

TO: IEEE Board of Directors – November 2013

FROM: Marc T. Apter, IEEE Director

SUBJECT: Report of IEEE-USA Activities and Progress Year-To-Date

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**EXECUTIVE SUMMARY:**

The following report highlights IEEE-USA's year-to-date activities and progress. It highlights my presidential activities, and concludes with updates on IEEE's U.S. membership trends, and the current status of the American Association of Engineering Societies (AAES).

**REPORT:**

IEEE-USA's primary focus for 2013 has been an emphasis on U.S. membership recovery and recruitment, and shifting resources to strengthen membership marketing, communications and member engagement in government relations.

Our Government Relations priorities for 2013 have focused on federal support for research and innovation, skilled immigration reform, energy, implementation of the new patent law, support of K-12 STEM education, and issues related to U.S. security.

IEEE-USA continues to offer strong programs, products and services in the areas of Career & Member Services, Communications & Public Awareness, Government Relations, and local Professional Activities. As a way of strengthening and diversifying our revenues, IEEE-USA is also engaged in building a technical conferences program. Highlights of our efforts in each area are summarized by program area below.

In addition, IEEE-USA continues to support IEEE's policy interests on the subjects of public access to scholarly publications, data and standards, and on U.S. federal participation in conferences.

**Career & Member Services**

**Career & Employment Assistance Webinars:** IEEE-USA has delivered or scheduled 12 career webinars for the year-to-date in its career series:

- How to Start a High-Tech Incubator (Harlan Jacobs)
- Seven Ways to Build Your Necessary, Notable Network Skills (Jean O'Brien)
- Building Your Online Resume Using LinkedIn (Kim Brown and Don Herres)
- Get Your Resume out of Cyberspace (Elizabeth Lions)
- Career Opportunities in Patents (Raymond Roberts)
- Engineers: It's Time to Change How We Promote the Profession (Chris McManes and Thea Sahr)
- Consulting 101 (Gary Blank)
- Setting Up Your Consultants Database (Gary Blank)
- Recharge Your Career (Pegotty Cooper)
- Enterprise Gamification – Exploiting People by Letting Them Have Fun (Mario Herger) – (Scheduled)
- Introduction to Design for Six Sigma (Tarek Lahdhiri) – (Scheduled\_
- Career Management (Elizabeth Lions) – (Scheduled)
- Career Workshop: Making a Difference (Don Herres & Nigel Bristow) – (Scheduled)

**Career Tracks at IEEE Metro Area Workshops (MAWS):** IEEE-USA is providing speakers and materials for career development panels or workshops at each of the 2013 IEEE MAWS: At the Boston MAW on 27-28 September, IEEE-USA provided a half-day workshop on *Career Assistance: Setting a Course For Career Satisfaction*, featuring presentations by Holly Cyrus, Don Herres, and IEEE-USA President-Elect Gary Blank. The Atlanta MAW, on 18-19 October, drew 30 participants for a full day IEEE-USA workshop on *Career Assistance: Managing Your Career as A Business*, featuring presentations by Ed Kirchner, Ron Jensen and Tarek Lahdhiri. Upcoming MAW career events are scheduled for:

- 1-2 November – Seattle, Wash.
- 22-23 November – Minneapolis, Minn. (Twin Cities Section)

**2013 Employment Survey:** In April, IEEE-USA published the results of its *2013 Employment Survey*, reflecting both good and bad news for unemployed U.S. IEEE members. The bad news is more unemployed members were eligible to be surveyed, and the median period of unemployment was a lengthy 52 weeks. The good news is 81 percent of respondents indicated they want to remain in the profession, and the percentage of members rehired who deemed their new job to be “better” or “much better” than their previous position, increased.

**Salary Survey:** The *2013 IEEE-USA Salary Survey & Benefits Report* was released in mid-August, with data collected from more than 11,400 members in Regions 1-6. Median wages for members working in their professional area of technical competence showed a healthy three percent uptick; however, the gap between wages for men and women of comparable experience widened. The proportion of employers reported as offering paid attendance at professional conferences has dropped more than 10 points in the past ten years to 68.2%.

Participants in the survey will be able to take advantage of an enhanced Salary Calculator, to be unveiled by the end of October. As part of this launch, an additional calculator will be added to the product line. This new calculator will pull real data, and allows for individual filtering of each field. The existing calculator applies a regression model that is predictive in nature, but requires the user to select every field. Both of these options will enhance the product offering. The survey and calculator projects were completed seamlessly, despite the unexpected necessity of shifting vendors from Gallup/ENetrix to Industry Insights.

