

The start of a new year often brings resolutions, recharged energy, and a change in perspective on goals and getting things done. So it is fitting that this first 2016 issue focuses on IEC work in health and fitness-related electrotechnologies, as well as how the USNC is gearing up for increased success across all areas of standardization.

FOCUS ON: HEALTH, FITNESS, & NEW BEGINNINGS

TWO FRESH VIEWS FROM TC 62

TC 62 Offers Expertise for Innovative Health and Fitness Devices

By Hae Choe, Director, Standards, AAMI - Association for the Advancement of Medical Instrumentation

Is it just a trend or is this the lifestyle of the future? It seems that there are more and more devices that support better fitness and health. A variety of wearable devices, computer applications, personal electronic devices, smart phones, and other products help track our eating patterns, from consumption of products to dietetic categories; our exercise patterns, from running to bicycling to hiking; and our sleeping patterns. These products can also nag and nudge us when there is the inevitable lull in one's activity. It is amazing how technology has become our personal trainer, our dietician, our nurse, our physician.

However, these new and developing technologies for better fitness and health are still in limbo, as it is difficult to determine whether, and at what

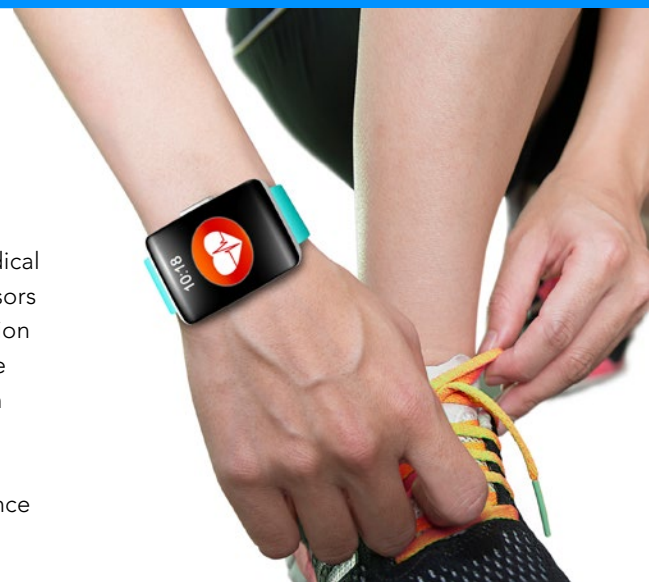
point, they can be considered medical products or devices. Digitized sensors are being used to convey information from the "wearable" devices to the internet to share relevant data with relevant systems. Are there and should there be standards that set the minimum safety and performance requirements for these health and fitness devices and applications?

IEC Technical Committee (TC) 62, *Electrical equipment in medical practice*, oversees all of the standards that deal with medical electrical equipment. Four Subcommittees (SCs) within the TC develop standards that are general and deal with issues that stretch across all equipment within medical devices, including standards on diagnostic imaging equipment, radiotherapy, nuclear medicine, radiation equipment,

and any other electro-medical equipment. The IEC 60601-1, *Medical electrical equipment*, family of standards, developed by SC 62A, are used in the development, testing, certifying, and regulating of healthcare and medical devices internationally.

The members nominated by their National Committees to serve in the TC 62 Subcommittees

(continued)



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IEC symbols for electrical current:



ALTERNATING CURRENT (AC)



DIRECT CURRENT (DC)



AC/DC

TWO FRESH VIEWS FROM TC 62

are the subject-matter knowledge experts. As health and fitness devices, activities, and applications are developed, it would be beneficial to include and gain input from this group of experts. As the line between medical devices and applications on our smart phones detecting health and medical information merge closer, standards setting the minimum safety and performance requirements may be needed for these applications in the near future. Along with particular devices such as blood pressure

monitors and pulse oximeters, experts who work on medical device software standards and medical electrical equipment in home care applications may have the most expertise in fitness and wellness products.

As devices and applications are developed to deal with health, fitness, and well-being of mankind, it is very important to gain input from engineers, physicians, healthcare technology management, regulatory bodies, testing houses, and others that make up the family of standards setters,

standards developers, and standards users of the medical device world. As these devices and applications delve more into the medical field, it is imperative that experts from IEC TC 62 be involved. ☺



HAE CHOE

Seeing Standards in a Different Light

By Cassandra Ricci, Manager of Government Relations, Medical Imaging & Technology Alliance

As a recent college graduate and newcomer to the healthcare industry, I find that I view the medical imaging industry from a more health-conscious perspective compared to my more senior colleagues. I spent my undergraduate career immersed in the biological sciences, specifically seeking coursework and opportunities for research in cancer biology and infectious diseases. In my current role as the manager of government relations at the Medical Imaging & Technology Alliance (MITA), I interact with members of Congress, stakeholder companies, standards professionals, lobbyists, and others in the nation's capital. My responsibilities range from monitoring state legislation and contributing to federal lobbying efforts to managing the website and serving as the U.S. Technical Advisory Group (TAG) Secretary for IEC Technical Committee (TC) 62, Subcommittees (SC) 62B and 62C.

