The IEEE Newsletter

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

NJ Computer & EMS Chapters:

Software Development Trends for Monitoring and Control of LonWorks Distributed Control Network Systems over the Internet

On November 16th, 2000, the IEEE North Jersey Section Computer and Engineering Management Chapters will jointly host a presentation on "Software Development Trends for Monitoring and Control of LonWorks Distributed Control Network Systems over the Internet" by Greg Potosnak.

About the Talk

Software development trends for monitoring and control of LonWorks Distributed Control Networks Systems over the Internet will be explored. The following topic areas will be covered:

- The basic features required for distributed control software.
- Comparisons with other industry technologies.
- The major challenges facing software development of monitoring and control of distributed devices.
- System performance and design concerns.
- Solutions for remote management and monitoring over the Internet.

About the Speaker

Greg Potosnak is President of The Centronix Corporation, an Electronic Hardware and Software Solutions provider specializing in embedded control systems with Web based monitoring and control. He has over 18 years of experience with embedded systems development for medical, industrial, and military applications for many companies including York International, Pentax Precision Instruments, US Endoscopy, BOC Gasses, Lockheed Martin, as well as for the US Naval Surface Warfare organization.

He holds a BSEE & MSEE from Rutgers University, New Brunswick, NJ, 1986 and 1989 respectively. He also completed a research project on computer testing systems for which he was awarded the James J. Slade Scholar Honors award from Rutgers College of Engineering.

Mr. Potosnak has served on the Technology Advisory Committee, County College of Morris, for four years. His professional and academic society memberships include: IEEE, Universal Plug and Play Committee (UPnP), American Society for Healthcare Engineering, Tau Beta Pi, and Eta Kappa Nu.

All Welcome!

You do not have to be a member of the IEEE to attend. Bring your friends.

Time: 7:00 PM, Thursday, November 16, 2000.

Place: Dialogic, Inc., 1515 Route 10 (East bound from Route 202), Parsippany, NJ.

Information: Howard Leach, (732) 594-2911, or h.leach@ieee.org.

Members and Associate Members - Advance to a Higher Grade!

Members can advance to Senior Member grade. Associate Members may qualify for Member or Senior Member grades.

To get information and an application, send me your mailing address and the grade you want to advance to Don Weinstein, Kulite Semiconductor, One Willow Tree Road, Leonia, NJ 07605-2239, (201)461-0900 Ext 234, mornings, FAX (201)461-0990, email: don@kulite.com.

IEEE Vehicular Technology Conference

The IEEE Vehicular Technology Society will hold its Fall 2001 Conference on October 6-11, 2001 in Atlantic City. It is one of the major international mobile communications conferences in the world and will be hosted by the North Jersey chapter. Information about the conference is available at www.fallvtc2001.org.

Companies that are interested in sponsorship should contact Steve Wilkowski at swilkowski@lucent.com.

NJ Computer Chapter:

IT Success Fair

On Tuesday, December 12, 2000 the New Jersey Technology Council and the New Jersey Center for Software Engineering in conjunction with the IEEE North Jersey Section Computer Chapter will honor the best New Jersey software companies.

About the Speaker

Walker Royce, VP of Rationale, will be the keynote speaker. He has been the leader in bringing the various development methods together under the Unified Modeling Language Umbrella. He is a leader in the software engineering community.

Time: 4:00 to 7:00 PM, Tuesday, December 12, 2000.

Place: Stevens Institute of Technology, Charles V. Schaeffer Athletic Center, Hoboken, NJ. Parking available at the Central Parking System located on 3rd & Hudson Streets under the Marine View Towers building, one block from campus.

Information: Prof. Larry Bernstein, (973) 258-9213, ibernstein@stevens-tech.edu, or Howard Leach, (732) 594-2911, h.leach@ieee.org.

NEWSLETTER STAFF

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Business Manager..................Theresa Saracinello

Deadline for receipt of material is the 1st of the month preceding the month of publication. All communications concerning editorial and business matters, including advertising, should be sent to the Business Manager via e-mail at *k.saracinello @ieee.org* or to *The IEEE Newsletter, c/o Keith Saracinello, 25 Messenger Ln, Ringoes, NJ 08551*, (732) 562-6472.