**Consultants Network:** Since its launch in February, more than 850 IEEE members (including 400 U.S. IEEE members) have joined the IEEE Consultants Network, an IEEE special interest group that provides members information on consulting and opportunities to network at the national and international levels. Phase 2 Integration of the IEEE-USA’s Consultants Network into the IEEE Membership system was successfully completed 3 September. Phase 2 allows U.S. IEEE members to sign up for the IEEE-USA Consultants Database, while renewing their IEEE membership. The intent is to make it easier for members to renew both their IEEE membership and their IEEE-USA Consultants Database profile, at the same time.

IEEE-USA released the results of its *2013 Consultants Fee Survey* in mid-September. The 2013 survey shows median hourly rates were flat for the third straight year. The typical independent consultant was 60 years old, with 25 years of professional experience, and just under 16 years in consulting practice.

**Entrepreneurs Activities:** IEEE-USA renewed a Strategic Alliance Memorandum with the U.S. Small Business Administration for 2013, under which IEEE-USA provides SBA with insight and volunteer assistance in support of SBA programs targeted at high-tech start-ups. Discussions are currently underway with The Kauffman Foundation to collaborate on research, webinars, and potential public policy issues impacting U.S. IEEE members who are entrepreneurs. Mark Wingate, chair of the Entrepreneurial Activities Committee, also moderated a panel discussion on early stage startups at the IEEE-USA Annual Meeting.

IEEE-USA is also working with representatives from the U.S. Small Business Administration, U.S. Trade Representatives' Office, Office of Science and Technology Policy, Department of Commerce Office on Entrepreneurship and Innovation, Export Import Bank, Department of State, and the U.S. Senate Committee on Small Business, on plans for the second in a series of IEEE-USA-hosted workshops exploring how these U.S. government agencies can better coordinate their efforts to support U.S. high-tech start-ups, and related small business needs. The workshop is tentatively set for 13 December, in Washington, D.C.

**Licensure and Registration:** Developed in partnership with the IEEE Computer Society, the National Society of Professional Engineers, and the Texas Board of Professional Engineers, IEEE-USA completed developing the first U.S. software licensure examination. The National Council of Examiners for Engineering and Surveying administered the exam in April this year to twelve participants, with a pass rate of 50%. IEEE-USA also developed an associated guide to the software engineering licensure examination, and it has sold 116 copies, since its release.

**K-12 STEM Literacy:** IEEE-USA's K-12 STEM Literacy Committee is currently working on updating STEM-related guidance literature for dissemination to K-12 students, educators, parents, etc., and developing a "kit" of IEEE and other materials to assist educators involved in teaching engineering principles to students. Planning for IEEE-USA's involvement in the 2014 U.S. Science and Engineering Festival (26-27 April 2014) is also underway.

**Intellectual Property Professionals:** Envisioned as a future IEEE special interest group, IEEE-USA's [IP Professionals](#) project provided educational opportunities and facilitated information exchange among IEEE members who work with intellectual property on a regular basis, including inventors, business owners and managers, and technology attorneys. In June, the IEEE-USA Board approved a charter for the IP Professionals Steering Committee, upgrading this effort from ad hoc status. The IP Professionals Steering Committee provided speakers for an IP-related panel session at the Boston "Smart Tech" Metro Area Workshop, held in September, and is tentatively planning a workshop in San Jose, in late October.

## **Communications & Public Awareness**

**Flagship Publication:** IEEE IT intervened in plans to *merge IEEE-USA Today's Engineer* and *IEEE-USA In Action* into a single "flagship" member publication for IEEE-USA, by requiring us to participate in developing an enterprise Content Management System (CMS) publishing solution, that will save IEEE an estimated \$1M in IT-related costs on other projects. As a result, developing the new publication is proceeding slowly, as IEEE-USA waits for IEEE IT to implement the new enterprise content management system and web commerce tool, to support the new IEEE-USA publication. The current target date for launch is now First Quarter 2014. In the interim, IEEE-USA is maintaining its normal schedule for both publications

**Today's Engineer:** Readership of [IEEE-USA's Today's Engineer](#) online journal has been growing consistently month to month, and is up nine percent for the year-to-date, averaging 158,000 visits/month, and breaking the 200,000 visits/month threshold for the first time, in January 2013. *IEEE-USA's Today's Engineer* received a 2013 APEX Award for publishing excellence in the electronic/web newsletter category, its second consecutive annual APEX award.

**IEEE-USA in Action:** IEEE-USA's electronic digest of career and government relations news, as well as news and features about IEEE-USA products, programs, services, activities and conferences is distributed quarterly by email to all U.S. members, and continues to enjoy a high average open rate of 23.05% (and a peak open-rate of 25.13% on the Spring 2013 issue), the highest in the IEEE, as well as many commercial online publications.

