

**Minutes
 Technical Standards Committee
 Friday, 13 July 2001
 Dallas/Ft. Worth Airport Marriott
 Irving, Texas**

Chairperson: Bill Groener; Fourth Phase New Jersey (PRG); principal

Recording secretary: Karl G. Ruling, ESTA

Members attending: Bill Maiman; ESTA; ex officio
 Edwin S. Kramer; IATSE, Local 1; principal
 Frank Stewart; Specialty Tech Services; principal
 Ken Vannice; NSI Corporation (Leviton Manufacturing Co., Inc.); principal
 Lori Rubinstein, ESTA, ex officio
 Mike Garl; James Thomas Engineering, Inc.; principal
 Mike Wood; High End Systems Inc.; principal
 Mitch Hefter; Entertainment Technology (Rosco); principal
 Rodney F. Kaiser; J.R. Clancy Inc., representing USITT; principal
 Tera Johnson; Electronic Theatre Controls, Inc.; principal

Visitors: Ron Dahlquist; DADCO
 William Conner; Schuler & Shook, representing ASTC
 Kent Jorgensen; IATSE Local 80
 Tim Hansen; Oasis Stage Werks
 Roger L. Lattin; IATSE Local 728
 Arnold Tang
 Bob Luther; Lex Products
 Jimm Cash; Lex Products

1 Opening remarks

Bill Groener called the meeting to order at 13:04. Groener noted that we have many new faces present and asked that those present introduce themselves, which they did.

2 Attendance and membership

An attendance sheet was circulated that was hot pink on the front and fluorescent green on the back. Members and visitors were instructed to sign-in on the attendance sheet.

2.1 Welcome to visitors

Groener welcomed all. Groener noted the presence of a quorum with nine voting members. He explained to the visitors the purpose of the TSC as an oversight committee.

2.2 Membership

The membership of the consensus body effective during this meeting was:

Name	Company	Voting status
Tera Johnson	Electronic Theatre Controls, Inc.	P
Mitch Hefter	Entertainment Technology (Rosco)	P
Mike Wood	High End Systems Inc.	P
Edwin S. Kramer	IATSE, Local 1	P
Larry Schoeneman	Interesting Products, Inc.	P
Mike Garl	James Thomas Engineering, Inc.	P
Edward Paget	Jones & Phillips Associates, Inc.	P
Ken Vannice	NSI Corporation (Leviton Manufacturing Co., Inc.)	P

Tim Cox	PLASA	P
Tony Douglas-Beveridge	PLASA	A
Bill Groener	Fourth Phase New Jersey (PRG)	P
Frank Stewart	Specialty Tech Services	P
Colin Waters	TMB Associates	P
Rodney F. Kaiser	J.R. Clancy Inc. representing USITT	P
Jay O. Glerum	Jay O. Glerum & Associates, Inc. representing USITT	A
Florian von Hofen	VPLT	P
Eckart Steffens	SOUNDLIGHT representing VPLT	A
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3 Approval of minutes from the previous meeting

Mike Garl moved that the draft minutes of the March 2001 meeting 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

The following patent statement was read by Bill Groener:

"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."

No patent issues were brought to the attention of the assembly.

Groener then read the following statement of anti-trust policy:

"The ESTA Board of Directors and the leadership of this Technical Standards Committee will reject or nullify any actions that unlawfully restrain trade. Anyone who feels that such an action is being or has been taken is requested to bring that 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 ESTA president immediately.

"ESTA legal counsel has informed us that violations of the anti-trust laws can have serious consequences. Individuals engaged in certain unlawful conduct can be found criminally liable. An individual convicted of a criminal violation of the Sherman Act may be fined as much as \$100,000 and imprisoned for up to three years. An easy to read pamphlet describing restraint of trade issues is available from the Technical Standards Manager."

No anti-trust issues were brought to the attention of the assembly.

5 Approval of agenda

Lori Rubinstein asked that a brief report on PR and a discussion of meeting hotels be added under "Other business." She also asked that the distribution of ESTA committee contact information be added to the agenda.

Mike Garl asked that we discuss a draft German rigging standard. Ruling put that as part of the Rigging Working Group report.

Mike Wood moved that the agenda be accepted with these additions. The motion was seconded. The motion was approved with a show of hands.

6 Distribution of contact information.

Lori Rubinstein distributed ESTA committee contact lists and asked for corrections. Ken Vannice said that his fax and phone numbers should be listed as 503-404-5663 and 503-404-5563, respectively.

7 Old business

7.1 Financial reports

7.1.1 Treasurer's report

Frank Stewart reported that we are on track with our expenses and income. He asked for budget requests from the working groups. Bill Maiman and Karl Ruling were directed to collect them. There were no questions about the treasurer's report.

7.1.2 Status of contributions and pledges

Lori Rubinstein reported that the investors in innovation program has been well received. She also reported that we had received a generous donation from Ralph Weber, the previous Technical Standards Officer.

Rubinstein reported that there had been one negative comment about the program, which is that it does not recognize those companies that have donated by working on standards. Rubinstein says that recognizing these contributions shall be addressed.

Work continues to try to raise money in other ways, Rubinstein reported.

7.1.3 Accounting of TSP documents sold and on-hand

Lori Rubinstein reported that the accounting sheet from USITT only goes through May. The E1.3 (analog control) and E1.9 (photometric data reporting) standards only recently arrived at the USITT office and were beginning to be sold.

7.1.4 Swag report

Karl Ruling was directed by the Chairman to delete this from future agendas. Lori Rubinstein said that the swag is sold mainly at trade shows and that few sales happen between the shows.