IEEE NJ SECTION HOME PAGE
http://www-ec.njit.edu/~ieeenj/
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NEWSLETTER.html

REPORT ADDRESS CHANGES TO:
IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, (732) 981-0060. It is not necessary to inform the North Jersey Section when you change your mailing address. "The IEEE Newsletter" and other section mailings use a list provided by IEEE's national headquarters.

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  Richard Tax (rtax@bellatlantic.net)

The North Jersey Section Executive Committee usually meets the first Wednesday (except holidays and December) of each month at 7:00 PM. Meetings are open to all members. For information on meeting agenda contact Secretary Wayne Owens at (201) 767-3400, ext. 226, wowens@crestron.com.

NJ Signal Processing Chapter:
A Joint Source-Channel Coding Approach to Network Transport of Digital Video

On Tuesday, November 21, 2000, the IEEE North Jersey Section Signal Processing Society Chapter will host a presentation on "A Joint Source-Channel Coding Approach to Network Transport of Digital Video." The speaker will be Professor J. W. Modestino.

About the Talk

The use of forward error-control (FEC) coding, possibly in conjunction with passive-error recovery techniques, has emerged as a promising approach for real-time video transport over ATM networks for cell-loss recovery and/or bit error correction, such as might be required for wireless links. Although FEC provides cell-loss recovery, through its erasure correcting capabilities, it also introduces transmission overhead which can possibly cause additional cell losses. A joint source-channel coding (JSCC) methodology is described to maximize the number of video sources multiplexed at a given quality of service (QoS), measured in terms of overall reproduced video quality. The transport channel is modeled as a block interference channel (BIC) and the multiplexer as a single server, deterministic service, finite buffer supporting N users. Based upon an information-theoretic characterization of the BIC and large deviation bounds on the buffer overflow probability, a methodology is described that provides theoretically achievable upper limits on the number of sources multiplexed at a given level of performance. Performance of a specific JSCC technique using an MPEG-2 source encoder and interlaced non-binary Reed-Solomon (RS) channel codes is illustrated and shown to approach the information-theoretic predictions with increasing levels of complexity. The application of this JSCC methodology to provide a fair comparison between variable bit rate (VBR) and constant bit rate (CBR) transport of MPEG-2 encoded video is illustrated. Finally, the application of this methodology to a layered transport scheme is described.

About the Speaker

James W. Modestino received a BS degree from Northeastern University, Boston, MA, in 1962, and MS degree from the University of Pennsylvania, Philadelphia, PA, in 1964, both in electrical engineering. He also received the MA and PhD degrees from Princeton University, Princeton, NJ, in 1968 and 1969, respectively.

He has held a number of industrial positions, including positions with RCA Communications Systems Division, Camden, NJ; General Electronic Laboratories, Cambridge, MA; AVCO Systems Division, Wilmington, MA; GTE Laboratories, Waltham, MA; and MIT Lincoln Laboratories, Lexington, MA. From 1970 to 1972, he was an Assistant Professor in the Department of Electrical Engineering, Northeastern University. In 1972, he joined Rensselaer Polytechnic Institute, Troy, NY, where he is currently an Institute Professor in the Electrical, Computer, and Systems Engineering Department and Director of the Center for Image Processing Research. He has been responsible for teaching and research in the communication, information and signal processing systems area. His specific research interests include communication in fading dispersive channels; detection, estimation and filtering in impulsive or burst noise environments; digital signal, image and video processing; and multimedia communication systems and networks. He has held visiting positions with the University of California at San Diego, LaJolla, CA (1981-1982); GE Research and Development Center, Schenectady, NY (1988-1989); and Massachusetts Institute of Technology, Cambridge, MA (1995-1996).

Dr. Modestino is a past member of the Board of Governors of the IEEE Information Theory Group. He is a past Associate Editor and Book Review Editor for the IEEE TRANSACTIONS ON INFORMATION THEORY. In 1984, he was co-recipient of the Stephen O. Rice Prize Paper Award from the IEEE Communications Society and in 2000 he was co-recipient of the best paper award at the International Packet Video Conference.

All Welcome!

You do not have to be an IEEE member to attend. Light refreshments will be served at 4:30 PM.

Time: 4:45 - 5:45 PM, Tuesday, November 21, 2000.
Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at www.njit.edu.
Information: Dr. Yun-Qing Shi, (973) 596-3501, shi@njit.edu (NJIT) or Dr. Alfredo Tan, (201) 692-2324, tan@mailbox.fdu.edu (Fairleigh Dickinson University).

