



## FOCUS ON: EMERGING PROFESSIONALS AND OTHER VALUE-ADDED PROGRAMS

The first step in getting our future standardization leaders involved in standards development activities is educating them about the importance of standards and conformity assessment – from a young age. This special issue explores what the IEC, USNC, and various standards developers and trade associations are doing to reach out to the next generation, whether that means students in grades K through 12, university and graduate students, young professionals, or emerging professionals of any age who are new to standardization.

## AAMI University: the “Go-to” Resource for Healthcare Technology Professionals

By Deborah Reuter, Senior Vice President, Education, Association for the Advancement of Medical Instrumentation (AAMI)

This year will mark the launch of a major new initiative at the Association for the Advancement of Medical Instrumentation (AAMI), one that promises to help professionals in the medical device industry and healthcare technology management advance their careers. Four years in the making, AAMI University opened its “virtual doors” on May 31, 2014.

The vision of AAMI University came out of a retreat staff held in 2010 for the faculty of AAMI’s industry training programs on quality systems. Based on discussions during the retreat on long-term planning for educational offerings, staff realized it was essential to create a central location for individuals to plan and track AAMI training and professional development activities.

When visiting AAMI University, students can map out their training plan and track progress, while employers will have access to training records for their employees and be able to identify needed training for their staff.



The university will provide a blended learning environment by offering face-to-face courses as well as distance learning that allows easy access to training. Other educational resources, such as standards, publications and websites, will also be available to students.

### Blended Learning

Attending face-to-face learning – such as AAMI’s quality systems and sterilization training programs and the AAMI/FDA S3 Challenge – is always the optimal choice. These in-person programs provide opportunities to network with peers, benchmark against other manufacturers, and learn how others have overcome the common challenges of meeting regulatory and standards requirements. In addition, best practices, case studies, and extensive question-and-answer time allow attendees to apply what they are learning to real-life situations. Information on all face-to-face training can be obtained at AAMI University.

Not everyone has the budget and time to travel to a course. Webinars are an ideal way to learn about new or revised standards, regulatory trends, or other hot topics. Typically two hours in length with an unlimited number of attendees allowed on a phone line, webinars are available, either live or recorded, at AAMI University.

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## AAMI University: the "Go-to" Resource for Healthcare Technology Professionals

AAMI is expanding its format to include e-learning programs. These on-demand, computer based training programs focus on a specific topic, organized into a variety of modules. Being able to pace the training to one's needs makes this a convenient learning alternative. Programs on submissions and e-learning are available at AAMI University, with programs on quality audits, combination products, ANSI/AAMI/ISO 13485, ethylene oxide calculations, training, communications, crisis management, and leadership currently in development.

While described as "distance" learning, AAMI's webinars and e-learning still bring an interactive element to the programs. Both formats incorporate a combination of lecture and interaction with faculty and peers. Whether the interaction entails question-and-answer, quizzes, discussion groups, or interactive exercises, these activities are designed to engage the user and build community.

### Certificates and Certification

A number of certificate programs based on specific domains, such as quality engineering and quality management, allow medical device quality management system professionals to establish a well-rounded background and the ability to demonstrate skill sets to current and prospective employers in the industry. Curriculum consists of a combination of courses, webinars, and

e-learning in a specific area of study. Students can track progress at AAMI University.

AAMI is also in the preliminary stages of developing a certification for quality system professionals in industry. Those that will hold the certification will be ideally suited to perform the quality system functions necessary to implement and monitor standards and best practices that significantly reduce quality issues and the costs of maintaining quality.

### Standards Education

Education on standards is a focal point of AAMI University. The variety of programs and formats highlight how standards can be used to promote and maintain consistency and quality. Whether it is an in-person course on radiation sterilization, a webinar on human factors, or an e-learning program on quality management systems, there is wealth of information on how standards provide requirements, specifications, guidelines, or characteristics that can be used consistently to ensure an acceptable level of performance.

