

Minutes
Technical Standards Committee
Wednesday, March 22, 2000
Adam's Mark Hotel
Denver, CO

Chair: Bill Groener; Production Arts (PRG); Principal

Recording secretary: Karl G. Ruling, ESTA

Members attending: Frank Stewart; Specialty Tech Services; Principal
Steve Carlson; High Speed Design, Inc.; Principal
Colin Waters; TMB Associates; Principal
Jay O. Glerum; Jay O. Glerum & Associates, Inc. (USITT); Principal
Edward Paget; Jones & Phillips Associates, Inc.; Principal
Mike Wood; High End Systems; Principal
Mitch Hefter; Rosco/Entertainment Technology (Rosco Laboratories); Principal
Rodney F. Kaiser; J.R. Clancy Inc. (USITT); Alternate
Ken Vannice; NSI Corporation (Leviton Manufacturing Co., Inc.); Principal
Eckart Steffens; SOUNDLIGHT (VPLT); Alternate
Tim Cox; PLASA; Principal
Tera Johnson; Electronic Theatre Controls, Inc.; Principal
Lori Rubinstein, ESTA (ex officio)

Visitors: Tim Hansen, Oasis Stage Werks
Ed Clare, PERA
Bob Luther, Lex Products
Kent Jorgensen, MPS Local 80
Eddie Kramer, I.A.T.S.E. Local 1

1 Opening remarks

Bill Groener called the meeting to order at 1:03 p.m.

2 Attendance and membership

Bill Groener noted that we had more than a quorum (five or more)

2.1 Attendance

Groener asked the TSC members and visitors to introduce themselves, which they did.

2.2 Welcome to visitors

Groener welcomed the visitors.

2.3 Steve Carlson offered his resignation from the TSC, this resignation to take effect at the end of the meeting. His resignation was accepted by the group.

2.4 Bill Groener announced that the TSC had agreed by e-mail to offer a seat to Eddie Kramer. He accepted. Mike Wood, ESTA president, stated that he was confident the Board would approve his appointment.

Thus, there were no effective changes in the voting body for this meeting, but there will be for the next meeting. The voting body was:

Name	Company	Parent company/ Organization represented	Voting status
Tera Johnson	Electronic Theatre Controls, Inc.	Electronic Theatre Controls	P
Mike Wood	High End Systems	High End Systems	P
Steve Carlson	High Speed Design, Inc.	High Speed Design, Inc.	P
Larry Schoeneman	Interesting Products, Inc.	Interesting Products, Inc.	P (absent)
Mike Garl	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	P (absent)
Edward Paget	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	P
Ken Vannice	NSI Corporation	Leviton Manufacturing Co., Inc.	P
Tim Cox	PLASA	PLASA	P
Tony Douglas-Beveridge	PLASA	PLASA	A
Bill Groener	Production Arts (NJ)	PRG	P
Mitch Hefter	Rosco/Entertainment Technology	Rosco Laboratories	P
Frank Stewart	Specialty Tech Services	Specialty Tech Services	P
Colin Waters	TMB Associates	TMB Associates	P
Jay O. Glerum	Jay O. Glerum & Associates, Inc.	USITT	P
Rodney F. Kaiser	J.R. Clancy Inc.	USITT	A
Florian Von Hofen	VPLT	VPLT	P
Eckart Steffens	SOUNDLIGHT	VPLT	A
			14 (12 present)

3 Approval of minutes from the previous meeting

Ted Paget moved that they be accepted as written. The motion was seconded. The motion was accepted unanimously by a show of hands.

4 Call for patents and anti-trust statement

Bill Groener asked the group to read the following statements and to signal if they had any issues to discuss:

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

"In keeping with the open disclosure policy, I ask if anyone present wishes to notify the Technical Standards Committee of the existence of a patent or copyright that might protect material in a standard being developed by a working group. You need not be the holder of the patent or copyright in order to notify the TSC of its existence."

"The ESTA Board of Directors and the leadership of this Technical Standards Committee will reject or nullify any actions that restrain trade. Anyone who feels that an action restraining trade is being or has been taken is requested to bring the matter to the attention of the chair immediately. Anyone who feels that actions in restraint of trade have been taken and not properly annulled is requested to notify the TSC chair or ESTA president immediately.