**E-Book Offerings:** IEEE-USA has published 24 new e-books for the year-to-date, bringing our catalog of offerings to 148. Total distribution (including the free monthly member download) is 42,653. The most popular purchased titles include the *Software PE Exam – Sample Questions and Solutions*, the 2012

*Salary Survey*, and the *2012 IEEE-USA Consultants Fee Survey*. The most popular free title was our member incentive offering *Strategic Thinking: A High-Tech Strategy Guidebook*, of which 12,635 copies were downloaded in February.

**IEEE-USA and TechNav:** IEEE-USA is pleased to note that its e-book offerings have been integrated into IEEE Technology Navigator (TechNav).

**National Engineers Week (EWeek):** In 2013, two IEEE-USA-founded EWeek programs celebrated their 20<sup>th</sup> anniversaries: the Future City Competition and the Discover Engineering Family Day. IEEE-USA supported celebratory activities for each program, including sponsoring the \$2K Communications Systems Award, and a \$2K scholarship award supporting the national third-place finalist in the Future Cities Competition. Family Day drew more than 9,000 parents, teachers and students, who engaged with various exhibits and STEM celebrities, including a former NASA astronaut. IEEE volunteers demonstrated electrical conductivity and energy efficiency concepts, and provided a Smart Grid demonstration using software provided by National Instruments. The local Fox TV affiliate previewed the event locally. Marie Vlachopoulou (of Pacific Northwest National Laboratory) and Curtis Ullerich (fourth year computer engineering major at Iowa State University) were recognized as the IEEE/IEEE-USA's New Faces of Engineering for EWeek 2013..

On 18 September, IEEE-USA and the DuPont Corporation formally announced their collaboration as lead society and corporate sponsor of National Engineers Week 2014. On 23 September, IEEE announced that IEEE-USA's App-E-Feat mobile application for the Humanity E-Week Competition will be tapped as part of IEEE's commitment to the Clinton Global Initiative (CGI), a world-wide effort to connect non-profits, non-governmental organizations, and corporate initiatives with engineers around the world, to help advance their goals through a digital platform. [\[Press Release\]](#) The formal kick-off meeting for EWeek 2014 will be webcast live from the University of Delaware on 15 November.

**"OutSMART the GRID" Mini-Golf:** IEEE-USA was pleased to partner with the National Building Museum (NBM), the architectural firm Inscape Publico, and builder company Glass Construction, in sponsoring a miniature golf hole, as part of an architecturally-themed course at the NBM. IEEE-USA's design is inspired by the Smart Grid, and is dubbed "OutSMART the GRID." This year is the second for the indoor mini-golf course, which has become a very popular attraction for Washington visitors and locals during the hot days of summer. Located in the National Building Museum, the course featured holes designed by various sponsor teams, around the theme, *Building the Future*. The exhibit ran from Memorial Day through Labor Day. Our 2012 hole--*Hole in 1s and 0s* was inspired by cell phone technology and won "Best Design" honors from the NBM, as well as being featured in several segments on local TV morning news. For more information, see: <http://www.ieeeusa.org/golf/>.

**Media Relations:** IEEE-USA has enjoyed robust media coverage of its positions and sponsored events for the year-to-date. [Media exposures](#) include pick-ups in the trade and political press, *The New York Times* (three times), *The Washington Post* (twice), *San Jose Mercury News*, Reuters, the Associated Press, a TV segment that ran on FOX 5 in Washington, D.C., and international media pick-ups in the *Silicon India News*, *Zee News* (India) and *International Business Times*.

**Awards and Recognitions:** IEEE-USA closed nominations for its 2013 Awards & Recognitions on 14 September. The awards will be presented next May, at the 2014 Annual Meeting in Providence, R.I.

IEEE-USA presented the 2012 Awards and Recognitions at its annual Awards Ceremony, held in conjunction with the IEEE-USA Annual Meeting in Portland, Oregon on 3 August 2013. The following is the list of 2012 Award winners:

- **Robert S. Walleigh Distinguished Contributions to Engineering Professionalism:** Harold S. Goldberg, P.E.
- **Award for Distinguished Public Service:** Rep. David E. Price (D-N.C.)

- **George F. McClure Citation of Honor:** Gus Gaynor and Edward L. Kirchner
- **Regional Professional Leadership Award:** James M. Anderson, Charles R. Husbands, Bernard T. Sander, David C. Schoggen, Robert Vice and Daniel P. Cowan
- **Divisional Professional Leadership Award:** Dr. Chi-Ming Chen
- **Professional Achievement for Individuals:** Dr. Eric Burger, Kenneth Reid and Jerry E. Knotts
- **Professional Achievement for Organizations:** Deere & Company (John Deere)
- **Harry Diamond Memorial Award:** Thomas Wettergren
- **K-12 STEM Literacy Committee Educator-Engineer Partnership Award:** Freddie Wong and Melissa Stadtfeld
- **IEEE-USA Entrepreneur Achievement Award for Leadership in Entrepreneurial Spirit:** Dr. William Weedon
- **Jim Watson Student Professional Awareness Achievement Award:** John Golzy