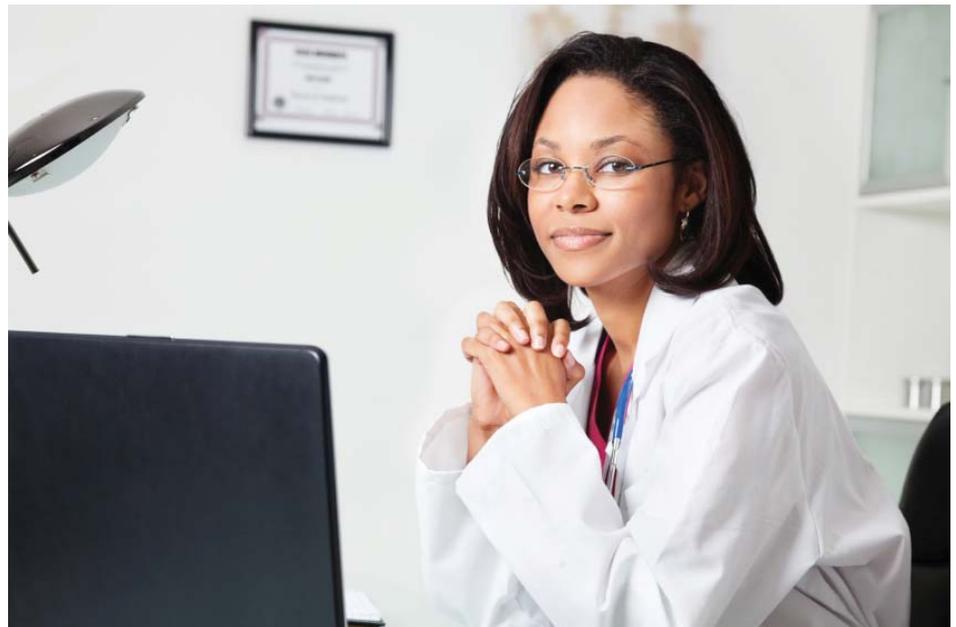


Deborah Reuter, AAMI Senior Vice President, Education

There are many great education offerings that we want to make easier for our members to find. That's why we established AAMI University as the 'go-to' learning place that makes it easy for busy professionals to keep current with industry issues.

For more information, visit AAMI University at [university.aami.org](http://university.aami.org). 

THERE IS WEALTH OF INFORMATION ON HOW STANDARDS PROVIDE REQUIREMENTS, SPECIFICATIONS, GUIDELINES, OR CHARACTERISTICS THAT CAN BE USED CONSISTENTLY TO ENSURE AN ACCEPTABLE LEVEL OF PERFORMANCE.



## U.S. Young Professionals: Going Ahead, Getting Ahead... Staying Ahead

By Ethan Biery, Lutron Electronics, 2013 IEC Young Professional Leader

Few people can ever predict the directions their career choice will take them, and my experiences have been no different. When I started as a design engineer, fresh out of college, I was (perhaps blissfully) unaware of the influence of standards on the development of a product. However, I quickly came to realize how important it was to have knowledge of standards, so that I could develop a product on time that meets the need of the market. To put it simply, for the first several years of my career, I was a "consumer" of standards, applying them to the product design process.



In 2011, I was selected by my company to represent our interests in Zhaga, an international consortium of hundreds of lighting manufacturers. This was my first hands-on experience with viewing the standards development process, officially making me a member of the standards-writing community, and not just a consumer of standards. At the time, I had no way of knowing the growth and enrichment this opportunity would provide me.

Over the ensuing years, I become more involved in the development of several standards, and gleaned an appreciation of the major and minor differences between different standards-writing bodies. Beyond Zhaga, I've also had experiences working with the National Electrical Manufacturers Association (NEMA) and, of course, the IEC. My experience culminated in 2013 by being chosen as one of three Young Professionals selected by the USNC to attend the IEC General Assembly in New Delhi.

Even before traveling to India, I was able to connect with my fellow 2013 U.S. Young Professionals (YPs), Chelsey Schweikert and Diana Bull. Their areas of expertise, and the career path they took to get to their positions, were (not surprisingly) completely different than mine. For example, right after college Chelsey started

immediately working within the product compliance and certification group of her company, which specializes in industrial gas turbines. Diana, on the other hand, first had several years of experience in the research and design of wave energy conversion systems.

While in New Delhi, we all had the experience to speak to the dozens of other YPs from around the world, each with differing skills, perspectives, and years of experience which they brought to the program. However, there was one theme that most of us had in common: we had not made a conscious decision to choose a career that would involve standards work. Perhaps some, like Chelsey, were hired directly into a standards role at a specific manufacturer, while others may have begun their career in a test lab. While in school, though, none that I spoke to had considered the relevant and interesting work that a standards-related job could provide when they were considering potential career paths.

Why is it important to raise awareness of the importance of standards work early in the career of students entering the professional world?

My experience with the Young Professionals program, as well as with colleagues and friends I've made through other standards work over the years, has shown me the following benefits:

### Benefits to individuals for becoming involved in standards early in their careers:

- Participating with work on a global stage increases one's personal network, visibility, and career prospects. As Chelsey observed, "Being selected as a 2013 IEC YP has provided me opportunities for growth and development that have furthered my career and professional goals."
- The communication and negotiation skills learned and practiced in the standards environment help people become better mentors, leaders and managers. As a prime example, Carin Stuart, recently selected as a 2014 U.S. Young Professional, has been mentored by Marc Boolish, who was himself a 2011 U.S. Young Professional.
- Becoming involved in international collaboration, such as that experienced through most standards work, provides individuals with a broader world view, and increases appreciation for foreign practices and cultures.
- Working on a standard often involves months of technical work, conference calls, and face-to-face meetings. Sharing this challenging experience with others can rapidly build rapport through shared struggle, which can return global friendships and dividends that can last a lifetime.

