

The *Pulse* of Long Island



IEEE LI Section's 50th Year!

May 1, 2003 - Vol. 53 No. 5

The monthly newsletter of the Long Island Section of the Institute of Electrical and Electronics Engineers, Inc.

Chairman's Message

By *Dave Mesecher*
d.mesecher@ieee.org



The Morning After

Wow! What a day! I hope everyone enjoyed the Awards Banquet as much as I did! From all of the e-mail traffic that crossed by desk today, it seems as if many people did in fact find the event exciting and inspiring, in no small part due to the fact that we had such fine keynote speakers – Ed Palacio of EDO Corporation and Congressman Steve Israel – back-to-back this year. Ed delivered an excellent message on the importance of training qualified engineers - an issue that has deep implications locally and nationally. Congressman Israel provided a highly complimentary and extremely informative talk on shaping our nation's defense for the future, and how technology development is a pivotal element of this process. I know I was captive, as both talks reflected the deep concerns I expressed in last month's *Pulse*. (Go to http://www.ieee.li/pulse/pulse_2003_04.pdf to see last month's column.)

We appreciate Ed and the Congressman taking time from their schedules to join us. Clearly, this was a challenge for Congressman Israel under the circumstances, but he was gracious to the point of resisting his assistant's urgings to leave for his next appointment, so that he could meet and take pictures with award recipients and Long Island Section volunteers, myself included!

For arranging for these excellent speakers, and for the entire banquet, we have Dan Rogers of Telephonics to thank. Thanks, Dan Rogers of Telephonics, for organizing such a wonderful banquet! Also, thanks to Dan's lovely wife Bridget for being so kind as to help out with the planning and arrangements, and for being at the banquet to help it run so smoothly!

It was great to see all the people I know, including all my friends from our corporate sponsors - EDO, BAE, Symbol, Telephonics, and Northrop Grumman – and it was equally enjoyable meeting all the new people I had the pleasure to. It was also great seeing so many people I know receive awards this year, and it was also equally enjoyable talking with the award recipients I had never before had the pleasure of meeting.

Apparently the celebration created an interesting "morning-after" effect in several people – though not your typical hangover. I was informed by Dr. Huayan Amy Wang of Symbol Technologies that she wanted to volunteer to fill the position of Secretary of our Section! We welcome Amy to the Executive Committee, and look forward to working with her this year as we handle the exciting business of the Section during its 50th Anniversary. Welcome aboard, Amy! And thanks to Harvey Altstadter for filling this important position in the interim.

(Continued on Page 2)

The PULSE is now available on-line!

To get the on-line PULSE and get up-to-date information about the Section, visit our
web site at: **www.IEEE.LI**

You can also register for IEEE LI Section events online at this web site!

(Continued from page 1)

As if that wasn't enough, Ted Pappas of Keyspan Energy Corporation stepped forward to take on the position of Membership Development Chair! Ted has been very involved in the past with the Engineer's Joint Committee of Long Island, and I have known him for many years. He will make an excellent addition to the Executive Committee, and no doubt will make substantial advances in the membership of our Section working with Babak Beheshti, who is our Region 1 Membership Development Chairman. Welcome aboard Ted! Thanks to Babak for filling this Section Membership Development position in the interim, and good luck in your new regional role.

But wait – there's more! We also have a new Chairman of the Long Island Chapter of the Aerospace and Electronic Systems Society: Rich Pierro. Prior to becoming Chairman of the Chapter, however, Rich actually had to establish the Chapter! Although our Section has a substantial number of AES members, there was no active Long Island Chapter. Thanks to Rich, however, who had the motivation and initiative to obtain the required number of signatures, we were able to petition the IEEE to authorize its establishment. I would say that Rich is off to a good start as Chairman! Congratulations Rich, and welcome to the Long Island Section Executive Committee!

I know what you're thinking: "Just when I about to volunteer for the IEEE, all the positions are taken!" Not true! There are many positions still available, and your Long Island Section needs your help as much as ever. Please feel free to contact me or visit your web site at www.ieee.li to find out how you can help. You never know – you just may get to have your picture taken with a US Congressman!

Best regards,
Dave Mesecher

MEETING NOTICE

Samir Das will preset a lecture Tuesday, May 13 at Telephonics on "Wireless Sensor Networks" for the Computer Society.

