

**Minutes**  
**Technical Standards Council**  
Monday, 01 February 2021 11:00 AM EST  
via WebEx

**Co-chairpersons:**

Mike Garl; Mike Garl Consulting, LLC (presiding)  
Mike Wood; Mike Wood Consulting; LLC

**Recording secretaries:**

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

**Attendees:**

Keith Sklar; Actors' Equity; P  
R. Duane Wilson; Amer. Society of Theatre Consultants; A  
Michael Lay; Candela Controls, Inc.; P  
Mike Skinner; Contract Services Administration Trust Fund; A  
Steve Terry; Electronic Theatre Controls, Inc.; P  
Alan M. Rowe; IATSE Crafts Advancement Program ; P  
Mike Garl; Mike Garl Consulting LLC; P  
Mike Wood; Mike Wood Consulting LLC; P  
Mitch Hefter; Mitch Hefter; P  
Bill Sapsis; Sapsis Rigging, Inc.; P  
Jerry Gorrell; USITT; P  
William Gillett; Walt Disney Company; A

**Visitors:**

Mike Skinner (see 2.5)

**1 Opening Remarks**

Mike Garl called the meeting to order at 11:05. He thanked everyone for taking time to join this meeting. He asked people to mute their microphones when not speaking, as a courtesy to the attendees.

**2 Attendance and membership**

**2.1 Taking attendance and introductions**

**2.2 Welcome to visitors**

**2.3 Call for quorum**

**2.4 Consensus body changes**

*Larry Schoeneman has resigned from all TSP participation.*

*Louis Bradfield's emails are now being returned as undeliverable. Is there action for the TSC?*

There was discussion. Jerry said that he'd talked to Dan Culhane and they will let it ride now. He thinks that Justin Bennett will be the USITT representative, but no formal decision has been made yet.

**2.5 Consensus body as of this meeting**

Mike Skinner entered the meeting as a visitor, with intention of being added as Matt Antonucci's Alternate representative for the Contract Services Administration Trust Fund. Later in the meeting, Matt sent an email affirming this intent, so he was appointed to the TSC accordingly.

<b>Name</b>	<b>Company or representation</b>	<b>Voting status</b>
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

<b>Name</b>	<b>Company or representation</b>	<b>Voting status</b>
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	IATSE Crafts Advancement Program	P
Mike Garl	Mike Garl Consulting LLC	P
Mike Wood	Mike Wood Consulting LLC	P
Mitch Hefter	Mitch Hefter	P
Bill Sapsis	Sapsis Rigging, Inc.	P
Jerry Gorrell	USITT	P
Louis Bradfield	USITT	A
David E. Miller	Walt Disney Company	P
William Gillett	Walt Disney Company	A
	<b>Total votes possible</b>	<b>14</b>

### **3 Approval of minutes from the previous meeting**

See *TSCmin10-2020\_DRAFT.pdf*.

Steve Terry moved to approve the minutes. The motion was seconded, and approved without objection or abstention.

### **4 Patent and anti-trust statements**

#### **4.1 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.

Karl Ruling held up a copy of the pamphlet in front of his camera. No anti-trust concerns were raised.

#### **4.2 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.

## **5 Approval of agenda**

The topic of E1.19 was added to the agenda. William Gillett move to approve the revised agenda. The motion was seconded and approved without objection or abstention.

## **6 Old Business and standing reports**

### **6.1 Financial reports**

*[See ESTA ESTA TSP 2020-12-31.pdf and ESTA TSP 2021-01-27.pdf]*

Erin Grabe reported. The 2021 budget is not as bad as 2020. We have less in TSP pledges. We had expectations that we would have other goals.

We didn't get the \$80,000 from ProSight. They had pledged to give \$15,000 for 2020, but haven't given it to us yet.

#### **6.1.1 Treasurer's Report and Status of Contributions and Pledges**

#### **6.1.2 TSP Fundraising**

*Three topics for discussion (Erin Grabe):*

- 1. TSP standards downloads sponsorship/income*
- 2. Reaching other (higher-level) stakeholders*
- 3. Investors in Innovation structure*

Erin Grabe said that we may need to consider selling standards again, and asked if reverting to a sales model might be possible. Steve Terry asked if there were any other untapped large donors, or if there were pledged donors to approach about the possibility of extending their respective pledge durations or increasing their pledged dollars. He pointed out that these standards are not "broad market" standards, so need to be available to everyone. Mitch Hefter said that IES had gone to a subscription model. Mike Garl reminded everyone to keep this in mind when speaking with potential donors.