*(continued)*

## U.S. Young Professionals: Going Ahead, Getting Ahead... Staying Ahead (continued)

### Benefits to companies for having new employees involved in standards:

- Besides the obvious benefits of understanding mandatory standards, paying attention to the development of new standards helps increase employees' awareness of global industry trends. Standards are often created or updated to address a nascent market need.
- Having employees with better knowledge of industry trends allows companies to better compete in a global marketplace. Most standards take into account global considerations that may not be well known within a company.
- Participating in the development of standards can be used as a competitive advantage for companies, either through being an early adopter of voluntary industry standards, or providing technical input that may help a company's products be first to market.

inject fresh ideas and new perspectives into standards-related discussions.

In my experience, I can personally attest to many of the benefits above, both to me as an individual, as well as to my company.

As individuals involved in the standards process, whether we are "young professionals" at the early stages of our career or seasoned veterans, we must be aware of the strong impact we can make on those around us. Ever since joining the Young Professionals program, I have made it my goal to not only become more active in our company's standards processes, but also to coach and mentor others around me as to the importance and value of such participation. So far, this has provided me both personal and professional gratification.

As many of you know, once you become involved in standards work, it is often easy to grow your participation and become more involved; often the hardest



WORKING ON A STANDARD CAN RETURN GLOBAL FRIENDSHIPS AND DIVIDENDS THAT CAN LAST A LIFETIME.

part is just getting started. Having the same experienced people from the same companies continuously involved is easy; identifying and supporting newcomers is hard. However, without new faces and expanded participation, the U.S. will be unprepared for the growth and change required by today's global markets. It is up to all of us to continue to foster early involvement and active participation in order to develop the next generation of standards experts. ☺

### Benefits to the standards community for getting young professionals involved:

- Getting young professionals involved in standards organizations early on allows for easier succession planning, otherwise "tribal knowledge" and big-picture perspective can easily be lost when experienced individuals retire or move on to other jobs.
- While experienced standards professionals can get the gratification of mentoring newcomers by sharing their experiences, getting young professionals involved in the standards process can help

#### DOCUMENTS OF INTEREST

Stay up on the latest policies, documents, and other offerings from the USNC, IEC, and ANSI by clicking on the titles below.



- [Secrets of Effective Participation](#)
- [IEC online IT tools and applications: Unlocking services for our community to succeed](#)
- [Guide to IEC/IEEE Cooperation](#)
- [EMC for Product Committees: A short guide to IEC Guide 107](#)

## Multi-Dimensional, Open Collaboration in Global Standards Development

By Jodi Haasz, IEEE Standards Association

The processes and concepts of standards development globally are undergoing an evolution, to adapt for the rise of commerce across geographic borders and convergence across traditional technology boundaries. In more and more areas of standards innovation, multi-dimensional, open collaboration is a point of emphasis.

In the increasingly borderless world of technology standards development, grassroots inspiration, creativity, and expertise are being marshaled from any area of the world and from any engineering discipline and put to work for the good of humanity.

### The Growing Necessity of Standards

We live in a technology-development environment today in which innovation is built on top of innovation built on top of innovation. We do business in a global marketplace in which products imagined in one market and assembled across multiple others are used in still others. And against a landscape of such complexity, globally scoped standards are of increasing importance to technologists, industry, and users.

In a standards-based industry environment, companies cooperate in standards and compete against one another on their ability to cost-effectively innovate on top of a standardized foundation. Standards eliminate boundaries. Standards enable interoperability, encouraging innovation in that manufacturers have greater assurance that new products will work with existing infrastructure of disparate legacy systems, reducing costs as investment can be concentrated in forging genuinely new capabilities instead of "re-inventing the wheel" by replicating



COMPETITORS INSTEAD BECOME COLLABORATORS WHEN THOUSANDS OF INDIVIDUAL TECHNOLOGISTS DIRECTLY CONTRIBUTE TO A GIVEN STANDARD'S DEVELOPMENT

existing ones and fueling competition and lower prices.

In addition, the consensus standards-development environment allows technologists to swap lessons learned and expertise with diverse colleagues to explore new business relationships, discussions and opportunities.

Indeed, driven by customer desire, industry need, and market opportunity, the worldwide engineering community is collaborating across traditional

geographic and technological borders to create the standards and technologies on which today's most compelling innovations are taking shape.

The IEEE Standards Association (IEEE-SA)—a globally recognized standards-setting body within IEEE with over 900 active standards, over 500 standards in development and 20,000 standards developers in over 160 nations around the world—is being constantly driven by its stakeholders to build a more collaborative, more open environment and lower barriers to entry into the standards-development process.