North Jersey Section Activities
November 2000

Nov. 6–"NJ Section Executive Committee Meeting" – 7:00 PM, ITT, 100 Kingsland Road, Clifton, NJ. Wayne Owens at (201) 767-3400 ext. 226 or wowens@crestron.com.

Nov. 8-"Video Indexing using MPEG-7 Motion and Color Feature Extraction in the Compressed Domain" - NJ Signal Processing Chapter, 5:00 – 6:00 PM (refreshments at 4:45 PM), NJIT, 202 ECE Center, Newark, NJ. Dr. Yun-Qing Shi (973) 596-3501 (NJIT).

Nov. 11–"Professional Skills Development Workshop" - 9:30 AM - 4:00 PM, Stevens Institute of Technology, main auditorium of the Burchard Building, Hoboken, NJ. Pre-registration required at http://ewh.ieee.org/r1/north_jersey/sac.   Amit Patel at a.j.patel@ieee.org or (973) 284-2708.

Nov. 16–"Software Development Trends for Monitoring and Control of LonWorks Distributed Control Network Systems over the Internet" - NJ Computer and EMS, 7:00 PM, Dialogic Inc, 1515 Route 10 East, Parsippany, NJ. Howard Leach, (732) 594-2911, or h.leach@ieee.org.

Nov. 21–"A Joint Source-Channel Coding Approach to Network Transport of Digital Video" - NJ Signal Processing Chapter, 4:45 - 5:45 PM (refreshments at 4:30 PM), NJIT, 202 ECE Center, Newark, NJ. Yun-Qing Shi, (973) 596-3501, shi@njit.edu (NJIT) or Dr. Alfredo Tan, (201) 692-2324, tan@mailbox.fdu.edu (Fairleigh Dickinson University).

Nov. 30–"Free Tutorial: Going from C to C++"– NY/NJ/LI EMBS, 7:15 PM Registration, 7:30 PM Program, Con Edison Executive Dining Room, 4 Irving Place, NY, NY. Joel H. Levitt (212) 479-7805 (24 hr voice mail).

Upcoming Meetings

Dec. 12–"IT Success Fair" - NJ Computer Chapter, 4:00-7:00 PM, Stevens Institute of Technology, Charles V. Schaeffer Athletic Center, Hoboken, NJ. Prof. Larry Bernstein, (973) 258-9213, ibernstein@stevens-tech.edu, or Howard Leach, (732) 594-2911, or h.leach@ieee.org.

Members and Non-Members Welcome
PLEASE POST

Free Tutorial: Going from C to C++

On November 30th, 2000, the North Jersey, New York, and Long Island Chapters of the Engineering in Medicine and Biology Society (EMBS) of the IEEE in conjunction with the IEEE Computer Society will present a FREE TUTORIAL: "Going from C to C++." The speaker will be Professor Joel H. Levitt.

About the Talk

In this free tutorial session Professor Levitt will provide an introduction to the programming language C++ for those who have some familiarity with C. Wide availability of cross compilers makes C++ an attractive option for stand-alone medical devices using almost any microprocessor, as well as general application. This will be a "LOW-TECH" , INTRODUCTORY session for those who want to START getting into C++. The three main differences between C and C++ which we will discuss are

1. Improved input command cin replaces scanf. Yes, scanf can still be used but you won't want to!
2. Improved output command cout replaces printf. Yes, you can still use printf but you won't want to!
3. C++ allows, but does not demand "object oriented programming" usually abbreviated as "OOP". We will discuss what this is using simple language and a simple example. We will also discuss why this is sometimes very helpful, and sometimes best avoided.

About the Speaker

Professor Joel H. Levitt holds four degrees from Columbia University and has been a member of the faculty of Pratt Institute for over 25 years. He is the Chairman of our local EMBS chapter. He has taught computer programming at Pratt Institute to Electrical Engineering undergraduates (FORTRAN) and to computer graphics undergraduate and graduate students (C and C++ languages). He currently teaches C++ and JAVA at Pratt. He is the author of "Small Signal Analysis - By Computer, By Inspection" Haywood Press 1983, which may have been the first electronics text to fully integrate a presentation of electronics fundamentals with an introduction to computer programming in both BASIC and FORTRAN.

