











































Effective Participation in the Development of International IEC Standards





Eighth Edition: 2018

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Learning Objectives

- Importance of global cooperation and collaboration
- Why should one participate in the development of international standards?
- How to cultivate international relationships and how to conduct oneself at international meetings
- Guiding rules and principles of international meetings
- Organizational Relationships





Presenters



Ms. Sonya Bird

- USNC Vice President Technical
- US IEC/SMB Representative
- Director International Standards,
 Underwriters Laboratories Inc.



Ms. Elaina Finger

- USNC Communications Committee Chair
- Global Standards Process Coordinator, Corning Incorporated





The purpose of IEC (founded in 1906) is to promote international cooperation on all questions of standardization in the fields of **electricity**, **electronics** and **related technologies**.



The purpose of ISO (founded in 1947) is to facilitate the internationalization and unification of standards and related activities over almost the **entire range of technology** (*except that covered by IEC*).



The purpose of ITU (founded in 1865), a government organization, is to promote international cooperation on all questions of standardization in the fields of telecommunications and radio communications.

IEC Structure

IEC

of the IEC



Mission and Principles of the IEC

- The International Electrotechnical Commission serves world markets and society through its standardization and conformity assessment work for all electrical, electronic and related technologies – collectively known as "electrotechnology."
- One of the main guiding principles of the IEC is that international standards should meet societal and market needs and should not be developed to act as barriers to trade.
- The IEC follows globally accepted principles of standards development:
 - Transparency
 - Openness
 - Impartiality
 - Effectiveness and relevance
 - Consensus
 - Performance-based

- Coherence
- Due process
- Technical assistance





Why should one participate in the development of international standards?

- To facilitate the adoption of globally-accepted standards that will promote interoperability and commercial acceptance across the electrotechnical industry
- To gain access to foreign markets, to improve safety and health and promote the protection of consumers, to safeguard the environment, etc.
- To benefit from unique networking opportunities and learn from international colleagues
- To anticipate emerging standards and their impact on technology and global markets



What are the consequences of not participating?

- Risk of developing standards that are only accepted locally, thus reducing interoperability and commercial acceptance across the global electrotechnical industry
- Limited access to foreign markets, leads to globally inconsistent standards affecting safety, health, consumer interests, etc.
- Putting manufacturers in a delayed and reactive position responding to emerging standards and their impact on technology and global markets

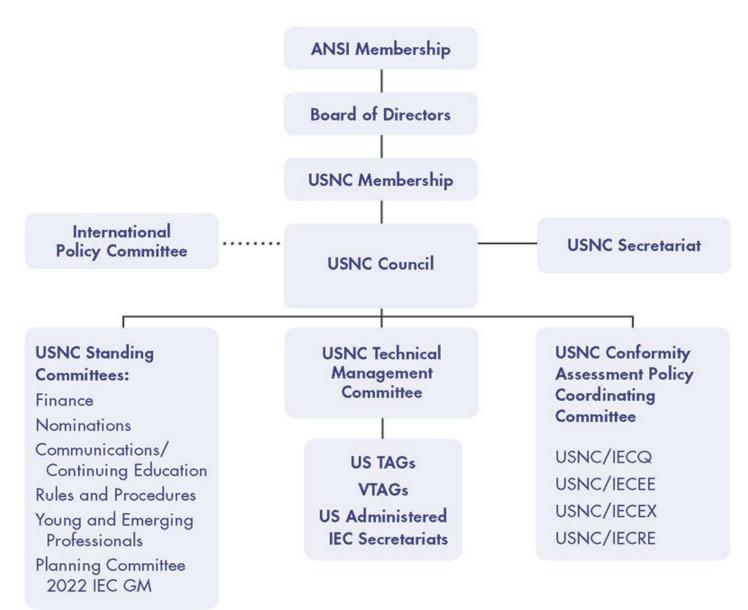


The US National Committee (USNC)

- The US National Committee (USNC) is the official US member body of the IEC and represents the US in the development, promulgation and use of globally-relevant standards for the electrotechnical industry
- Facilitates the assessment of conformance to standards via mechanisms such as testing, certification and accreditation as outlined in the IEC schemes
- Serves as a conduit to the global standards-setting community
- Is a committee of the American National Standards Institute (ANSI)
 - ANSI provides administrative support to the USNC



