telebytebroadband.com



IEEE

**IEEE LONG ISLAND SECTION and
IEEE REGION 1 present**

LISAT2009

The fifth annual conference on

Long Island Systems, Applications, and Technology

Save the Date: Friday, May 1, 2009

in cooperation with the

**INSTITUTE FOR RESEARCH & TECHNOLOGY TRANSFER
LUPTON HALL**

Farmingdale State College, State Univ. of NY

**Farmingdale
State College**

The IEEE Long Island Section, in cooperation with its Technical Society Chapters and IEEE Region 1, will be holding the 2009 IEEE Long Island Systems, Applications, and Technology Conference (LISAT2009) on Friday, May 1, 2009, in Lupton and Roosevelt Halls at Farmingdale State College, 2350 Broadhollow Road, Farmingdale, New York.

LISAT2009 Advanced Program

Track A

RFID for Personal Asset Tracking
Enhancing User Experience at Museums Using Smart Phones with RFID
RFID Wrist Band for Children in Elementary Schools
Image Sensor Requirements for 2D Barcode Scanning
Quo Vadis Face Recognition: Spectral Considerations
Parallel Computation Methods for Enhanced MoM and MLFMM Performance
Efficient Spectrum Sensing in Cognitive Radio Networks
Data Detection for MIMO WCDMA-HSDPA Systems
IEEE 802.11N WLAN Migration - Impact On System Capacity & Terminal Design
Resource Scheduling Heuristics for Data Intensive Networks
Improving Elevator Call Time Responsiveness via an Artificial Neural Network Control Mechanism
Health Monitoring Systems for Massive Emergency Situations

Track B

Natural ELF Electric Oscillations in Human Life
Use of Marine Current Turbines to Reduce Hurricane Intensity in the Gulf of Mexico
TDR-Inspection of Vast Tracts of Forests or Plants
Implications of Microsoft Vista File Systems for Computer Forensics Investigators
Strong Security Solutions for Low-resource Devices - the Algebraic Eraser
MIL-STD-461: The Basic Military EMC Specification and It's Evolution Over The Years
Tuki: A Voice-Activated Information Browser Aperture Modeling & Simulation for Enhanced Performance
Characterization of CZT Materials for X-ray and Gamma-ray Detectors
CZT Virtual Frisch-grid Detector: Principles and Applications
Lunar Regolith Control and Resource Utilization

In addition to these two tracks, we are planning a third track dedicated to CEU / PDH credits.

LISAT2009 Organizing Committee

CONFERENCE CHAIR: Charles Rubenstein, Pratt Institute < c.rubenstein@ieee.org >

CONFERENCE VICE CHAIR: Dave Mesecher, Northrop Grumman

TECHNICAL PROGRAM CHAIR: Dan Rogers, Telephonics;

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TREASURER: Brian Quinn, Verizon SECRETARY: Nick Golas, Telephonics

FACILITIES CHAIR: John Fiorillo, Farmingdale State









2009 CONFERENCE SPONSOR Executive Officers: Region 1 Director Howard Michel; Long Island Section Chair Sandy Mazzola, BAE

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

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Celebrating IEEE's 125th Anniversary

by Nikolaos Golas, Pulse Associate Editor

May 13th 2009, marks IEEE's 125th Anniversary and a time to celebrate 125 years of engineering the future. The anniversary dates back to 1884, when groundbreaking inventions such as the electric light were emerging. A small group of industry pioneers, including Alexander Graham Bell and Thomas Edison, met that year in New York City to form IEEE's predecessor society, the American Institute of Electrical Engineers. They gathered again at the International Electrical Exhibition of 1884, sponsored in Philadelphia by the Franklin Institute, to address the future needs of engineers and the burgeoning industry.

"For the last 125 years, IEEE has fostered technological innovations that have helped improve the quality of life," said 2009 IEEE President Dr. John Vig. "We are proud of our heritage and our community where the best in engineering, technology, and applied sciences continue to learn, discover, and develop new knowledge for the benefit of humanity worldwide."

IEEE's 125th anniversary celebration focuses on the future. Many anniversary activities will acknowledge the past, but others will call attention to the ongoing contributions made by engineers and other technology professionals worldwide.

How can you as a member get involved? You have myriad opportunities, with many venues for networking, including anniversary parties and receptions, technical programs, talks by prominent speakers, contests, and online video contributions. Activities are planned around the world, and you can participate in person and online.

Here are a few ways you can join the celebration:

- Find an event near you and sign on. Check the calendar at the IEEE anniversary Web site, <http://www.ieee125.org>. Can't find something close by? Have any ideas for the anniversary celebration contact the IEEE Long Island Section Chairman Sandy Mazzola at: chairman@IEEE.LI.
- If you're already planning an event, spread the word to colleagues in your area, and don't forget to mark it on the Web site's anniversary calendar.
- For the latest word on emerging, world-changing technologies of benefit to humanity, tune in on March 10th to the IEEE Engineering the Future Media Roundtable webcast, streamed live from the anniversary Web site.
- Create a new online discussion on a technical or historic subject or contribute to an existing one on the anniversary Web site message board. Check the anniversary greeting videos and vignettes on the site, and submit your own.
- Post a historical photo involving the IEEE or a new photo taken at an IEEE anniversary celebration that you attend.
- Check the IEEE 125th anniversary on Facebook <http://www.facebook.com/pages/IEEE-125th-Celebrating-125-Years-of-Engineering-the-Future/22038835285?ref=s> and connect to your friends and colleagues around the world by becoming a friend of IEEE.
- If you're a student, enter the Presidents' Change the World competition by identifying a real-world problem and developing a solution using engineering, science, computing, and leadership skills to benefit the community or humanity. You could win the top prize of US \$10,000. The deadline is February 28th 2009 at the Web site <http://www.ieee125.org/changetheworld>. Visit the anniversary Web site in May to vote for the finalist you think should win the \$500 People's Choice award.

Upload a 10-second video as part of the Graduates of the Last Decade (GOLD) project to spread word of the anniversary worldwide. Learn more at <http://www.goldaroundtheworld.com>.

Keep checking <http://www.ieee125.org> for updates on anniversary news, events, and programs designed to celebrate this historic milestone and create additional visibility for IEEE.