Although each item in my portfolio involves different challenges, processes, and outcomes, I find that my background

in science helps me keep one objective at the forefront: patient health and safety.

In the government relations arena, political discourse and partisan rhetoric can often distract from the creation of policies promoting innovation and patient access to life-saving diagnostic imaging equipment. I can easily cite the heterogeneous nature of tumors and the need for personalized medicine when arguing for the coverage of and agency recommendations for nuclear medicines and therapies. I can inform others that appropriate and regular mammography screenings could save the lives of many women who suffer from BRCA 1 and 2 gene mutations and those who are predisposed to developing breast cancer. These scientific connections that I have learned through my undergraduate education and personal interest are especially helpful in explaining the value of imaging to politicians and lawmakers.

In the standards and conformity assessment field, I have noticed that professionals see the need to update standards and policies in concert with

advancements in technology and new safety concerns. From issuing recalls for outdated medical equipment

to lowering the radiation dosage on scanners and devices, I can see that the ultimate goal is to avoid harmful risks and promote patient health. As my career in medical imaging progresses, I look forward to seeing how standards evolve from ideas on a page to valuable enhancements on lifesaving technologies.

My goal in my current position at MITA and involvement with the government, USNC, and other organizations is to leverage my knowledge of the biological sciences to provide a unique perspective in key conversations and interactions. The medical imaging industry lies at the intersection of patient health and complex technology, developing and employing diagnostic and preventative measures to save lives. ☺



CASSANDRA RICCI

International Standards for Radiation Therapy Equipment: U.S. Contributions

By Geoffrey S. Ibbott, Ph.D., James R. Halama, Ph.D., and Wesley Culberson, Ph.D., IEC SC 62C

Concerns about the safety of the uses of radiation in medicine were highlighted a few years ago by a series of [articles in the New York Times](#). These articles, together with a series of meetings and symposia sponsored by U.S. professional societies, raised awareness of the degree to which equipment performance can influence patient safety.

The safety and performance of medical equipment is addressed by standards approved by ANSI, and requirements for certain equipment are published by the Food and Drug Administration (FDA) or the Nuclear Regulatory Commission (NRC) or are promulgated by each state's health department. In many cases, specific requirements for safety and performance originate from standards published by the IEC.

TC 62 and SC 62C Structure

IEC Technical Committee (TC) 62, *Electrical equipment in medical practice*, has four Subcommittees (SCs) that address different areas of medicine. SC 62C is responsible for equipment for radiation therapy, nuclear medicine, and radiation dosimetry. It has three Working Groups (WGs): WG 1 is responsible for radiation therapy equipment, WG 2 handles nuclear medicine equipment, and WG 3 deals with radiation dosimetry measurement equipment.

This structure makes SC 62C somewhat unusual among IEC Subcommittees in that the Working Groups are stable and conduct both new developments and maintenance work. In some cases, formal or informal Project Teams are created, but even then, the



work is reviewed and voted upon by the WG. In other Subcommittees, it is much more common for Working Groups, Project Teams, and Maintenance Teams to be formed for a specific purpose, and dissolved when the work is completed. The 62C arrangement has evolved because the pool of experts in the topics addressed by 62C is relatively small, and because the input from many experts is needed for each development or maintenance project.

The standards work is largely conducted by email, but meetings of each WG are held at least annually. WG 1 meets quite frequently: meetings of the entire WG generally are held twice each year, with one of the meetings held in conjunction with a meeting of TC 62 and a plenary meeting of SC 62C; meetings of individual Project Teams are sometimes held during the intervals between WG meetings. WG 2 and WG 3 typically meet once each year, and do not generally schedule the meetings to coincide with SC 62C and TC 62 meetings.

The United States participates through the USNC and a Technical Advisory Group (TAG). Some of the members of the TAG are medical physicists who are supported in part by, and function as technical liaisons to, three professional

societies: the American Association of Physicists in Medicine, the American Society for Radiation Oncology, and the American College of Radiology. These organizations also assist the TAG members in promulgating educational information regarding the IEC to society members, and in calling attention to the significance and benefits of IEC publications. Some details about the U.S. contributions to Subcommittee 62C have

been [published previously](#).

A selection of the 35 standards developed and maintained by IEC SC 62C is available at www.iec.ch. A few of the more significant standards published or currently in development are described below.

Status of Working Group 1

IEC 60601-2-1, *Medical electrical equipment – Part 2-1: Particular requirements for the safety of electron accelerators in the range 1 MeV to 50 MeV*

Probably the most comprehensive, far-reaching, and influential recent publication of WG 1 is the third edition of IEC 60601-2-1, known as the "Accelerator Safety Standard." This document dictates the design of important safety features of medical linear accelerators, including requirements for a dual-channel dosimetry system, testing of interlocks, permitted levels of radiation leakage, and certain important characteristics of the radiation beams. A fourth edition is currently in development.