His last four lectures for EMBS (at Rockefeller University) were: "Introduction to Programming in C" (Feb. 15 1996), "Domestic Violence and Sugar Metabolism- What's The Connection?" (May 25, 1995), "Fighting Anxiety, Depression, and Fatigue, Without Drugs" (Jan. 20, 1994), and "Panic Attacks and Sugar Metabolism - What's the Connection?" (Oct. 17 1990).

Time: 7:15 PM Registration (no charge), 7:30 PM Lecture, Thursday, November 30, 2000.
Place: Con Edison Executive Dining Room, 4 Irving Place, NY, NY. Travel Hints: One block east of Union Square (14th Street). By subway: L-N-R-4-5-6.
Information: Joel H. Levitt (212) 479-7805 (24 hr voice mail).

Note: The former chairman of the Computer Society, the late Jim Barbera, was instrumental in setting up this joint meeting.

Video Indexing Using MPEG-7 Motion and Color Feature Extraction in the Compressed Domain

On Wednesday, November 8, 2000, the IEEE North Jersey Section Signal Processing Society Chapter will host a presentation on "Video Indexing Using MPEG-7 Motion and Color Feature Extraction in the Compressed Domain." The speaker will be Dr. Ajay Divakaran.

About the Talk

MPEG-7 or "Multimedia Content Description Interface" is a recently proposed standard that will enable content based browsing of multimedia databases much as text is browsed on the world wide web today. First, we present the MPEG-7 motion activity descriptor, our invention, and its applications. The descriptor can be extracted in the compressed domain and is compact, hence is easy to extract and match. It captures the gross motion characteristics of a video segment in a compact form. It enables effective indexing of video. Second, we describe an indexing technique that combines the motion activity descriptor with a color histogram extracted in the compressed domain. Note that color features present a feasible complementary avenue for indexing in the compressed domain. We are able to achieve a significant speed up in matching over using color alone with our combination of features. Finally, we will demonstrate video indexing using our combination of color and motion features, as well as with motion activity alone.

About the Speaker

Ajay Divakaran received a BE (with Hons.) degree in Electronics and Communication Engineering from the University of Jodhpur, Jodhpur, India, in 1985, along with MS and PhD degrees from Rensselaer Polytechnic Institute, Troy, NY in 1988 and 1993 respectively.

He was an Assistant Professor with the Department of Electronics and Communications Engineering, University of Jodhpur, Jodhpur, India from September 1985 to May 1986. He was a Research Associate at the Department of Electrical Communication Engineering, Indian Institute of Science, Bangalore, India from September 1994 to February 1995. He was a Scientist with Iterated Systems Inc., Atlanta, GA from February 1995 to January 1998. Since January 1998, he has been a Principal Member of Technical Staff at the Mitsubishi Electric Research Laboratory, Murray Hill, NJ. His research interests include data compression and transmission with current emphasis on video compression and indexing. He has been an active contributor to the MPEG-7 video standard.

All Welcome!

You do not have to be an IEEE member to attend. Light refreshments will be served at 4:45 PM.

Time: 5:00 - 6:00 PM, Wednesday, November 8, 2000.
Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at www.njit.edu.
Information: Dr. Yun-Qing Shi, (973) 596-3501, shi@njit.edu.

Student Activities Committee Seeks Volunteers and Speakers for Local Branches

The North Jersey IEEE Section Student Activities Committee is looking for volunteers that can help out in the following areas:

1. Branch Mentors to provide one-on-one guidance to local students in running their branches.
2. Speakers on technical and non-technical topics for student lecture series.
3. Section volunteers to help organize events and maintain contact with branches and student leaders.

If you are a recent graduate (GOLD) or long-time member, all are welcome to participate. Please contact chairman Amit Patel at 973-284-2708 or a.j.patel@ieee.org and visit the new website at:

http://ewh.ieee.org/r1/north_jersey/sac

Professional Skills Development Workshop Call for Participants

This notice is to inform all interested students/GOLD of the upcoming Professional Skills Development Workshop. This annual workshop will be held on Saturday, November 11th, 2000 at Stevens Institute of Technology, Hoboken, NJ in the Burchard Auditorium from 9:30 AM to about 4:00 PM.

If you don't already know, this workshop is to provide students an opportunity to get professional skills education that is not available in an academic environment. Comparable to last year's workshop, the agenda will include topics emphasizing softer skills that engineers need to succeed in today's working world. Previous topics included career planning and management, overcoming fears, and public communication skills.

