

Happy Thanksgiving!

Giving thanks for ten standards in three months

I AM PROCLAIMING “HAPPY THANKSGIVING!” too late for the US holiday, which was set as the fourth Thursday of November by federal law in 1941, and I am even later

for the Canadian Thanksgiving, which is on the second Monday of October. However, my motivation for “Happy Thanksgiving!” is inspired by the Thanksgiving proclaimed

by the first US President, George Washington, on 3 October 1789, a few days after the House of Representatives voted to send the First Amendment to the Constitution to the



Howard Chandler Christy's rendering of the signing of the US Constitution in 1787. It was signed by 39 of 55 delegates (some had gone home) on September 17. Thirty-nine out of 55 would meet the TSP's definition of "supermajority."

states for ratification. That First Amendment says:

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or of the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

This was a major accomplishment, the first Amendment of the ten Amendments we call The Bill of Rights. It was a major parliamentary feat, acknowledged by President Washington in his proclamation:

Now therefore I do recommend and assign Thursday the 26th day of November next to be devoted by the People of these States to the service of that great and glorious Being, who is the beneficent Author of all the good that was, that is, or that will be. That we may then all unite in rendering unto him our sincere and humble thanks . . . for the peaceable and rational manner, in which we have been enabled to establish constitutions of government for our safety and happiness, and particularly the national One now lately instituted, for the civil and religious liberty with which we are blessed; and the means we have of acquiring and diffusing useful knowledge; and in general for all the great and various favors which he hath been pleased to confer upon us.

ESTA's Technical Standards Program has garnered ANSI approval and published ten standards since I wrote this column for the last issue of *Protocol*. I won't claim that these ten standards are as important as the Bill of Rights—although, if one of the standards saves a life, that person saved might think the standard is pretty important—I can applaud the fruitful effort of the working groups creating the standards.

Achieving consensus

Writing standards—documents that are clear, that give guidance without being overly prescriptive or restrictive—is hard work, but the really tricky part is drafting something enough people can support to achieve consensus, consensus being the requirement for ANSI approval. Consensus

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A call for members

ESTA's TSP works to maintain a balance of the interests represented by the volunteers on the working groups to help ensure that the standards developed are for the benefit of everyone: the people who make equipment, the people who sell or rent it, the people who specify it, and the people who use it. To do this, periodically the TSP issues a call for new members in particular interest categories. At this time, the following working groups are looking for voting members in the noted interest categories to help balance the interests in the working group.

- **Control Protocols:** General interest, dealer/rental companies, designers
- **Electrical Power:** Custom-market producers, designers, general interest
- **Event Safety:** Performing artists, insurance companies
- **Floors:** Custom-market producers, designers, dealer/rental companies
- **Fog and Smoke:** All categories except users
- **Followspot Position:** Custom-market producers, dealer/rental companies, mass-market producers
- **Photometrics:** Dealer/rental companies, designers, general interest, users
- **Rigging:** Designers
- **Stage Machinery:** Users, dealer/rental companies

Voters in the Technical Standards Program are required to attend meetings and to vote on letter ballots. Membership in ESTA or any other organization is not a requirement for participation in ESTA's Technical Standards Program, but there is a \$100 a year per person participation fee—a flat rate, regardless of voting status or the number of working groups a person joins. The fee is levied to help defray the costs of running the TSP, which has always run a deficit. There is a scholarship fund, with an initial endowment from Chris Kaiser, to help those who would like to participate for whom the participation fee would be a hardship. More information about becoming involved in the Technical Standards Program and links to application forms are available at <http://tsp.esta.org/>.

is defined in ESTA's TSP as a supermajority affirmative vote, which is more than 50% of the consensus body (the voters in a working group) and at least two-thirds of those who voted. Both conditions have to be met for consensus. For the Rigging Working Group, our largest with 61 votes possible, "consensus" means at least 32 "Yes" votes cast, and at least 67% of the votes actually cast must be "Yes." That is, if 54 votes are cast (seven voters not getting around to voting), then at least 36 of those votes need to be "Yes" votes. A motion would fail if only 30 people voted, or if, out of 54 who voted, 19 of the votes were "No" votes.