### **Government Relations – Priority Issues**

**Skilled Immigration Reform:** On 21 May, the Senate Judiciary Committee completed mark-up, and reported the *Border Security, Economic Opportunity, and Immigration Modernization Act* (S.744). The bill passed the full Senate on 27 June, but has not yet been sent to the House for consideration. The Senate-approved comprehensive immigration reform bill includes provisions recommended by IEEE-USA to provide green cards for foreign STEM graduates, but it also included a weakened requirement for comparable wages for skilled guest workers; increased numbers of H-1B visas; a proposal to explore gender-related discrimination issues; and some provisions to discourage offshoring of U.S. high-tech jobs by foreign corporations. These watered-down protections are of concern, and have caused us to moderate and narrow our support for the Senate bill. As part of its advocacy efforts on this legislation during its drafting, Congress invited IEEE-USA to testify at hearings twice in March.

On 6 March, IEEE-USA representative Bruce Morrison testified before the House Judiciary Subcommittee on Immigration at a hearing on *Advancing America's Competitiveness through Skilled Immigration*. On 18 March, IEEE-USA Communications and Public Relations Vice-President, Karen Panetta, testified before the Senate Judiciary Committee on *How Comprehensive Immigration Reform Should Address the Needs of Women and Families*. The later testimony focused on gender discrimination issues facing skilled women guest-workers, and prompted including legislative language mandating a federal study. For more information, see: <http://www.ieeeusa.org/policy/issues/immigration/>

**Federal Support of Conferences/Travel:** Responding to input from the association and S&T communities, including IEEE-USA, on 28 May, the U.S. Federal Office of Management and Budget released a Controller's Alert to federal agencies, encouraging support for federal participation in S&T conferences and related meetings that are mission-relevant, and providing some guidelines to help conference organizers and federal managers optimize federal participation. For more information, see: <http://www.ieeeusa.org/policy/issues/federaltravel/>. Implementation remains inconsistent among the various federal departments and agencies, and budget sequestration continues to drive limits on federal participation. IEEE-USA is exploring a narrow initiative, requesting OMB to streamline the federal approval process, by allowing multi-year "waivers" for annual conferences with large federal participation.

**Open Access/Open Data Policies:** IEEE-USA is working with PSPB staff to track progress of the *Public Access to Science Act* (H.R. 3157), bipartisan legislation introduced on 20 September by Reps.

Sensenbrenner (R-Wis.) and Johnson (D-Texas) that would require NASA, the National Science Foundation, the National Institute of Standards and Technology, and the National Weather Service to adopt policies that would require researchers and publishers to “allow the public to read, download and analyze by machine, covered works in digital form.” The policy would include access to “covered works’ metadata, without charge, upon first publication, in a data format that ensures interoperability with current and anticipated future search technology.” The bill would provide an embargo period of 12 months before published articles have to be made publicly available. However, the bill also provides a petition process for interested stakeholders to request each covered federal agency to make an adjustment of up to six months (shorter or longer) in the embargo period upon demonstration that “the public interest will be substantially and uniquely harmed” under the covered agency’s current embargo policy. The bill purportedly has been endorsed by the White House, and was crafted as a possible add-on to the *America COMPETES Act* Reauthorization (see below).

On 29 July, IEEE-USA joined with ACS, AIP, APS and MRS in a letter to the President’s Office of Science and Technology Policy urging that efforts to develop a public access plan for research data be developed separately from plans for ensuring public access to federally-funded research in scholarly publications. The letter was followed by a meeting with OSTP Assistant Director Michael Stebbins in mid-August. In late August, U.S. federal research agencies began filing plans for ensuring public access to federally funded, published, research and digital scientific data, in response to a White House directive. The White House emphasis is on requiring federal grantees to include data management and accessibility plans as part of their peer reviewed research proposals. The plans have not been released to the public yet for comment.

**America COMPETES Act Reauthorization:** IEEE-USA has participated in meetings with House Science committee staff discussing plans for reauthorization of the *America COMPETES Act*, dispatched grassroots volunteers with a message of support for reauthorization in the 2013 Congressional Visits Day, and signed on to a coalition letter to Congress outlining a set of principles for the upcoming reauthorization of the *America COMPETES Act*. In late September, House Science Committee Chair Lamar Smith finally announced plans to proceed with a reauthorization bill, to be renamed the *Einstein Act*, with action expected in the fourth quarter.

**Networking and Information Technology:** IEEE-USA endorsed the *Advancing America’s Networking and Information Technology Research and Development Act* (H.R. 756), legislation that reauthorizes federal R&D related to networking and information technology. The bill was passed in the House of Representatives on 16 April, and is currently pending review by the Senate Committee on Commerce, Science and Transportation.