Organizational Structure of the USNC





USNC Officers

- John Thompson USNC President and US IEC Council Board Member (UL)
- Tony Zertuche USNC General Secretary (USNC/ANSI)
- Tim Duffy Vice-President Conformity Assessment and US IEC/CAB member (Rockwell Automation)
- Steve Rood Vice-President Finance and US IEC Finance Committee Member (Legrand Pass/Seymour)
- Sonya Bird Vice-President Technical and US IEC/SMB Member (UL)
- Phil Piqueira USNC Past-President (UL)



Please note the following are not USNC officers but hold IEC positions:

- Steve Margis US IEC/CAB Alternate Member (UL)
- Kendall Szulewski-Francis US IEC/SMB Alternate Member (USNC/ANSI)

USNC Participation in IEC

- The USNC interfaces with IEC TCs, SCs and SyCs via "mirror committees" called "US Technical Advisory Groups" or "USTAGs"
 - One USTAG for each IEC TC/SC/SyC where the USNC is a "P" (Participating) Member
- Administers over 165 USTAGS with over 2,500 experts
- USTAGs determine USNC votes/comments on related IEC documents
- Designates delegates to attend TC/SC/SyC meetings
- Appoints experts to serve on Working Groups (WGs), Maintenance Teams (MTs) and Project Teams (PTs)



Consensus



General agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments.

- Source: ISO/IEC Guide 2

IMPORTANT NOTE: Consensus does not imply unanimity



Project Development

Steps in the IEC project development process include . . .

- Research
- Gathering viewpoints of all interested and materially affected parties
- Discussion

- Compromise
- Agreement on content
- Preparation of drafts
- Agreement on drafts
- Publication



The key to standards development is remembering that there are many more aspects to consensus building than just a strong knowledge of the subject matter.



Conformity Assessment





IECEE - System for Conformity Testing and Certification of Electrical Equipment





IECQ - System for Quality Assessment of Electronic Components and Associated Materials and Processes





IECEx - System for Certification to Standards for Safety of Electrical Equipment for Explosive Atmospheres





**IECRE - System for Certification to Standards relating to Equipment for use in Renewable Energy Applications















































Before the Meeting





Appoint a US Delegation

- The USTAG must appoint a US delegation before each meeting of a TC, SC or SyC.
- The goal of the US delegation to an IEC Meeting is to achieve the objectives and advance the positions established by the US constituency.





Head of Delegation

If there are multiple delegates attending the meeting, one individual is designated by the USTAG as the Head of Delegation (HoD)



The HoD:

- Speaks for the entire US delegation,
- Designates other delegates as speakers for particular topics or points, and
- May designate a delegate to serve on the Drafting Committee for Resolutions of the TC/SC/SyC meeting.
- Observers are not authorized to speak



Experts to an IEC WG/PT/MT

US Experts* appointed to IEC WGs, PTs and MTs normally act on the basis of their own professional expertise, not as official representatives of the USNC.





*However, USNC Experts are encouraged to keep the related USTAG informed, so that when the time comes for the USNC to vote on the draft standard, a consistent position can be taken. In addition, US Experts are considered Participating Members of the related TAGs and are required to pay the TAG participation fee.



Effective Delegates/Experts

- The effective delegate/expert will be prepared to:
 - demonstrate competence in the field in which the committee is writing standards,
 - represent USNC viewpoints in a clear, concise and persuasive manner,
 - provide input early in the standards development process to optimize results, and
 - participate in formal meetings, informal gatherings and social events.



Preparing for an IEC Meeting

- The US Technical Advisor and USTAG Secretary (and/or the USTAG Chairman) should call a USTAG meeting to review US positions, strategize options, and develop a tactical plan prior to an international meeting.
- USTAG members should:
 - Research their own organization's views to help develop a US position,
 - Have data, information and documentation available to support their positions,
 - Keep up to date on the status of issues within the committee via USTAG minutes or from other members,
 - Be familiar with all related documents well before the meeting,
 - Fully understand critical issues and positions of other delegations, and
 - Decide which US positions are negotiable and which are not.



Preparing for an IEC Meeting (cont.)