Consensus is not simply a number; it's also a process. Any dissenting votes must be heard and considered. If someone votes "No" on a motion needing a supermajority, they have to provide reasons. Providing reasons can be part of a discussion at a meeting, but more often votes requiring a supermajority are done by letter ballot, so the reasons are provided in writing. Those reasons and the "No" vote are reported to the voting body, and the voting period extended by at least two weeks so that other voters can consider the reasons and change their votes to agree with the "No" vote if they think the dissenting voter has a valid objection. Voters also may change their votes to "Yes with comments" and in their comments say why they think the "No" vote is wrong. "Yes with comments" is a "Yes" vote, but it allows people to suggest things that should be thought about. The "No" voter might change his vote to "Yes" during the extended voting period, if the comments are persuasive. People can change their votes as often as they wish until the voting period has ended.

If a motion carries after the extended ballot but there are still "No" votes, the working group needs to talk about the objections at the next working group meeting. Everyone should have thought carefully about the objections during the letter ballot period, but often things look a bit different in a face-to-face meeting and people change their minds. This doesn't often happen, but

it has sometimes. If enough people think, "Gosh, he's right, we need to change that," and ask that their recorded votes be changed to "No," the motion fails. However, at this point the working group has pretty thoroughly considered the objections and how they might be resolved. There's more work ahead, but the working group collectively has an idea of what must be done to earn solid approval in the next iteration.

More often the "No" votes stay "No" votes, the "Yes" votes stay "Yes" votes, and, if there are enough "Yes" votes, the motion carries. However, the working group still needs to agree on a statement about why each "No vote with reasons" was unpersuasive, perhaps suggesting what might be done in a future edition of the standard to address the issue identified but not now. That's not what the "No" voter wants, but at this point the dissenting argument has been heard at least twice and people have had to respond to it with a rational argument. The majority voters win, but the minority voters are heard and not ignored. The process is less entertaining than the "Sit down, John!" number in 1776, but it works and losing a vote rarely leads to desertions from the working group by people who didn't get their way.

A working group also has to respond to comments offered in the public review process in a similar fashion. Public review commenters do not get a formal vote, so we don't have to tally the "Yes" versus the "No with reasons" comments, but we do have to offer a reasonable response to any public review comments or objections—and approving public review comment resolutions is another vote that must have supermajority support to pass.

This is slow work, but the people in the TSP's working groups stick with it, and this process has been going on now for decades. Whether we want to give thanks, as George Washington did, to *"that great and glorious Being, who is the beneficent Author of all the good that was, that is, or that will be,"* or we want to be more secular and simply thank the people who do the work, I think it's time for thanksgiving. Happy Thanksgiving!

Approved and published

Ten standards have been approved and published since I last sat down to write the TSP news column. Some are reaffirmations of existing standards, some are revisions of standards, and some are new. Some took only a few months to move forward and others took years. In any case, these are done for now, and I offer them in alpha-numeric designation order.

ANSI E1.1 – 2018, Entertainment Technology—Construction and Use of Wire Rope Ladders describes the construction and use of wire rope ladders in the entertainment industry. It is a revision of the 2012 standard, which was a revision of the 2006 standard with changed load ratings to accommodate heavier workers. This new revision updates the reference to the *ANSI/ASSE Z359, Fall Protection Code*, to point to the most recent edition. Thank you, Rigging Working Group!

ANSI E1.5 – 2009 (R2018), Entertainment Technology—Theatrical Fog Made With Aqueous Solutions of Di- And

Trihydric Alcohols, describes the composition of theatrical fogs or artificial mists that are not likely to be harmful to otherwise healthy performers, technicians, or audience members of normal working age. This is a reaffirmation—no substantive changes—but before reaffirming the standard the working group reviewed some recent CIH reports and recommendations on fog chemicals. This reaffirmation was not a rubber-stamp. Thank you, Fog & Smoke Working Group!