"ESTA legal counsel has informed us that any member of this committee may be found individually liable for any action that restrains trade taken by this committee. An individual convicted of a violation of the Sherman Act may be fined as much as \$100,000 and be imprisoned for up to three years. An easy to read pamphlet describing restraint of trade is available from the Technical Standards Committee."

5 Approval of agenda

Bill Groener suggested that we add 6.1.4 under financial reports as a report on swag. Kramer asked that we add after "Floors" the item "NFPA building code."

Ted Paget moved that the agenda with these revisions be accepted. The motion was seconded. The motion was accepted unanimously with a show of hands.

6 Old business

6.1 Financial reports

6.1.1 Treasurer's report

Frank Stewart said he had no report. We are two months into the fiscal year, said Stewart, and the data is incomplete. He said that budget requests will be sent soon to the working groups.

Groener asked if anyone was uncomfortable with the lack of a report. None were.

6.1.2 Status of contributions and pledges

Lori Rubinstein gave a report on the status of contributions and pledges. She asked if there were any contributions we had planned on but that we were not likely to get. None were identified. She identified Clay Paky as probably not making a contribution this year.

Steve Carlson said he had spoken to people at 3Com and Nortel for contributions. His contacts cannot make those kinds of funding commitments, but they will forward the request to those who can.

6.1.3 Accounting of TSP documents sold and on-hand

Lori Rubinstein reported that she had no accounting right now because the information comes from USITT, and USITT has been completely occupied with the Conference and Stage Expo.

6.1.4 Swag report

Rubinstein directed the group's attention to the swag order form. Frank Stewart and Mike Wood displayed the wares. Rubinstein explained that the point of selling swag was to build awareness of the program. Bill Groener praised Beverly Inglesby for her work on developing the line of merchandise. Hollywood Lights will warehouse the merchandise for us and ship from there.

6.2 Working group reports

6.2.1 Camera Cranes

Ed Clare reported on the group's progress on the operator's handbook. Clare said there is a group called ASPEC in Britain working on a similar but more detailed document. Suggested it might be useful to hold up the CCWG document until this ASPEC document is checked.

Hefter advised that the CCWG should not hold up their handbook, but should make sure that our document does not contradict the ASPEC document. The ASPEC document could be cited for more information.

The CCWG had made a request of the TSC, which was recorded in the minutes of the January 24, 2000 Camera Cranes Working Group meeting:

"Tim Wade moved that we ask ESTA for permission to publish the handbook document on websites for download as a PDF file, without royalty to ESTA. Paul Holehouse seconded. Unanimous by voice vote.

Mitch Hefter moved that the TSC comply with the request. The motion was seconded. By show of hands: 8 yes, 4 no. Motion carried.

Ted Paget moved that ESTA staff coordinate with PERA for distribution of the document through the ESTA website. CCWG members wishing to distribute the document from their website would do so by providing a link to the ESTA site, where the document would be stored. The motion was seconded. The motion was accepted unanimously by a show of hands.

Ted Paget moved that the ESTA staff, TSC chair, TSC treasurer, and president of ESTA prepare information to review with PERA the long-term business relationship between ESTA and PERA in

regard to the technical standards effort. The motion was seconded. The motion was accepted unanimously by a show of hands.

Ed Clare said he will be in New York on April 25, 26th, and 27th and he would like to meet on one of those dates.

Groener appointed an ad hoc committee to consider the revenue issues with standards. Should they be sold or distributed for free? The ad hoc committee is: Tera Johnson (chair), Steve Carlson, and Frank Stewart.

Kent Jorgensen reported on BSR E1.12. Said the big problem was that there has been a reluctance to get involved by major manufacturers.

6.2.2 Control Protocols

6.2.2.1 BSR E1.3

Ruling reported that the comments from the last public review had been resolved and the resolutions were accepted by the CPWG. The resolutions had been sent to the commentors with an invitation for them to object if they did not agree, and no objections had been received. The document now needs to be voted to go to public review again.

6.2.2.2 BSR E1.11

Mitch Hefter reported that over 300 comments were received during the call for comment. The most contentious issue is power on pins 4 & 5.