- USTAG members should:
 - Make sure the USTAG considers taking on leadership positions, invite the TC/SC to meet in the US, nominate Experts, etc.,
 - Familiarize themselves with ISO/IEC Directives (including the IEC Supplement), and related USNC procedures, particularly guidelines for voting,
 - Learn as much as possible about the other delegates from different National Committees (NCs),
 - Arrive at the meeting location a few days early to acclimate themselves,
 - Learn the protocol for exchanging business cards, particularly with certain delegations, and
 - Learn as much as possible about the culture of the country visited as well as a bit of the local language.



Summary

In order to do my job as a delegate I must . . .

- Have the support of the USNC and my organization
- Be sure to keep my supervisor informed of the activities at meetings and any critical outcomes
- Have available to me the tools necessary to do my work (adequate administration and financial means)
- Have sufficient knowledge of English
- Be familiar with the IEC Statutes and Rules of Procedure, and with the ISO/IEC Directives*, particularly the IEC Supplement. Please <u>click here</u> to view these documents.



Summary (cont.)

I must also . . .

- Know of any IEC Council, Council Board or SMB decisions regarding the activities of my Committee
- Be sensitive to the nuances of politics, negotiation, alliances and cultural differences
- Understand the realities, economics, and self interest of "winning"
- Be in a position to advise the committee and any subsidiary bodies on any point of procedure or drafting
- Carefully review the TC/SC Report and Strategic Business Plan submitted to the SMB after your meeting.





Wrap Up – Before the Meeting

Questions and Answers

































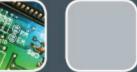












During the Meeting

Techniques for Successful Participation



During the Meeting

- Schedule a US delegation meeting before the Committee meeting to review last minute plans
- Establish good relationships with the IEC Committee Officers
- Volunteer to serve on a committee where your influence can be felt
- Carefully review the Resolutions, Daily Reports and Chair's Comments of meetings to ensure they reflect the USNC's understanding of actions taken
- Be sensitive to opportunities to take on leadership positions
- Insist that the business language of IEC, English, be used during meetings
- Get your point of view across concisely and quickly
 - However, remember that many delegates are not native English speakers
- Know your allies and your adversaries
- Consider the seating arrangements
 - Sitting with those who support your position vs. with those who do not



During the Meeting (cont.)

- Be affirmative but strong in presenting your positions
- Be willing to compromise where possible but determined where compromise is not possible
- Consider having an ally make the case if that would more likely accomplish the desired result
- Be aware that some delegates may be expressing their own personal opinion and not that of their NC
 - This can be challenged in TC/SC meetings, but not in WG, PT and MT meetings
- Delegates can be challenged to produce data to justify their positions
- Consider bringing samples of the products involved for illustrative purposes
- If a travel companion is attending any of the social events, encourage him/her to get to know travel companions of other delegates



During the Meeting (cont.)

Be aware of timing issues:

- NCs may occasionally use delays to further their goals
- There are specific time frames for additions to the agenda
 - Other NCs may attempt to add new issues just before the meeting
 - Know the rules and object if appropriate
- Use various techniques for expediting the work
- Don't address critical issues too late in the day
 - Suggest carrying items over to the next day
- Be sensitive to the judicious use of coffee breaks, comfort breaks, etc. for handling impasses during formal meeting discussions
 - These breaks can be advantageous or detrimental
 - Call home during breaks if guidance from others will help



Effective Delegates/Experts

- The effective delegate/expert will:
 - Act in cooperation with representatives from other countries
 - allies can be particularly useful during deliberations at meetings
 - these relationships can be professionally valuable and personally rewarding
 - Review the expected attendance roster to identify allies and/or points of influence represented on other delegations
 - Keep in mind that today's adversaries may be tomorrow's allies and vice versa!



Effective Delegate Conduct*

- Show respect to delegates/experts from other countries
- Listen thoroughly to all suggestions and contributions
- Be aware of regional sensitivities to the US
- Be careful not to make "blunt" statements regarding the US being the "first," most advanced, experienced, etc.
- Delegates are strongly encouraged to avoid actions that will reflect adversely on themselves, their organization, ANSI, and the USNC
 - Internal delegation disagreements should not be discussed in public
 - USNC delegates should never argue, or even imply, that other countries should accept a position simply because it is "the view of the US."