IEC 60601-2-64, *Medical electrical equipment – Part 2-64: Particular requirements for the safety and essential performance of light ion beam equipment* (continued)

International Standards for Radiation Therapy Equipment *(continued)*

The U.S. spearheaded development of a standard that addresses proton and light ion accelerators. The standard addresses aspects of beam control considered important to safety, such as the selection and verification of the correct beam energy (or range), range modulation, lateral beam spreading and uniformity, and correct dose delivery. It also specifies safety provisions such as collision avoidance, correct treatment couch positioning, and avoidance of electrical hazards.

IEC 60601-2-68, *Medical electrical equipment – Part 2-68: Particular requirements for the safety and essential performance of X-ray based image guided radiotherapy equipment for use with electron accelerators, light ion beam therapy systems and radionuclide beam therapy systems*

This is a new standard that addresses the use of equipment for image guidance of radiation therapy. Provisions specify limits on the control of movements of the equipment and allowable speeds and controls on the delivery of radiation, among other safety aspects.

IEC 61217, *Coordinates, Movements and Scales*

This standard defines the so-called “IEC scales” and ensures that various pieces of radiation therapy equipment communicate gantry angles, field dimensions, and other critical parameters accurately. The standard also includes matrices to enable transformation of position information to and from the DICOM coordinate system.

Status of Working Group 2

The charge of the WG 2 is to prepare and maintain standards for the performance and safety of nuclear medicine equipment used for imaging the distribution of radioactive radiopharmaceuticals within

the human body for diagnostic and therapeutic purposes. The Working Group meets once per year; its latest meeting was held in Vancouver, Canada, in April 2015.

Maintenance was performed for several standards in 2015, including the following:

IEC 61303, *Medical electrical equipment - Radionuclide calibrators*

- Particular methods for describing performance

IEC TR 61948-4, *Routine tests - Part 4: Radionuclide calibrators*

IEC TR 61948-1, *Routine tests - Part 1: Radiation counting systems*

IEC TR 61675-1, *Characteristics and test conditions - Part 1, Positron emission tomographs*

WG 2 is investigating new work to create a standard on “Performance and safety of cardiac imaging systems.”

Status of Working Group 3

WG 3 is charged with the preparation of standards for the performance and safety of dosimeters used in radiotherapy and X-ray diagnostics for measuring the quantity of radiation and derived characteristic data, e.g., the non-invasive measurement of X-ray tube voltage. The WG met most recently in Kista, Sweden, in June 2015, and plans another face-to-face meeting in the United States in August 2016.

A major work in progress in WG 3 is the following:



(L –R) DRS. IBBOTT, HALAMA, AND CULBERSON

Geoffrey S. Ibbott, Ph.D., is chair of IEC SC 62C. His term ends in May 2016 (when he will be succeeded by the U.S.’s Alan Cohen). He is convener of WG 1, a Technical Advisor to the USNC, and chair of the U.S. TAG dealing with SC 62C standards. James R. Halama, Ph.D., and Wesley Culberson, Ph.D., are members of the U.S. TAG and are Co-Deputy Technical Advisors for SC 62C matters.

IEC 60731 am1 Ed. 3.0, *Amendment 1, Medical electrical equipment - Dosimeters with ionization chambers as used in radiotherapy*

Other recent projects include:

IEC 60580, *Medical electrical equipment – Dose area product meters*

IEC 62467-1 Edition 1.0, *Medical electrical equipment - Dosimetric instruments as used in brachytherapy – Part 1: Instruments based on well-type ionization chambers*

IEC 61676 Edition 1.1, *Medical electrical equipment – Dosimetric instruments used for non-invasive measurement of X-ray tube voltage in diagnostic radiology*

IEC 61267, *Medical diagnostic X-ray equipment – Radiation conditions for use in the determination of characteristics* ☺

References

- Bogdanich, W. 2010. “Radiation offers new cures, and ways to do harm.” *The New York Times*, January 23.
- Ibbott, G.S. 2012. “U.S. contributions to international standards for medical electrical equipment.” *Journal of the American College of Radiology*, 9(3):218-20.

Congratulations to USNC President-Elect 2016 John Thompson

The USNC has appointed John M. Thompson of UL as USNC President-Elect 2016. Mr. Thompson will be serving a one-year term, and then will become USNC President as of January 1, 2017, succeeding current President Philip M. Piqueira, also of UL.

Mr. Thompson has held multiple leadership positions of increasing responsibility within global standards development and certification over the course of his 27-year career. He is currently the UL director of North American standards, with responsibility for the direction of development of UL standards for existing and new technologies. He also oversees staff participation with other standards developing organizations and committees, including IEC and International Organization for Standardization (ISO) committees.

Mr. Thompson's other leadership positions include his role as NFPA 70 (National Electrical Code) Panel 11 chairman, where he is responsible for the management of multiple sections of the code, the expert panel members, and coordination of input from key

stakeholders. He has also been the vice-chair of the UL Electrical Council since 2006, where he directs the Council in assisting UL with the development of technical requirements, standards proposals, and the management of global trade and safety issues. In 2012 Mr. Thompson was honored as a distinguished member of the UL technical staff. He holds a B.A. in music from the University of North Carolina and a B.S. in electrical engineering from North Carolina State University.