The Fall 00 program will include new professional topics and new speakers from industry/academia. This year's topics include:

- "Three Teams, Four Deadlines, and a Trip: project planning, time management, and team interaction... Real Engineering at Work."
- "The Business Side of the Engineer's Career: Success or Failure?"
- "Setting Up Your Own Company."
- "Mastering Presentation Skills for Technical Professionals."

Remember, this workshop is open to all interested engineering students and GOLD members that want to learn such professional skills and have an edge before they goto work or at their current jobs.

So what do you have to do ? PRE-REGISTER ! Attendance to the event is completely FREE. You must pre-register to reserve a seat at the event, to reserve a copy of the FREE workshop proceedings (this is a copy of all the speaker's presentations and related materials) and to reserve a seat for a FREE lunch. If you do NOT pre-register we can not guarantee any of the above.

The registration form can be found on the North Jersey IEEE Section SAC website:

http://ewh.ieee.org/r1/north_jersey/sac

Also, directions, agenda, location, maps, and more can be found there or email the organizer Amit Patel a.j.patel@ieee.org for more information or to join the SAC mailing list.

The VT Conference Committee Wants You!! Looking for Volunteers, Sponsors, Exhibitors

The IEEE North Jersey Section is hosting the Fall 2001 Vehicular Technology Conference in Atlantic City, NJ from October 6-11, 2001. And now's your chance to get involved.

Have you ever wondered how a conference comes together? How speakers, tutorials, meals, and many other activities are smoothly integrated? How to produce a powerful technical program of international caliber? How to advertise your company's name on the coffee cups during the lunches and breaks?

Then this is the deal for you. The conference committee is issuing an open call for volunteers to help man its sub-committees. Currently the following have some openings: local arrangements, banquet, publicity, publications, registration, special/social events, transportation, and many others.

But it doesn't stop there. There are special discounts for student volunteers and sponsoring companies. What better way for your organization to get its name out to hundreds of people from worldwide in the mobile communications arena than by becoming Platinum, Gold, or Silver sponsors? You can even tailor your sponsorship to meet your advertising needs. This includes getting tables or floor space to exhibit YOUR products and services to those people with the purchasing power or an all electronic advertisement on the website.

Even students can get involved. There is a significant student admissions discount and does not require any society affiliations. We are also looking for students to man the registration desk and take on other activities. Universities are also welcome to become sponsors.

How can you find out more and get involved? Contact conference chair Art Greenberg at a.h.greenberg@ieee.org or (973) 386-6673, and Industry Liaison/Exhibits chair Stephen Wilkowski at swilkowski@lucent.com or (973) 386-6487. Check out the website at http://www.fallvtc2001.org.

National Engineers Week Announces Billboard Ad Campaign 2001

For its Fiftieth Anniversary Celebration, the National Engineers Week Committee will again take its message that "Engineers Turn Ideas into Reality" to the streets and the highways through its Outdoor Advertising Campaign. The goal of the program, which will be led by student and professional sections of engineering societies around the country, is to place a public service announcement extolling engineers on a minimum of 100 billboards, and 1000 public transit buses, during the month of February.

Building on the increased success of the program over the past four years, the campaign has a dual purpose: to increase grassroots involvement in National Engineers Week, particularly among undergraduate engineering students; and to make a broader audience aware of the week-long celebration and the technological achievements it honors.

For more information, visit http://www.eweek.org/2000/Engineers/billboard/index.html.

Applications Available for 2001 Mass Media S&E Fellows Program

For a 10-week period during the summer, the AAAS Mass Media Science and Engineering Fellows Program places advanced college and university students in the natural and social sciences and engineering at radio stations, television stations, newspapers, and magazines throughout the country. The goal of the program is to strengthen the connections between science and the media. This past summer marks the first time that IEEE-USA has placed a Science and Engineering Fellow. Elan Ruskin, a junior at the University of Pennsylvania majoring in computer science engineering, spent 10 weeks at the ST. LOUIS (MO) POST DISPATCH covering environment, nature and technology news. IEEE-USA is looking forward to continuing its participation in the Mass Media Science and Engineering Fellows Program in 2001. IEEE-USA will sponsor a U.S. IEEE member who is a Junior, Senior, or Graduate/Post-Graduate level student in the 2001 program. For more information, visit http://www.ieeeusa.org/notable/mediafellow2001.htm. The deadline for receipt of applications is 15 January 2001.