Talking vs. Hearing vs. Listening

- Listening requires skill and patience
 - Comprehensive listening is listening to understand a message
 - Critical listening is listening to comprehend and then evaluating the message
- If you don't understand, ask the speaker to repeat in different words
- Pay attention to all communication and cues
- Limit your own talking
- Be concise (don't use unnecessary words)
- Use Global English
- Be patient and concentrate





Talking vs. Hearing vs. Listening

- Rephrase or paraphrase, in your own words, the essence of the message you have heard from other delegates
- Use feedback to clarify and elaborate
- Avoid jumping to conclusions
- Establish a rapport
- Try to stay "in tune" with each other
- Don't assume that because a person has heard you, she/he has also agreed with you

















































Wrap-Up: During the Meeting

Questions and Answers



































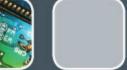












After the Meeting What now?





United States National Committee of the IEC

After the Meeting

- Carefully review the official Report of Meeting to ensure it reflects your understanding of what happened. If it doesn't, challenge it through official channels.
- Don't vote to extend the term of office of a Chair who fails to carry out his/her responsibility
- Consider maintaining contact with delegates from other countries, e.g. send holiday and birthday emails, thank you notes, etc.
- Help arrange visits to the US by colleagues from other countries and perhaps invite them to meet with you
- Keep tabs on what is supposed to happen and, if it doesn't, submit an official inquiry through the USNC Office.



Reporting Back Home

The designated HoD must complete the Head of Delegation Report (using HoD Report form*) as soon as possible after the close of meeting for distribution to the USTAG and submission to the USNC office.

The HOD report should summarize the successes and challenges of the IEC TC/SC/SyC meeting. It should highlight which US positions/opinions were accepted and those that would not. The report should also review the potential effect(s) on US interests. Copies of this report may be of interest to other entities either in its original form or perhaps as a further developed article in the USNC's quarterly newsletter, the USNC Current.





Reporting Back Home (continued)

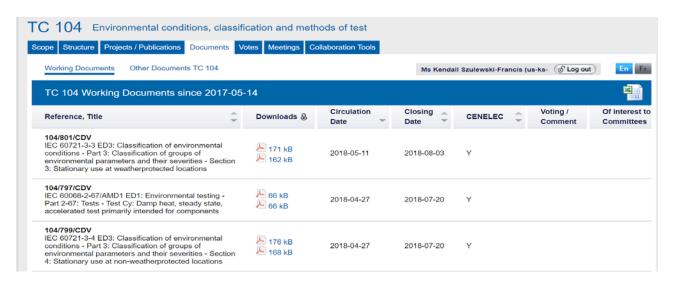
- To gain management and government support for international standardization, it's important to communicate the results of meetings to industry, the public, the USNC and ANSI through regular reports. There are usually two types:
 - Public communications announcements to the trade and technical periodicals and professional journals
 - Private communications to the USTAG and to the USNC and ANSI.





Access to IEC TC/SC/SyC Documents

- "Unofficial" documents
 - Internal edits, informational documents, pre-drafts, etc.
 - Visit the IEC's Collaboration page for the specific committee
- "Official" documents
 - NP, DC, CD, CDV, etc..
 - Published by IEC Central Office on IEC Website (<u>www.iec.ch</u>)
 - Obtain an IEC Username/Password from USNC staff*

















































Wrap-Up: After the Meeting

Questions and Answers















































Technical Positions, Contributions and Guidelines for Voting





USNC Technical Positions & Contributions

- USNC positions shall be developed in accordance with <u>USNC's</u> <u>USTAG Model Operating Procedures</u> or the USTAG's approved Unique Operating Procedures.
- Decisions should <u>not</u> be taken on items that were not posted to the agenda in accordance with the prescribed timelines
 - US delegates must follow established procedures for the establishment of consensus positions
 - It is appropriate for a delegation to call for the consideration of items via correspondence if the item was introduced directly at a meeting instead of being circulated in advance



USNC Technical Positions & Contributions (cont.)