The USNC congratulates Mr. Thompson on his election and anticipates great success under his leadership. ☺



“As USNC President, I will drive the positions and needs of the U.S. to ensure that the voice of the U.S. is represented. I will provide leadership to the USNC with respect to issues such as continuing to develop the value proposition for USNC stakeholders in order that it maintain its vibrancy, and ensuring the relevancy of the USNC is maintained in the face of pressures from other countries.”

— John M. Thompson

DOCUMENTS OF INTEREST

Stay up on the latest policies, documents, and other resources from the USNC and IEC by clicking the links below.



- **Factory of the Future:**
<http://www.iec.ch/whitepaper/futurefactory/>
- **Strategic asset management of power networks:**
<http://www.iec.ch/whitepaper/powernetworks/>
- **Orchestrating infrastructure for sustainable Smart Cities:**
<http://www.iec.ch/whitepaper/smartcities/>
- **Internet of Things – Wireless Sensor Networks:**
<http://www.iec.ch/whitepaper/internetofthings/>
- **USNC Guidance Bulletins:** http://www.ansi.org/standards_activities_iec_programs/usnc_training.aspx?menuid=3#Guidance-Bulletins

The Future Looks Bright! Q&A with Tony Zertuche, Recently Appointed USNC General Secretary and ANSI Director of International Policy

Tony Zertuche has high expectations for 2016. March marks his ninth year at the American National Standards Institute (ANSI), where he rose through the ranks from program administrator with ANSI's International Organization for Standardization (ISO) team, to program manager of international policy and deputy general secretary of the USNC in 2009, and ultimately senior manager in 2013. This year, in his latest role as director of international policy and general secretary of the USNC/IEC, he has his sights on streamlining business, focusing on membership incentives, and ensuring the next generation of industry fills leadership roles to enhance U.S. competitiveness. Here, he shares a few of his thoughts on the future USNC.

What's in store for you this year?

With all of the new IT enhancements happening right now at ANSI with CRM software and the new IT tools and processes, my first priority is to get the USNC on board to make the transition along with the rest of the Institute. I want to streamline processes and find ways to handle tasks more quickly and efficiently. That way, we'll really have more time to serve the members.

I really want everyone to know that we are going to be modernizing the USNC. We want to become much more responsive to our constituency. We are going to free up all the time that it takes to go through some of the procedures and processes; we are going to be appraising the statutes, the rules of procedure, and our Technical Advisory Group (TAG) operating procedures. These are all going to be reviewed and possibly revised with an eye to becoming more efficient and getting things done, because we know everyone's time is valuable. We don't need to be bogged down in any bureaucratic



procedural tasks that really aren't necessary.

Membership is also huge priority for me. It's always been important to us, but I want to take an even more strategic approach. Beyond just filling vacancies around the table, we've got to look ahead and think about succession planning, to ensure that USNC leadership remains strong. I'm going to make a concerted effort to really push towards broader USNC membership, and not just on the TAGs. Many of our participants don't understand that there's significant value in being a USNC sponsoring member. Individual TAG members can participate in their TAGs, but sponsoring members are full members at the organizational level. This gives unlimited opportunities for employees to be TAG members, as well as the opportunity to get engaged with USNC and IEC policy decisions.

Of course it supports us financially, but looking past that, it helps the USNC make better, more informed decisions for the entire U.S. electrotechnical industry. And ultimately, it helps those sponsoring members as well, because they have a voice at the table – not just on the individual standards that they develop, but also on the direction that the USNC is going and how we interact with the IEC.

What are some areas for growth?

I think that we really need to support candidates from the U.S. to serve in IEC leadership positions, both technical and policy. I know this is really important "across the aisle" with ANSI's ISO engagement, and I want to be sure we have the same level of focus with our USNC activities. I am proud that we were very successful in getting Jim Shannon elected as the new IEC President-Elect. We have had an American serve as the SMB Chair for the last 12 years (Frank Kitzantidies followed by Jim Matthews), and we want to continue in that vein by making sure that the U.S. is well represented in those leadership positions.

This is good for the United States, but I also believe it's good for the region. We are very active in the Americas, along with Canada and Mexico, and we really want to make sure that regional voice gets stronger, especially with respect to working with our colleagues in Europe and Asia. We have close relationships with Europe and close relationships with our Asia-Pacific partners, but it's important that our regional voice here in the Americas doesn't get lost in the pivot between the two.

What is your takeaway on the efforts for emerging industry leaders in the U.S., as seen in the Young Professionals Workshop?