In many cases today, thousands of individual technologists from around the globe—some of them from huge, long-established players in a market space, some from small startup companies, and, oftentimes, competitors with each another—directly contribute to a given standard's development.

This collaborative, open model of standards development and adoption is proving itself to be widely applicable across an array of technology spaces within the new world of borderless commerce.

### Bridging Engineering Disciplines

The smart grid is one area where multi-dimensional collaboration is driving standards development.

In the globally intensifying movement, traditional electricity grids are being augmented with two-way networks of communications and control toward the goals of empowering users with more choices in how they cost-effectively use power, reducing environmental impact and enabling more reliable and secure energy exchange. While the technologies and processes of electricity production, distribution, and delivery have been growing steadily *(continued)*

## Multi-Dimensional, Open Collaboration in Global Standards Development (continued)

more intelligent over decades, the smart grid is a dramatic transformation that demands that multiple engineering communities work together.

When development began in 2009 on IEEE 2030® “Guide for Smart Grid Interoperability of Energy Technology and Information Technology Operation with the Electric Power System (EPS), End-Use Applications, and Loads,” it pulled together engineers from disparate disciplines—power systems, communications, and information technology (IT)—in unprecedented collaboration. There were language differences to overcome; common definitions of words such as “network” and “reliability” had to be agreed upon across the different domains. Reliability profiles, equipment life, consumer engagement, security sensitivities, and a host of other concepts were points of debate.

By the time the IEEE 2030 standard was published in 2011, more than 400 professionals from across the global communications, power and IT industries had contributed to its development. And the result was a groundbreaking,

MORE THAN 400 PROFESSIONALS CONTRIBUTED TO THE DEVELOPMENT OF IEEE 2030 ON SMART GRID INTEROPERABILITY.



system-of-systems, foundational standard developed from the ground up to specifically inform smart grid interconnection and interoperability.

### Coordinating Across Organizations

Another technology space in which openness and collaboration are increasingly driving standards innovation is “e-health.”

In the vision of e-health that is taking shape across global healthcare, a larger array of more accurate data on patients is efficiently and securely shared across a greater variety of interoperable systems. Sensors in houses and other buildings, in clothing and maybe even on or in an individual’s body would produce data that could be securely shared among doctors’ offices, hospitals, emergency services, etc. The impact on wellness monitoring and preventive care could be revolutionary.

The notion of e-health is predicated on standards across a terrific array of technologies: personal health device communications, the smart grid, cybersecurity, mobility, social networking and “Big Data” analytics, among others. The range of standards demanded in e-health is so great that no one standards-development organization (SDO) could possibly create and keep relevant all of them. SDO coordination and collaboration across pre-standards research, standards development and market implementation is needed to keep technology innovation and market expansion moving forward in e-health.

The IEEE-SA collaborates with a wide swath of healthcare-focused organizations—Health Level 7 (HL7), Continua, Integrating the Health Enterprise (IHE), Logical Observation Identifiers Names and Codes (LOINC), and U.S. National Institute of Standards and Technology (NIST), among them—from around the world in building out its IEEE 11073™ family of personal health



Jodi Haasz, IEEE Standards Association

device standards. In an environment in which standards work is coordinated across multiple organizations globally, the development costs shouldered by industry (and ultimately passed on to healthcare providers and then patients) are streamlined, and innovation in e-health’s life-saving capabilities in wellness monitoring and preventive care is accelerated.

### Conclusion

Many of the traditional precepts of standards development came to exist before global commerce and technology convergence came to the fore. There was a time when an innovation’s manufacturer, seller, and user all tended to reside in the same geographic region and when engineers in one technology area had not much need or means to communicate with the engineers in another.

That day has passed. In the contemporary era of globalization and multi-layered innovation in areas that converge multiple technologies (the Internet of Things, smart cities, augmented reality and others, in addition to e-health and the smart grid), multi-dimensional, open collaboration across traditional borders is more necessary than ever—and the global standards-development community is adapting accordingly. ☺

## UL Shares Over 120 Years of Safety Science Expertise through Education

By Tony Robertson, Manager - North America, UL Knowledge Solutions

**UL** (Underwriters Laboratories) is a global independent testing and certification company widely known for the development of nearly 700 ANSI approved safety standards. With over 120 years of experience using research and standards to continually advance and meet ever-evolving needs around safety, performance and quality, UL is a thought leader in the realm of safety science.

The company places a strong emphasis on internal education, which is no small feat in an organization that employs over 10,000 staff, 50% of which have titles involving research, engineering, or science.

