

The



IEEE Newsletter

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

NJ Section PACE:

ENGINEERS MEET: CURRENT ACTIVITIES: NJ LEGISLATIVE ACTION, SEMINAR REVIEWS

On Wednesday, December 10, 2003 the North Jersey Section Professional Activities Committee will meet to discuss Legislative Action involving the Off-shoring of NJ State jobs, Roll Back H-1B Numbers, Networking & Contracting Engineering.

The NJ State Assembly is still considering A2425. Please continue calling your representatives in support of this legislation. Our discussion will involve PACE legislative activities for the remainder of 2003.

You do not have to be unemployed to attend. All jobs are being threatened. Now is a time to work to build a better profession. You are encouraged to attend and bring your spouse and associates.

About the Meeting

This meeting provides an opportunity to meet and discuss action items relating to the unemployment situation. High on the IEEE-USA list of subjects is unemployment and the displacement of American citizens by sending jobs offshore and importing foreign workers under the H-1B and L1 legislation

This year one IEEE-USA goal was to roll the H-1B number back to 65,000 from 195,000. The numbers were currently rolled back to 65,000. And, please do not confuse this as an "immigration" issue. This is all about money and wage busting.

Survival in a Competitive Environment seminar was postponed to November 15th. Five Section Members will attend and the Jersey Coast Section's PACE seminar "Survival in a Competitive Environment" and report at the December PACE meeting. A critique will be provided by those attending. This should help with some interesting information. Funding was covered by the North Jersey Section.

Networking and Contract Engineering Issues will be discussed.

Our PACE meeting is open to discuss professional needs. PACE provides the opportunity to meet, address, discuss and perhaps improve the professional aspects of the engineering profession. We should take advantage of the opportunity to have a place and time to meet. Invite your associates to join us. Bring engineers and students from the other engineering disciplines

According to IEEE-USA leaders "Employment Assistance and Career Development are important" and they request your help. More on these projects can be found at www.ieeeusa.org.

All Welcome!

You do not have to be a member of the IEEE to attend. Members and students from other professional societies and engineering disciplines are always welcome.

Time: 6:30 to 8:30 PM, Wednesday, December 10, 2003

Place: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500.

Information: Paul Ward, (973) 790-1625. PWard1130@aol.com, Richard F. Tax, (201) 664-6954, rtax@bellatlantic.net.

2005 IEEE Fellow Nominations

Deadline: 15 March 2004

Recognizing the achievements of its members is an important part of the mission of the IEEE. The IEEE grade of Fellow is conferred upon a person of "outstanding and extraordinary qualifications and experience in IEEE designated fields, and who has made important individual contributions to one or more of these fields." The total number of Fellows selected each year does not exceed 0.1% of the total IEEE membership.

Any person, including nonmembers, is eligible to serve as a nominator with the following exceptions: members of the IEEE Board of Directors, members of the IEEE Fellow Committee, IEEE Technical Society/Council Fellow Evaluating Committee Chairs, members of IEEE Technical Society/Council Evaluating Committees reviewing the nomination, or IEEE staff. The deadline for nominations is 15 March 2004.

The candidate must be an IEEE Senior Member at the time the nomination is submitted, and he/she must have completed 5 years of service in any grade of IEEE membership.

All the necessary material to assist you in the nomination process is available on the IEEE Web site: <http://www.ieee.org/about/awards/fellows/fellows.htm>. If you prefer a hard copy, please send an e-mail to fellow-kit@ieee.org. Include your name, street address, city, state/province, postal code, country, and telephone/fax numbers.

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IEEE NJ SECTION HOME PAGE

<http://web.njit.edu/~ieeenj/>

IEEE NJ SECTION NEWSLETTER HOME PAGE

<http://web.njit.edu/~ieeenj/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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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 Dr. Sanghoon Shin at (973) 492-1207 Ext. 22, s.shin@ieee.org.

NJ Consultants' Network:

Consultants' Network Planning Meeting & Workshop

On Thursday, December 4, 2003, the IEEE Consultants' Network of Northern NJ (CNNNJ) will conduct its annual Planning Meeting and Workshop.

About the Talk

The combined November/December meeting of the IEEE Consultants' Network is designed as a strategic planning event for Network members and for consultants who are considering membership in the Consultants' Network.

The main purpose of the meeting will be to discuss ideas and expectations for the various Network functions in the upcoming year. Results of the annual election of officers will be announced at the time.

This working session is traditionally an open, informal forum to determine what the IEEE-CNNNJ is doing right or wrong. The floor will be open to suggestions for improvements, recommendations of new Network directions and activities and proposals of new feature topics for the general meetings.

The major functions performed by the IEEE Consultants' Network that will be discussed are:

- Monthly General Meetings - Suggested feature topics will be discussed.
- Member Networking - Member presentations and alternate general meeting formats that improve networking.
- Group Marketing & Image Building - CNNNJ Website, tri-fold and postcard mailing, CNNNJ's free consultant referral service, and alternate publicity methods.