We, the USNC committee members, are in raging agreement that the IEC Young Professionals program is probably the best initiative that the IEC has come up with in decades. The U.S. is really reaping the benefits of this program. A few years ago, one of our USNC officers gave a presentation at a management meeting and asked everyone to look around the room. He then announced that many of the people in that room

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Q&A with Tony Zertuche, USNC General Secretary *(continued)*



(L-R) ANSI CHAIRMAN KEVAN LAWLOR AND USNC'S PHIL PIQUEIRA, TONY ZERTUCHE, AND CHARLIE ZEGERS AT THE 2015 ANSI AWARDS.

would be out of standards in five years. And to be honest, he wasn't far off. We had no one in line to take over those vacant positions – as representatives, as officers, as anything. Many of those professionals were about to retire in the next five years or so, and that was a huge issue for the USNC both in terms of our committees and in our officer ranks.

I know for a fact that the Young Professionals (YP) Workshop is a great way to help in that succession program. That being said, our major challenge with the YP program in the U.S. is getting more nominations and more candidates. The quality of young professionals in the U.S. is top notch. We had three U.S. YPs voted by their international peers as IEC YP Leaders three years in a row (2011 – 2013), and it speaks to the quality of our candidates. The problem for us has to do with quantity, because, you know, we've never had more than 13 submissions in a year. And I just don't think that's representative of our true talent pool. To start with, we have a huge population in the U.S., and our industry sector is a world leader in many respects. The USNC is a very large and active National Committee. There have to be more YPs that we aren't hearing from, and I think it's for their managers who are directly engaged with the USNC to be more proactive in nominating them and getting them involved.

How do you see USNC members influencing the strategic direction of standards and conformity assessment?

Now is a great time to look at strategic policy in the IEC. They are just about to begin developing the next iteration of the IEC Masterplan, and Jim Shannon, as the President-Elect of the IEC, is going to be spearheading that effort. The USNC is going to be at the table to positively influence the strategic direction of both conformity assessment and standards in the IEC. Plans are already underway for the USNC officers to meet with the IEC and provide input into that strategy.

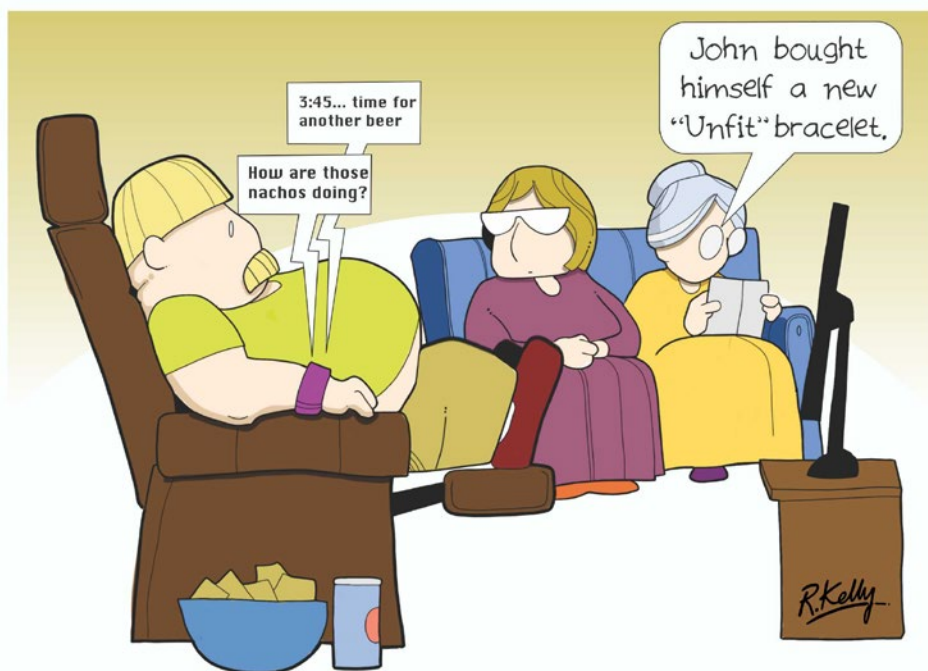
Another way the USNC participates in strategic planning is by being completely active in most of the IEC's committees and groups. The U.S. participates in over 90 percent of the Technical Committees (TCs) and Subcommittees (SCs) in the IEC. We are active members of the Standardization Management Board (SMB) as well as the Conformity Assessment Board (CAB), and our USNC

President sits on the Council Board, which decides on policy issues for the IEC. There are a ton of opportunities to get engaged.

Finally, we have a great team here in the USNC department to support our members. Tackling the volume of work that we get from all of our colleagues working in the IEC, we have some truly expert individuals on staff. Many of you have already worked with Mary, Kevin, Lisa, and Debbie and know how valuable their experience is to the work of the USNC. This team is so well-versed in USNC procedures, that they have also been a resource for the IEC Central Office – many times the IEC has come to us and asked, "Do you have any suggestions on how to do this better?" And to this we always say, "Yeah, we have a few ideas" [laughs].

