

Minutes
Technical Standards Council
Sunday 28 January 2024 – 09:00 PST
Wyndham Anaheim - Anaheim, CA

Chairpersons:

Mike Garl; Mike Garl Consulting LLC; P (presiding)
Alan M. Rowe; I.A.T.S.E. Local 728; P

Recording secretaries:

Karl Ruling, Erin Grabe, and Richard Nix (ESTA)

Attendees:

Justin Bennett; USITT; P
William Gillett; Walt Disney Company; A
Mitch Hefter; Mitch Hefter; P
Edwin S. Kramer; I.A.T.S.E. Local 1; P
Michael Lay; Candela Controls, Inc; P
D. Andrew Gibbs, Ph.D.; Amer. Society of Theatre Consultants; P
Bill Sapsis; Sapsis Rigging, Inc.; P
Mike Skinner; Contract Services Administration Trust Fund; P
Keith Sklar; Actors' Equity Association; P

1 Opening Remarks

Mike Garl called the meeting to order at 09:04, welcoming everyone and thanking them for their attendance.

2 Patent and anti-trust statements

2.1 Reading of the anti-trust statement

Mike Garl read the following statement aloud to the assembly:

ESTA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all ESTA events, all discussions will be limited to those subjects that are permitted by the antitrust laws. All members should refrain from any discussion or mention of competitively sensitive subjects such as the current or future prices charged for any member product or services, current or future marketing plans or strategies, and current or future costs, including employee salaries. There also must be no agreement on the suppliers or customers that members will or will not do business with or the markets in which members will conduct business.

Violations of the antitrust laws can have serious consequences. If you have any questions or concerns about anything that is discussed at an ESTA meeting, please bring your concern to ESTA management. An easy to read pamphlet describing the antitrust laws is available from the ESTA staff.

Richard held up the pamphlet.

2.2 Reading of the call for patents

Mike Garl read the following statement aloud to the assembly:

ESTA intends not to publish any standard that contains protected intellectual property, unless that information can be licensed by anyone for a reasonable fee. ESTA uses a process of open patent and copyright disclosures to implement its intent. ESTA does not conduct patent or copyright searches and does not warrant that its standards contain no protected intellectual property.

In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent, patent application, copyright, or other protected intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence.

Nothing was revealed.

3 Attendance and introductions

3.1 Welcome to visitors

3.2 Determination of a quorum

A quorum is seven voting members.

Mike Garl noted that a quorum was present.

3.3 Consensus body

The full consensus body during the time of this meeting, including voters not present, is:

Name	Company or representation	Voting status
Keith Sklar	Actors' Equity	P
D. Andrew Gibbs, Ph.D.	Amer. Society of Theatre Consultants	P
R. Duane Wilson	Amer. Society of Theatre Consultants	A
Michael Lay	Candela Controls, Inc.	P
Matthew Antonucci	Contract Services Administration Trust Fund	P
Mike Skinner	Contract Services Administration Trust Fund	A
Steve Terry	Electronic Theatre Controls, Inc.	P
Todd Spencer	ESTA President	P
Edwin S. Kramer	I.A.T.S.E. Local 1	P
Alan M. Rowe	I.A.T.S.E. Local 728	P
Mike Garl	Mike Garl Consulting LLC	P
Mitch Hefter	Mitch Hefter	P
Bill Sapsis	Sapsis Rigging, Inc.	P
Jerry Gorrell	USITT	P
Justin Bennett	USITT	A
David E. Miller	Walt Disney Company	P
William Gillett	Walt Disney Company	A
	Total votes possible	13

4 Approval of minutes from the previous meeting

[See TSCmin10-2023_DRAFT.pdf]

Bill Sapsis moved to approve the minutes. The motion was seconded, and carried without objection or abstention.

5 Approval of agenda

Bill Sapsis moved to approve the agenda. The motion was seconded, and carried without objection or abstention.

6 Old Business and standing reports

6.1 Financial reports

[see ESTA TSP 2023 2023-12-31.pdf]

6.1.1 Treasurer's Report and Status of Contributions and Pledges

Steve Surratt was not present, so Erin Grabe reported. She said the financial report is a draft. It shows an anticipated \$50,000 deficit for TSP, but overall the other programs made a little money, including Protocol. The health of the association has allowed the TSP to survive. The 5-year pledges ended in 2022. The Investors in Innovation list is outdated but there are donors willing to maintain prior commitments. She said that 50% of Karl Ruling's salary will be moved to Protocol, since he works on that as Technical Editor.