- USNC proposals for the initiation of new work must be approved by the USTAG and, where appropriate, publicly announced in ANSI's Standards Action for review and comment prior to the meeting.
 - Such proposals are based on:
 - appropriate American National Standards
 - other generally accepted standards
 - a rationale or standard under development
- USTAGs shall only use the authorized IEC comment template when submitting comments to the USNC Office
- Any communication (comments, votes, etc.) from US TAGs to the IEC needs to be sent through the USNC Office
- Copyright and Intellectual Property Rights (IPR) of the standards developer must be respected



IEC TC/SC Voting

- Formal votes decided by the majority of votes cast by P-member delegations.
 - Only one vote per delegation, cast by the National HoD
 - Special attention must be paid to negative votes and every attempt should be made to achieve consensus
- Formal votes decided by the majority of votes cast by P-member delegations.
 - Only one vote per delegation, cast by the National HoD





Guidelines for Determining a US Voting Position

General...

- Regardless of whether or not a national standard exists, <u>if no US consensus has been established</u>, **abstain**.
- The US vote, if negative, must be accompanied by reasons and supporting information such as technical data and logical argument. Also, any known exceptions and/or additions that will be required to conform to US safety practices or regulations shall be noted.

EXCEPTION TO THE STATED VOTING GUIDELINES ABOVE SHOULD BE CAREFULLY CONSIDERED





Guidelines for Determining a US Voting Position

If a US National Standard Exists...

- **1.** If the national standard can be considered <u>equivalent</u> to the requirements in the international document, **vote affirmative.**
- 2. If the international document includes different, additional or more stringent requirements than are in the national standard and the US consensus indicates that such requirements are:
 - a) acceptable and should be considered for inclusion in the national standard, vote affirmative
 - b) not acceptable, vote negative

- **3.** If the national standard includes <u>different</u>, <u>additional</u>, <u>or more stringent requirements than are in the international document</u> and the US consensus indicates that such requirements:
 - a) should be modified in accordance with the international document, vote affirmative
 - b) must be maintained, vote negative
 - c) must be maintained, but the proposed document is considered to represent the best agreement which can be attained at the present time from an international point of view, vote abstain with a statement that the US cannot modify its national standard for stated reasons



Guidelines for Determining a US Voting Position

If NO US National Standard Exists...

- 1. If US consensus establishes that the international document is:
 - a) Technically acceptable and could be used as the basis for the development of a national standard, vote affirmative, or
 - b) Not technically acceptable, vote negative



- 2. If the international document is of <u>little or no interest to the US</u>, abstain
- 3. If the international document unnecessarily creates a barrier to domestic or international trade or impedes innovation or technical progress, vote negative



IEC Electronic Voting System

- All USTAG votes on NPs, CDs, CDVs and FDISs are conducted via IEC's electronic voting system.
- USNC Office officially submits ALL votes/comments via the IEC's electronic voting system on behalf of ALL USTAGs.
- ALL USTAG recommended votes and comments must be submitted to the USNC office at <u>USNC@ansi.org</u> <u>ONE WEEK</u> prior to IEC voting deadline. The USNC may submit an Abstention if no vote/comments are received by the related USTAG leadership by the IEC due date.
 - According to ISO/IEC Directives a National Committee can lose its Participating Member status for 12 months if it fails to vote
- All comments <u>MUST</u> be submitted on the IEC Commenting Form.
 This form should not be altered or changed in anyway by the <u>USTAG</u>.















































Wrap-Up: Technical Positions, Contributions and Guidelines for Voting

Questions and Answers



































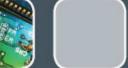












Home Field Advantage





Hosting TC/SC/SyC Meetings in the US

- The USNC is the official host for TC, SC and SyC meetings held in the US and is solely responsible for their effective conduct
- The US delegation may extend a conditional invitation if the USTAG and its Administrator agree, with the understanding that the USNC will submit an official invitation to the IEC Committee officers subsequently.
- Hosting a meeting in the US allows a larger number of US delegates to participate
- Announce the intention to host as early as possible delegates from other countries may need to obtain visas that take time to process
- Schedule meetings to your best advantage choose a time and location that coincides with events that showcase your strengths



Hosting WG Meetings in the US

- Informal responsibility of a host
- NC is not normally the host
 - A WG member, trade association, or interested company is normally the host
- Choose the time and venue to seek advantage
 - Maximize U.S. participation
 - Show examples/exhibits
 - Networking opportunities