Email Tony at tzertuche@ansi.org. ☺

LAUGH TRACK



A Salute to Charlie Zegers, USNC/IEC General Secretary, Retired

As Charles T. Zegers embarks on his retirement, his colleagues at the USNC and the American National Standards Institute (ANSI) thank him for his decades of dedicated service, leadership, and friendship. We congratulate Charlie on his outstanding achievements on behalf of the U.S. electrotechnical standardization community, and wish him many years of happy retirement.

As USNC General Secretary since 1998, Mr. Zegers had a key role in managing USNC staff and serving as support for the USNC president and management committees. For many years, he was active in contributing to the development of International Standards for electrical, electronic, and related technologies. Using his own professional experience and his limitless enthusiasm, he was particularly instrumental in efforts to foster the next generation of standardization and electrotechnical leaders. He spearheaded ANSI/USNC participation in the USA Science and Engineering Festival, and was a driving force in the IEC Young Professionals program on behalf of the United States.

Among his many other noteworthy accomplishments was his tremendously successful leadership and oversight of the U.S.-hosted IEC General Meeting in



Seattle in 2010. The event was the largest in the event's history, bringing together 2,400 delegates for more than 400 meetings and events over two weeks.

Beyond his USNC roles, Mr. Zeger's career with ANSI traces back over 30 years, when he first joined the Institute as director of standards audit, accreditation, and review. From 1985 to 1989 he served as senior program administrator, with staff responsibility in various technical areas including nuclear, solar, welding, plastics, and heating. He subsequently served as program director of standards and technology, and electrotechnical and telecommunications through the



CHARLIE RECEIVES A GIANT MEATBALL AT THE 2010 GM IN SEATTLE.

1990s. And in January 2009, Mr. Zegers was promoted to ANSI senior director of international policy.

Mr. Zegers launched his career at the Industrial Relations Division and Electric Vehicle Council of Edison Electric Institute (EEI), and later became the manager of standards and international activities for the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). He has a B.A. in economics from St. Francis College in Brooklyn.

Mr. Zegers lives with his wife, Judy, an elementary school teacher, in Wantagh, NY. The Zegers have three sons, two daughters-in-law, and four grandchildren. ☺

Standards Purchases at webstore.ansi.org Support USNC Activities

IEC Standards can be purchased from a variety of websites, organizations, and resellers. But to see the greatest benefits from dollars spent, USNC members should purchase standards directly from ANSI's webstore, since that revenue directly supports the activities and initiatives of the USNC. The USNC is a totally integrated committee of ANSI.

As such, ANSI provides administrative support to the USNC and its nearly 1,500 participants. ANSI also provides the fiduciary framework by which the USNC's financial obligations are met, including

the payment of annual dues to IEC. When you purchase IEC standards from ANSI, you are making a commitment to bolster U.S. leadership at the IEC table. And purchasing standards directly from ANSI's Webstore offers the additional benefits of cost savings for ANSI members, personal service, and the

convenience of one-stop shopping for more than 230,000 standards available for immediate download. For more information, contact the ANSI customer support team (212.642.4980; info@ansi.org) or visit webstore.ansi.org.



Nominations Now Open for Emerging U.S. Professionals Workshop at IEC 2016



United States
National Committee
of the IEC



The USNC is currently seeking nominations of emerging electrotechnology professionals to participate in the upcoming IEC Young Professionals 2016 Workshop, which will be held on October 10–14, 2016, in Frankfurt, Germany, in conjunction with the 80th IEC General Meeting (GM). Nominations can be submitted using the [USNC Young Professionals \(YP\) Workshop Nomination Form](#) until April 29, 2016.

YP Program Background

Each year, the IEC Young Professionals Workshop assembles international candidates at the beginning of their careers in electrotechnical standardization who have been chosen by IEC National Committees around the world. The program supports the increased involvement of young professionals in international electrotechnical standards and conformity assessment work, bolstering the future of technology transfer and long-term national involvement in the international standardization arena.

Alongside recipients from other nations, the USNC-selected young professionals will take part in a dedicated workshop covering information about the IEC and relevant strategies for international standardization and/or conformity assessment work. Networking opportunities will help cultivate long-term involvement of young people from all over the world in international

standardization. Participants will also be given the opportunity to visit local industry, receive guidance from a mentor, and observe a meeting of the IEC Standardization Management Board (SMB) and Conformity Assessment Board (CAB). Individuals chosen to take part in the 2016 Young Professionals Workshop will be financially supported for their travel to Frankfurt and for up to three nights of accommodations.

Nomination and Selection Process


The USNC will select up to three young professionals to represent the United States at the 2016 workshop. The selectees may be employed by industry, the government, academic bodies, consumer organizations, or any other member of the U.S. standards and conformance community that uses, benefits from, or contributes to the IEC's work in electrotechnical standardization and conformity assessment. The program is intended for individuals who have completed their undergraduate education and are in the early stages of their profession—graduate engineers or managers, for example.

