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KEY UPDATES IN THE USNC AND IEC



FEATURED STORIES



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by IEC Technical
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Waves to Water Finalist Buoyed by IEC Technical Specifications

by Dr. Wesley Williams, PhD, PE, Associate Professor at the University of North Carolina at Charlotte and Dr. Landon Mackey, PhD, Principal Investigator at Water Bros Desal, LLC



The Waves to Water Prize (bit.ly/W2WPrize), sponsored by the Water Power Technology Office (WPTO), is a five-stage competition that tasked teams from across the United States with developing small, modular, wave-powered desalination systems capable of producing potable drinking water from seawater for disaster relief and water-scarce coastal and island communities. Starting originally in the Fall of 2019, the competition is entering the final stage this spring, where the five remaining teams will deploy their prototypes for five days off the coast of North Carolina. In addition to the obvious humanitarian impacts of these technologies, the prize is part of the WPTO's greater strategy of Powering the Blue Economy to develop marine energy expertise through niche applications on the way to grid-connected marine energy.

Water Bros Desal, one of the teams heading into the final DRINK stage of the competition, was formed by Dr. Landon Mackey and Dr. Wesley Williams from North Carolina. The two met during the course of research supported by the North Carolina Renewable Ocean Energy Program

(NCROEP). While both had completed extensive research in marine energy components, neither had been part of developing or deploying a complete marine energy device. This healthy respect for what they knew, and what they didn't know, led them to the International Electrotechnical Commission (IEC) series of 62600 Technical Specifications (TS) for marine energy, specifically IEC/TS 62600-2, which Dr. Williams and Dr. Mackey became familiar with through updates from the National Hydropower Association's (NHA) Marine Energy Council. Once reviewed, the IEC/TS 62600-2 standard provided Water Bros with a wealth of information regarding the design requirements, materials, loading conditions, and failure modes that they should consider as they advanced their design through the competition. Those documents were an efficient distillation of decades

of marine energy design and deployment experience that would otherwise be beyond the grasp of a small (2-5 person) start-up.

The Water Bros team credits the use of IEC standards and the TEAMER (Testing Expertise and Access for Marine Energy Research) program as the key differentiating factors that elevated them to a finalist position among a field of strong competition. The use of IEC standards also lays the foundation for the commercialization of the technology after the competition by following established paths that investors and insurers will be looking for when backing a marine energy venture. The marine environment is harsh and unforgiving, but with the perspective of the years of expertise found through the standards, the Water Bros team is reassured that they aren't truly facing those challenges alone. ☺



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The 2021 IEC Young Professionals Workshop: Reflections on a Unique Experience

by Chris Schmid, Engineer, Underwriters Laboratories



In 2021, I was presented with the opportunity to participate in the IEC's Young Professionals (YP) Workshop, which was held in conjunction with the 85th IEC

General Meeting (GM) in Dubai, United Arab Emirates. The workshop provides an important networking platform in which young engineers, managers and technicians can connect with technical experts from around the world and gain a better understanding of the importance of international collaboration and standards development.

Attending the workshop was truly a unique experience. After I was chosen as a USNC representative, I was eagerly looking forward to attending the workshop in person. The opportunity to meet, learn from, and network with representatives from other countries was an exciting proposition, to say the least. Due to the challenging conditions brought on by the COVID-19 pandemic, though, there were quite a few things that made this year very different. The workshop was held in a hybrid format for the first time since it began in 2010. Additionally, the schedule was extended from three to five days to accommodate some of the new changes and make up for lost time after having been cancelled in 2020.

It came as somewhat of a disappointment that U.S. participants were among those only attending virtually, but I went into the workshop with optimism – hoping I would still get the same value out of the experience as I would have if I'd attended in person. I can now gladly



say that the workshop, though a bit different from my initial expectations, was very rewarding and allowed me to come away with plenty of valuable experience and perspective.

One of the activities I found particularly valuable was collaborating with a group of other participants to explore the topic of geographical diversity within the IEC. My group included participants from Australia, China, Korea, The Philippines, South Africa, Singapore and Slovakia, and I was surprised to find how many things we had in common. Discussing and learning from the representatives of other National Committees was a highlight of my week, even though it took place virtually. I presented the group's conclusions and thoughts with one of the 2021 YP Leaders, Colin Sheldon, to the approximately 100 other young professionals attending the workshop. Looking back, this activity was one of my favorites, as it helped achieve my goal of connecting with representatives from other regions.