Karl Ruling said that we earned \$18,643.00 in 2012 in document sales. The idea was put forth that free standards could be an ESTA member benefit, with other people having to buy them. There was not a lot of enthusiasm for the idea that we could replace a significant source of donation income with selling standards. These are niche products.

#### **6.1.3 Accounting of TSP documents sold and downloaded**

*[See SalesReportforTSC\_01-2021.pdf]*

## **6.2 Old Business**

### **6.2.1 Technical Standards Program project report**

*See TSPPrjctsSmmry2021-02.pdf to come.*

### **6.2.2 Working group documents for possible action by the TSC**

#### **6.2.2.1 Public reviews**

#### **6.2.2.2 Withdrawals**

### 6.2.2.3 Accept as ANS

*ESWG motion to approve BSR ES1.7-202x (Weather Preparedness)[See TSC\_Ltr\_Ballot\_BSRE1-7\_AcceptANS\_summry.pdf and MLay\_Yes\_with\_Comments\_thread\_Re\_BSR ES1-7.pdf]*

*The TSC letter ballot to accept as an ANS carried unanimously, but one “yes, with comments” vote was received. The voter’s comments expressed concern for specific editorial issues. An email was sent to the voter with an explanation that responded to the concerns, essentially stating that the document is as it’s supposed to be. The comments and responses are included in the TSC meeting attachments for review, so the comments can be properly dispensed before the motion is sent to the ExC.*

There was discussion of where to put the asterisk directing a person to the annex note. Richard Nix explained that this was not a new topic of conversation among the working groups. Sometimes the asterisk applies to the entire clause, and is placed in the header, so it also appears in the table of contents. Sometimes the asterisk only applies to a subclause, and so does not appear in the heading, or in the table of contents.

Michael Lay said he did not like the apparent inconsistency in the way annex notes are referenced, but had no objection to the standard. He reiterated his affirmation of the standard. The TSC asked that the annex reference be part of the header for the related section. Karl Ruling said we would add this comment to the style guide.

The motion now forwards to the ExC.

### 6.2.2.4 Reaffirmations

*RWG motion to reaffirm ANSI E1.15-2016 (Boom and base assemblies)*

Name	Company or representation	Voting status	Vote
Keith Sklar	Actors' Equity	P	Y
D. Andrew Gibbs, Ph.D.	Amer. Society of Theatre Consultants	P	
R. Duane Wilson	Amer. Society of Theatre Consultants	A	Y
Michael Lay	Candela Controls, Inc.	P	Y
Matthew Antonucci	Contract Services Administration Trust Fund	P	
Mike Skinner	Contract Services Administration Trust Fund	A	Y
Steve Terry	Electronic Theatre Controls, Inc.	P	Y
Todd Spencer	ESTA President	P	
Edwin S. Kramer	I.A.T.S.E. Local 1	P	
Alan M. Rowe	IATSE Crafts Advancement Program	P	Y
Mike Garl	Mike Garl Consulting LLC	P	Y
Mike Wood	Mike Wood Consulting LLC	P	Y
Mitch Hefter	Mitch Hefter	P	Y
Bill Sapsis	Sapsis Rigging, Inc.	P	Y
Jerry Gorrell	USITT	P	Y
Louis Bradfield	USITT	A	
David E. Miller	Walt Disney Company	P	
William Gillett	Walt Disney Company	A	Y
	<b>Total votes</b>	<b>14 possible</b>	<b>12 Yes</b>

### 6.2.2.5 New projects

#### **6.2.2.5.1 Indoor stage ventilation**

*See TSP\_ProjectRequestUse of Ventilation on an Indoor Stage.pdf*

Karl Ruling said this is a project request, submitted by Keith Sklar, with two goals—one explicit and the other implicit. The explicit goal is to provide guidance on good stage ventilation to control dust particulates, such as paint spray and sawdust, and also aerosols, such as theatrical fog and haze. The implicit goal is to control the spread of viruses and other germs to control disease spread. It's become clear that the SARS-CoV-2 virus is mainly spread via the air.

Keith Sklar moved to accept the new project. The motion was seconded and carried without objection or abstention, 12 yes out of a possible 14. The project was assigned to the Fog & Smoke Working Group.