In the course of the session, Network members Laurence W. Nagel and George Hacken will be honored with 5-year senior CNNNJ member plaques.

About the Consultants' Network

Founded in 1992, the IEEE Consultants Network of Northern NJ encourages and promotes the use of independent technical consultants by business and industry.

Time: 7:30 PM, Thursday, December 4, 2003.

Place: Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. (Entrance at rear of building)

Information: For directions and up-to-date meeting status, call Robert Walker (973) 728-0344 or visit our website at www.TechnologyOnTap.org. To download a map to KDI, go to: <http://www.mcekdi-integrated.com/directions.htm>.

North Jersey SMC Society:

Designing Decision Support Systems Using ACCESS™

On Tuesday, December 9th, the SMC Society will host the last of three presentations by Michael Liechenstein on Microsoft's ACCESS™.

About the Talk

The attendee preferably has basic knowledge of ACCESS™, since this final lecture will focus on the more sophisticated aspects of the software (specific topics for this presentation are available upon request).

About the Speaker

Dr. Liechenstein is currently a member of the faculty at St. John's University in the Department of Computer Information and Decision Sciences. He has also been affiliated with Columbia University's Department of Mathematical Statistics and CUNY's Department of Computer Information Systems. Following his graduation from M.I.T. and Yale, Dr. Liechenstein was a member of the Bell Laboratories Technical Staff and was also a research director at the RAND Corp. As president of Integrated Technology Services Corp., he has been a consultant to numerous business and governmental organizations. Since 1988, he has chaired the North Jersey's Systems, Man & Cybernetics Society chapter and continues to serve on the Section's Executive Committee (as Senior Past Chairman). To date, Dr. Liechenstein has published over 150 technical articles and research monographs.

All Welcome!

You need not be a member of IEEE to attend, and there is no charge for admission. Light refreshments will be served starting at 6:45 PM.

Time: 7:00-8:30 PM, Tuesday, December 9, 2003.

Place: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500.

Contact/RSVP: Dr. Mike Liechenstein, (973) 471-0721, (m.liechenstein@ieee.org). Please RSVP at least one week prior to the presentation since space is limited. Also, check electronic newsletter for any possible changes in room, etc.

IEEE North Jersey Section Activities

December 2003

Dec. 4 – “Consultants’ Network Planning Meeting & Workshop” - NJ Consultants' Network, 7:30 PM, Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. Robert Walker (973) 728-0344 or www.TechnologyOnTap.org.

Dec. 9 – “Designing Decision Support Systems Using ACCESS™ (3rd Lecture in Series)” - NJ SMC Society, 7:00-8:30 PM, Clifton Memorial Library , 292 Piaget Ave, Clifton, NJ. Dr. Mike Liechenstein (973) 471-0721 (m.liechenstein@ieee.org).

Dec. 10 – “Wireless LAN Security: Standards, Business Plans and Deployment Issues” - 1:00-5:00 PM, Meeting Rooms 108/109 Magill Commons, Monmouth University. Dr. Amruthur Narasimhan (732) 957 0850 (anarasimhan@ieee.org).

Dec. 10 – “Engineers Meet: Current Activities: NJ Legislative Action, Seminar Reviews” - NJ PACE, 6:30 – 8:30 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward (973) 790-1625 (PWard1130@aol.com) or Richard F. Tax (201) 664-6954 (rtax@bellatlantic.net).

Upcoming Meetings

Jan. 5-8 – “2004 IEEE Consumer Communications and Networking Conference - Consumer Networking: Closing the Digital Divide” - Caesars Palace, Las Vegas, Nevada. See <http://www.cnc2004.org/> for more details.

Jan. 7 – “NJ Section Executive Committee Meeting” - 7:00 PM, ITT, 100 Kingsland Rd, Clifton, NJ. Dr. Sanghoon Shin at (973) 492-1207 Ext. 22 or s.shin@ieee.org.

Jan. 19 – “Inside Internet E-Mail” - NJ Computer Chapter, 7:00 PM, Public Meeting Room, Morris County Library, 30 E. Hanover Ave, Whippany, NJ. Seth Jakel (973) 731-1902 (sgjakel@comcast.net) or Vivek Shaiva (908) 229-6125 (vshaiva@computer.org).

Jan. 29 – “Web-Based and Email Marketing” - NJ Consultants' Network, 7:30 PM, Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. Robert Walker (973) 728-0344 or www.TechnologyOnTap.org.

Feb. 16-Apr. 12 – “Introduction to JAVA Programming” - North Jersey Section, Monday Evenings, 8 sessions, 6:30-9:00 PM, Wessley Inns & Suites, 265 Route 3 East, Clifton, NJ. Bhanu Chivakula (b.chivakula@computer.org).

Feb. 18-Apr. 14 – “Project Management” - North Jersey Section, Wednesday Evenings, 8 sessions, 6:30-9:00 PM, Wessley Inns & Suites, 265 Route 3 East, Clifton, NJ. Bhanu Chivakula (b.chivakula@computer.org).