The seminar will be presented from 6:00 to 8:30 PM Tuesday, May 13, 2003 located at Telephonics Corporation on Route 110 in Farmingdale, New York. Refreshments will be provided.

The seminar is free and open to all. If you wish to attend, please register via internet in the computer society section of www.ieee.li.

You can contact the coordinator Daniel Rogers by email at drogers@ieee.org.

Long Island Section Officers

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Secretary. Amy Wang
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The PULSE of Long Island is published monthly except July and August by the Institute of Electrical and Electronics Engineers, Inc. Headquarters: 445 Hoes Lane, Piscataway, NJ 08855-1331. \$1.00 per member per year (included in annual dues) for each member of the Long Island Section. Periodical postage paid at New York, NY, and at additional mailing offices. Postmaster send address changes to IEEE PULSE, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. (USPS 450-540). The opinions expressed in this newsletter are those of the authors, and no endorsement by the Institute, its officials, or its members is implied.

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PULSE Deadlines

For June.. 2003: 5-5-03
For Sept.. 2003: 8-5-03

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IEEE Long Island Section Calendar

(No membership requirements, no registration, no fees at meeting unless otherwise noted.)

Please visit our website at www.IEEE.LI and click on the calendar for online registration (as available) and for listing updates

May 7, 2003 - LI Consultant's Network at 7:00 PM at Briarcliffe College. For See Announcement on page 4.

May 13, 2003 - "Wireless Sensor Networks" , by Samir Das , 6:00 to 8:30 PM, Located at Telephonics Corporation on Route 110 in Farm-ingdale, New York. Please register via internet in the computer society section of www.ieee.li. Contact Daniel Rogers, Computer Society Chair of the IEEE Long Island Section for more info at drogers@ieee.org.

May 14, 2003 - "Evolution of 3G Wireless Systems - High Speed Downlink Packet Access and Beyond" , by Dr. Ariela Zeira , 6:30 to 8:30 PM, Located at Melville, New York. Please register via internet in the Signal Processing section of www.ieee.li. Contact Babak Beheshti, Signal Processing Chapter Chair of the IEEE Long Island Section for more info at b.beheshti@ieee.org.

May 19, 2003 - Long Island Section Executive Committee (ExCom) meeting at 6:00 PM, Telephonics Corp. on Route 110 in Farmingdale- This meeting is OPEN and FREE TO ALL IEEE members - Please contact Dave Mesecher for reserving a space in the meeting (d.mesecher@ieee.org)

June 4, 2003 - LI Consultant's Network at 7:00 PM at Briarcliffe College. For See Announcement on page 4.

June 4 & 5, 2003 - "Fundamentals of Digital Signal Processing" Workshop (Rescheduled) , For details and registration contact Babak Beheshti, b.beheshti@ieee.org or 516-686-7437.

June 9 & 10, 2003 - "Basic Methods of Cryptography and Network Security" Seminar, See ad on page 9. For details and registration contact Babak Beheshti, b.beheshti@ieee.org or 516-686-7437.

June 9, 2003 (tentative)- "User Interface Design: An Introduction and Overview" , by Dr. Joseph Konstan , 6:00 to 8:30 PM, Located at Telephonics Corporation on Route 110 in Farmingdale, New York. Please watch for registration via internet in the computer society section of www.ieee.li. Contact Daniel Rogers, Computer Society Chair of the IEEE Long Island Section for more info at drogers@ieee.org.

June 10, 2003 - "EMI Filter Connectors, Then and Now", By Mr. Leonard Krantz & Mr. Tom Gregory. See announcement on page 8 for details.

July 14 & 15, 2003 - "Windows™ Programming Using Visual Basic" Workshop, See ad on page 7. For details and registration contact Babak Beheshti, b.beheshti@ieee.org or 516-686-7437.

EDA
Ad Here

MEETING NOTICE

On the **First Wednesday of each month** at 7 PM, the IEEE Consultants Network of Long Island will Meet.

The program will be held at Briarcliffe College,
1055 Stewart Avenue, Bethpage, NY.

Admission is free (no charge).

No pre-registration is required.