Hefter predicted a possible public review in late summer, or more likely after LDI.

6.2.2.3 Report of ACN Task Group

Steve Carlson reported that there are three documents that make up ACN. These are about 90% stable. The next step will submit it to a select group of networking manufacturers for comment before the July meeting. The July CPWG meeting will include a tutorial on how ACN got to be where it is and why. There will be some public presentation at LDI.

6.2.3 Fog and Smoke

6.2.3.1 Working group co-chair appointment

Bill Groener reported Larry Schoeneman's request for a working group co-chair. Schoeneman had suggested Gary Fails, but Groener says Fails is reluctant to take on the job. Groener asked for suggestions. Eric Tishman of Rosco was identified. Groener said he will approach Tishman, unless someone first offers a better qualified candidate.

6.2.3.2 BSR E1.5, glycol/glycerin fog

6.2.3.2.1 The Stink Test search for consultants

Mike Wood spoke on the working group's attempts to have Dr. James Kehrer serve as our consultant. Kehrer met Jim Buss, a member of the American Conference of Governmental Industrial Hygienists, at a toxicology meeting. Buss suggested that the ACGIH would probably be interested in taking on a project of setting exposure levels for those glycols that do not have them. Karl Ruling has drafted a letter requesting ACGIH involvement in this project for approval by the F&S working group. We had been trying to work out a face-to-face meeting with Kehrer, but this suggestion that we contact the ACGIH is probably the best advice we could hope to get from him right now, so a meeting is probably not necessary.

The consensus of the TSC was that involving the ACGIH is a reasonable way forward.

6.2.3.2.2 Sampling project

Mike Wood reported that High End Systems has bought the necessary sampling equipment and started some testing in the Austin area. The equipment will be used by the Fog and Smoke Working Group to do some sampling in other areas.

6.2.3.3 Fog book, third edition

Lori Rubinstein said that it's for sale at the USITT Boutique on the Stage Expo show floor.

6.2.3.4 BSR E1.14, Standard for fog machine manuals

Ruling reported that one editorial comment was received during public review. That one comment needs to be resolved by the Fog and Smoke Working Group.

6.2.3.4 Product stewardship

Mike Wood presented the fancy new product stewardship brochure.

Lori Rubinstein suggested it would be sent it out in early summer. They are working on a glossy pamphlet version. It is still in a draft stage.

6.2.4 Photometrics

6.2.4.1 BSR E1.9, nutrition label

Ted Paget moved that we waive the two-week rule on voting to approve the working group motion to send the document to public review. The motion was seconded. The motion was accepted unanimously by a show of hands.

Ted Paget moved that the TSC support the working group's motion to send the draft document (Photo/1997-5010r7) to a second public review. The motion was seconded. The motion passed unanimously with a show of hands, meeting the supermajority requirement.

6.2.4.2 Revamp/renew IES procedures

Ruling reported that we are to have a report on the IES project at the Photometric Working Group meeting.

6.2.4.3 Public information project

Ruling reported that planning seminars at the LDI and USITT trade show/conferences was on the agenda for the working group meeting.

6.2.5 Rigging

6.2.5.1 E1.2 – Aluminum Truss Standard

Ruling reported that the ESTA Board hadn't finished voting on the motion to accept BSR E1.2 as a standard.

6.2.5.2 E1.4 – Manual Counterweight Flying Systems Standard

Ruling reported that the proposed comment resolutions that had not been unanimously approved by the working group were sent back to the task group for further work. No revised resolution document had been received yet.

6.2.5.3 E1.6 – Powered Flying Systems

Ruling reported that the revised document had been sent to the original commentors with a letter explaining that it was not possible to provide a comment-by-comment summary of resolutions. No commentors had objected to the lack of a resolution document, although some comments were received on the revised document.

6.2.5.4 E1.7 – Recommended Practice for Flying Performers

Proposed comments resolutions and a new document were sent to working group, Ruling reported.

6.2.5.5 E1.8 – Speaker Enclosures Rigging Standard

Ruling reported that the proposed comment resolutions that had not been unanimously approved by the working group were sent back to the task group for further work. A new revised resolution document had been received.