Members and Non-Members Welcome

PLEASE POST

NJ Consultants' Network: **Web-Based and Email Marketing**

On Thursday, January 29, 2004, the IEEE Consultants' Network of Northern NJ (CNNNJ) will host a talk on "Web-Based and Email Marketing." The speaker will be Ed McCauley.

About the Talk

It is increasingly common today for those who have very specific needs to turn to the Web in search for solutions. This is particularly true for technical consumers with esoteric requirements.

Conversely, those offering such services make their presence visible via web pages or email marketing.

The presentation will explore benefits and pitfalls of this strategy. The interactive session will cover how Ed McCauley's company is learning to leverage a combination of email marketing, technical web pages, and non-technical web pages to market their services. Topics will include such marketing issues as:

- Industry trends
- Defining goals and target audience
- Defining the target audience
- Contact database generation
- Content, search engine issues

About the Speaker

Ed McCauley is the President and Founder of Bottom Line Technologies Inc. (BLT), a 15-year old electronic design services provider based in New Jersey.

Ed started his career as part of a startup team, which grew from the basement to over 300 people and an acquisition. Next, he joined another startup, Xilinx, as FAE covering the northeastern U.S. After two years and their IPO, he left to start BLT.

Today he is primarily responsible for Marketing, Sales, and Finance, although his engineering and project management skills are often called upon to fulfill specific client needs.

About the Consultants' Network

Founded in 1992, the IEEE Consultants Network of Northern NJ encourages and promotes the use of independent technical consultants by business and industry.

Time: 7:30 PM, Thursday, January 29, 2004.

Place: Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. (Entrance at rear of building)

Information: For directions and up-to-date meeting status, call Robert Walker (973) 728-0344 or visit our website at www.TechnologyOnTap.org. To download a map to KDI, go to: <http://www.mcekdi-integrated.com/directions.htm>.

Get Ready, the Spring 2004 Presentation Contest is Coming!

Can you believe it, it is about time to get ready for the spring paper presentation contest. You must be thinking, how come it's so soon? Well, it is coming up fast and all interested students should start thinking of topics they would be interested in now.

As usual, the North Jersey Section IEEE Student Activities Committee will be sponsoring the contest open to all schools in North Jersey. This time, NJIT has volunteered to host the contest and the local contest is being planned for late February or early March 2004. The details and registration will begin in December via the web and all details, as well as last year's contest winners can be found at the SAC website: http://ewh.ieee.org/r1/north_jersey/sac/iee.html.

We will be holding the contest open to undergraduates as well as graduate students, with cash prizes in both categories. The contest has had great success in the past and many of the participants and winners have learned a lot by giving their project presentations.

More importantly, this year's Region 1 contest is being held almost in our backyard. The 2004 Spring Region 1 Paper Contest will be hosted by SUNY-Stony Brook, Long Island, NY in April. Their deadline for registration will be around mid-March. Undergraduate winners from the local contest are allowed to participate in the Region 1 contest.

Additional questions about the local contest and its related details can be found at the website above or by emailing the organizer: [a.j.patel "AT" ieee.org](mailto:a.j.patel@at.ieee.org).

Conference Rooms Needed!

The North Jersey Section (Education Committee) is looking for conference room facilities to hold their training seminars. The seminars are being held on one weeknight from 6:30 PM to 9:00 PM. In lieu of providing the conference facility for free, the organization can get free registration up to three members in the course/seminar. Please contact Bhanu Chivakula, Co-chair, Education Committee at b.chivakula@computer.org for suggestions or discussions, if interested.

Help For the Unemployed or At-Risk Member

Resources are available to benefit U.S. IEEE members who are unemployed or anticipating an involuntary career transition. For details, go to

<http://www.ieeeusa.org/careers/help/index.html>

On the Road to a Great Presentation

Regardless of how polished your presentation may be, it will surely fall flat unless you connect with your audience. How do you get there?

<http://www.todaysengineer.org/oct03/presentations-p1.asp>

Who Wants to Be a Millionaire?

As a recent graduate and new hire, what can you do now to know you'll have a million bucks in the bank when you retire?

<http://www.todaysengineer.org/oct03/millionaire.asp>

Data Mining and Privacy Issues

Gathering information by looking for hidden relationships in data is generating considerable debate both on Capitol Hill and among the public. With so much information gathered and stored by companies and the government, how can we retain our privacy?

<http://www.todaysengineer.org/oct03/data-mining.asp>

IEEE Meetings: An Engineer's Primary Career Networking Resource

(a message from the IEEE North Jersey Membership Chairman – Gary Hojell)

The nature of the engineering profession has changed drastically over the past twenty years. The old social contract asserted that if one was loyal, hardworking and productive, you could rest assured that your career was secure for life. Promotions of employees from the bottom of the corporate hierarchy on through to top executive ranks were common place. A job at Bell Labs meant cradle to grave employment working on the world's most sophisticated technology. Well in case you hadn't noticed, the old employment paradyme has disappeared. In its place we find a management environment that tends to view seasoned engineers as overqualified and overpaid, long tenured employees as liabilities, and engineering as an money sink which works against corporate profits. Executive positions are generally filled by hiring on outsiders with MBA profiles and little knowledge of the businesses technology. These are of course all very short sighted views, but tend to prevail in today's job environment.