To maintain the highest standard of technical expertise, UL's internal training organization delivers consistent technical educational support for staff and has gained outside recognition for its innovative training approach, including a 2011 Learning Leaders® Award for its Safety Engineer Bootcamp program.

Recognizing an opportunity to help customers improve the competitiveness of their own people and processes, UL launched the external training organization, UL Knowledge Solutions, to share its vast technical expertise.

Knowledge Solutions helps customers realize their strategic vision through best-in-class knowledge and business practices – equipping people with the tools and training necessary to address market challenges, manage risk, and compete more effectively.

Combining dynamic learning with practical application and demonstration, Knowledge Solutions delivers comprehensive technical training programs aimed at enabling learners within a specific field to effectively interpret, apply, and demonstrate knowledge. Leveraging a blended learning approach, the curriculum includes more than 1,500 courses across a wide spectrum of areas, including local and harmonized Product Standards, Global Market Access, and Hazard-Based Safety Engineering. Training is delivered through a convenient array of modalities including eLearning, live webinars, classroom sessions and



on-site events, and upon completion of the educational experience, learners receive a Certificate of Completion and Continuing Education Units where applicable.

Knowledge Solutions continues to innovate education and technical training programs that provide modular solutions designed to the individual, the institution, and beyond the classroom. With a strong commitment

to helping customers design, build and distribute safe and sustainable products in an increasingly complex global marketplace, UL Knowledge Solutions provides the world's most progressive and safety-conscious companies with the expertise and tools needed to help advance their approach to safety science.

For more information about UL's comprehensive training portfolio, please visit [www.ul.com/knowledgesolutions](http://www.ul.com/knowledgesolutions), call 888.503.5536 or email [ulknowledgeservices@ul.com](mailto:ulknowledgeservices@ul.com). ☺



### Why IEC Standards Work Is Important to My Company

"We recognize that participating in IEC standards activities allows us to be a part of the process that determines the product testing and performance requirements. As Eaton continues to grow internationally, IEC standards continue to be more and more important to our business. We are proud to be a member of the USNC."

–Kevin Lippert  
Manager of Codes and Standards , Eaton Corporation

[Click here](#) to read more from the USNC's Why IEC Standards Work Is Important to My Company.

## NEMA and Northwestern University's Externship Program (NEXT)

By Ken Gettman, Director, International Standards, National Electrical Manufacturers Association (NEMA)

NEMA participates in the NEXT Program, which offers current Northwestern students the opportunity to accompany alumni on the job in order to learn more about different professional fields.

Students spend time observing and often working alongside their alumni hosts in order to gain insight into the practical aspects of potential careers.

Ken Gettman, USNC TMC Vice-Chair, has been gracious enough to share the experience NEMA and two externship students from Northwestern had recently.

This was the first experience for NEMA to participate in an externship but I think it went reasonably well. This particular program was selected because I received notification as a Northwestern University (NU) alumnus of the opportunity to possibly be a host.

The two students visiting NEMA were both interested in joining the IEC/TC 113 U.S. TAG as their academic focus is on nanotechnology.

If this can be enabled on a wider scale, we can then establish a mechanism to create a cadre of ambassadors to spread the standardization word in academia.

The NEMA program was established to expose the students to information concerning a combination of standardization activities that take place within NEMA and of other association activities, including government relations, economic analysis, and communications.

The day began with introductions and discussion of the student's background, studies and interests,

along with their expectations for the visit. We then gave general information concerning NEMA, and proceeded to provide presentations or brief explanations concerning the other areas of services NEMA provides.

We rotated the appropriate individuals into and out of a conference room that had Wi-Fi and projection capabilities so that any web-based information could be readily accessed.

Both students indicated their appreciation for the time we dedicated

to their visit and the exposure to a world of standardization and association work they had not previously experienced.

It is hoped that they will relate a good experience back to their fellow students and university staff.

I would have preferred to have more students, maybe 5 to 10, and undergraduates would have also been good candidates.

The advantage of graduate student participation was their higher experience level with both the education system and, presumably, with some commercial/governmental activities.

In addition, I think students would benefit from more "show and tell" – perhaps a plant tour from a manufacturer or observations of applying construction and performance requirements during a product evaluation from a certifier.

Ultimately, I felt that the two relevant take-away items were:

- Standards really do not get exposure to the academic community.
- There is a need to enable student participation in USNC activities.

My recommendation to NEMA (and other standards organizations) is that we again volunteer to be an externship host next year, possibly with one or more additional universities. ☺

### ONE TAKEAWAY: THERE IS A NEED TO ENABLE STUDENT PARTICIPATION IN USNC ACTIVITIES.



## USNC Names Participants for 2014 IEC Young Professionals Workshop

The USNC is pleased to announce the U.S. winners of the 2014 IEC Young Professionals Workshop competition.