**Cybersecurity:** IEEE-USA endorsed the *Cyber Security Enhancement Act* (H.R. 756), legislation that would direct the federal government to develop a cybersecurity strategic research and development plan and triennial updates, and develop and annually update an implementation roadmap for this plan. The bill was passed in the House of Representatives on 16 April, and is currently pending review by the Senate Committee on Commerce, Science and Transportation. IEEE-USA is currently evaluating other new and proposed cyber legislation, including Senator Rockefeller’s *Cybersecurity Act of 2013* (S. 1355), as congressional leaders consider whether and how they will advance cybersecurity legislation in this session of Congress.

**Intellectual Property Issues:** IEEE-USA’s IP-related focus for the year-to-date has been on strengthening federal adherence to the requirements of the *Administrative Procedure Act*, *Paperwork Reduction Act*, *Executive Order 12,866*, and OMB’s *Bulletin on Agency Good Guidance Practices*, in the implementation of the new *America Invents Act* patent law. IEEE-USA has joined with a broad industry coalition to oppose a new legislative proposal to expand post-grant reviews of previously granted business method patents, and it has urged Congress to hold public hearings on legislative proposals being developed for further reforms of the U.S. patent system, as a follow-up to the *American Inventors Act*, passed in 2012. IEEE-USA is also monitoring plans developing in Congress to develop comprehensive *Copyright Act* reform legislation.

**Amicus Brief in CLS v. Alice:** IEEE-USA filed an [amicus curiae brief](#) on 7 October 2013, urging the Supreme Court to review the lower court decision in *CLS v. Alice*, a case concerning the patentability of software. In support of the request for review, the brief notes that previous Supreme Court decisions in the *Diehr* and *Mayo* cases have created incompatible tests for determining what constitutes patent-eligible subject-matter.

**Energy Efficiency:** IEEE-USA is supporting a bi-partisan amendment by Senator Gillibrand (D-Mass.) to the *Energy Savings and Industrial Competitiveness Act of 2013* (S. 761), that would authorize recipients of FEMA disaster recovery funds to replace damaged property with more energy efficient alternatives. The bill (and amendment) came to the Senate floor for debate in September, but was derailed by budget-related politics. It is hoped that the bill will return to the Senate floor for a vote later this year, in which case passage is anticipated.

**Wireless Innovation:** In an effort to promote wireless innovation, IEEE-USA has [petitioned](#) the Federal Communications Commission to issue a declaratory ruling that petitions or applications related to technologies and services in the frequency spectrum above 95 GHz be classified presumptively as “a new technology or service,” to encourage private-sector investments. IEEE-USA has also circulated a [whitepaper](#) encouraging the FCC to clarify what constitutes harmful interference, to reduce regulatory uncertainties for current spectrum users and wireless innovators.

**Repeal of Massachusetts IT Services Tax:** Working with the Boston Section, IEEE-USA participated in a successful campaign to repeal a controversial 6.25% state sales tax on software and IT services. Massachusetts Governor Deval Patrick signed the repeal measure into law on 27 September.

**EPEAT Reforms:** IEEE-USA has been working with IEEE’s Standards Association, and a coalition of business groups, to highlight issues with the management of the EPEAT product registry, used to certify federal procurement of energy efficient electronic products and goods. Meetings have been held with EPA staffers, and with staffers of the House and Senate Energy and Commerce Committees, which have oversight authority. IEEE-USA is exploring ways Congress can encourage the EPA to reform the program short of legislation.

### **Government Relations – Programmatic Highlights**

**Policy Communications and Position Statements:** Through 1 October, IEEE-USA has issued 34 [policy communications](#) to Congress and/or the Executive Branch, including six grassroots action alerts, and two testimonies before the House and Senate Judiciary Committees, on skilled immigration-related issues. IEEE-USA has also released five new or updated [position statements](#) on the following topics:

- Enhancing Coordination of Federal, State and Local Innovation Activities  
Multiple Patent Claim Forms
- Non-Discriminatory Patent Legislation  
University Intellectual Property Guidelines  
The U.S. Patent Office and Patent Administration

**Government Fellowships:** Starting in 2013, IEEE-USA adjusted its [Fellowship programs](#) from a calendar year to a federal fiscal year schedule, resulting in an overlap of fellowship terms. As a result, IEEE-USA is sponsoring five Government Fellows in 2013:

- 2013-2014 Diplomacy Fellow **Len Hause** (President and CEO of MashBrain, LLC) has been assigned to the State Department’s Office of the Coordinator for Cyber Issues, where he is supporting development of the U.S. international strategy for cyberspace.
- 2013 Diplomacy Fellow **Kyle Bunch** completed his Fellowship in March, where he was assigned to the State Department’s Office of Verification and Transparency Technologies in the Bureau of Arms Control to support work on arms control verification and compliance, including issues

related to weapons of mass destruction.