The greatest challenge I faced in attending remotely was adjusting to the time difference between

Gulf Standard Time and my local time zone of Eastern Standard Time (an eight hour difference) and the traditional Middle Eastern work week, which begins on Sunday morning rather than Monday. Being alert after waking up slightly after midnight and completing my workday around my regular lunchtime for five days straight became a taxing effort as the week progressed. However, I'm glad to have stuck through it and would do it all over again without a second thought.

My advice to any aspiring young professionals interested in the IEC YP Workshop: regardless of your motives or reservations, you should welcome and seize the opportunity. You will almost certainly find many sources of value from it, as I did. Some of these may come as a surprise, but you will likely come away reflecting on it as a rewarding experience. I can certainly say this has been the case from my perspective.

To learn more about the IEC Young Professionals programme and other ways to get involved, please visit the [USNC webpage](#).

Aligning an Organization's Strategy with the UN SDGs

By IEC Editorial Team

Over 230 participants joined the recent IEC webinar on IEC Strategic dialogue on the UN SDGs. The panel discussion brought together four business leaders to discuss their experiences in aligning their corporate strategies to the UN SDGs: Xavier Denoly, Senior Vice President Sustainable Development at Schneider Electric, Virginie Gatin, Executive VP Corporate Social Responsibility at Legrand, Barbara Guthrie, Vice President Corporate Sustainability at UL and Philippe Metzger, General Secretary and CEO at the IEC.

Together with the panel moderator Vimal Mahendru, IEC Ambassador for UN SDGs, they shared how and why companies are engaging with the UN SDGs and the role of standards and conformity assessment systems in helping to achieve these goals.

Sonya Bird, a member of the IEC Council Board Taskforce on the SDGs, opened the session by highlighting the IEC commitment to advancing the UN SDGs. "The IEC is a global, non-profit international organization whose work directly contributes to all 17 SDGs."

Providing a common framework

All panellists agreed that the UN SDGs provide a common framework and language. "The UN SDGs offer a benchmark to give us guidance to make the world a better place and leave the world a better place for the next generation," noted Ms Guthrie.

According to Mr Denoly, the UN SDGs offer aspirational goals for everyone. "Businesses cannot thrive unless people and the planet thrive together. It's good to have a common language to help us operate collaboratively. The SDGs give us the framework and overall direction."

For Mr Metzger, there is a business case for sustainability. "In the context



of the SDGs let's not stay on the surface but instead we must hone our existing DNA." Ms Gatin agreed, noting that they offer a holistic approach and focus. "It is good to have all 17 goals to remind us of our priorities and it is helpful to dive deeper and have concrete targets too."

Adopting a successful strategy

Each of the panellists gave their thoughts on how companies can incorporate sustainability into their strategy. "Make sure that your sustainability strategy is your company strategy, make it part of the core of your company. It's not easy, but be persistent and stay focused," noted Mr Denoly.

Ms Guthrie agreed. "Choose goals that resonate with you and your stakeholders. Identify the strengths of your company, know what you are passionate about and focus on it." For Ms Gatin, "Be ambitious in setting your targets. The targets should make you and your organization uncomfortable. It is necessary to engage with the value chain which is hard, complex and takes time but


needs to be done to deliver successful value for your company."

How the IEC can help

Standards have a key role in helping to achieve sustainability targets. For Ms Gatin, sustainability should be considered at the same level as safety in product design. "We need to make the circular economy a genuine way of putting products on the market. This is where the IEC Standards can help."

According to Mr Denoly, "The IEC is a guardian of trust. The emergence of science-based solutions, such as those offered by the IEC, can serve to increase trust and confidence." Ms Guthrie agreed. "Never underestimate the skills and expertise of the IEC. It is a convening, independent body which can engage dialogue."

As Mr Metzger concluded, "We need to recognize the interdependencies and engage with the stakeholders around us. No single organization can do this all. We can leverage the technology and scientific know-how to create cases that prove we can benefit from sustainability."

The recording of this webinar is now available online: www.iec.ch/academy/webinars 



Building on the Momentum of #WomenatIEC

By IEC Editorial Team

As we celebrate the [International Day of Women and Girls in Science](#), it is time to look back at how gender diversity is improving at the IEC, since the #WomenatIEC campaign launched exactly a year ago. The campaign itself was a huge success, reaching 1,734,519 people and led to a huge number of comments and discussions within and outside of the IEC community.

Following on from the success of the #WomenatIEC campaign, IEC is organizing a webinar on 8 March, entitled **Building momentum with #WomenatIEC**, with some of the women who took part in the campaign and whose videos were the most viewed. The webinar is organized to coincide with [International Women's Day](#) and will broach topics such as how to promote gender diversity at the IEC, within National Committees and in standardization. More will be revealed in coming days and weeks.