For last minute announcements and updates visit:

www.consult-li.com

Advertisement Business Opportunity

Considering starting your own business, but don't have access to affordable facilities/services? Our new Tech Center in Ronkonkoma LI can help by providing a professional facility to set up your business, and services ranging from engineering to full mfg.

Call for details. Mr. A 631 471 6157

IMPORTANT NOTICE

Fundamentals of Digital Signal Processing Seminar

This seminar originally scheduled for March 24, 25 - 2003
6:00 - 9:00 PM, has been rescheduled to **June 5, 6, 2003, 6:00 - 9:00 PM.**

To register please contact Babak Beheshti at 516-686-7437 or email to
b.beheshti@ieee.org

RETLIF
Ad
Here!

You May Be Already Qualified to be Elevated to Senior Member Grade!

Attention: Potential IEEE Senior Members!!

You may be eligible for elevation to Senior Member grade. There are many reasons why you should consider upgrading your membership. Some of the benefits include:

- The professional recognition of your peers for technical and professional excellence.
- An attractive fine wood and bronze engraved Senior Member plaque to proudly display.
- Up to \$25.00 gift certificate toward one new Society membership.
- A letter of commendation to your employer on the achievement of Senior Member grade (upon the request of the newly elected Senior Member.)
- Announcement of elevation in Section/Society and/or local newsletters, newspapers and notices.
- Eligibility to hold executive IEEE volunteer position.
- You must be a Senior Member to be considered for the Fellow grade

We know that *many members never take the time to apply for Senior Membership, either because they think the requirements are too high or they think it would take too much time*. We would like to show you that neither of these reasons should be an obstacle.

First of all, the basic requirement for Senior Membership is 10 years in the profession with 5 years of significant performance. Significant performance can include responsibility for, or major contribution to, important scientific or engineering work, publication of engineering or scientific papers, books or inventions, development of courses and related activities. **Most engineers with 10 years in the profession will meet these requirements**. Details and examples are given on the IEEE web site:

<http://www.ieee.org/organizations/rab/md/smprogram.html#role>

Secondly, your application can be done quickly. The IEEE web site has forms for electronic submission of applications and the required references.

And finally, to make the submission as easy as possible, the Long Island Section is going to have a panel of Senior members and Fellows to sponsor your application. Fill out the on-line application and contact

Ted Pappas

tpappas@keyspanenergy.com

Checklist of items:

To complete the application you will need: (Electronic format required)

1. IEEE member number
2. Degrees, schools and dates
3. Current position, company and title
4. List of professional experience
5. List of achievements demonstrating significant performance
6. Copy of a recent resume (to be attached to the application)

Plan to join us and UPGRADE YOUR MEMBERSHIP.

Sincerely, Babak Beheshti, Membership Development Chair, Long Island Section, IEEE

The Long Island Section of the IEEE Computer Society

presents a seminar titled:

Wireless Sensor Networks, Tuesday, May 13, 2003

WHO SHOULD ATTEND? Persons who are interested in the upcoming wireless sensor networking technology. The seminar is free and open to all.

WHAT ARE THE KEY BENEFITS? Learn about how future computing technology will look like when compute devices can interact with the physical world directly, exist in enormous numbers and are networked together.

HOW TO REGISTER: If you wish to attend, please register via internet in the computer society section of www.ieee.li.

SPEAKER: Samir R. Das, SUNY at Stony Brook

Abstract:

The availability of cheap, low power, and miniature embedded processors, radios, sensors, and actuators, often integrated on a single chip, will soon be leading the use of wireless networking for interacting with the physical world. The applications are wide-ranging -- from security and surveillance, to monitoring of natural habitats and eco-systems; for designing smart homes to smart highways. The resulting systems, often called wireless sensor networks, differ considerably from current networked and embedded systems. Their design requires a proper understanding of the interplay between wireless network protocols, energy-aware design, signal-processing algorithms, and distributed computing.

This seminar will introduce wireless sensor networks with motivating applications, and describe the engineering design challenges. In the second part of the talk, we will address some specific issues related to such networks: such as design of routing, data dissemination and data gathering protocols, design of location service and issues related to power and topology management.