6.2.5.6 E1.10 – Building Structural Requirements Standard

Ruling reported that the proposed comment resolutions that had not been unanimously approved by the working group were sent back to the task group for further work. A new revised resolution document had been received.

6.2.5.7 E1.13 – Arena Scoreboards and Speakers

The TSC voted to send it to public review, so it is in public review, Ruling reported. [TSC ballot summary is appended to these minutes.]

6.2.5.8 British Standards

Tim Cox reported nothing to report.

6.2.6 Electrical Power

6.2.6.1 Task group on a recommended practice for selection, installation, and use of portable feeder cable.

Ken Vannice reported that they were creating a survey. Bob Luther explained that the survey is to determine what current practice is.

6.2.6.2 Task group for a recommended practice for use of GFCI (Residual Current Devices) in entertainment applications.

Vannice reported that there had been no report because Mitch Stein, the task group leader, had not attended the meeting.

6.2.6.3 Task group to write a configuration standard for HMI power cables and/or head to ballast cables

Colin Waters reported that they have a draft document for power input that is a modification of the PERA document. They still need to identify the Mil-Spec identifications for some of the connectors used.

For head to ballast cabling, they are starting to look at how it is done now. There is no de facto standard way of doing it. Colin says he has a database of the connectors now used for head to ballast cabling. The task group is polling manufactures and verifying the connectors and connections. The task group is unsure of whether the manufacturers would want to have this information published.

6.2.6.4 EMC task group

Ken Vannice reported that Dr. Balint Szentkuti is stepping down as chair of IEC TC77. The US nominated Mr. Johannes Appel, a German from the manufacturing sector. The Secretariat nominated Mr. Heinrich A. Kunz, a German from the harmonics testing sector. All previous Chairs of TC77 have been from the electric power and communications industries. The US believes it is time for a change. The US is actively working to get Mr. Kunz rejected and Mr. Appel accepted.

The fourth USCEMC Harmonics Workshop will be held at the BWI Airport Sheraton Hotel. The registration fee is \$275.00 and is due by 4/15/00. The proposed agenda and registration forms are available from Ken at kenv@nsicorp.com.

IEC 61000-3-2 (Harmonics) and IEC 61000-3-3 (Inrush) are scheduled to go into effect in the EC by 1/1/01. The US contends that this is pre-mature as extensive revisions are scheduled to be completed. The US believes this goes against the WTO's efforts to promote free trade. The LFEIC is working with the US Dept. of State, US Dept. of Commerce, US Congress and President Clinton to file the appropriate complaints and to put forth our US position. The US is putting forth its position to

have the EC delay implementation of IEC 6000-3-2 and 3-3 to beyond the 2004 rework completion date by any and every means possible.

TC77A/WG1 is working on IEC 61000-3-2 on Harmonics. CENELEC is pushing the IEC for a fast vote on a band-aid amendment to meet the 1/1/01 date. Natalie Baumier, Secretary to TC77A, states that an international agreement has been reached and the IEC will hopefully publish it soon. The US disagrees with this and is filing a complaint.

A fourteen-member delegation from the US attended the Organisation for Economic Co-operation and Development (OECD) Special Meeting on Technical Barriers to Trade: International Standards and Conformity Assessment. The LFEIC made a presentation of our case. It was well received by everyone except the EC delegate, Brian Jenkinson and the Spanish delegate, Suzanne Troje.

6.2.6.5 Vannice reported that a power quality task group has been formed. Andy Topinka is the chair.

6.3 Report on Liaisons to Other Industry Groups

6.3.1 NFPA

Ted Paget moved that Karl Ruling be Larry Schoeneman's alternate when he cannot attend technical committee meetings. The motion was seconded. The motion was accepted unanimously by a show of hands.

6.3.2 EMC Workshops/LFEIC

This was covered under the EPWG report above, and always is. Ruling was directed to omit it from future agendas.

6.4 Action items from last meeting

6.4.1 Mike Wood and Bill Groener will write a thank you letter to Jack Schmidt.
Done.

6.4.2 Larry Schoeneman agreed to speak to Joe Tawil to see if there was cause for GAMPRODUCTS declining to contribute its VAT refund.
Done.