So the challenge to us working engineers is to stay employed throughout our careers without any major 'gaps' on our resumes. What I euphemistically call a gap can be devastating both to one's bank account and career. So our goal must be by necessity, survival in a rapidly changing world. And here is where the IEEE facilitates our survival:

By networking with the industry leadership at our meetings, events, and symposiums!

How else are you going to know whether your particular expertise is in a field that has become mature, and is therefore poised to shed people? Do you think your boss is going to tell you that? (He's not allowed to, until its time to let you go.) Where are there new opportunities, new growth? You can find out by listening to discussions and talking to those who are leading the way at IEEE meetings. And you can gain industry recognition in your field of expertise by presenting your ideas at IEEE events. By virtue of keeping in touch with a wide range of IEEE membership, you maintain the survival knowledge of what to expect from the industry and where your viable career options lie. It only takes one smooth career transition based on your IEEE contacts for membership dues to pay for themselves in spades!

Engineers for Mentors for FIRST Robotics Competition

In 2003, more than 20,000 high school students on 800 teams, nationwide, competed in 23 regional competitions and a follow-on national competition in the FIRST (For Inspiration and Recognition of Science & Technology) Robotics Competitions. This program started about 15 years ago by Dean Kamen, the inventor. It has been growing nearly 50% each year. The program has resulted in life-changing, career-molding experiences for participants. It is also lots of fun!

In New Jersey, there were 32 NJ teams competing in 2003 and the NJ FIRST Planning Committee has set a goal of "50 in 05." Each team, nationwide, participates in a kick-off session in early January, at which the goals and rules of this year's competition are announced. Also, at the kick-off, each team is issued a kit of the major parts from which they are to innovate the design and construction of their robot for the competition in March. Each team has a high school teacher as its coach and a **volunteer engineer from industry or academia as its mentor.**

Engineers interested in becoming a mentor -- or volunteering to provide leadership at the competition -- should contact Irwin Dorros at idorros@aol.com. Or if you're not sure, you can attend the NJ kickoff at Middlesex County College on January 10, 2004 from 9:00 AM to 12:00 PM. If you want more information on what's involved, contact Paul Kloberg, a high school teacher and one of the enthusiastic coaches. Paul can be reached at prkloberg@comcast.net.

Backscatter: Accidents Waiting to Happen

Why do systems fail when they shouldn't? Is it because designers are not aware of preceding failures, or because they are willing to accept the risks based on prior successes?

<http://www.todaysengineer.org/oct03/backscatter.asp>

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BSEE, MSEE (system architecture and applications software). Over 10 years of patent prosecution experience with NYC intellectual property and high-tech law firms. Former in-house senior patent counsel with a multinational corporation. Patent applications, opinions, counseling, litigation support. Personal attention, high quality, reasonable fees. References upon request. For more information please visit my website.



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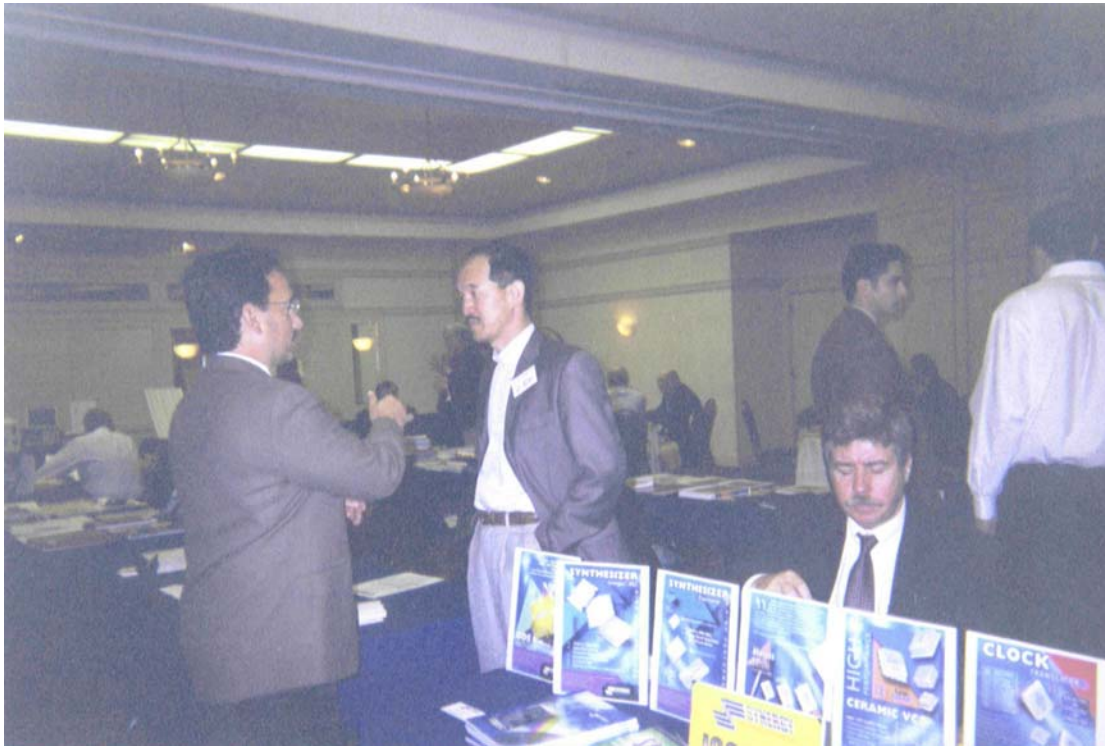
Voting Technologies -- The Issues Go Beyond Punch Card Ballots and Lever Machines