At IEC level, diversity – including gender - has now become a priority at governance level and one of the company's core values. A new structure has been created, the Diversity Advisory Committee, whose task is to propose guidance to the IEC Board for its selection process of members of the other bodies reporting to the IEC Board. Guidelines may include appropriate skills and competencies matrices, best practices for diversity performance indicators and recommended monitoring



measures, as needed at any level of the Commission. Such guidelines and provisions of recommendations shall also be available to National Committees for consideration in their nominations, including for membership on the IEC Board.

In 2020, IEC and [ISO](#) partnered under the stewardship of the Joint Strategic Advisory Group (JSAG) to develop guidance to help technical committees ensure they are developing gender-responsive standards. As part of these efforts, JSAG conducted the first ever industry questionnaire on gender-responsive standards development among IEC and ISO technical committees and subcommittees, the results of which were communicated in June 2021.

Perspectives were gathered from 356 respondents (50% IEC, 50% ISO). The committees covered a range of sectors, from the more traditional technical industries to the service-orientated ones. While the initial responses showed that there is still quite a lot of work to do to make gender fully acknowledged when preparing standards, this was a first step and IEC and ISO are committed to continue collecting data on gender in standardization work. This will help establish a baseline and better understand the scale of the challenges, with a view to improving gender responsiveness in future standards development.





Remembering our Friends

by USNC Staff



Charles T. Zegers

Charles T. Zegers – an international policy and standardization trailblazer who had limitless enthusiasm for his professional work and colleagues, as well as a zest for life, family, and bringing positive change to the world – passed away on January 20, 2022. Charlie had a distinguished 35-year career at the American National Standards Institute (ANSI). He served in numerous leadership roles, including as General Secretary of the U.S National Committee (USNC) of the International Electrotechnical Commission (IEC), until his retirement in 2015.

ANSI and the USNC/IEC extend heartfelt condolences to Charlie's family, friends, and former colleagues, and remember him for his outstanding achievements and passionate leadership.

Charlie launched his career at the Industrial Relations Division and Electric Vehicle Council of Edison Electric Institute (EEI). He later became the manager of standards and international activities for the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). From the outset of his career at ANSI in 1980, he served

as the director of standards audit, accreditation, and review. From 1985 to 1989, Charlie served as senior program administrator, and held staff responsibility in various technical areas including nuclear, solar, welding, plastics, and heating. His expertise and successful leadership led to his subsequent role as a program director, international policy and General Secretary of the USNC/IEC, a role he assumed in 1990.

During the 90s, he was instrumental in managing USNC staff and serving as support for the USNC president and policy committees. He was active in contributing to the development of international standards for electrical, electronic, and related technologies for several years.

His dedication to fostering the next generation of standardization and electrotechnical leaders was one of his significant accomplishments during his career. As an example of his tireless drive, he successfully spearheaded ANSI/USNC participation in the USA Science and Engineering Festival, and was a driving force in launching the IEC Young Professionals program on behalf of the United States.

"Charlie was relentless in his pursuit of answers and committed to ensuring

that rules were followed. He was dedicated to serving in the best interest of our USNC members and advancing global standardization through U.S. participation in the IEC. He was generous with his time and always willing to debate issues, making the system stronger as a dedicated leader. It was an honor to work with him," said ANSI colleague Joe Tretler, vice president, international policy.

"He was a wonderful human being who worked tirelessly supporting ANSI and USNC for so many years," added Frances Schrotter, ANSI senior vice president and chief operating officer. "Charlie had a heart of gold, and was so proud of his sons and family. He was someone who truly made a difference."

"He significantly shaped the USNC over many years and was instrumental in the organization of the IEC General Meeting in Seattle in 2010," said Philippe Metzger, IEC Secretary-General and CEO.

"Throughout his exceptional 35-year career, Charlie made tremendous contributions to the Institute and international electrotechnical standardization," said ANSI president and CEO S. Joe Bhatia. "He will be





greatly missed by all of his friends and colleagues in the standardization community and beyond.”

Charlie served as ANSI senior director from 2009 until his retirement at the end of 2015. He was a long-time and valued member of the ANSI staff, and was deeply appreciated for his dedication, leadership, and friendship, and many contributions to ANSI and the USNC over the years.

He is survived by his wife, Judy, sons, and grandchildren.

Robert J. Kretschmann

Robert J. Kretschmann—an influential and longtime member of the USNC—passed away peacefully on the morning of January 21, 2022 with his family by his side. Bob was the beloved husband of Katherine, and loving father of Christy, Hans and son-in-law Jeremy. He was born on January 13, 1952 to the late Rosemary (Fuerst) and Walter Kretschmann. He was a graduate of Elyria Catholic High School and received his Bachelor's and Master's degrees from the University of Dayton.