Location and Time:

The seminar will be presented from 6:00 to 8:30 PM Tuesday, May 13, 2003 located at Telephonics Corporation on Route 110 in Farmingdale, New York. Refreshments will be provided. The seminar is free and open to all. If you wish to attend, please register via internet in the computer society section of www.ieee.li. You can contact the coordinator Daniel Rogers by email at drogers@ieee.org. A confirmation email will be sent by May 1. The seminar is wholly the responsibility of IEEE Long Island Section and the speaker.

POLY Ad
Here

Windows™ Programming Using Visual Basic Workshop

July 14, 15—2003
6:00 - 9:00 PM

Overview

The role of programming tools has evolved over the past 45 years along with computer hardware. A programming language today, such as Visual Basic, differs greatly from programming languages of just a few years ago. The visual nature of the Windows operating system requires more advanced tools than were available a few years ago. Before windowed environments, a programming language was a simple text-based tool with which you wrote programs. Today you need much more than just a language; you need a graphical development tool that can work inside the Windows system and create applications that take advantage of all the graphical, multimedia, online, and multiprocessed activities that Windows offers. Visual Basic is such a tool. More than a language, Visual Basic lets you generate applications that interact with every aspect of today's Windows operating systems. A **FREE TEXT** will be given to each attendee at no additional cost.

Who Should Attend

This course is intended for engineers and developers who have a background in any programming language and who would like to embark on visual programming in the Windows environment.

Key Benefits

- Obtain a working knowledge of visual programming and programming constructs in Windows™
- Learn the terminology and fundamental key concepts

Contents

What you will learn:

- Visual Basic at Work
- Analyzing Visual Basic Programs
- Controls and Properties
- Examining Labels, Buttons, and Text Boxes
- Putting Code into Visual Basic
- Improving Code: Message and Input Boxes
- Making Decisions , Visual Basic Looping
- Combining Code and Controls
- List Boxes and Data Lists
- Dialog Box Basics
- Modular Programming
- Built-in Functions Save Time
- Printing with Visual Basic
- Menus in VB Applications
- Visual Basic and ActiveX
- Distributing Your Applications

Seminar Coordinator and Instructor

Babak D. Beheshti is the Senior Past Chair of IEEE Long Island section, the Seminars Coordinator and the Chair of the Signal Processing Chapter.

Location and Times

The seminar will be given in Melville, 6:00 to 9:00 PM. Registrants will be advised of the exact location and receive an acknowledgment by mail shortly after registration. The seminar is wholly the responsibility of IEEE Long Island Section and the instructor.

For further information contact Babak Beheshti via email at b.beheshti@ieee.org or by phone at 516-686-7437.

Fees will be refunded in full if the seminar is canceled or the registrant cannot be accommodated due to capacity limitations. Other refunds will be considered.

Registration Fees

If Paid..	Non-IEEE	IEEE Member	Student/Life
Before July 7 OR After July 7	\$335	\$285	\$200
	\$385	\$335	\$230

Registration Form Visual Basic Prog. , July. 2003

Make checks payable to "IEEE Long Island Section".
Send form to Babak Beheshti, 101 Caffrey Avenue,
Bethpage, NY 11714-1435

Name: _____

Company: _____

Home Address: _____

City and Zip: _____

Hphone: _____, Bphone: _____

email: _____

Member #: _____ Grade: _____

Amount enclosed: _\$ _____

The Long Island Chapter of IEEE Electromagnetic Compatibility Society is presenting a lecture entitled:

EMI Filter Connectors, Then and Now

Tuesday, June 10, 2003



WHO SHOULD ATTEND? Individuals who design, and test equipment that is subject to today's Commercial and Military EMI, Lighting, ESD, and EMP requirements, individuals who integrate complex (and distributed) systems of electronic equipments, and individuals interested in learning more about the design, construction, and modeling of filter connector products.

WHAT ARE THE KEY BENEFITS? The opportunity to learn about today's filter connector technology, its benefits, and its limitations.