The Help America Vote Act has prompted many state governments to consider moving to electronic voting technologies. Some experts believe that, eventually, this trend will involve the Internet. Are we improving the voting system or opening a can of worms?

<http://www.todaysengineer.org/oct03/voting.asp>



18th Annual MTT-S/AP-S One Day Symposium & Minishow
Chapter Chair Kirit Dixit (left) with Exhibitors



18th Annual MTT-S/AP-S One Day Symposium & Minishow-
Sessions Chair George Kannell (Left) speaking with exhibitor Chang Kim of Lucent Technologies



18th Annual MTT-S/AP-S One Day Symposium & Minishow
NJ Section Vice Chair Har Dayal (center) with show attendees



18th Annual MTT-S/AP-S One Day Symposium & Minishow
NJ Section Nominations Committee Chair Dr. Fred Chichester (left) with a show volunteer

U.S. EE Unemployment Moves Upward As Thousands of Non-U.S. Workers Continue to Flood the Job Market

Washington (14 October 2003) - Although the unemployment rate for all workers fell slightly in the third quarter, the rate moved in the opposite direction for U.S. electrical and electronics engineers (EEs), according to data compiled by the Department of Labor, Bureau of Labor Statistics (BLS).

The jobless rate for EEs rose from 6.4 percent in the second quarter to 6.7 percent in the third, while the rate for all workers fell from 5.6 percent to 5.5 percent. At the same time, the number of employed EEs fell by 37,000 (from 386,000 to 349,000).

The 6.7 percent figure is more than six times as high as it was in 1997 (1.0), and more than five times as great as 2000 (1.2). The EE unemployment rate reached an all-time high of 7.0 in the first quarter of 2003.

Despite continuing high levels of EE unemployment, the government has issued more than 900,000 H-1B visas in new, renewal and exempt categories since FY 2000, many of them in high-tech fields.

"We're pleased that Congress allowed the annual H-1B cap to drop to 65,000 earlier this month, but U.S. EEs are still competing for scarce jobs in an artificially saturated labor market," IEEE-USA President-Elect John Steadman said. "In addition, demand is shrinking as high-tech jobs are outsourced overseas. Despite the bleak employment outlook, some H-1B proponents are still calling on Congress to increase the number of visa exemptions."

Among other high-tech professionals, the unemployment rate jumped for computer hardware engineers (5.7 percent to 6.9), computer software engineers (4.1 to 4.6), and network and computer systems administrators (5.6 to 7.6). The rate fell for computer scientists and systems analysts (5.6 to 4.8), computer programmers (7.5 to 7.1), and network systems and data communications analysts (5.5 to 5.0).

The third-quarter jobless rate for mechanical engineers rose slightly from 3.1 percent to 3.3 percent, while the rates for civil engineers (3.9 percent) and industrial engineers (5.9 percent) remained the same.

IEEE-USA is an organizational unit of The Institute of Electrical and Electronics Engineers, Inc., created in 1973 to

advance the public good, while promoting the careers and public-policy interests of the more than 235,000 electrical, electronics, computer and software engineers who are U.S. members of the IEEE. The IEEE is the world's largest technical professional society. For more information, go to

<http://www.ieeeusa.org>

IEEE-USA Urges Congress to Strengthen Protections for U.S. High-Tech Workers in Temporary Visa Programs

Washington (16 September 2003) — Congress should allow the H-1B visa cap to drop to its original level of 65,000, retain the \$1,000 visa application fee and ensure that the money is used to provide technical skills training for displaced high-tech U.S. workers, according to IEEE-USA President-Elect John Steadman, who testified before the Senate Judiciary Committee today.

While more than 900,000 H-1B visas, including new, renewal and exempt categories, were approved since the beginning of FY 2000, the unemployment rate among electrical and electronics engineers shot up to an unprecedented 7 percent in the first quarter of this year. Thousands more guest workers entered the country on L-1 visas, and an undetermined number of engineers and information technology professionals have lost their jobs to offshoring during the same period, Steadman noted.