6.1.2 TSP Fundraising

6.1.3 Accounting of TSP documents sold and downloaded

[See SalesReportforTSC_01-2024.pdf]

Total downloads have increased by 3.7% since the last report.

6.2 Old Business

6.2.1 Technical Standards Program project report

[See TSP Project Status Summary_01-2024.pdf]

Mike Garl noted the summary. No questions.

6.2.2 Working group documents for possible action by the TSC

6.2.2.1 First public reviews

6.2.2.1.1 BSR E1.60 – 202x, Guidelines for the Use of Raked Stages in Live Performance Environments

[see BSR_E1.60-202x_FL2017-8009r3.pdf]

The Floors Working Group approves this for its first public review.

Keith Sklar moved to approve the first public review. The motion was seconded and carried without objection or abstention. A BSR8 will be filed.

6.2.2.1.2 BSR E1.51, Feeder Cables in Canada

[See ANSI_E1-51_2018 Proposed revisions 2 RD 29-12- 2023.pdf]

The EPWG approved this for first public review.

Mitch Hefter moved to approve first public review. The motion was seconded and carried without objection or abstention. A BSR8 will be filed.

6.2.2.1.3 BSR E1.79, Entertainment Industry Electrical Practices in Canada

[see E1.79 Proposal Dec 29 2023 (1).pdf]

The EPWG did not approve this for first public review. Richard Nix said it has trade mark references that need to be removed or carefully explained so as not to be construed as endorsements of, or requirements for, the use of these products.

6.2.2.2 Reaffirmations

6.2.2.2.1 ANSI E1.34 – Floor Slipperiness using drag sled

[See Floors Working Group vote on E1.34, drag-sled testing standard, reaffirmation _ Fastmail.pdf]

The working group letter ballot to reaffirm was carried.

Keith Sklar moved to reaffirm the standard. The motion was seconded, and carried unanimously by the voters present. There were no objections. Erin Grabe said there was a large concert last year in Las Vegas during which the floor points shifted overnight. They should have used this standard!

6.2.2.2.2 ANSI E1.5 – Glycol and Glycerin fog exposure

[See F&S Working Group votes to reaffirm ANSI E1.5 and E1.29 _ Fastmail.pdf]

The working group letter ballot to reaffirm was carried.

Keith Sklar moved to reaffirm the standard. The motion was seconded, and carried unanimously by the voters present. There were no objections.

6.2.2.2.3 ANSI E1.29 – Fog Machine Safety Standard

[See F&S Working Group votes to reaffirm ANSI E1.5 and E1.29 _ Fastmail.pdf]

The working group letter ballot to reaffirm was carried.

Keith Sklar moved to reaffirm the standard. The motion was seconded, and carried unanimously by the voters present. There were no objections.

6.2.2.3 Approve as ANS

None for TSC action at this time, but the following drafts have completed public reviews without objection or substantive changes, and may be moved by their respective working groups to approval as ANS:

- *BSR ES1.17, Electrical Safety (ESWG approved for next PR)*
- *BSR E1.11, DMX (CPWG approved for next PR)*
- *BSR E1.68, DMX Compatibility Testing (CWPG approved for next PR)*
- *BSR E1.1, Wire Rope Ladders (RWG approved for next PR)*

6.2.2.4 Withdrawals or abandonments

6.2.2.5 New project requests

6.2.2.5.1 Uni-directional Machine Controls

[See Uni-Directional_Machine_Controls_ProjectRequest - signed.pdf]

The project request was submitted by a SMWG member, who notes that other working groups may have interest in its scope. It's on the SMWG's agenda, and has been sent to the CPWG for review and comment. The SMWG voted to accept the [project. CPWG members are willing to support it.

Mitch Hefter moved to approve the project. The motion was seconded and carried without objection or abstention. A PINS will be filed.

6.2.2.5.2

[See TSP_rigging access-12.29.pdf]

The project request was submitted by a RWG member. Bill Sapsis said the project was not approved by the RWG.

6.2.3 Working group documents for TSC review

[In conformance with the 04-2023 TSC directive, all drafts considered for public review will be sent to the TSC at the time they are distributed to the working group for PR consideration.]

6.2.3.1 BSR E1.50-1, Structural Support of Temporary LED, Video & Display Systems

[See BSR E1.50-1-202x_Rig2023-2001r0.pdf]

The RWG approved this for 2nd public review.

6.2.3.2 BSR E1.43, Performer Flying Systems

[see E1-43_PerformerFlyingSystems_Rig2020-2032r1.pdf]

The RWG approved this for 2nd public review.