SPEAKERS:

Mr. Leonard Krantz -- Engineering Manager for EMI/EMP Products, Amphenol Corporation, Sidney NY

Mr Tom Gregory -- Marketing Manager for EMI/EMP Products, Amphenol Corporation, Sidney NY



Abstract:

EMI, EMP, ESD, lightning, and similar design / test requirements are currently imposed on most military and commercial electronic equipment built today, and defined "levels" are more severe than ever. EMI filter connectors are a viable option when equipments must operate in such adverse environments, and improvements in technology have allowed EMI filter connectors to migrate from a design fix that was implemented as an "afterthought" to a design solution, that is planned for at the beginning of the equipment design process. Improvements have not been limited to filter technology. Available design tools allow the user of filter connectors to more easily select the correct part and ensure that these parts will survive required surge, lightning, and ESD levels.

The use of present day filter connectors for common and differential mode suppression in RF and transient environments, will be presented, and technical descriptions of the pSpice models and surge analysis tools will be reviewed. Details of currently available product lines will also be presented.

Seminar Coordinator:

Bruce Willard and John LaSalle of the IEEE Long Island EMC Chapter.

Speaker Bios:

Leonard Krantz -- Leonard joined the Bendix Corporation (now Amphenol) in 1963, and began his involvement with connector products 6 years later. Prior to attaining his current position as the Engineering Manager for EMI/EMP Products, Leonard served as a Test Engineer in the Connector test lab and a Senior Design Engineer for Filter Connector products in the Engineering Design group. During this period, Leonard developed the test methods and techniques for electrical testing of filter and EMP products and obtained 10 patents in the field of filter connector design. Leonard received a Bachelor of Science degree in Physics from Canisius College.

Tom Gregory -- Tom is currently the Marketing Manager for EMI/EMP products, and has been working for the Bendix Corporation (now Amphenol) since 1981. Tom has been a connector product specialist and product manager for the last 18 years.

Location, Time, and Registration:

This lecture will be held at Northrop Grumman Plant 25, Conference Room B, in Bethpage (off South Oyster Bay Road) at 6 PM on 10 June. To gain access to the Northrop Grumman facility, it is important to REGISTER by 3 June and ARRIVE BEFORE 6 PM (5:45 PM is recommended). Coffee and a snack will be served prior to the talk. To register, or view additional driving directions, please visit our web site at: <http://www.ieee.li/emc.htm> For those without internet access, an RSVP message (indicating citizenship) may be left at 651-265-2282.

Signal Processing Society and IEEE Long Island Section Present

Basic Methods of Cryptography and Network Security

June 9, 10—2003

6:00 - 9:00 PM

Overview

The Long Island Section of IEEE and its Signal Processing Society are presenting a training course consisting of two 3-hour sessions, entitled "Basic Methods of Cryptography and Network Security".

Who Should Attend

This course is designed for managers who need to implement network security in networks and network applications, entry-level network professionals seeking to understand the underlying role of encryption in secure network protocols, and engineers having some familiarity with TCP/IP and Internet mechanisms who want a practical understanding of current security technologies, with methods for integrating security hardware and software into their network environments.

Key Benefits

- Acquire familiarity with fundamental Network Security terminology and concepts
 - Understand cryptographic techniques and key role of cryptographic methods in enabling secure network protocols and communications
 - Learn names and characteristics of numerous important security technologies, how they work, and how they are used
- Gain awareness of outstanding security issues in key technology areas, as well as methods for evaluating relative strengths of a security implementation

Content

Security Basics, Threat Analysis, Survey of Cryptography, Public Key encryption, Digital Signatures, Hash Algorithms, Encrypted email, X.509 Certificates and Authorities, SSL/HTTPS, RSA Algorithm, Layered Security and Mechanisms, Firewall ACLs, NAT, and Stateful mechanisms, Proxies, IDS concepts, RADIUS, IPSEC protocols and configurations, IKE, DNS Security, Kerberos, Wireless LAN security

Speaker

Dr. Scott O'Hare received his Bachelors' Degree in Mathematics from the State University of New York at New Paltz, and his M.S. and Ph.D. degrees in Mathematics from the State University of New York at Stony Brook. Since that time he has worked with Grumman Data Systems, performing network protocol and performance studies, and developing security standards and implementations with NIST and NCSA. Most recently he served as Chief Scientist with Cablevision Systems Corporation, where he has played a key role in designing and

establishing Cablevision's Internet Services Provider program. He has had numerous years of practical and theoretical experience in the network security field, most recently in developing Cablevision's Business Class Optimum Online ISP service, which provides for Firewall, QoS, and a broad range of IPSec VPN capabilities to small business customers.