#### **6.2.2.5.2 NextGen Library ANS project**

*See UDR\_ProjectRequest\_Signed.pdf, a project request to turn the Libraries Study into a project to write an American National Standard. It will be considered by the CPWG at its meeting.*

*Also see letter from GDTF Group, GDTF-Group\_Letter to ESTA\_12-2020[3].pdf, and a response from the study group leaders, GDTF\_CPWG\_Library\_Study\_Group\_Background\_Information\_For\_TSC Response.pdf. ESTA responding to the GDTF Group letter is not a new ANS project, but it is related to that project.*

Michael Lay reported that there are two components to the topic. He asked Karl to speak about the GDTF letter, which was addressed to Ruling and Richard Nix, and written by Gerhard Krude (MA Lighting), Biplab Sarkar (Vectorworks, Inc.) and Josef Valchar (Robe, Inc.)

Karl Ruling said the letter essentially asks that ESTA not develop a parameter library standard, which the letter's authors feel would compete with DIN SPEC 15800, and would “confuse the market, manufacturers and users.”

Ruling said the CPWG's Next Gen Luminaire Libraries Study Group had looked at DIN SPEC 15800 (GDTF) and the needs of the market, and found fundamental limitations in the 15800 approach to meet those needs. (See the CPWG's Library Study Group's background information document.) The Study Group's opinion is that another, different standard would help meet the needs of the market. The Study Group also noted that “competing standards are a common and healthy driver of innovation. Within our own industry there has been widespread adoption of both E1.31 (sACN) and Art-Net.” There is no evidence that the market is confused by the existence of different standards attempting to solve common problems.

Mike Lay suggested that Karl Ruling draft a response letter to the GDTF-Group\_Letter to ESTA\_12-2020 authors.

Mike Garl asked for a motion to continue with the UDR Project. Mike Wood so moved. The motion was seconded and carried unanimously, 12 “yes” out of a possible 14, with two votes not cast because the people were not present.

The TSC then directed Karl Ruling to draft a response letter as discussed. He said he would work to keep it short but clear. He would send a draft to the TSC leaders to make sure he had struck the right tone.

#### **6.2.2.5.3 Additional Message Sets for ANSI E1.20 (RDM) – IPv6 & Improved IPv4 Configuration Messages**

*See NewIPv4&IPv6\_TSP\_ProjectRequest.pdf*

Michael Lay explained the reason for the project, and moved to accept the project, directing it to the CPWG. The motion was seconded and carried without objection or abstention, 12 “yes” out of a possible 14.

#### **6.2.2.5.4 GitHub**

*Task group: Mike Wood, Michael Lay, Steve Terry, Karl Ruling  
Any news or updates from the task group?*

Mike Wood said that a task group meeting has not occurred because we do not have a proposal from the GitHub study group. Wood said he'd spoken to Jason Potterf, but there is nothing more to report at this time.

### **6.2.2.5.5 USITT language proposal**

*See USITT TWG - Problematic Terminology Spreadsheet 01-05-2021.pdf and Terminology TSP\_ProjectRequest.pdf*

Justin Bennett gave an overview of the project request. It seems out of the TSP's scope, but he said that USITT's P&P on developing recommended practices didn't support development of such an RP under USITT's purview, so he is bringing it up for TSP discussion.

Steve Terry said while the ANSI ESTA process might be an attractive model for development, the TSP's work is in "technical standards," and does not cover this type of subject matter.

Mitch Hefter suggested ESET, which is under USITT's purview, could take this up. Justin Bennett said that they are talking to people in that program. He also said that USITT intends to work towards a resolution, but did not want the perception that they were working in overlapping areas. The consensus was that there is no overlap. Justin asked for permission to use the TSP's P&P document as a basic framework for writing a USITT RP practice. The consensus was that there was no problem using it as a starting point for tailoring something useful to USITT.

Karl Ruling suggested that there might be words added to our style guide suggesting people consider the language they use in our standards, avoiding, for example, terms such as "master/slave" and "blacklist/whitelist."

## **7 New business**

### **7.1 ANSI Audit and Policy & Procedures revisions**

*[See the three documents sent on 30 December 2020: ANSI Audit report, draft audit responses, and revised P&Pr14a]*

Richard Nix gave a brief report about the audit and its results.

Mitch Hefter moved to accept the audit responses. The motion carried without objection or abstention, 12 yes out of a possible 14. Two voters were not present.

Steve Terry moved to approve the revisions to the P&P. The motion was seconded and carried without objection or abstention, 12 yes out of a possible 14. Two voters were not present.