To be held in conjunction with the 78th IEC General Meeting (GM) in Tokyo on November 10–14, 2014, the Young Professionals Workshop will bring together professionals from around the world who are at the start of their careers in electrotechnical standardization and conformance.

Now in its fifth year, the workshop aims to cultivate long-term national involvement in the international arena, strengthen technology transfer, and encourage the participation of emerging professionals in shaping the future of standardization and conformance.

The USNC received a number of applications for well qualified candidates, making the selection committee's job difficult. The winners are:

### Ryan Franks

Mr. Franks serves as a technical program manager for the National Electrical Manufacturers Association (NEMA). He has been actively involved in IEC-related standardization work and serves as the secretary of the U.S. Technical Advisory



## IEC Young Professionals Programme

Group (TAG) to IEC Technical Committee (TC) 120, *Electrical Energy Storage (EES) Systems*, and the Convener of IEC TC 120, Ad Hoc Group (AHG) 1, *System aspects and gap analysis*, among other positions.

### Kevin Mangold

Mr. Mangold works as a computer scientist at the U.S. Department of Commerce (DoC)'s National Institute

of Standards and Technology (NIST). He has been an active participant in the work of International Organization for Standardization (ISO) / IEC Joint Technical Committee (JTC) 1, *Information Technology*, Subcommittee (SC) 37, *Biometrics*, where he serves as a project editor and a data structure expert.

### Carin Stuart

Ms. Stuart is a senior technology engineer at Energizer Holdings Inc. She currently serves as a subject area expert to IEC TC 100, *Audio, video and multimedia systems and equipment*; IEC TC 35, *Primary cells and batteries*; and IEC TC 21, *Secondary cells and batteries, SC 21A, Secondary cells and batteries containing alkaline or other non-acid electrolytes*. She previously served as an expert to IEC TC 105, *Fuel cell technologies*.

Alongside recipients from other nations, the USNC's selectees will attend a dedicated workshop where they will learn more about the IEC, standardization strategies, and conformity assessment.

They will also have the opportunity to attend technical meetings where standards are developed, observe meetings of the IEC Standardization Management Board (SMB) and the IEC Conformity Assessment Board (CAB), and benefit from extensive networking opportunities in an international setting.

"On behalf of the USNC, I'd like to particularly congratulate our three winners, and express the wish that we could have recognized all of the candidates," said Phil Piqueira, global standards leader for General Electric (GE) Industrial Solutions and president of the USNC. "We look forward to having these truly deserving recipients participate in the Young Professionals Workshop as part of the 78th IEC General Meeting in Tokyo this fall." ☺

2014 U.S. YOUNG PROFESSIONALS (L-R) RYAN FRANKS, CARIN STUART, AND KEVIN MANGOLD



## ANSI and the USNC Highlight the Importance of Standards in Daily Life at 2014 USA Science & Engineering Festival Expo



The American National Standards Institute (ANSI) recently took part in the 2014 USA Science & Engineering Festival, a national event designed to advance science, technology, engineering, and mathematics (STEM) education and energize the next generation of scientists and engineers.

The Festival's free USA Science & Engineering Festival Expo was held April 25-27 at the Walter E. Washington Convention Center in Washington, DC, and was visited by an estimated 320,000 people, significantly surpassing expectations for the event.

ANSI participated in the expo through the support of the ANSI Committee on Education (CoE)/U.S. National Committee (USNC) of the International Electrotechnical Commission (IEC) Communications and

Continuing Education Committee Joint Task Force on Emerging Professionals.

ANSI presented a display – "Standards are everywhere!" – as part of the expo, which also featured more than 3,000 other activities and 100 onstage performances intended to help get students of all ages informed and excited about the science and engineering fields.

ANSI made use of engaging graphics and hands-on toy displays to demonstrate the universality and importance of voluntary consensus standards to students, parents, teachers, and other festival attendees. The Institute is especially grateful to The LEGO Group for their generous donation of the LEGO bricks used in the display.

During the event, ANSI staff members and representatives of the ANSI Federation oversaw the exhibit, answering questions

about standards, ANSI's role in the greater standards and conformance community, and other related topics. The exhibit, which was particularly popular with middle school and high school students, featured toy scenes showcasing technologies and activities in day-to-day life that depend on standards, as well as an area where students could build their own objects and structures. Illustrative signs and hand-outs pointed out precisely where standards can be found in the familiar scenes, and provided user-friendly explanations of standardization and ANSI's activities.

More details on ANSI's presentation and the educational resources created for the event (example shown below) are available for free download at [www.ansi.org/students](http://www.ansi.org/students). Additional photos of ANSI's exhibit are [available online](#). ☺

**Standards are everywhere!**

**Can you spot any?**

See key on the opposite side

These are just a few of the thousands of standards that improve the safety, quality, and performance of the structures, products, and processes people rely on every day – as in the smart city scene on the other side.