6.2.3.3 BSR ES1.2, Planning and Management

[see red line PMI_ES1.2_DRAFT5_30NOV2023_sent to WG.pdf]

The ESWG approved this for 3rd public review.

6.2.3.4 BSR E1.20, RDM

[see BSR_E1-20_201x-6 524.pdf]

The CPWG approved this for 5th public review.

6.2.3.5 E1.64, Stage Machinery Controls
[see BSR E1.64-202x_SL2023-10002r3.pdf]

The SMWG approved this for 3rd public review.

6.2.5 CEN collaboration

The The CEN BT did not approve Richard Nix's application. Members of the TC 433 committee are appealing the decision.

6.2.6 UL and NFPA representation

Any news or updates?

Karl Reported. Erin Grabe has applied to represent ESTA on 1126 and 160 to replace Larry Schoeneman, who has retired. Her application has been accepted and is pending approval at the April NFPA Standards Council meeting.

7 New business

7.1 TSP Participation Fee increase

ESTA's Executive Director and the Technical Standards Manager ask the TSC to consider a TSP fee increase, effective for all incoming new applications after January's meeting cycle.

Erin Grabe asked for the TSP's opinion on this – should it go up, and – if so – by how much? She said the fee was implemented in 2016. Bill Sapsis asked how difficult it's been to collect. Richard said it's been challenging but is now easier because it's written into the P&P.

Mike Lay suggested \$125 for this year, \$150 next year. Alan Rowe moved to do so, but withdrew the motion.

Bill Sapsis moved to approve a fee increase to \$150 in 2025. The motion was seconded. The motion carried with one objection from Alan Rowe, and no abstentions.

Mike Skinner suggested we note how long the fee has remained at \$100. Bill suggested marketing it as a \$50 increase, not as a 50% increase. The consensus was that we should bundle this with a fund-raising campaign targeted at supporting the TSP, which runs at a deficit.

8 Optional reports

8.1 Optional reports by working and task group leaders on active projects

8.1.1 Control Protocols

Mike Lay gave a summary report of the working group meeting.

8.1.2 Electrical Power

Justin Bennett gave a summary report of the working group meeting. There are currently two active projects: 19-pin connectors in conjunction with related proposed changes to NEC, and Canadian Electrical Practices in Entertainment, which also has ESWG members participating.

8.1.3 Floors

Karl Ruling said there's no need for a report – the TSC has voted on the important items.

8.1.4 Fog and Smoke

Karl Ruling said there's no need for a report – the TSC has voted on the important items.

8.1.5 Followspot Positions

No report. They did not meet.

8.1.6 Photometrics

No report.

8.1.7 Rigging

Bill Sapsis reported a very well-attended meeting in-person and online – around 80 people.

8.1.8 Stage machinery

No report.

8.1.9 Event Safety

Erin Grabe thanked the TSC for their swift action in pushing ES1.5 back to the working group. They had serious and productive discussions about the draft standard at the ESWG meeting.

8.1.10 Weapons Safety

8.2 Reports of affiliated organizations

8.2.1 ASTC

Andy Gibbs said there was nothing to report.

8.2.2 Event Safety Alliance

Erin Grabe said they are still planning their Event Safety Summit for the end of year, maybe in Houston, still TBD.

8.2.3 NFPA

8.2.3.1 FDW-AAA committee (NFPA 80 fire doors & fire safety curtains)

8.2.3.2 SPE-AAA (NFPA 160 & 1126, flame and pyrotechnics)

Karl said there's nothing much to report, their last meeting revealed nothing of concern, they're more interested with enforcement than ultimate safety. He said that the most recent meeting dealt with the process for AHJs to approve gas flame effects. He did not see it negatively affecting our industry.

8.2.3.3 SAF-AXM & BLD (assembly occupancies. NFPA 101, 102, & 5000)

Karl Ruling said that there is a meeting coming up at the end of February to deal with grandstands (NFPA 102). He did not see any problems looming for our industry.

8.2.3.4 NEC (NFPA 70)

Mitch Hefter reported, and submitted a report by email, which said:

The NEC Public Input meetings for the 2026 cycle were held January 15 – 26 in Charleston, SC. Topics of most interest to our constituency were mostly successful. Note that the code panel actions in these meetings are essentially straw polls, requiring only > 50% to pass. Those actions will be balloted (letter ballots) requiring a 2/3 vote in favor to be incorporated into a first draft of the 2026 edition. The biggest disappointment was our (my) effort to put pointers for definitions now located in Article 100 at the front of the Code into the appropriate articles failed.