Location and Times

The seminar will be given in Melville, 6:00 to 9:00 PM. Registrants will be advised of the exact location and receive an acknowledgment by mail shortly after registration. The seminar is wholly the responsibility of IEEE Long Island Section and the instructor. For further information contact Babak Beheshti via email at b.beheshti@ieee.org or by phone at 516-686-7437.

Fees will be refunded in full if the seminar is canceled or the registrant cannot be accommodated due to capacity limitations. Other refunds will be considered.

Registration Fees

If Paid..	Non-IEEE	IEEE Member	Student/Life
Before June 5	\$335	\$245	\$200
OR			
After June 5	\$385	\$295	\$245

Registration Form Comp. Security, June, 2003

Make checks payable to "IEEE Long Island Section".
Send form to Babak Beheshti, 101 Caffrey Avenue,
Bethpage, NY 11714-1435

Name: _____

Company: _____

Home Address: _____

City and Zip: _____

Hphone: _____, Bphone: _____

email: _____

Member #: _____ Grade: _____

Amount enclosed: _\$ _____

PACE REPORT

By: Irwin Weitman

"In addition to the downturn in the U.S. economy, we're worried about the eagerness of American businesses to move high-tech jobs overseas," IEEE-USA President-Elect John Steadman said. "Congress should take a close look at overseas outsourcing to see what can be done to create and keep high-value, high-tech jobs here in the U.S."

During roughly the same time period (FY '01 and '02) our nation lost more than half-a-million high-tech jobs ? both blue collar and professional ? 799,700 new or renewal H-1B visas were issued. And according to a 6 March article in Business Week, another 329,000 people were working in the U.S. on L-1 visas in 2001, many in the high-tech sector.

In "A Mainframe-Size Visa Loophole," Business Week noted that the L-1 visa is intended for "intracompany transfers by multinational corporations," but "many employers looking to slash costs have discovered that they can use [outsourcing] firms that hire L-1s to dump high-paid Americans in favor of cheaper workers from abroad." Read on at http://www.businessweek.com/careers/content/mar2003/ca2003036_6655.htm.

The unemployment rate for electrical and electronics engineers (EEs) has more than tripled since 2000, going from 1.3 percent to 4.2 percent last year. For computer scientists, the jobless rate jumped from two percent to five percent.

You don't have to be a consultant or intend to become one to attend meetings of the IEEE Consultants' Network of Long Island. We have some excellent technical and software/computer related presentations at our monthly meetings (7:00 PM on the first Wednesday of each month.) Our April meeting was about backup protection for your computer. It was so interesting that what is usually an hour and a half ran up to 10:00 PM and will be continued in May. At the rate we are going and the interest, it may even extent into June. See the web site at www.consult-li.com

You may contact me with questions or comments at i.weitman@ieee.org
or 1(631)266-2651.

Irwin

EMC Chapter Update

By: Bruce Willard

Tom Moyer of Amplifier Research provided an interesting, and well received, talk on at RFI in Bayshore during our April EMC Chapter meeting. In addition to receiving a overview of the European harmonic regulatory requirements, we were treated to a demonstration of the equipment needed to make the harmonic current measurements. In addition to learning just how complex the measurement process is, we were also shown how measurement results can be adversely affected by the source power to the device under test.

Our next meeting will be held on 10 June at Grumman (start time will be 6 PM sharp!) and will focus upon filtered connectors. Details can be found on the EMC chapter web page <http://www.ieee.li/emc.htm> and elsewhere in the Pulse.

MEETING ANNOUNCEMENT

On June 9, 2003 (tentative) the Computer Society Chapter hosts a talk titled "User Interface Design: An Introduction and Overview" , by Dr. Joseph Konstan , 6:00 to 8:30 PM, Located at Telephonics Corporation on Route 110 in Farmingdale, New York.

Please watch for registration via internet in the computer society section of www.ieee.li. Contact Daniel Rogers, Computer Society Chair of the IEEE Long Island Section for more info at drogers@ieee.org.