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1 ANSI/ASME PTC 42, Wind turbines</li> <li>2 IEC 61400-12, Performance measurements of electricity producing wind turbines</li> <li>3 ANSI/ASA S12.9, Procedures for description and measurement of environmental sound</li> <li>4 SAE J 1713, Structural testing of passenger car and truck disc brakes</li> <li>5 ANSI Z245.1, Mobile wastes and recyclable materials collection, transportation, and compaction equipment - safety requirements</li> <li>6 ISO TR 17098, Packaging material recycling - Substances which may impede recycling</li> <li>7 ISO 16840-1, Wheelchair seating - Part 1: Vocabulary and measures for body segments, posture, and postural support surfaces</li> </ol> | <ol style="list-style-type: none"> <li>8 ANSI A117.1, Buildings and facilities - Providing accessibility and usability for physically handicapped people</li> <li>8 ISO/IEC TR 16167, Information technology - Telecommunications and information exchange between systems - Emergency calls</li> <li>9 ASTM F1031, Standard practice for training the emergency medical technician</li> <li>10 AAMI TIR 11, Selection and use of protective apparel and surgical drapes in health care facilities</li> <li>11 IAPMO IGC 143-2000, Sanitary flooring system</li> <li>12 ASTM F2020, Standard practice for design, construction, and procurement of emergency medical services systems ambulances</li> <li>13 NFPA 1, Fire Code</li> </ol> |
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[www.ansi.org/students](http://www.ansi.org/students)



## New Energy Efficiency Standardization Roadmap Establishes National Framework for Action

With the June release of the [Standardization Roadmap: Energy Efficiency in the Built Environment](#), U.S. industry, government, standards developing organizations (SDOs) and other energy efficiency stakeholders now have a national framework for action and coordination on future energy efficiency standardization.

Developed by the ANSI Energy Efficiency Standardization Coordination Collaborative (EESCC) – a cross-sector group chaired by representatives of the U.S. Department of Energy (DOE) and Schneider Electric – the roadmap charts 125 recommendations to advance energy efficiency within the built environment.

According to the DOE, our nation's buildings account for more than 70 percent of total U.S. electricity use and 40 percent of the nation's total energy bill, at a cost of \$400 billion dollars per year. With 20 percent or more of this energy wasted, comparable reductions in energy have the potential to save an estimated \$80 billion annually. Standards, codes, and conformity assessment programs offer

significant opportunities for energy and cost savings and improved energy efficiency capabilities for the nation's buildings. The roadmap identifies many such opportunities, detailing recommendations and timelines for action across five interrelated areas of focus.

Increased awareness and coordination among the public and private sectors on standards, codes, and conformity assessment can help quicken the pace of energy efficiency technology development and deployment. To this end, the roadmap establishes a framework to which U.S. industry, government, standards developing organizations, and others can look to enable greater energy efficiency capabilities for the nation's buildings.

The roadmap's recommendations for closing standardization gaps in the near-term (0-2 years), mid-term (2-5 years), and long-term (5+ years) are intended to map



developing organizations, energy efficiency-focused organizations, educational institutions, and other groups, took part in the roadmap's development.

"Energy efficiency is a complex, cross-cutting issue that applies to all industry sectors, impacts

multiple government agencies, and hits every stage in the life cycle of a building," said S. Joe Bhatia, ANSI president and CEO. "The release of the energy efficiency standardization roadmap marks an important step forward in advancing a coordinated national approach to energy efficiency standardization, and the recommendations outlined in the roadmap are both actionable and achievable.

Following publication, the EESCC will actively monitor implementation of the roadmap's recommendations, track updates on work to close identified gaps, and create a mechanism by which this information can be broadly shared. It is envisioned that a future report will highlight progress to close gaps and provide an update on new developments. The EESCC will work with relevant groups, as appropriate, to ensure gaps are addressed, and facilitate coordination and collaboration among domestic, regional, and international standardization activities.

Organizations intending to carry out standardization activities to close a gap identified in the roadmap – either working collaboratively or on their own – are asked to complete the online EESCC Standardization Action Form at [www.ansi.org/eesc](http://www.ansi.org/eesc) so that the collaborative can monitor the roadmap's implementation and assist with coordination of standardization activities, as appropriate. ☺

### LAUGH TRACK



*Enlightenment and inner peace are on the next hill.  
I explain the U.S. standardization system.*

out a coordinated approach to energy efficiency standardization, and to assist SDOs in identifying priority areas for work, as well as opportunities for collaboration, consolidation, and harmonization.