6.4.3 People were given assignments as to whom they should ask for new donations or fulfillment of pledges already made, so they need to carry out those assignments.
Covered in 6.1.2 above.

6.4.4 We should figure out some other ways of funding, rather than going to the same donors again and again.
Groener pointed out that we are now selling swag.

6.4.5 Rubinstein will report back on Tien's response to the proposal that ESTA should get \$500 or 50% of the profit, whichever is greater, from the LDI Institute sessions run by ESTA.
Lori Rubinstein will meet with Linda McKinney. It's McKinney's decision.

6.4.6 Bill Groener and Mike Wood are to write a letter responding to Michael Akrep stating that the procedure has not been violated, but that we appreciate his concern. It shall remind him that he has an opportunity object to the resolutions to his comments if he finds them unacceptable.
Done.

6.4.7 People are to meet for another strategy session from 10:00 a.m. to noon on Wednesday, March 22, in the ESTA Suite at the Adam's Mark Hotel in Denver, CO.
Groener reported that about eight people met in the suite. From that meeting it was decided that the TSC needs to take a more active role in supervising the working groups. One way would be to do an

annual performance review of each working group. Groener said that a task group is needed to create a performance review document to be sent to working group chairs. The volunteers were: Ted Paget, Tim Bachman, Steve Carlson, and Amy Paget (whose services were offered by Ted Paget).

Another idea was to create a standards-promoting event to get industry buy-in. This would feature respected industry leaders and outside leaders to speak to the importance of standards. The audience would be a mixture of the converted and the skeptics.

Groener also reported that the group decided it would be good to set up a non-profit foundation to support the Technical Standards Program. Funding would be available for a non-profit foundation that would not be available for a trade association.

6.4.8 All who can should attend the 40th birthday bash for USITT on the evening of March 22. Mitch Hefter urged people to attend if they can.

6.4.9 Colin Waters asked that Karl send him an electronic version of the Working Group Meeting Guide for Chairpersons via email.
Done. Ruling announced that it is also posted on the ESTA website.

6.4.10 Karl is to add times to the agenda for the next meeting. (I've started an agenda with times for the March meeting. It will need to be okayed by Bill Groener, and late developing agenda items will need to be added.
Done. This meeting's agenda had times added to serve as a scheduling guide.

6.4.11 Anyone wanting to change the meeting times for the July meetings from what they were at the January meetings will need to let Lori know very soon.
Done.

7 New Business — Floors working group

Tim Hansen was directed by the TSC to head an ad hoc committee to ascertain interest in this possible working group. The group would work on possible standards or recommendations for floor resilience and coefficient of friction, and possibly other floor-related topics that affect live performance. Ruling asked for some kind of notice to send out as a call for interest.

8 Other business

Eddie Kramer reported that the NFPA is going to write a building code to issue in 2002. He suggested that ESTA may want to participate in it.

Rodney Kaiser moved that ESTA send a letter to NFPA expressing interest in what is happening and an interest in being kept apprised. The motion was seconded. The motion was accepted unanimously by a voice vote.

9 Schedule for future meetings

Lori Rubinstein announced that the July meetings would be at the Dallas/Ft. Worth Marriott at the following times:

FRIDAY, JULY 14TH

8am - 12pm Electrical Power Working Group
1pm - 5pm Technical Standards Committee
7pm - 11pm Rigging Working Group
7pm - 11pm DMX Task Group (to be confirmed)

SATURDAY, JULY 15TH

9am - 6pm Executive Committee
9am - 6pm Control Protocols Working Group
1pm - 11pm DMX Task Group

1pm - 5pm Photometrics Working Group
7pm - 11pm Fog and Smoke Working Group
7pm - 10pm Certification Program Committee

SUNDAY, JULY 16TH

8am - 1pm DMX Task Group (to be confirmed)
9am - 1pm Executive Committee
9am - 4pm Certification Program Committee
9am - 6pm ACN Task Group

MONDAY, JULY 17TH

9am - 6pm ACN Task Group

Rubinstein described the new travel program with NFT Travel, which should cut attendees expenses and eliminate the Saturday night stayover requirement.