### **7.2 Fog & Smoke leadership**

*Should there be a new co-chair? If so, who? Larry Schoeneman has withdrawn from active participation.*

Karl Ruling asked if the TSC wanted to appoint a new co-chair to replace Larry Schoeneman. Karl said that Brad Dittmer is happy to continue, but there are times when he is unable to attend due to work load. Karl said that Brad had mentioned Mona Shum, Keith Sklar, and Mike Wood as possible candidates. Mike Wood agreed to be a second chairperson, as a backup only. He would rather someone else in the working group take this position. He used to work in the theatrical fog industry, but has not in many years.

### **7.3 Other new business.**

*Moving E1.19 to first public review – the draft was sent with less than two-weeks notice.*

Mike Garl asked if anyone objected to waiving the 2-week rule. There were no objections. Steve Terry moved to approve the first public review. The motion was seconded and carried without objection or abstention, 12 yes out of a possible 14. Two voters were not present.

## **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 report on task group and working group activities.

### **8.1.2 Electrical Power**

Mitch Hefter gave a precis of the working group's meeting. The important action was moving BSR E1.19 to public review.

### **8.1.3 Floors**

Jerry Gorrell reported.

### **8.1.4 Fog and Smoke**

*Larry Schoeneman has resigned as Co-chairperson of this working group. Will the TSC appoint a replacement, or maintain the status quo with Brad Dittmer as the Chairperson?*

There was no meeting in this meeting cycle. The leadership matter was dealt with as TSC action item 7.2.

### **8.1.5 Followspot Position**

Richard Nix reported that the working group discussed what to do with the permanent followspot positions document, which is due for action. They agreed to reaffirm E1.28.

Mike Wood moved to approve the reaffirmation public review. The motion was seconded and carried without objection or abstention.

### **8.1.6 Photometrics**

Jerry Gorrell said there was not much to report. Mike Wood said they agreed the ANSi E1.41 LED standard needs to be revised.

### **8.1.7 Rigging**

Bill Sapsis reported on the *“short but very active meeting”*. Four documents—E1.2, E1.4-2, E1.39, and E1.67—will go to letter ballot for approval as ANSs.

### **8.1.8 Stage machinery**

Jerry Gorrell reported that the meeting was short.

### **8.1.9 Event Safety**

Richard Nix reported that the working group had a good meeting. If things go as planned, three drafts—Communication, PMI, and Venue and Site Design—will go to the working group for informal comment, and then consideration for first public review at July's meeting. The Fire Safety standard came back with few comments, fewer than expected.

## **8.2 Reports of affiliated organizations**

### **8.2.1 ASTC**

R. Duane Wilson reported, no news.

### **8.2.2 Event Safety Alliance**

Richard Nix said no news that would not be included in the ICC report.

### **8.2.3 NFPA**

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

Jerry Gorrell reported that the NITMAM submission period is open, but otherwise NFPA 80 is done.

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

No news, Karl Ruling reported.

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

Done deal, said Jerry Gorrell . He's gotten his free copy, so it's published.

### **8.2.3.4 NEC (NFPA 70)**

Mitch Hefter reported. The code panel meetings ended two weeks ago; the results will be published. He said Article 530 was rewritten by a motion picture industry committee lead by Alan Rowe. The only concern is that the staff might have messed it up. Multi-use/multi-conductor cable proposal from Steve Terry has been accepted in Article 520 and 530.

Hefter mentioned a concern about relocation of definitions, and deferred to Steve Terry for additional information. Steve reiterated the information given in his EPWG report. Essentially all definitions are being moved from their respective articles into Article 100. He said he felt this would make the NEC much less user-friendly.

He also mentioned the changes to Article 700, and encouraged everyone to give these changes—specifically those related to Class 2 wiring as part of emergency lighting systems—close scrutiny when they are published, because this could have a significant impact on the industry.

### **8.2.3.5 NFPA 70E**

Jerry Gorrell reported.

### **8.2.4 USITT**

Mitch Hefter reported that the 2021 Conference is all virtual. He said the cost to attend is significantly lower than before, and he encouraged those who have not yet registered to attend, to please consider doing so.

### **8.2.5 DTHG**

Steve Terry reported that we have a pan-European rigging standard. He urged people to see the article by Michael Lichter in the Winter 2021 edition of *Protocol*.

### **8.2.6 ICC**

[See Pages from FCAC proposals as submitted.pdf]

Richard Nix reported on three code change proposals currently submitted for inclusion in the 2024 IFC. The first, proposal #6558, proposes requiring the permitting of all special event structures. He said this would be good to facilitate better coordination between fire code officials and building code officials.

The second proposal proposes a ban on all water-filled ballast methods, unless there is detailed engineering for their use on the specific project being permitted.