More than 50 member organizations and 4 federal agencies, involving over 160 experts from industry, standards and code

## Keeping the Lights on: New Website, Energy Zone, Highlights IEC's Key Role

By Janice Blondeau, IEC Communications Officer • Originally printed in IEC *e-tech*

The work of the IEC to develop and publish International Standards to enable switches, plugs, cables, sensors, connectors, resistors, and capacitors to fit and work safely together across energy generation, transmission, storage, right down to individual devices is well known. What is perhaps less recognized is IEC's role as the global platform that helps keep the lights on – a role that underpins many aspects of our daily lives.

A new Energy Zone on the IEC website, which showcases IEC's energy-focused achievements, and the benefits that standardization brings, has just been launched at [www.iec.ch/energy](http://www.iec.ch/energy).

### Wherever There's Electric Energy, the IEC is Present

Modern life is unthinkable without electricity – it transforms lives. Electricity lights homes, offices and public spaces, drives information and communication technology, enables financial transactions and powers gadgets and mobile phones. IEC work covers the devices that use electricity at home, in the office, in healthcare facilities or public spaces, as well as the components from which they are all built.

IEC International Standards and Conformity Assessment Systems cover all facets of electrical energy generation, distribution, storage and use; including manufacturing, Smart Grid, smart cities, smart buildings, and e-mobility. They allow millions of components, devices and systems that use or produce electricity or contain electronics to work safely with each other everywhere in the world.

### Insights into the Whole Energy Chain

The new Energy Zone on the IEC website provides insights, including colourful



photos, of how the IEC and the almost 14,000 experts who participate in its work are committed to bringing reliable and safe electricity to the world. Real life examples are presented with reference to the relevant IEC Technical Committees and Conformity Assessment schemes.

### Standardization as a Facilitator

It shows how IEC has led the way in establishing International Standards for transmission, connection, and use, and how it provides detailed technical guidance for implementers of emerging systems such as off-grid small-scale sustainable energy initiatives. IEC's primary drivers are safety, energy efficiency, and systems compatibility, thus enabling safe and economic use of electrical and electronic goods and services wherever they are needed.

The Energy Zone covers the main areas of the IEC's work – generation, T&D (Transmission & Distribution),

storage, components, connectors, cables, and switches. Also shown is work in interoperability, safety, EMC (Electromagnetic compatibility), terminology, the environment, and hazardous substances.

### IEC's behind-the-scenes role

The IEC international community of experts has accompanied electrical and electronic developments since the very beginning. As energy consumption is forecast to double between now and 2030 the IEC is working hard to help improve energy efficiency, provide clean energy and to make its work accessible to all countries.

The behind-the-scenes engineering and scientific work the IEC delivers enables existing and new technology to work in the most energy-efficient way.

### More Information

Energy Zone: [www.iec.ch/energy](http://www.iec.ch/energy)

SAVE THE DATE

## Mark Your Calendar for Upcoming Meetings & Events

### ABOUT THIS PUBLICATION

The USNC Current newsletter is distributed to the constituency of the U.S. National Committee (USNC) of the International Electrotechnical Commission (IEC). It provides updates on technical activities and other information of interest to members of the electrotechnical community. Some articles are reprinted with permission from the IEC News log.

### DISCLAIMER

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### HOW TO CONTRIBUTE

Contributions are gladly accepted for review and possible publication, subject to revision by the editors. Submit proposed news items to: Tony Zertuche, USNC/IEC Deputy General Secretary, ANSI 212.642.4892

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**Monday – Wednesday**  
**15 – 17 September 2014**  
**1st IECRE Management Committee (REMC) Meeting**  
University of Colorado in Boulder, Colorado

**Monday – Friday**  
**22 – 26 September 2014**  
**IEC/SEG 1 Smart Cities Meeting**  
Grid IQ Center, Atlanta, GA

**Tuesday – Thursday**  
**30 September, 1 – 2 October 2014**  
**CAPCC/TMC/Council Meetings**  
TIA, Arlington, VA

**Tuesday**  
**7 October 2014**  
**IEC Effective Participation Webinar**

**Thursday - Friday**  
**16 - 17 October 2014**  
**FINCA Meeting**  
Santiago, Chile

**Monday – Friday**  
**10 – 14 November 2014**  
**78th IEC General Meeting**  
Tokyo, Japan  
Monday 10: SMB, CAB  
Wednesday 12: CB  
Friday 14: Council

**Tuesday – Wednesday**  
**18 – 19 Nov 2014**  
**IEC Advisory Committee on Electromagnetic Compatibility (ACEC)**  
IEEE, Piscataway, NJ

**Tuesday – Thursday**  
**2 – 4 December 2014**  
**DMT/JDMT Meetings**  
London, England

For additional event info, visit [www.ansi.org/calendar](http://www.ansi.org/calendar) and search for "USNC" or "IEC."

## UPCOMING ISSUES OF THE USNC CURRENT

Q III New IEC Systems Groups

Q IV Conformity Assessment