The Long Island Chapter of IEEE Signal Processing Society is presenting a lecture entitled:

Evolution of 3G Wireless Systems

High Speed Downlink Packet Access and Beyond

Wednesday, May 14, 2003

WHO SHOULD ATTEND? Individuals who are interested in or are involved in the wireless industry, in particular its evolution towards packet based next generation technologies.

WHAT ARE THE KEY BENEFITS? The opportunity to learn about today's latest development in Third Generation Wireless telephony.

SPEAKER: ARIELA ZEIRA, Ph.D., director of the Core Technology Development at InterDigital

Abstract:

Third generation wireless communication systems were introduced to extend the data capabilities of second-generation systems by providing quality of service (QoS) management and enabling the high data rates required for high speed web access, and transmission and reception of high quality images and video. To satisfy predicted future increasing demands on even higher rate data services, additional enhancements are being incorporated into the different 3G air interface standards.

The first step in evolving the 3G standards is enabling high-speed packet access in the downlink or forward link, i.e. when the terminal is receiving information from the network. The higher data rates are achieved via new features such as adaptive modulation and coding, Hybrid ARQ and fast scheduling. Other enhancements that are being considered are extending the high-speed packet access to the uplink or reverse link (when the terminal is transmitting information to the network) and smart antenna techniques. In this talk we will review the new features recently introduced or being considered for 3G air interfaces and discuss their impact on the performance of the evolving standards.

Seminar Coordinator:

Babak Beheshti, Seminars Coordinator and the Signal Processing Chapter Chair.

Speaker Bio:

Dr. Ariela Zeira is the director of the Core Technology Development at InterDigital. An engineer since 1978, Zeira has spent much of her career as a research scientist, and has more than forty pending patents in wireless communication. Zeira joined InterDigital in 1998 as an R&D engineer developing algorithms for the time division duplex (TDD) mode of wideband code division multiple access (WCDMA). As the manager of the Core Technology Development department, she is responsible for algorithm development and modeling for current programs and future initiatives.

Zeira obtained her undergraduate and graduate EE degrees from Israel Institute of Technology in 1978 and 1985 respectively. In 1991 she obtained her PhD degree in EE at Yale University (New Haven, CT), with a thesis in the area of estimation theory. From 1992 to 1997 Zeira was a senior research engineer at Signal Processing Technology (Palo Alto, CA). She worked in detection and estimation, statistical signal processing, time-frequency analysis and antenna array processing.

After a stint as a visiting research engineer at the University of California-Davis, where she worked on blind equalization algorithms for communications, Zeira joined InterDigital bringing her wealth of knowledge and experience to the company.

Location, Time, and Registration:

The location for this talk will be in Melville, NY at 6:30 PM on 14 May. Registrants will be notified of the exact location. Coffee and a snack will be served prior to the talk. To register, please visit our web site at: <http://www.ieee.li> For those without internet access, an RSVP message may be left at 516-686-7437.

Long Island Section Celebrates a Half Century of Service to the Scientific Community

Rod Lowman, Historian

When I came to Long Island in 1943 as a freshly minted electrical engineer from Ohio State, New York was the epicenter of the nation's scientific support of the WWII War effort. As a student member of both the IRE and the AIEE, I was fascinated to start with Harold Wheeler at Hazeltine in Little Neck as he was designing the Interrogate, Friend or Foe (IFF) equipment which would keep our airmen safe from friendly fire. Then, as now, the way to learn of the myriad programs in the New York area was to attend the Engineering Society meetings. However, both the IRE and the AIEE held their meetings in the Engineering Society Building on 39th Street in Manhattan which made attendance more difficult.

As the scientific developments expanded during the war, companies doing this work moved or expanded into the suburbs. After the war with engineers from Radiation Lab, Radio Research Lab and other wartime enterprises setting up new companies on Long Island and with Bill Levitt building 6,000 homes a year in Levittown to house the engineers and returning veterans to man these companies, Jim Shepherd of Sperry, who was chairman of the New York Section of the IRE, decided to set up the first IEEE Subsection on Long Island. In the spring of 1947 he enlisted the aid of Eric Isbister and Harold Wheeler to organize it. With a rapidly growing Long Island membership of 1,000 (from the total IRE membership at the time of 17,000) success was assured. Within 5 years Long Island engineers flocked to local meetings in such numbers that in 1953 the IRE made Long Island a full Section -the third largest IRE Section in the country. To reassure the IRE that they made the right decision, a new attendance record was set when the new section held a demonstration of color television for the home which delighted 672 viewers. The highlight of the year was our first Fellow Awards Presentation held at the Garden City Hotel -the old one for those who remember -with recognition of 7 members who attained Fellow Status. Befitting a full Section, Jim Craib initiated the PULSE of LONG ISLAND to publicize our activities.