- 2013 Congressional Fellow **Christopher Reed** accepted an assignment with the Senate Permanent Committee on Investigations, where he supported their efforts to investigate fraud, corruption and waste in all areas of government. At the request of the Permanent Subcommittee, IEEE-USA agreed to extend Christopher Reed's Fellowship for an additional three months (Jan-Mar 2014). Reed has become a key resource in an important congressional investigation involving complex financial structures and details that utilize his unique combination of engineering, computing and legal skills.
- Incoming 2013-2014 Congressional Fellow **Anne Marie Lewis** has accepted an assignment with Senator Heidi Heitkamp (D-N.D.), who serves on the Senate Banking, Homeland Security and Small Business Committees.
- Incoming 2013-2014 Congressional Fellow **Michael R. McQuade**, Ph.D., P.E., has accepted an assignment with the majority staff of the House Committee on Science, Space and Technology.

Earlier this year, IEEE-USA also signed a Memorandum of Understanding with the U.S. Agency for International Development for establishing an Engineering and International Development Fellowship at USAID. Recruitment is currently underway for the first Fellowship placement in 2014.

**Washington Internships for Students of Engineering (WISE):** IEEE-USA, IEEE-TA and the IEEE Life Members Committee jointly sponsored three IEEE student members for participation in the nine-week [WISE](#) summer program, exposing engineering students from multiple disciplines to technology policy. IEEE's 2013 Interns were Alexandra Nilles (Colorado School of Mines), Lucas Wadman (Colorado State University) and Turner Cotterman (Clemson University). Nilles' research focused on the Smart Grid; Wadman's on grid-scale energy storage; and Cotterman's on international Internet governance. Their reports are published in the 2013 edition of the [WISE Journal of Engineering and Public Policy](#).

**Engineering Public Policy Symposium:** IEEE-USA joined with ASME and other engineering societies in sponsoring the annual Engineering Public Policy Symposium, held on Capitol Hill on 23 April. The 2013 Symposium focused on the *Impact of Sequestration on the U.S. Research Enterprise*, and featured speakers from the President's Office of Science and Technology Policy, the House Science, Space and Technology Committee, the Senate Committee on Commerce, Science and Transportation, and the National Academy of Engineering.

**Congressional Briefings:** IEEE-USA continues to co-chair the steering committees for the Congressional Research and Robotics Caucuses. IEEE-USA has also helped organize or sponsor seven congressional briefings through 1 October, and has three briefings currently under development for delivery in the fourth quarter:

Date	Topic	Co-Sponsors/Partners
23 Jan.	American Exceptionalism, American Decline? Research, the Knowledge Economy, and the 21st Century Challenge	Task Force for American Innovation
25 Feb.	Small Modular Nuclear Reactors	ASME
20 March	Robotics Roadmap 2.0	Robotics Caucus
6 June	STEM: Driving the Future	ASME & MINDDRIVE
6 June	Innovative Strategies for Building a Diverse Scientific Workforce	Collaborative for Enhancing Diversity in Sciences (CEDS)
9 July	A Revolution in Prosthetics	Johns Hopkins Applied Physics Lab.
10 July	Extreme Computing	Council on Competitiveness
25 July	Robots and Job Creation	IEEE-RAS, Carnegie-Mellon
7 Nov.	Enhancing FCC Spectrum Management	



20 Nov.	The Electric Power Grid	ASME
TBD	STEM Workforce	IEEE Spectrum

**Grassroots Activities:** IEEE-USA was able to coordinate grassroots efforts with sections in ten states to get targeted and timely messages to Congress, prior to the Senate vote on immigration reform. We also worked closely with the Boston Section to effectively respond to the Massachusetts Computer Sales Tax. IEEE-USA's three fly-ins in 2013 were successful. Twenty-five individuals visited 58 different congressional offices to discuss the importance of federally funded R&D, as part of the annual Congressional Visits Day (CVD) on 21 March. This event involves more than fifty different groups, all visiting Congress on the same day, with similar messages about the federal budget.

IEEE-USA also participated in the Society of Women Engineers (SWE) fly-in on 1 May. Three IEEE members visited seven congressional offices to discuss efforts to increase diversity in the STEM workforce. Finally, our Energy fly-in on 11 June had eight participants discussing federal energy policy with fourteen congressional offices. Our new Legislative Action Center is up and running, making it easier for IEEE members to get updates on our legislative initiatives, and then communicate with Congress about those initiatives.

**Energy-Water Nexus:** IEEE-USA partnered with the American Institute of Chemical Engineers and other "Founder societies" in an NSF-supported workshop on *Developing A Research Agenda for The Energy-Water Nexus*. The initial workshop was held on 10-11 June in Arlington, Va., and provided an opportunity to explore a continuing, multi-society collaboration on this topic.