IEEE-USA Seeks Applicants for FCC, Congressional Fellowships

FCC Fellowships

IEEE-USA is seeking U.S. IEEE members interested in an Executive Fellowship at the Federal Communications Commission (FCC) (June-December 2002). The Fellow will help the FCC chart its course in the rapidly evolving areas of wireless and network technologies. Eligible candidates must be IEEE members and U.S. citizens and have a strong background in new and emerging telecommunications technologies as well as an interest in regulatory policy. Fellows may not be presently employed by or have a significant interest in companies regulated by the FCC. Fellows receive a stipend of $50K from IEEE-USA.

Congressional Fellowship

IEEE-USA is also seeking U.S. IEEE members interested in spending a year (January-December 2002) in Washington as a Fellow working for a Member of Congress or congressional committee. Eligible candidates must be IEEE members and U.S. citizens, and have a minimum of 10 years professional experience, which may include graduate-level education. Fellows receive a stipend of $35,000-$50,000 depending on current salary, plus relocation assistance.

The deadline for receipt of applications for both the FCC and Congressional Fellowships is 23 February 2001.

For more information and an application kit for the FCC and Congressional Fellowships, go to http://www.ieeeusa.org/forum/govfel, or contact Chris Brantley at mailto:c.brantley@ieee.org, or (202) 785-0017, ext. 8347.

Make an Impact on the Engineering Profession

The 2001 IEEE membership renewals are in the mail! Like last year, you have the option of making voluntary contributions to various IEEE funds. As you fill out your renewal form, please consider making a contribution to the IEEE-USA General Fund. Last year, IEEE members generously gave nearly $74K in voluntary contributions to the IEEE-USA General Fund at renewal time. Gifts to the IEEE-USA General Fund promote the electrotechnology careers of the IEEE's U.S. members by sustaining member services such as career development, employment assistance, consultants networks, and government fellowships. Gifts also support IEEE-USA's efforts to provide balanced, reliable information to the public on important career and public policy issues.

Please check your 2001 IEEE Membership Invoice for more details on making a gift to IEEE-USA. If you have any questions, contact the IEEE Development Office at (732) 562-3915 or at supportieee@ieee.org. Please note that contributions to the IEEE should be paid in full at the time of the renewal and cannot be included in the installment renewal payment plan.

IEEE-USA Launches Election 2000 Resource Center

This web site is designed to help the IEEE's U.S. members learn more about the positions taken by the candidates on issues that affect science, engineering, and the engineering profession. Its resource directory links to IEEE-USA election resources, the presidential candidates, debates information, the political parties, other election resources and news sites. Current features include Candidate Bush's response to IEEE-USA's questions and the SPECTRUM article on technology issues confronting the next U.S. President.

The URL is http://www.ieeeusa.org/election2000.

Membership Renewal Schedule

Demonstrating our commitment to doing business electronically, IEEE has made membership renewal available on the web for the third year. IEEE members can renew now at http://www.ieee.org/renewal. As an extra encouragement, those who renew their membership online by 1 December 2000 will receive 15% off their next purchase in the IEEE Online Catalog & Store, the definitive source for IEEE products (special terms and conditions apply.) Members who applied or renewed their 2000 membership online were sent an email renewal notice on 2 October. Paper renewal notices for the balance of members and customers are on the following schedule:

- 29 September - Members in Regions 8-10 and nonmember subscribers
- 2 October - Members in Regions 1-7
- 20 October - Members with email bounce-backs from 1st email notice.

For additional information, contact IEEE Member Services, telephone (800) 678-4333 (US), (732) 981-0060 (worldwide): e-mail: member-services-[insert IEEE Region number 1-10]@ieee.org.

First Volunteers for Students

FIRST is an acronym that stands for "For Inspiration and Recognition of Science and Technology". You can help students have fun learning what it means to be an engineer by volunteering to coach a FIRST Robotics Team or Lego League. Engineers are needed as coaches and mentors for children, judges for competitions, and support as technical experts for teachers. Don't delay! Many schools need engineers now in order to start their projects. The IEEE is a technical cosponsor of FIRST.

Find out more about FIRST and other volunteering opportunities at the Educational Activities Pre-college web page, http://www.ieee.org/organizations/eab/precollege/. For information on where you can help, contact Lynn Murison at l.murison@ieee.org.