Bob had an illustrious and successful career as an electrical engineer with Rockwell Automation and retired after 37 years. While with Rockwell, he was a member of IEEE, the recipient of many awards including the Leonardo da Vinci Engineer of the Year Award (1989), two IEC 1906 Awards for his work on the International Electrotechnical Commission Standards Technical Committees and was the holder of over 75 patents.

“Bob was always a class act and his input with respect to USNC issues was always thoughtful and respectful,” said ANSI President, Phil Piqueira.

“Bob was just a really kind soul in a world that needs a lot more of them,” said USNC Director, Tony Zertuche.

Bob held numerous roles within the USNC including policy member and Vice Chair of the Technical Management Committee, Technical Advisor to a USNC Technical Advisory Group (TAG), member of several TAGs and VTAGs as well as expert on countless working groups. Bob also played a role in developing the USNC TAG Operating Procedures.

USNC celebrates the life of Bob Kretschmann for his many contributions and achievements. He will be greatly missed by all who knew him.

In lieu of flowers, donations to [The Nature Conservancy](#) are encouraged. ☺



USNC Releases 2021 Edition of Statutes and Rules of Procedure

by USNC Staff

The USNC is pleased to share the revised 2021 edition of the [USNC Statutes](#) and the [USNC Rules of Procedure](#). Both documents along with other USNC and IEC documents can be found in the [USNC Toolbox](#).

Changes to the USNC Statutes include the definition of “USNC Member,”

updated Honorary Life Membership text to be inclusive of all individuals, addition of “one organization, one vote” policy, and more. Key changes made to the USNC Rules of Procedure include an updated Section 4: Procedure for CAPCC Management of the Conformity Assessment Work of

the USNC to be aligned with the text in USNC CA-01, as well as updated Terms of Reference.

USNC staff would like to acknowledge and thank USNC Rules of Procedure Committee members for their diligent work in updating these guidance documents. ☺



Call for Action and Participation in Standards!

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) Advisory Committee on Safety (ACOS) – US Representative Needed

ACOS, which reports to the SMB (Standardization Management Board), deals with safety matters which are not specific to one single TC (Technical Committee) of the IEC.

Individuals interested in serving as the US Representative on ACOS are invited to contact Betty Barro at bbarro@ansi.org as soon as possible.

Please see the scope for ACOS below:

Scope:

Its task is to guide and coordinate IEC work on safety matters in order to ensure consistency in IEC safety standards.

ACOS is responsible for the assignment of Horizontal and Group Safety Functions to TCs, subject to confirmation by the SMB, which are thereby mandated to prepare Basic Safety/Group Safety Publications. The aim of these publications is to provide a coherent set of safety standards thus ensuring consistency of IEC standards in areas common to a number of TCs.

CALL FOR MEMBERS – USNC TAGs to IEC/TC 1 and IEC/TC 3, SC 3C, SC 3D

The USNC Technical Advisory Group (TAG) Secretary for the USNC TAGs to IEC/TC 1 and IEC/TC 3, SC 3C, SC 3D would like to grow the membership of the TAGs. Individuals who are interested in joining the USNC TAGs to IEC/TC1 and IEC/TC 3, SC 3C, SC 3D are invited to contact Betty Barro at bbarro@ansi.org as soon as possible.

Please see the scopes for IEC/TC 1 and IEC/TC 3, SC 3C, SC 3D below:

Scope TC 1 - Terminology



To sanction the terms and definitions used in the different electrotechnical fields and to determine the equivalence of the terms used in the different languages. As a consequence, to prepare an International Electrotechnical Vocabulary aiming at the standardization and coordination of the terms relating to electrical sciences and techniques for use in the technical language and literature, in teaching, in technical specifications and in commercial exchanges, and at giving their equivalents in the different languages.

Scope TC 3 - Documentation, graphical symbols and representations of technical information

Standardization in the field of documentation, graphical symbols and representations of technical information, covering

1. Rules, principles and methods focusing on machine sensible representation of information. This includes but is not limited to:

- » definition and identification of classes and properties (e.g. semantic data),
- » ontologies and data dictionaries (e.g. CDD),
- » information models for structuring of technical data and document management,
- » information exchange based on existing communication means.

It includes definition, co-ordination and management of the information required during the whole life cycle of a device, system, or plant, also covering aspects of documentation.

2. Rules, principles and methods focusing on human sensible



representation of the information. This includes but is not limited to:

- » presentation of information in documentation,
- » graphical symbols for use in documentation,
- » graphical symbols for the human interaction with equipment.