"Ultimately at risk is America's ability to innovate and to use technology to provide competitive advantage and ensure our national economic and military security," Steadman said.

IEEE-USA's additional recommendations include:

- Requiring all U.S. companies to attest that they have tried and been unable to hire U.S. workers, and that they have not displaced U.S. employees to hire an H-1B worker. Currently, only H-1B dependent companies — those with 15 percent or more of their workforce on H-1B visas — have to meet this requirement, and they account for just 2 percent of companies submitting H-1B visa applications
- Passing the USA Jobs Protection Act of 2003 (S. 1452 / H.R. 2849), bipartisan legislation that would plug loopholes and prevent abuses of both the H-1B and L-1 visa programs

- Paying all H-1B workers a prevailing wage that is not less than the median salary paid to similarly qualified U.S. workers in their intended area(s) of employment
- Empowering the Department of Labor to enhance compliance and reduce fraud and abuse by authorizing random audits of labor condition applications and related H-1B visa applications

Read IEEE-USA's testimony at:

www.ieeeusa.org/forum/POLICY/2003/091603.html

See also IEEE-USA's web page on the implications of H-1B visas, temporary labor and outsourcing of engineering careers at:

www.ieeeusa.org/forum/issues/H1bvisa/index.html

IEEE Personal Email Alias Service with Free Virus Scanning

Did you know that as an IEEE Member you can sign-up for an IEEE email alias? This service is free to all IEEE members and offers the following benefits:

- Clarity - An IEEE alias is easy to acquire, remember and update online
- Constancy - Your alias stays @ieee.org even when your email address changes
- Convergence - You'll identify yourself to other IEEE members
- Connectivity - Email messages are automatically forwarded to your real Internet address
- Comfort - Attachments to emails sent to your alias will automatically be scanned for viruses

To sign-up for this service, visit

<http://elecomm.ieee.org/personal-aliases.shtml>

IEEE-USA Recruits For 2005 Government Fellowships

IEEE-USA is seeking applicants for Congressional and Engineering & Diplomacy Fellowships in 2005. Congressional Fellows spend a year working for a Member of Congress or congressional staff, often taking on both technical and non-technical issues. Engineering & Diplomacy Fellows select an assignment to a specific office or bureau with the U.S. Department of State, serving as a technical adviser on such topics as non-proliferation, international information policy, nanotechnology, and related foreign policy issues. Fellows receive a stipend of \$50,000, plus relocation assistance, and are required to participate in a two-week orientation session organized under the auspices of the American Association for the Advancement of Science. Applicants must be U.S. IEEE members in good standing, U.S. citizens, and have the requisite degrees or experience. Diplomacy Fellows are also required to have or obtain a security clearance. Application deadlines for the 2005 Fellowships are 23 February 2004.

For more information, see:

<http://www.ieeeusa.org/forum/GOVFEL/index.html>

WISE Seeks Interns and Faculty-Advisor for Summer 2004 Program

The Washington Internships for Students of Engineering (WISE) is accepting applications from U.S. IEEE student members who have completed two years of undergraduate engineering or computer science to spend 10 weeks next summer in Washington (1 June - 4 August 2004) learning how the U.S. government makes technology-related policy. WISE is also seeking an outstanding faculty member, or engineer with strong policy and previous academic experience, to serve as Faculty-Member-in-Residence for the 2004 program.

For more information, see:

<http://www.wise-intern.org>

Mentors Needed for Student Teams Competing for the Vinny™ Award

IEEE in cooperation with the NASA Center for Distance Learning and Christopher Newport University announce the VINNY™ award. Named in honor of Leonard da Vinci, a man famous for the creative use of science, technology, engineering, and mathematics to solve human problems, designed to help heighten and increase awareness of science, technology, engineering, and mathematics (STEM). VINNY is a global video competition. Teams made up of one teacher and three students will identify and research a global problem and discover ways that STEM can help solve it. Teams will combine skills in research, writing and creativity. It's what you do for a living. Be a mentor and share the wealth of your experience with young learners. You can mentor your team on-line. The final product to be submitted for judging is a one-minute video explaining the global problem and a possible STEM solution. Grade levels: elementary grades 3-5, middle grades 6-8, and high grades 9-12. Two languages: English and Spanish. The winning one-minute videos will be exhibited on the NASA's Kids Science News Network™ (NASA's KSNN™) web site (<http://ksnn.larc.nasa.gov>). Register on-line at <http://vinny.pcs.cnu.edu>. Contact Doug Gorham, Ed.D, IEEE Manager of Pre-college Education, at d.g.gorham@ieee.org, if you have questions. Help shape the future. Sign up to be a mentor.