The IEEE-USA's President's Column:
Technology and the US Presidential Candidates
By Merrill W. Buckley, Jr., IEEE-USA 2000 President

The 43rd U.S. President can expect to encounter a host of technology related issues during his term. How he plans to handle these issues is of particular interest to us when deciding how we will cast our votes on November 7th. This year, as I did on behalf of the IEEE in 1992, I sent a letter to all of the major candidates asking what strategies they plan to apply to meet the technology challenges of the 21st Century. You can view the candidates' responses on the web at www.ieeeusa.org/forum/election2000.

Investment priorities for research and development, information security and privacy, improving technology education in schools, and the controversial H-1B skilled worker visa program are just a few of the thorny issues the next Administration will face. Despite similarities in the major-party candidates' technology platforms, the differences can't be overlooked.

Both major-party candidates support increased funding for development of new technologies and scientific processes. Texas Governor George W. Bush says that -- if elected -- he will make the Research and Experimentation tax credit, which is currently temporary, a permanent tax credit. Bush also pledges to increase the military R&D budget by $20 billion and to double the budget of the National Institutes of Health.

Vice President Al Gore says he, too, will make the Research and Experimentation tax credit permanent, but says his plan would go further to expand the tax credit to include "more innovative companies," and also to ensure that the tax code reflects the short life span and obsolescence of high-tech equipment.

Both Gore and Bush value online privacy, and say they would enact legislation to protect medical records, financial information, and an individual's genetic code. Gore adds that he will call for an "Electronic Bill of Rights for Privacy" to ensure that people know how and why their personal information is being collected. Bush says he will appoint a federal Chief Information Officer (CIO) who will lead and coordinate efforts to facilitate a digital government, including privacy protections. Both candidates stress that equipping a workforce with the tools necessary to succeed in the technology markets and businesses of tomorrow requires educating that workforce today, with particular attention to K-12 students. Governor Bush proposes a math and science partnership fund of $1 billion that would join states with institutions of higher education. This endeavor would provide an additional $1 billion for enhanced Pell Grants to students who take advanced math and science courses in high school.

Vice President Gore's plan would create a bipartisan consensus to increase the public's awareness of the vital role of science and technology in the health of the nation's economy. He supports funding for rigorous research on what educational strategies work and why, as well as research and development that will advance the state-of-the-art in educational technology. Like Bush, Gore believes that every classroom and library should be connected to the Internet, and indicates he will work to increase investment in training teachers and students in the safe and effective use of the Web.

Employment concerns in the high-tech industry will have to be addressed by the next President. Both major-party candidates agree that increasing the number of H-1B visas will provide temporary relief, and neither camp is willing to say what the level of that increase should be. Governor Bush suggests the long-term solution lies in his education plan, which provides for additional funding in math and science education. Vice President Gore echoes those ideas endorsing education as well as retraining for minorities and women.

The Bush and Gore camps are both strong proponents of science and technology as drivers of the "New Economy," but much of what separates the two candidates is how much they are willing to spend to carry out their plans for the future. It's our turn now to make a distinction.

MTT-S/AP Chapter held its 15th annual symposium/minshow on September 7, 2000, at the Hanover Marriott. The focus was on microwave and wireless communication in the new millenium. Approximately 225 people attended the symposium with some 12 lectures organized by Mr. George Kannell and 42 exhibits by local businesses. Thanks to everyone who helped make this a great success!

2001 Officer Ballot

Instructions for Casting Ballots
Completed ballots should be mailed to the North Jersey Section Secretary as follows:

> Wayne Owens
> IEEE North Jersey Section Secretary
> 554 Gilbert Ave
> Pearl River, NY 10965-3320

The ballot MUST be filled out completely with members name, membership number, and signature. The ballots are invalid without this information . Xerox copies of the ballot are acceptable as long as they are filled out completely. Ballots received after November 30, 2000, will <u>not</u> be counted.

Chairperson: (choose one)

.... Nirwan Ansari

............................(write-in)_____

Vice Chairman-1: (choose one)

.... Rodney Cole

............................(write-in)_____

Vice Chairman-2: (choose one)

.... Milton Korn

............................(write-in)_____

Treasurer: (choose one)

.... Durga Misra

............................(write-in)_____

Secretary: (choose one)

.... Wayne Owens

............................(write-in)_____

Members-At-Large: (choose three)

...............Bhanu Chivakula

....................Naz Simonelli

.................Richard Snyder

............................(write-in)_____

Member Name_____ Member No. _____

Signature _____ Date _____