Providing leadership and guidance for IEC technical activities

- TC/SC/SyC Secretariats are National Committees assigned responsibility for providing technical and administrative services to their respective Committees
- TC/SC/SyC Chairmen are responsible for the overall management of the Committee, including any of its subcommittees and WGs
- TC/SC/SyC Secretaries are individuals who are assigned by Secretariats to provide administrative and technical support to committee activities
- Convenors function as the chairs of WGs; they may also function as project leaders
- Project Leaders are responsible for developing a standard in a timely fashion
- Experts (WG, PT, MT) are subject matter experts
- Liaison Representatives from other ISO or IEC committees or other international organizations may attend meetings but cannot vote

Benefits of the USNC Holding an IEC TC/SC/SyC Secretariat

- Establishes USNC leadership in the relevant sector
 - Nominates the Chairman of the committee
 - Provides the management and administration of the committee
- Establishes USNC in a position of influence
 - Ensures management of the work program
 - Prepares meeting agendas
 - Provides interpretation of rules and procedures
- Provides easier access to USNC leaders and stakeholders
 - Understands USNC concerns/issues/interests
 - Speaks the same language as USNC participants/constituents
 - Usually the same general time zone
 - Always "just a phone call away"



TC/SC/SyC Secretariats vs. TAG Administrators

Costs Associated with Holding a USNC Secretariat and TAG Administrator

International Secretariat

- Direct expenses
 - Staff time
 - Office equipment and supplies
 - Travel (international)
- Nominates the Secretary
- Education and Training Opportunities
- Annual International Activity Assessment to ANSI
- ANSI Membership

USNC TAG Administrator

- Direct expenses
 - Staff time
 - Office equipment and supplies
 - Travel
- Education and Training Opportunities
- Annual International Activity Assessment to ANSI
- ANSI Membership or equivalent fee



































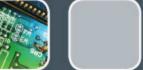












Wrap-Up: Home Field Advantage

Questions and Answers















































Hot Button Issues





IEC Masterplan and Implementation Plan

- Recently, the IEC began a review/revision of the IEC's Masterplan
- March 2018 a draft of the IEC's Masterplan implementation place was distributed to the IEC constituency for review. A vote to approve this implementation plan will be distributed to IEC Council member NCs shortly.
- Main elements of the new Masterplan are:
 - Market and societal relevance
 - Sustainable business model
 - Flexible organization
 - Agile operations



Intellectual Property Rights (IPR)

- Effective standardization utilizes patent policies that encourage participation, respect the contribution of valuable intellectual property, and result in standards that are technically proficient and widely accepted. Successful, balanced patent policies typically provide incentives to interoperate, innovate and compete by:
 - Respecting intellectual property
 - Balancing the interests of all stakeholders so that the outcomes are representative, inclusive and more broadly supported
 - Being open and transparent for all to review and understand
 - Promoting the use of the best technical solutions given commercial requirements
 - Being consistent with internationally accepted norms such as widely accepted RAND-based patent policies
 - Recognizing the right of patent holders
 - Recognizing the rights of all implementers of the standard





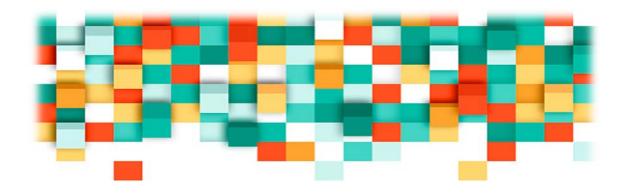
SMB Systems (SyC) Approach

- The SMB created an Ad hoc Group, Review of Systems Activities, to focus on the task, content, deliverable and organization of the SyCs. It was the intent of the ahG to more clearly distinguish between TCs, SCs and SyCs.
- Recommendations from ahG:
 - SyCs may not be permitted to produce International Standards, but instead a new deliverable to be called a "Systems Reference Document (SRD)"
 - Increase transparency of SyC work to TCs and other groups by circulating documents for vote/comment to other IEC TCs and non-IEC organizations recognized as Contributing members to the SyC
 - Creation of a "Contributing Member" (C-member) with the abilities to:
 - Appoint experts to the expert pool
 - Provide comments (but not vote) on SyC documents





Bloc Voting



DEFINITION

 A group of IEC National Committees, usually on a regional basis, voting or taking exactly the same positions for the purpose of defeating the positions of other voting countries to achieve a regional advantage.