**Air Force 60<sup>th</sup> Anniversary:** IEEE-USA provided letters to the U.S. Air Force (USAF) Office of Scientific Research (AFOSR) as part of their 60<sup>th</sup> Anniversary celebration, highlighting the USAF's historical accomplishments and contributions to S&T research.

## Professional Activities

**Annual Meeting:** The 2013 IEEE-USA Annual Meeting, and the inaugural IEEE Conference on Sustainable Technologies (SusTech), was held in Portland, Ore., on 1-4 August 2013. In connection with these two events, Oregon Gov. John Kitzhaber, M.D., proclaimed 1 August IEEE Oregon Sustainable Technology Day. Planning for the 2014 IEEE-USA Technical Conference and Annual Meeting are underway, and will be held on Providence, R.I., on 15-18 May 2014. The Milwaukee Section has been selected as the host of the 2015 IEEE-USA Annual Meeting.

**PACE:** IEEE-USA is experimenting with new approaches to funding local professional activities organized by IEEE U.S. sections (and associated organizational units). Through our Member Engagement Program (MEP), IEEE-USA is offering any section that organizes at least three professional activities by year-end a \$250 section rebate. New this year, IEEE-USA has also allocated a portion of its Professional Development Funds to supporting merit-based grants to support specific section activities, in addition to funds traditionally allocated by formula in lump-sums. These new approaches are being assessed to see if they increase the number of local PACE activities, and the level of quality member engagements.

**Student Professional Activities:** For the year-to-date, IEEE-USA has sponsored 37 student professional awareness activities (33 S-PACs and 4 S-PAVES). We are on pace to reach our year end metric of 50+.

IEEE-USA's various student professional activities programs are in the process of being rebranded as **SPA-X** (SPA = Student Professional Awareness and X=The Experience) that the student/school has selected to hold), with the tagline, *Engage. Explore. Experience*. SPA-X will become the overarching umbrella for professional awareness conferences, ventures, workshops, and related professional development ideas, driven by the students.). The pilot program is expected to launch in spring 2014, and

the official rebranding is expected to be announced at the IEEE-USA Annual Meeting, in May 2014. Inspired by input from Walt Disney Imagineers, and IEEE student leaders, it is believed this change will simplify marketing of student professional awareness programs, eliminate jargon and confusion over the various offerings, and provide greater flexibility and freedom to event planners.

**Conferences**

As part of on-going efforts to diversify revenue sources, and reduce reliance on U.S. higher-grade member assessment for support of IEEE-USA operations, IEEE-USA continues to expand its technical conferences program. Current (2013-2014) conference commitments are listed below:

<b>2013</b>	<b>Conference</b>	<b>IEEE-USA Role</b>
24-28 Feb.	<a href="#">IEEE PES Innovative Smart Grid Technologies Conference</a> Washington, D.C.	Technical Co-sponsor
4-5 April	<a href="#">IEEE Green Technologies Conference</a> Denver, Colo.	Co-sponsor
1-2 Aug.	<a href="#">IEEE Conference on Technologies for Sustainability</a> Portland, Ore.	Co-sponsor
1-4 Aug.	<a href="#">IEEE-USA Annual Meeting</a> Portland, Ore.	Sponsor
20-23 Oct.	<a href="#">IEEE Global Humanitarian Technology Conference</a> San Jose, Calif.	Technical Co-sponsor
21-23 Oct.	<a href="#">Carbon Management Technology Conference</a> Alexandria, Va.	Sponsor
7-9 Nov.	<a href="#">IEEE Int'l Conference on Wireless for Space &amp; Extreme Environments</a> Baltimore, Md.	Co-sponsor
11-14 Nov.	<a href="#">IEEE International Conference on Technologies for Homeland Security</a> Waltham, Mass.	Technical Co-sponsor
2-6 Dec.	<a href="#">2013 International Conference on Connected Vehicles and Expo</a> Las Vegas, Nev.	Co-sponsor
7 Dec.	<a href="#">IEEE Signal Processing in Medicine and Biology Symposium</a> Brooklyn, N.Y.	Co-sponsor
<b>2014</b>	<b>Conference</b>	<b>IEEE-USA Role</b>
30 April-2 May	<a href="#">IEEE Engineering, Security and Project Professionals Conference</a> College Park, Md.	Technical Co-sponsor
23-25 May	<a href="#">IEEE Int'l Symposium on Ethics in Engineering, Science and Technology</a>	Co-sponsor
7-8 Oct.	<a href="#">IEEE NewNEB DC Utility Power Conference &amp; Exhibition</a> Islip, N.Y.	Organizer

## **IEEE-USA Presidential Activities**

In addition to conducting the business of the IEEE-USA Board of Directors and overseeing the operations of the organization, it has been my privilege and pleasure as IEEE-USA President to serve on the Executive Committee of the American Association of Engineering Societies, and to represent IEEE-USA and IEEE at the following events and gatherings in 2013:

<b>Date</b>	<b>Event</b>	<b>Location</b>
5-6 April	IEEE Region 1 Student Conference	MIT
6 April	Philadelphia Section Awards Banquet	Philadelphia, Pa.
23 April	Convocation of Engineering Societies	Nat'l Academy of Engineering
24 April	Engineering Societies Public Policy Symposium	Washington, D.C.
6 June	New Jersey Coast Section Awards Banquet (presented Division Professional Leadership Award to Dr. Chi-Ming Chen)	New Jersey
24 Aug.	Region 1 Meeting	Providence, R.I.
11-13 Sept.	Triangle Coalition 13 <sup>th</sup> Annual STEM Education Conference	Washington, D.C.
4 Oct.	175th Anniversary Engineering Gala (and Dedication)	University of Tennessee-Knoxville
21 Oct.	Carbon Management Technology Conference	Alexandria, Va.
29-30 Oct.	National Competitiveness Forum	Washington, D.C.
1 Nov.	Southern Minnesota Section 50 <sup>th</sup> Anniversary	Rochester, Minn.
3 Dec.	Lexington Section 50 <sup>th</sup> Anniversary	Simpsonville, Ky.

## **U.S. Membership Trends**

IEEE's R1-R6 Higher Grade membership has been steadily declining 1-2% per annum since 2003, and that decline seemed to accelerate during the 2012-2013 membership year.

For 2012-2013, R1-R6 Higher Grade membership was down 2.9% (5012 members); with all six U.S. regions showing declines ranging from 2.2% to 4.1%. The decline in "full-paying" Higher Grade members was more than 5%. IEEE Life Membership in R1-R6 increased 2.4% in the 2012-2013 membership year (Life Members are exempted from dues/assessments).

For Higher Grade members, recruitment was down 8.7% (688 members) from 2012. The member retention rate was 84.6%, down from 85.2% in 2012. First Year member retention was 37%, down from 38.8% in 2012.

The loss of 5,000 U.S. members represents an opportunity cost of \$200,000 in assessment revenues not available to support IEEE-USA programs and activities, and represents approximately 3.7% of our annual operating budget. Since 95% of our operating revenues are derived from the U.S. assessment, and since efforts to diversify our revenue sources have seen limited success to date, enhancing higher-grade membership in R1-R6 is a financial imperative for IEEE-USA.

To support IEEE's U.S. membership recruitment and retention efforts, IEEE-USA provided programmatic support to the IEEE's R1-R6 Membership Initiative in 2013, through support of local employment networks and provision of career-related speakers to MGA's Metro Area Workshops. Also this year, IEEE-USA funded the third year of its financial incentive to U.S. IEEE Sections, for achieving positive net growth of Higher Grade membership. In early October, MGA announced a new IEEE-USA-supported U.S. Membership Referral pilot, which provides incentives in the form of branded gifts and discounts for

successful membership referrals. For more information, see <http://www.ieeeusa.org/volunteers/membership/>

To cope with revenue shortfalls resulting from declining U.S. membership, IEEE-USA adopted a restructuring plan in 2012 that resulted in sunseting several committees/ programs, and reducing OU staff from 21 to 18. This plan was intended to give us three to five years of financial stability, so that we could focus on strategic options for a more sustainable IEEE-USA in the future. The apparent acceleration in U.S. Higher Grade membership decline, however, narrows IEEE-USA's window to two to three years.

### **American Association of Engineering Societies (AAES)**

AAES and the National Academy of Engineering held a successful [Convocation](#) of engineering societies on 22 April, along with the annual AAES Awards Banquet and AAES Board meeting. AAES' International Affairs Committee (IntAC) and its subcommittees also continue to actively coordinate U.S. participation in the World Federation of Engineering Organizations (WFEO) and the Pan-American Federation of Engineering Societies (UPADI). Financially, however, AAES is currently operating with a negative net worth of approximately \$60K, due to their failure to meet society membership goals, and a decline in publication-related revenue from Engineering Workforce Commission survey products.

With support from the United Engineering Foundation, the AAES Board began a re-visioning process in 2012. A follow-on strategic retreat was held on 29-30 July, to continue discussing AAES' future. As an outcome of that summit, and subsequent work by the AAES Executive Committee, two proposals have been developed for consideration. The first proposal would result in a reorganization of AAES' governance structure, with the current AAES Board of Directors becoming an Assembly of member societies, and the AAES Executive Committee becoming the functional Board of Directors. The second proposal would reestablish tiered membership dues to make membership more attractive to smaller engineering societies currently unwilling to pay the base \$10K annual membership fee. IEEE-USA will be sharing its concerns regarding each of these proposals at the upcoming AAES Board of Directors meeting in October.