Web Site Explains Benefits of Membership

If you're trying to recruit new members, but struggle to explain all the benefits of the IEEE, the new "Join IEEE" Web site can help you. The site explains IEEE services and benefits, spells out the organization's scope and value, and describes the organization's 38 societies. Learn more at

http://www.theinstitute.ieee.org/inst_art.js?p?isno=11031&arnumber=11031_11w.newsjoinite§ion=5

The IEEE Virtual Museum Continues to Gain Visitors and Praise

Designed to teach the general public—and particularly the pre-university crowd—about IEEE technologies and their social and historical importance, the IEEE Virtual Museum (VM), which opened in 2002, continues to draw thousands of users monthly and to attract critical praise. The newest exhibit, Women & Technology, opened in June 2003 to rave reviews. The two most recent awards for the VM were to be named one of the "Best Sites for Kids" by the prestigious American Library Association and to make PC Magazine's "Top 101" list. PC Magazine named the IEEE VM one of the "Top 101 Most Incredibly Useful Sites" of 2003. The museum was among the eight sites chosen in the "Computing – Everyone" category. The review called it a "fascinating, engaging, image- and infographic-laden site" where "you'll discover the stories behind your favorite electrical engineering marvels."

For more information on the list, go to <http://www.pcmag.com/category2/0,4148,7488,00.asp>. You can visit the IEEE Virtual Museum yourself at <http://www.ieee.org/museum>. Be sure to look for the next exhibit on technology and World War II, opening in December 2003.

**Amrutek Services Inc.
Presents a Symposium on**

Wireless LAN Security: Standards, Business Plans and Deployment Issues

**by
Dr. Amruthur Narasimhan
President, Amrutek Services Inc.**

**&
Dr. Manu Malek
Industry Professor and Director of CyberSecurity Certificate Program, Stevens Institute of Technology**

**Sponsored
by
IEEE NJ Coast, PACE & Consultants Network sponsors**

Abstract

The dramatic cost reduction of Wireless LANs (WLANs) in the Small Office Home Office (SOHO) market has fueled their proliferation in enterprise. The explosion of wireless devices requiring network services is driving the need to evaluate, implement and support WLAN applications in the network. While WLANs provide flexibility, cost savings, and convenience, their presence introduces security vulnerabilities apart from limitations of scalability, performance, resilience and manageability. In this symposium, we discuss the impending challenges of deploying wireless, how wireless and wired networks can be deployed assuring security. The growing number and intensity of security incidents, coupled with the post-9/11 heightened security concerns, have made security the most important issue relative to the progress of WLAN deployment. Recently, new security methods based on IEEE 802.1x and strong EAP authentication methods, such as EAP-TTLS, have emerged, which offer strong WLAN security.

An overview of WLAN, standards, deployment and security needs will be described. Some related security services and mechanisms will be discussed. A general introduction to the field of security, covering threats, countermeasures, as well as design principles, and practical examples of how to integrate security services into WLAN will be discussed. Security vulnerabilities will be explained by presenting a few examples of security attacks and the safeguards needed to counter them. A brief description of players such as Cisco, AirFlow, Aruba, and Symbol will be provided. Also, deployment challenges, covering typical architectures for WLANs, with the related security issues, will be provided. The symposium will conclude with pointers to future trends in WLAN on secured roaming and privacy issues.

Details on Seminar Speakers

<http://mywebpages.comcast.net/anarasimhan3/seminar/seminar-speakers.htm>

What you will Learn: <http://mywebpages.comcast.net/anarasimhan3/seminar/wlanSecurity-WillLearn.htm>

Date & Time: December 10, 2003; 1:00 PM to 5:00 PM. Refreshments will be provided.

Place: Meeting Rooms 108/109, Magill Commons, Monmouth University. For directions, see <http://www.monmouth.edu/about/atagance/directions.asp>

Information: Dr. Amruthur Narasimhan, anarasimhan@ieee.org, (732) 957-0850.

Registration: <http://mywebpages.comcast.net/anarasimhan3/seminar/seminar-speakers.htm>

IEEE North Jersey Section Course Project Management

Wednesday Evenings, February 18, 2004 through April 14, 2004 (No class on March 3) 8 weekly classes (February 18, 25, March 10, 17, 24, 31, April 7, 14 2004) at Wellesley Inn & Suites, 265 Route 3 East, Clifton, NJ 07014
(Checks should not be mailed to this address)

The North Jersey Section IEEE is offering an evening course entitled "Project Management". Dice.com lists 1500+ Project related jobs in the New York tri-state area daily! This course will help you to break down a master project into manageable tasks, pinpoint possible solutions, and provide information to keep the project under control. Using Microsoft Project 2002 software, you will learn to accomplish various project plans. In addition, it will greatly enhance your business, communications and interpersonal skills.

The IEEE certificate of completion will be given to you when you finished this course. You may wish to take two Certification exams, one in Project Management administered by Project Management Institute and the other in IT Project+ by CompTIA Inc.

Instructor: Donald Hsu, Ph.D., has been a corporate manager for 11 years and is an experienced trainer. Since 1999, he has trained 150+ people in *IT Project+*, *MS Project 2002*, and *Project Management* courses in five organizations.