Candidates may be nominated by any interested stakeholder who is not a member of the program's selection panel; letters of support from members of the standardization community testifying to the candidate's appropriateness for the workshop and significant achievements to

date are highly encouraged. Prospective candidates may also nominate themselves, but must provide at least one letter of professional recommendation and written assurance that their employers have agreed to allow them to attend the 2016 IEC GM if selected.

Candidates will be judged based on their demonstrated leadership and dedication in connection with standardization and/or conformity assessment activities, as well as their vision of the larger commercial and strategic impact of standards and conformance work, and their accomplishments in their chosen field of activity. Nominated individuals will be assessed by a selection panel made up of USNC officers, standing committee officers, former U.S. Young Professionals Workshop participants, and a pool of USNC Honorary Life Members. All individuals chosen to take part in the 2016 Young Professionals Workshop will be notified in May 2016.

Don't Miss the Deadline!

To nominate yourself or another individual, complete the [USNC Young Professionals Workshop Nomination Form](#) and submit it to Tony Zertuche, general secretary of the USNC, via email at tzertuche@ansi.org by **Friday, April 29, 2016**. For more information about the IEC YP Program, visit www.iec.ch/members_experts/yp/. 

The Keys to the USNC

In 2007, as part of its Communication, Education, Marketing, and Promotion Plan, the USNC adopted a set of Key Messages to be included in communications to effectively promote USNC activities.

Many of those messages still hold relevance today, and can help accomplish our goal of developing a broad-based communications plan promoting the USNC value propositions. The USNC Communication and Continuing Education Committee (C&CEC) shared the [10 Key Messages of the USNC in the Spring 2015 issue of the USNC Current \(page 8\)](#). As part of this ongoing campaign, a member from our USNC C&CEC will highlight one of their favorite Key Messages in each of our issues.



One key message rings particularly true for Florence Otieno, senior manager, international standards programs, Telecommunications Industry Association (TIA), when she considers the critical role standards and conformance play in consumers' everyday lives:

Key Message #9: An essential goal of the USNC's communication and education program is conveying the value and benefits to society of voluntary consensus standards and related conformity assessment programs.

"As consumers, we rarely give much thought to how standards and conformity assessment affect our lives on a daily basis," said Ms. Otieno. "A good standard is written in such a way that it allows conformity to its requirements to be assessed: it describes the function and behavior of the product; it gives precise, measurable specifications; it mandates reliable and reproducible tests and methods. These characteristics ensure that the link from a standard or specification to conformance activities will be successful and correspond to users' expectations. In this way, standards and conformity assessment, together, provide the reassurance that consumers need." ☺

ANSI Forum Explores Proposed Systems Committee for Smart Manufacturing

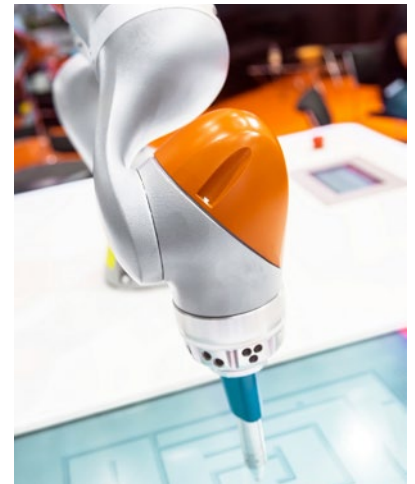
The American National Standards Institute (ANSI) Company Member Forum (CMF) monthly online discussion on February 9 featured a presentation led by IEC Strategic Group (SG) 8, *Industry 4.0 - Smart Manufacturing*. The event supported IEC SG 8 efforts in getting U.S. stakeholder feedback on proposed recommendations to form a new IEC Systems Committee (SyC) to address smart manufacturing. The SyC would be a collaboration with the International Telecommunication Union (ITU), the International Organization for Standardization (ISO), ISO/IEC Joint Technical Committee (JTC) 1, and other international standards organizations.

IEC SG 8 is tasked with providing recommendations for an IEC strategy addressing manufacturing automation that will aim to ensure real-time needs of the manufacturing enterprise are sustained, in an effort to achieve safe, secure, and energy-efficient factory operations. The group is also pursuing architecture for smart manufacturing that will enable it to function as a smart application with a broad Internet of Things (IoT) environment. It aims to leverage the adoption of current next-generation technologies to achieve safe and secure factory operations.

IEC SG 8 convener Alec McMillan – USNC vice president-technical, USNC representative to the IEC Standardization

Management Board (SMB), and a member of the ANSI Board of Directors – was the CMF featured speaker. The recommendations offered by U.S. stakeholders will be shared with all SG 8 members at their March 1-2 meeting.

The ANSI CMF serves as a venue for ANSI members representing the full spectrum of U.S. industry to examine issues related to national and global standards, as well as conformity assessment developments. The forum allows industry members an opportunity to collectively shape and influence U.S. policy in the domestic and international arena, while also bolstering cross-industry networking and alliances. For more information, visit www.ansi.org/membership or email membership@ansi.org. ☺



IEC Launches Online Community in Support of World Smart Cities Forum 2016

In an effort to help city stakeholders worldwide make cities “smarter,” the IEC recently launched the World Smart City online community as part of its lead-up to the first World Smart City Forum – a partnership between the IEC, the International Organization for Standardization (ISO), and the International Telecommunication Union (ITU). The American National Standards Institute (ANSI) is pleased to serve as a supporting organization of the forum, to be held July 13, 2016, in Singapore, co-located with the World Cities Summit and Singapore International Water Week.