ANSI E1.8 – 2018, Entertainment Technology—Loudspeaker Enclosures Intended for Overhead Suspension—Classification, Manufacture, and Structural Testing, covers the requirements for loudspeaker enclosures specifically intended for overhead suspension, but addresses only the structural characteristics of the enclosure pertaining to its suspension, such as enclosure construction, component part security, enclosure suspension hardware, manufacturing control systems, structural testing, and product representation. The revision was done to update

the references to the other standards cited. Thank you, Rigging Working Group!

ANSI E1.29 – 2009 (R2018), Product Safety Standard for Theatrical Fog Generators That Create Aerosols of Water, Aqueous Solutions of Glycol or Glycerin, or Highly Refined Alkane Mineral Oil, is a guide for product safety testing laboratories in evaluating fog-making equipment for design or construction defects that might create unacceptable hazards. Fog generators often are evaluated as heating appliances to assure they are not a fire or shock hazard. *ANSI E1.29* considers those issues, but also has safety tests for the fog generated. Thank you, Fog & Smoke Working Group!

ANSI E1.31 – 2018, Entertainment Technology—Lightweight Streaming Protocol for Transport of DMX512 Using ACN, is a revision of the 2016 standard describing sACN. This revision requires support for IPv6 as well as IPv4. The big debate in the working group was whether IPv4 support should be required, with the argument for



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dropping it being that many light-weight IoT devices only support IPv6. However, making IPv4 support optional would also have made existing support for sACN devices optional, and lot of sACN systems in the field would not work with new equipment. IPv6 is undoubtedly the way of the future, but not working now is not a useful feature, so IPv4 support is mandated—at least in this edition. Thank you, Control Protocols Working Group!

ANSI E1.42 – 2018, Entertainment Technology—Design, Installation, and Use of Orchestra Pit Lifts, is a revision of the standard for orchestra pit lifts and their associated parts and support spaces. The vote for final approval of this revision involved considering whether SIL 3 should be required for all E-stop systems. The decision was that would be excessive. Thank you, Stage Machinery Working Group!

ANSI E1.51 – 2018, The Selection, Installation, and Use of Single-Conductor Portable Power Feeder Cable Systems

for Use At 600 Volts Nominal or Less for the Distribution of Electrical Energy in the Television, Film, Live Performance and Event Industries in Canada, is a new standard that took four and a half years and seven public reviews to finish. It is generally consistent with what is required in the United States per the *National Electrical Code* for using single-conductor portable power feeder cable, but the *Canadian Electrical Code* is largely silent on the subject, hence this standard. Thank you, Electrical Power Working Group!

ANSI E1.56 – 2018, Entertainment Technology—Rigging Support Points, is a new standard that applies to stationary rigging points, attached to permanent facility structure, that are intended to be permanent, and provides minimum requirements for the design, fabrication, installation, inspection, and documentation of these rigging points for their use to support rigging loads. Thank you, Rigging Working Group!

ANSI E1.60 – 2018, Guidelines for the

Use of Raked Stages in Live Performance Environments, is a new standard providing guidance for the use of raked stages in live performance environments to mitigate the risks for the protection of actors and technicians. It doesn't ban raked stages, or say they can't be any steeper than a certain slope, but it does help people figure out what they should do so that performers and technicians aren't hurt on them. Thank you, Floors Working Group!


ANSI ES1.19 – 2018, Safety Requirements for Special Event Structures, is a new standard that covers any temporary structure used for special events ("temporary special event structures"), where such structures are used for presentation, performance, structural support of entertainment technology equipment, audience seating or viewing in conjunction with the event, and regardless if the event is indoor or outdoor. This is a standard from the Event Safety Working Group, which focuses on safety management, so the emphasis of *ES1.19* is a little different from *ANSI E1.21*, but the goal is the same: no one under a pile of broken aluminum. Thank you, Event Safety Working Group!

All these standards are available for download at no cost from the TSP website at <http://tsp.esta.org/freestandards>. The no-cost download is made possible by the sponsorship of ProSight Specialty Insurance. They also are available for sale from ANSI and IHS at \$15 or \$40, depending on the standard. ■

And a final thank you to Joel Goldfield, the host of a Thanksgiving dinner I attended on November 22, who gave a brief history of Thanksgiving at the dinner, and thus inspired my lede for this story. Thank you, Joel!






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