Rubinstein announced that the LDI trade show will be the 20-22 of October. Meeting times were not set yet.

10 Adjournment

Groener declared the meeting adjourned at 4:55 p.m. There were no objections.

Technical Standards Committee Membership at the End of the March 22, 2000 Meeting

Name	Company	Parent Co./Org Represented	Vot. Stat.
Tera Johnson	Electronic Theatre Controls, Inc.	Electronic Theatre Controls	P
Mike Wood	High End Systems	High End Systems	P
Edwin S. Kramer *	IATSE, Local 1	I.A.T.S.E. Local 1	P
Larry Schoeneman	Interesting Products, Inc.	Interesting Products, Inc.	P
Mike Garl	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	P
Edward Paget	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	P
Ken Vannice	NSI Corporation	Leviton Manufacturing Co., Inc.	P
Tim Cox	PLASA	PLASA	P
Tony Douglas-Beveridge	PLASA Standards Office	PLASA	A
Bill Groener	Production Arts (NJ)	PRG	P
Mitch Hefter	Rosco/Entertainment Technology	Rosco Laboratories	P
Frank Stewart	Specialty Tech Services	Specialty Tech Services	P
Colin Waters	TMB Associates	TMB Associates	P
Jay O. Glerum	Jay O. Glerum & Associates, Inc.	USITT	P
Rodney F. Kaiser	J.R. Clancy Inc.	USITT	A
Florian Von Hofen	VPLT	VPLT	P
Eckart Steffens	SOUNDLIGHT	VPLT	A

* Kramer's membership was approved by the ESTA Board at the March 23, 2000 Board meeting.

**Summary of TSC Ballot (Rig/99-2039)
to Send BSR E1.13 (Rig/99-2021) to First Public Review**

Statement: It was moved and seconded at the July 16, 1999 Rigging Working Group meeting to send the draft American National Standard, BSR E1.13 — Entertainment Technology — Design, Installation, Inspection, and Maintenance of Permanently Installed Hoisting Equipment for Overhead Suspension of Scoreboards, and Video, Lighting, and Audio Equipment in Sporting Facilities (Rig/99-2021), to first public review. The vote passed by letter ballot with the required supermajority. The two dissenting voters accepted the resolutions offered to address their concerns at the November 17, 1999 working group meeting.

Question: Do you accept the motion to send the draft American National Standard BSR E1.13 — Entertainment Technology — Design, Installation, Inspection, and Maintenance of Permanently Installed Hoisting Equipment for Overhead Suspension of Scoreboards, and Video, Lighting, and Audio Equipment in Sporting Facilities (Rig/99-2021), to first public review?

Ballot closed at 3:35 p.m. on January 8, 2000 with the receipt of the last ballot. The ballot period was scheduled until 3:00 p.m. ET, January 19, 2000.

Results: Motion passed with a supermajority. Thirteen votes out of a possible 13 "accept." No negative votes and no substantive comments.

Name	Company	Representing	Voting status	Accept	Accept in principle	Accept in part	Reject	Abstain	Comments
Mike Wood	High End Systems	High End Systems	P	X					
Larry Schoeneman	Interesting Products, Inc.	Interesting Products, Inc.	P	X					
Mike Garl	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	P	X					
Edward Paget	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	P	X					
Ken Vannice	NSI Corporation	Leviton Manufacturing Co., Inc.	P	X					Editorial. Pointed out a formatting artifact in the PDF file, which was fixed.
Tim Cox	PLASA	PLASA	P	X					
Bill Groener	Production Arts	PRG	P	X					
Steve Carlson	Rosco/Entertainment Technology	Rosco Laboratories	P	X					
Mitch Hefter	Rosco/Entertainment Technology	Rosco Laboratories	P	X					
Frank Stewart	Specialty Tech Services	Specialty Tech Services	P	X					
Colin Waters	TMB Associates	TMB Associates	P	X					
Jay O. Glerum	Jay O. Glerum & Associates, Inc.	USITT	P	X					
Eckart Steffens	SOUNDLIGHT	VPLT	A	X					
				13	0	0	0	0	One

(Document number Rig/2000-2009)