The World Smart City Forum is intended to attract professionals such as city planners, architects, consultants, utilities, transport planners, safety/security/data specialists, standardization specialists, and industry (solution providers) for interactive discussions and idea-exchange on best practices, standards activities, and other needs and solutions for smarter cities. In support of the forum, the new online community has been established to identify top “pain points” that are barriers to city development.

IEC reports that an estimated 66% of the world’s population will live in urban areas by 2050, but supplying populations with basic resources like safe food, clean water and sufficient energy, while ensuring overall economic, social and environmental sustainability, will be a major challenge. Cities need to substantially increase the efficiency in which they operate and use their resources.

Welcome to the Smart Cities Forum! Join Our Community | Join us on 13 February for the first Google+ hangout!

WELCOME TO
WORLD SMART CITY FORUM
13 JULY 2016
CO-LOCATED WITH THE WORLD CITIES SUMMIT
MARINA BAY SANDS SINGAPORE

By 2050 cities are projected to house around 70% of the world's population. International Standards help these urban areas to become more connected, more sustainable and to cope with this growing and ageing population.

Kevin McKinley, Acting ISO Secretary General

#Worldsmartcity2016 Infographic

#worldsmartcity2016

Concept Paper
Smart Cities, some thoughts for discussion – click here to read our Concept Paper by Gordon Feller.

Recent Discussions

Topic	Voted/Polls	Freshness
Obstacles to Smart Cities Implementation	1	3 days, 23 hours ago
Collecting data for smart solutions in Mexico	1	3 days, 4 hours ago
Glasgow project in ICT	1	5 days, 4 hours ago
London, smart city?	1	5 days, 5 hours ago
Smart Cities in India	1	5 days, 5 hours ago
Decarbonization of the energy system	2	6 days, 16 hours ago
Here is our work, share yours!	6	1 week ago
Join PPP global discussion on Feb	1	1 week ago

VIP Members

NILS MOE
Managing Director at Urban Sustainability Directors Network

PAOLO GAUDIANO
Founder and CEO at Infomous, Inc.

Supporting Organizations

World Smart City Forum Organisers

Standards Organizations

Major efficiency improvements could be achieved by horizontally interconnecting individual systems such as energy, water, sanitation and waste management, transportation, security, environmental monitoring or weather intelligence, with the help of standardized interfaces.

The forum is intended to address these issues. Admission is free of charge for all those who register via www.worldsmartcity.org, members and invitees of IEC, ISO, and ITU, and registered participants of the World Cities Summit and World Water Week.

“Smart cities make sense: they waste less, offer better quality of life and ensure a brighter future for the next generation,” said Kevin McKinley, acting ISO Secretary-

General. “But cities face many challenges in their quest to improve,” he said, noting how ISO standards help cities measure and improve their performance and provide best practices and harmonized solutions that can be used everywhere.

ANSI also supports smart cities through its ANSI Network on Smart and Sustainable Cities (ANSSC) – a forum for information sharing and coordination on voluntary standards, conformity assessment and related activities for smart and sustainable cities in the U.S. and abroad. Visit www.ansi.org/cities.

To join the online World Smart City online community, which has designated “hang out” dates on social media, or to register for the forum, visit the website at www.worldsmartcity.org.

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.

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HOW TO CONTRIBUTE

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Mark Your Calendar for Upcoming Meetings & Events

2016

23 February

SMB Meeting

Geneva

15 – 17 April

USA Science & Engineering Festival

Washington, DC

18 – 22 April

COPANT General Assembly

Quito, Ecuador

8 – 12 May

Pacific Area Standards Congress (PASC) 39

Bali, Indonesia

17 – 19 May

CAPCC/TMC/Council Meetings

FM Approvals, Norwood, MA

13 June

CAB Meeting, Geneva

14 June

SMB Meeting, Geneva

15 June 2016

Council Board, Geneva



30 August – 1

September

CAPCC/TMC/Council Meetings

IEEE, Piscataway, NJ

10 – 14 October

80th IEC General Meeting

Frankfurt, Germany

Monday 10: SMB/CAB

Wednesday 12: CB

Friday 14: Council

24 – 28 October

World Standards Week

Washington, DC

2022

86th IEC General Meeting

USA

For additional event info, visit www.ansi.org/calendar and search for "USNC" or "IEC."

UPCOMING ISSUES OF THE USNC CURRENT

www.ansi.org/usnc

Q I E-Labeling

Q II IEC's Lost Boys - Seldom-seen groups, partnerships and issues

Q III Encouraging Leadership / Succession Planning

Q IV IECRE & Renewable Energies