TOPICS

1. Explain the need for a project manager
2. Define SOW, PERT, GANTT, CPM, and Scope of the project
3. Identify the team members, resources and plan for the strategy
4. Calculate schedule, budget variances, and monitor project progress
5. Manage changes, estimates, and communications
6. Set a baseline, import tasks from MS Excel, export Project files to MS Word
7. Create and modify custom reports, templates and combination views
8. Share resources and create a master plan loaded to Project Server
9. Approve updates and conclude a project plan
10. Analyze Global E-Commerce and present student Projects

Class size will be limited to a maximum of 25 with a minimum of 15. Early registration is recommended. Phone reservations will NOT be accepted. Reservations accepted after February 4, 2004 will require a late fee of \$25. No reservations will be accepted after February 11, 2004.

WHEN: 8 Sessions, Wednesdays, February 18, 25, March 10, 17, 24, 31, April 7, 14, 2004, 6:30-9:00 PM.

COST: With textbook or notes: IEEE (& affiliate) members \$375; Non-IEEE members \$475.

CONTACT: Bhanu Chivakula -email b.chivakula@computer.org

REGISTRATION: Project Management

Please email details to address b.chivakula@computer.org and upon confirmation, the address where to mail the checks with details as described under, would be replied **(Checks payable to "North Jersey Section IEEE" with registration form should be mailed to this address)**

Name: / Mr. / Mrs. / Miss / Ms. / _____

Non-member

✉ email address ✉

IEEE Member Member #: _____ Member of _____ technical society

Employer: _____

Employer Address: _____

Home Address: _____

Business (day) telephone #: _____ Home telephone #: _____

Please enclose required fee payable to: **North Jersey Section IEEE**

Registration status will be mailed after February 11, 2004. Phone inquiries concerning registration will NOT be honored. In general, the effective date of the application corresponds to the date when BOTH a fully completed application/registration and payment are received.

Tuition receipt will be mailed only if this box is checked

Signature: _____

IEEE North Jersey Section Course Introduction to Java Programming

Monday Evenings, February 16, 2004 through April 12, 2004 (No class on March 1- eight weekly classes (February 16, 23, March 8, 15, 22, 29, April 5, 12 2004) at Wellesley Inn & Suites, 265 Route 3 East, Clifton, NJ 07014
(Checks should not be mailed to this address)

The North Jersey Section IEEE is offering an evening course entitled "Introduction to Java Programming." Java Programming has gained enormous popularity in corporate Information System applications as well as in advanced Webpage Design since 1997. About 2.5 million Java Programmers are currently working on all types of commercial projects in the world, ranging from cell phone applets, to UNIX server, to business intelligence and mainframe data-warehouse access.

Java is an easier transition for C++ Programmers. This course, however, will be for anyone who *never took* a programming course. The instructor will provide the necessary software (compiler and editor) for you to get started immediately!

Instructor: Donald Hsu, Ph.D., has been a corporate manager for 11 years and is an experienced trainer. Since 1997, he trained 350+ people in Java Programming and Advanced Java Programming courses in eight organizations.

TOPICS

1. Explain the dynamic growth in Java Programming
2. Contrast the importance of AWT, CGI, JavaScript and HTML
3. Classify the different types of Java applets vs Java applications
4. Identify the control structures, arrays and classes
5. Construct character strings and graphics tools
6. Define multithreading, files and streams
7. Draw multimedia, animation and Swing images
8. Build audio files, JavaBeans and networking applications
9. Distinguish Java utilities, error handling, serialization and reflection
10. Analyze real-world projects using SDK 1.4 development tools

Class size will be limited to a maximum of 25 with a minimum of 15. Early registration is recommended. Phone reservations will NOT be accepted. Reservations accepted after February 2, 2004 will require a late fee of \$25. No reservations will be accepted after February 9, 2004.

WHEN: 8 Sessions, Mondays, February 16, 23, March 8, 15, 22, 29, April 5, 12, 2004, 6:30-9:00 PM.

COST: With textbook or notes: IEEE (& affiliate) members \$375; Non-IEEE members \$475.

CONTACT: Bhanu Chivakula -email b.chivakula@computer.org

REGISTRATION: Introduction to Java Programming

Please email details to address b.chivakula@computer.org and upon confirmation, the address where to mail the checks with details as described under, would be replied **(Checks payable to "North Jersey Section IEEE" with registration form should be mailed to this address)**

Name: / Mr. / Mrs. / Miss / Ms. / _____

Non-member

 email address 

IEEE Member Member #: _____ Member of _____ technical society

Employer: _____

Employer Address: _____

Home Address: _____

Business (day) telephone #: _____ Home telephone #: _____

Please enclose required fee payable to: **North Jersey Section IEEE**

Registration status will be mailed after February 9, 2004. Phone inquiries concerning registration will NOT be honored. In general, the effective date of the application corresponds to the date when BOTH a fully completed application/registration and payment are received.

Tuition receipt will be mailed only if this box is checked

Signature: _____