PERSPECTIVE

 Bloc voting is not considered to be a generalized phenomenon but one that may occur on a case-by-case basis. U.S. delegates to IEC meetings should be vigilant to this possibility and report any evidence of its occurrence to their Technical Advisory Groups and to their contacts at the USNC/IEC.



Meeting Space and Fees

- The SMB previously established Adhoc Group 50 to prepare a set of recommendations for the concept of a Meeting Space Bank intended to help the IEC TC/SC/SyCs (and subgroups) in securing hosts for meetings. The IEC Central Office promoted this IEC Meeting Space Bank (originally published in an Administrative Circular <u>AC/15/2016</u>).
- At its February 2018 meeting, SMB asked the IEC Central Officer to re-distribute the initial Administrator Circular to again promote the use of this database.
- The ISO/IEC Directives and IEC Meeting Guide provide the necessary requirements that must be met when hosting an IEC meeting. Such requirements as:
 - No participation fee can be charged for any meeting
 - Internet must be provided for all participants
 - Appropriate number of electrical plugs for participants



China and the IEC

- China is fast becoming a major player in the international standards arena and a vital contributor with which you will interface. The USNC and ANSI* regularly communicated and interact with Chinese actors.
- China has increased its participation in the IEC and has been consistently working to increase the number of leadership roles held by the National Committee and Chinese experts.
- In January 2018, China finalized its reform of its standardization system and enacted new standardization law. According to Chinese leadership, the goal of this reform was to streamline the system and adjust the roles of the government and private sector to increase effectiveness.



Current IEC Initiatives

Digital Transformation

- SMB Strategic Group (SG 12)
- Established to define the aspects of the Digital Transformation that are relevant to the IEC and standardization activities, and identify emerging trends, technologies and practices needed for the development, delivery and use of IEC's work.

Hot Topics Radar

- SMB Strategic Group (SG 11)
- Established to proactively monitor emerging issues, including technological changes and other challenges to the technical work of IEC.



Current IEC Initiatives (continued)

- Improve efficiency of standard development
 - IEC Collaboration Tools
 - Alternative deliverables (TR, TS, and PAS processes)

IEC Academy

 Recently created the IEC Academy to provide high quality training, webinars, eLearning, regional and national workshops to the global IEC community.





Course Wrap-Up



THE USNC STAFF



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Kendall Szulewski-Francis USNC Program Administrator – **Technical** US IEC/SMB Alternate Member



Kevin Sullivan USNC Program Administrator – Voting and Membership



Jinny Park USNC Program Administrator – Finance and TAG Membership





Debbie Negron-Badillo **USNC** Meetings Coordinator

















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Resources







United States National Committee of the IEC



USNC Resources



- **US National Committee of the IEC**
- **USNC Reference Documents and Toolbox**
- American National Standards Institute
- * ANSI International and Regional Programs
- * ANSI Education and Training Programs





IEC Resources



International Electrotechnical Commission (IEC)

IEC Reference Documents

IEC News and Views

IEC Academy





Standards Coordination on a Regional Basis

Regional Organizations & Resources

Americas

- CANENA Council for Harmonization of Electrotechnical Standards of the Nations of the Americas
- COPANT Pan American Standards Commission

Europe

CENELEC - European Committee for Electrotechnical Standardization

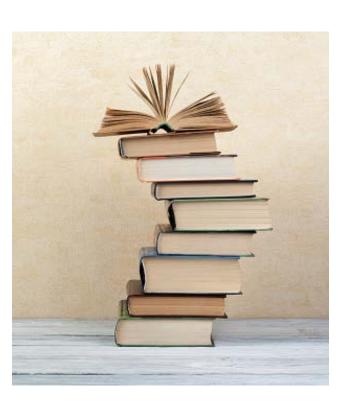
Pacific Rim

PASC – Pacific Area Standards Congress





Text Resources



- Kiss, Bow, or Shake Hands: How to do Business in Sixty Countries by Morrison, Conway, and Borden
- When Cultures Collide: Leading Across Cultures by Richard Lewis















































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