The third proposal addresses Inflatable Amusement Devices, also known as “bounce houses.” He thinks the proposal is problematic, because it refers to an ASTM standard that incorporates a tent industry study on staking, which he thinks does not present accurate procedures, and is based on subjective methods. Using the staking study may be a camel's nose under the tent issue, for staking with other non-tent structures that are our concern.

The proposed code changes will be published sometime in July, and the public review period will be open at that time.

### **8.2.7 IES**

Mitch Hefter reported The Lighting Library™ is now available through subscription.

### **8.2.8 UL**

Karl Ruling reported no news.

### **8.2.9 ASSP**

Jerry Gorrell reported that the ASSP has revised the front end of the fall protection code, Z359. The front end—ASSP Z359-1—is available free of charge. The other parts are for sale.



## **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](http://tsp.esta.org/tsp/news/award_recipients.html).

Bill Sapsis reported Ethan Gilson and Reid Neslage were given the award at last week's RWG meeting. Michael Lay reported Wayne Howell had also received an award, during the CPWG meeting.

### **9.2 Lifetime Technical Achievement Award**

No news or action.

### **9.3 Volunteer of the Year Award**

No news or action.

### **9.4 Swan Award**

### **9.5 TSP participation fee donor fund**

No news or action.

### **9.6 NAMM**

Erin Grabe reported a great turnout for the Believe in Music sessions. She thought all went well. The attendance for ESTA sessions was good. It was not the trade show we wanted, but still good.

### **9.7 INNOVA**

Mike Garl asked if Erin Grabe had any comments on this. She said, although she believes in the program, it costs ESTA about \$8k to run, and we receive about \$2k revenues. It needs content. She is working with USITT to see if, and how, it can be maintained.

Bill Sapsis said that there are people doing on-line lessons on their own with success. He thinks the industry, particularly content suppliers, now has a better understanding of the potential for training programs, and suggested that they might not be in a rush to provide content for a 3<sup>rd</sup> party, such as INNOVA.

### **9.8 NATEAC**

Sapsis reported NATEAC 2021 will be virtual. They will be deciding on the platform in a few days.

## **10 Schedule for future meetings**

The meeting schedule will be posted at <http://www.esta.org/ESTA/meetings.php>. It was noted that our meetings are in April, not in conjunction with USITT.

## **11 Adjournment**

Sapsis moved to adjourn. The motion was seconded. The agenda had been completed, so Mike Garl declared the meeting adjourned at 13:04.

Technical Standards Council members

Delegate	Company	Representation	Voting status
Matthew Antonucci	Contract Services Administration Trust Fund	CSATF	P
Harry Box	Production Equipment Rental Group	PERG	O
Louis Bradfield	Louis Bradfield	USITT	A
Mike Garl	Mike Garl Consulting LLC	Mike Garl Consulting LLC	P
William Gillett	Disney Parks Live Entertainment	Walt Disney Company	A
Jerry Gorrell	Theatre Safety Programs	USITT	P
Erin Grabe	ESTA	ESTA	exf
Mitch Hefter	Mitch Hefter	Mitch Hefter	P
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P
Michael Lay	Candela Controls, Inc	Candela Controls, Inc	P
David E. Miller	Walt Disney Parks & Live Entertainment	Walt Disney Company	P
Richard J. Nix	ESTA	ESTA	exf
D. Andrew Gibbs, Ph.D.	D. A. Gibbs and Associates	Amer. Society of Theatre Consultants	P
Eddie Raymond	IATSE Local 16	IATSE Local 16	O
Alan M. Rowe	IATSE Local 728	IATSE Crafts Advancement Program	P
Karl G. Ruling	ESTA	ESTA	exf
Bill Sapsis	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	P
Mike Skinner	Alliance of Motion Picture and Television Producers	Contract Services Administration Trust Fund	A
Keith Sklar	Actors' Equity Association	Actors' Equity Association	P
Todd Spencer	PSAV Presentation Services	ESTA President	P
Stephen G. Surratt	Texas Scenic Company	ESTA Treasurer	exf
Steve Terry	Electronic Theatre Controls	ETC	P

Technical Standards Council members

---

Delegate	Company	Representation	Voting status
R. Duane Wilson	George C. Izenour Associates	Amer. Society of Theatre Consultants	A
Mike Wood	Mike Wood Consulting LLC	Mike Wood Consulting LLC	P

**Voting status codes:**

- P Principal voter
- A Alternate voter
- O Observer, non-voter
- exf Ex Officio