The standards deal with the presentations and graphical symbols as shown in documents or on equipment, independently of their forms of representation, analogue or digital, but may also include requirements for the development of documentation.

3. Rules, principles and methods for general and safety related marking, identification and arrangement of information in electrical installations, equipment and man-machine interfaces. This includes but is not limited to:

- » the meanings of colours and alternative means, when used for marking and identification,
- » the arrangement of indicating devices and actuators,
- » coding principles for indicating and actuating devices,
- » terminal designation of electrical and electronic components, apparatus and equipment,

- » designation of certain designated conductors,
- » marking of electrical and electronic equipment with ratings related to supply and to its properties,
- » marking of bare and insulated conductors.

Scope SC 3C - Graphical symbols for use on equipment

Standardization in the field of graphical symbols for the human interaction with equipment regarding methods and rules.

Included:

- » Basic design rules for graphical symbols.
- » The design of graphical symbols for particular applications.


Graphical symbols for use on equipment are primarily intended to:

- » identify the equipment or a part of the equipment (e.g. a control or display);
- » indicate a functional state (e.g. on, off, alarm);
- » designate connections (e.g. terminals, filling points for materials);
- » provide information on packaging (e.g. identification of contents, instructions for handling);

- » provide instruction for the operation of the equipment (e.g. limitations of use).

Scope SC 3D - Classes, Properties and Identification of products - Common Data Dictionary (CDD)

Standardization for representation of technical information along the life cycle of a product including service, device, system or plant, covering rules, principles and methods associated with the machine sensible representation of the technical information. This refers to:

- » definition, structuring and identification of classes and properties
- » structural design of product data dictionaries and ontologies
- » consistent methodology for the purpose of structuring technical information and its exchange
- » support for the design of classes and properties in all domains/ industries and their publication in IEC Common Data Dictionary (IEC CDD)
- » maintenance and quality control of the IEC Common Data Dictionary (IEC CDD)
- » Supporting semantic interoperability 

DECISION DEPOT



This column provides easy access to recent decisions that have been made regarding IEC and USNC policies and procedures that directly affect our members. Click the link below to access the recent decisions.

See the Decision List below for decisions made at the following meeting: SMB meeting 173 held in hybrid mode from Geneva (CH) on 2022-02-21/22

SMB: [SMB/7750/DL](#)

IEC Board: [IB/33/DL](#)



Calling All Sponsors!

USNC Welcomes IEC Members to the IEC 2022 General Meeting in San Francisco

The USNC is thrilled to host the IEC 2022 General Meeting October 31-November 4 in San Francisco! Check out our recently released [host video!](#)

Hosted annually by a different IEC member nation, the IEC General Meeting brings together international stakeholders for discussion of current issues and future directions and strategies for the IEC. The General Meeting has a unique format, combining management and technical meetings, and bringing all the key players together on one stage.

Interested in becoming a General Sponsor for this once-in-a-decade, international event? Check out the 2022 IEC General Meeting USNC webpage. We are also accepting in-kind donations to help offset our costs. We are currently in need of items like power strips, monitors, extension cords, etc. to support the technical and management meetings. Contact us at IEC2022GM@ansi.org for more information!

Thank you to the organizations already on board as 2022 IEC General Sponsors!





Get the most of your ANSI membership with a free webinar!

ANSI encourages you to take the first step to see what you are missing, and, more importantly, to find areas where we can work effectively together. Find out why so many people value their membership in ANSI. Join in our upcoming webinar and ask us!

These interactive 30-minute webinars — held on the first Friday

of each month and free of charge — are hosted live and provide an overview of ANSI's activities, as well as information on how to take full advantage of ANSI membership. A Q&A session encourages active dialogue between all participants.

For more details, visit our [website!](#)



UPCOMING EVENTS

Registration is now open for the following IEC webinars:

- » [“Introducing IEC Guide 108: Guidelines for ensuring the coherence of IEC publications – Horizontal functions, horizontal publications and their application”](#) on March 31 at 6:00 AM ET

The USNC will host a TAG Leadership workshop in 2022. Stay tuned for more information soon!

USNC LINKEDIN



Would you like to stay updated with the news and events of the USNC? [Join our LinkedIn Group](#) to learn about and provide input on all issues electrotechnical that can affect your life, from your own home to the other side of the globe! If you have any information to share on LinkedIn, please contact Megan Pahl (mpahl@ansi.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

Contributions are gladly accepted for review and possible publication, subject to revision by the editors. Submit proposed news items to: Megan Pahl, mpahl@ansi.org.