So this year we celebrate 50 years as a full section. A momentous half century of dramatic new initiatives usually the result of careful planning and daring new ideas and occasionally the result of plain luck, like the meeting in 1957 when we packed every seat and aisle in the house to hear John Pierce's "Fancies and Fallacies of Space Travel". Planned months in advance, the meeting occurred less than two weeks after Sputnik was launched and more than 800 people came including reporters from the N. Y. Times.

Our history is more than just facts. It is a story of people -outstanding innovators of technical, social and economic change. It is the story of companies with perceptive leaders who recognize the value of technical excellence and encourage their engineers to participate in professional organizations that promote both technical and professional improvement. The Long Island Section has had strong leaders from the beginning. From the start we have emphasized technical excellence, sharing and distribution of technical knowledge, and recognition of accomplishments.

Look at our list of Long Island Fellows -it reads like a Who's Who of high technology. Look at our list of past chairman and you see both technical giants and managers, leaders, and organizers for change.

Long Island has always had an influence far greater than our numbers suggest because we speak, we write, we act, we get things done.

Our members have been generous in their support not only of the section but many have served in regional and Institute positions as well. Four of our members have served as President of the Institute: Art Loughrin, Emst Weber, Henry Bachman and Joel Snyder. A number have served as Directors of Region I. Admirable as this recognition for leadership is, the potential for service to the Institute from the quality of leaders we have suggests that we should do more to nominate and promote local leaders to responsible positions in the Institute.

About 35 years ago, many in our section recognized that we could also help our members through increased professionalism. We sought better, fairer, more ethical ways to do our jobs. We sought to convince our employers that they and their customers benefited

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A picture from IEEE Long Island Section's 40th Anniversary



Jim Shepherd and Eric Isbister return after 40 years to celebrate the success of the fledgling Subsection they started 40 years before. At this 40th Anniversary Party they are shown with four other LI Section Chairmen, Gregg Stephenson, Rod Lowman, Dave Dettinger and Bill Bailey and four admiring spouses.



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30 YEARS AGO

Rod Lowman, Historian

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when they treated their engineers in a fairer, more ethical manner. Over the next ten years many Long Island leaders promoted several areas of this new emphasis, like the IEEE Code of Ethics, Employment Practices, fair and equitable pensions, patent rights, etc. Leaders like Art Rossoff, Joel Snyder, Vic Zourides, Bob Barden, and Bob Bruce, to name a few, were so persuasive that concurrence of a majority of the membership supported a constitutional change to include professionalism in the activities of the Institute.

About 18 years ago, Bill Wilkes alerted us to another segment of the membership that was not being served, the self employed entrepreneurial member. Readily accepting the challenge, the section encouraged the foundation of the IEEE's first Consultant's Network. Its immediate success brought emulation in a number of other sections. Irwin Weitman pushed for Institute wide recognition and the Alliance of IEEE Consultants Networks was set up by the Institute and is now the fastest growing activity in the Institute.

As great as the Long Island Section's accomplishments over these past 50 momentous years are, the rapid rate of technical change has but increased the need for a strong professional society like the IEEE to help members stay current and optimize their career performance. We feel certain that our Section's members will take a strong leadership role in the formation of Institute policy. This will continue to make it an outstanding professional organization that is even more responsive to the needs of its members and will better serve a public that is ever more demanding of higher technology equipment and services.

So celebrate with us as we accept the laurels of the Institute for our 50 years as a full section in providing quality service to our membership and the ever increasing demands of a technically oriented society .



VOL. 53, No. 5

(USPS 450-540)

For
May
2003:

PERIODICAL MAIL
POSTAGE PAID AT N.Y., N.Y.



INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

IEEE *Pulse*
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Piscataway, NJ 08855-1331