Most proposals to add more requirements on Cybersecurity into the NEC – an installation Code, failed. Jason Potterf reports that many of these could be considered for NFPA 70B, a maintenance based standard. Most proposals for addition of Class 4 requirements failed.

The proposal for revision to 520.68 to more properly address multi-pin connectors was successful, with a new information note referring to E1.80. (If E1.80 is not complete by publishing date, the note would be removed). References to ESTA standards have been updated for the most recent revisions.

The biggest change coming, but for 2029, is a complete restructuring of the Code grouping articles more specifically related. Part of this comes from a desire to clear up distinctions with medium voltage as well as a merging of Chapter 8 communication systems into the resto of the Code. An appendix showing the numbering changes would appear in the 2026 edition. Most content will not change, it will just be located differently (e.g., Article 520 will become Article 1620). As disruptive as this seems, it actually does make sense.

The first draft will be available July 10, 2024, with the comment period ending August 28. Note that any proposals that wer rejected (resolved in NFPA language) will not be shown in the first draft but are available for Public Comment.

8.2.3.5 NFPA 70E

Mitch Hefter said it will be open for public input soon.

8.2.4 USITT

Mitch Hefter reproted. The conference is coming in March. Karl Ruling will receive a very distinguished award.

8.2.5 ICC

There is a proposal in the current 2027 IFC change cycle that updates the ANSI E1.21 reference and adds the ANSI ES1.7 (Weather Preparedness) standard to the IFC, coordinating with the most recent additions for same in the 2024 IBC. The FCAC has approved the change proposal and is listed as a proponent!

We're trying to good work, and seem to be successful, said Richard.

8.2.6 IES

Mitch Hefter said there is nothing to report. Erin Grabe asked if IES was ANSI accredited. Yes, said Mitch.

8.2.7 UL

Nothing to report.

8.2.8 ASSP

Nothing to report.

9 Other business and announcements

9.1 Above & Beyond Awards

Information on the Above & Beyond Awards may be found at http://tsp.esta.org/tsp/news/award_recipients.html.

9.2 Lifetime Technical Achievement Award

Erin Grabe said there were nominations, and we will plan to meet for discussion.

9.3 Volunteer of the Year Award

Erin Grabe said the 2023 award was granted to the MRI ETCP-recognized trainers, for their work in 2022 and 2023.

9.4 Swan Award

Erin reported. There's no formal procedure. It hasn't been awarded since 2022. There may be potential candidates who might deserve the award for 2024.

10 Schedule for future meetings

The meeting schedule is posted at <http://www.esta.org/ESTA/meetings.php>.

Spring meetings will be in conjunction with USITT in Seattle, during the week of 18 March 2024, and the Summer meetings will be co-located with NATEAC during the week of 08 July (11-13 July) in New York City. Fall meetings will likely return to Westlake, TX.

Michael Lay asked when the USITT meetings will be posted. Eriin Grabe said we do not have word yet from USITT about what rooms will be available. We have a tentative schedule, but no space assignments, so it's not yet possible to schedule the meetings. She also said it appears that we will be back in DFW for Fall meetings. 14-21 October, which may conflict with NEC meetings.

11 Adjournment

Mike Garl declared the meeting adjourned at 10:21 AM.

Technical Standards Council Members as of 28 January 2024

Name	Representing	Status
Matthew Antonucci	Contract Services Administration Trust Fund	A
Justin Bennett	USITT	P
Harry Box	PERG	O
Mike Garl	Mike Garl Consulting LLC	P
William Gillett	Walt Disney Company	A
Jerry Gorrell	USITT	A
Mitch Hefter	Mitch Hefter	P
Edwin S. Kramer	I.A.T.S.E. Local 1	P
Michael Lay	Candela Controls, Inc	P
David E. Miller	Walt Disney Company	P
D. Andrew Gibbs, Ph.D.	Amer. Society of Theatre Consultants	P
Eddie Raymond	IATSE Local 16	O
Alan M. Rowe	I.A.T.S.E. Local 728	P
Bill Sapsis	Sapsis Rigging, Inc.	P
Mike Skinner	Contract Services Administration Trust Fund	P
Keith Sklar	Actors' Equity Association	P
Todd Spencer	ESTA President	P
Steve Terry	Electronic Theatre Controls, Inc.	P
R. Duane Wilson	Amer. Society of Theatre Consultants	A