7.2 Working group reports

7.2.1 Camera Cranes

7.2.1.1 E1.12, American National Standard for camera cranes task group

Kent Jorgensen reported that the task group working on this project includes four manufacturers working on the manufacturing section, three companies in the rental business working on the maintenance section, and three users to work on the use section of the standard.

7.2.1.2 Operators handbook task group

Kent Jorgensen reported that they had had problems because the March meeting was cancelled. Many showed up for the meeting anyway, and so they met, even though it was not a formal working group meeting then. Jorgensen reported that the text was pretty well set and that the illustrations had been started. The consensus of the group is that the document should go to a public review.

There was a discussion of whether public review is necessary and what benefits it might offer.

Groener summarized the TSC's recommendation on how to proceed:

- (a) When all the parts of the book are together, it goes to working group to vote for public review.
- (b) The TSC will then vote on the public review motion.
- (c) The book will go to public review and receive comments.
- (d) The book will go back to the working group for incorporation of the comments and editing.
- (e) The finished book will be forwarded to the TSC and Board before it is published.
- (f) The public review/editing cycle may be repeated as often as necessary until the working group feels that the handbook is finished.

7.2.2 Control Protocols

7.2.2.1 E1.11 (DMX)

Mitch Hefter reported that there were still a significant number of comments to resolve from the last public review and that resolving them will be the major portion of the task group's work at this round of meetings.

7.2.2.2 E1.17 (ACN)

Lori Rubinstein and Karl Ruling said that the rescheduling of the ACN task group meetings had caused problems. Ruling reported that there had been some complaints from working group members that moving the task group meetings to Portland, OR, had moved them out of reach of the rest of the working group. Rubinstein pointed out that ESTA had been stuck with meeting room cancellation fees, because the ESTA staff was not notified until late that the ACN task group was not meeting. This was an unnecessary expense, since the task group had decided to move the meeting site at the last task group meeting in March, but had not communicated that decision until more recently. Ruling pointed out that late cancellations or reschedulings also cause problems with our duty to announce meetings and to keep them public.

There was a discussion of how to avoid problems with cancelled or moved task group meetings in the future.

Ken Vannice moved that the minutes of a working group meeting shall note the scheduling of any task group meetings. If a task group meeting is rescheduled, the task group chairs shall notify the Executive Director and the Technical Standards Manager and the all members of the working group. Vannice's motion was seconded. It was accepted unanimously by a show of hands.

7.2.3 Fog and Smoke

7.2.3.1 Equity/League study

Ruling reported that the Equity/League study had failed to find a significant health risk with theatrical fog as it is used on Broadway. It has proposed ceiling levels, which appear to the members of the F&S Working Group who have expressed an opinion to be reasonable.

7.2.3.2 E1.5, glycol/glycerin fog

Ruling said that the ceiling levels proposed by ENVIRON and the Mt. Sinai School of Medicine in the Equity/League Study may provide the working group with the peak exposure level values needed to complete the draft standard. The working group has a version of the draft E1.5 standard that has those values plugged in. If the working group finds it acceptable, there should be a motion at the F&SWG meeting to send the draft document to public review.

7.2.3.3 Sampling project

Ruling reported that we've been collecting data, but at a slow rate. At the USITT Conference Bill Hektner had collected the business cards of a lot of academics who had said they were interested in participating. Sophie Stewart had contacted them and a few had responded, but only a few of them have shows that use glycol fog. Nevertheless, the working group will go ahead with this projects. There is no deadline for gathering the data.

7.2.3.4 Product stewardship

Ruling reported that Larry Schoeneman is trying to hone the ESTA product stewardship program into something more fog-specific. The working group has some fog-specific product stewardship checklists it is developing.

7.2.4 Photometrics

7.2.4.1 Samples for E1.9, photometric data presentation standard

Ruling reported that developing some examples of data sheets using the ANSI E1.9-2001 standard is a project of the working group, but that no samples are expected before the LDI meeting. The working group is not meeting in Irving as part of this meeting cycle.

7.2.4.2 Public information project

Ruling reported that there had been a brainstorming session at the last meeting to identify topics that could be developed into Protocol articles and then into chapters in a book.

7.2.5 Rigging

7.2.5.1 E1.4 – Manual Rigging Systems Standard

Rodney Kaiser said that the E1.4 task group had drafted responses to all the public review comments and a written a revised standard. The working group will decide at this evening's meeting if they approve of the resolutions and the new document.

7.2.5.2 E1.6 – Powered Rigging Systems

Mike Garl reported that there is a new version of the document to be considered by the working group.

7.2.5.3 E1.7 – Recommended Practice for Flying Performers

Mike Garl said that the combined motion to accept the comment resolutions and the new document had been rejected by letter ballot. The author of the draft standard had asked that it not go to public review until he'd had a chance to look at a draft British standard for performer flying, and the working group had largely acceded to his wishes. There also had been some objections to some of the comment resolutions.

7.2.5.4 E1.8 – Speaker Enclosures Rigging Standard

BSR E1.8 is now in public review, reported Garl.

7.2.5.5 E1.10 – Structural Requirements

There was a brief discussion of Harry Donovan's letter in response to the cancellation of the BSR E1.10 project. That draft standard wouldn't have addressed the problem Donovan identified, which is not knowing a building's design loads.

7.2.5.6 E1.15 – Manufacture, Assembly, and Use of Theatrical Boom & Base Assemblies

Mike Garl said that there is a German standard for lighting stands, and that it has been translated and reviewed by the working group. The BSR E1.15 task group is still working on our standard.

7.2.5.7 Portable roof systems

Mike Garl reported that Keith Bohn is heading this project. No documents have been offered to the working group yet.

7.2.5.8 German code of practice for using trusses

Mike Garl reported that VPLT in cooperation with VBG has written a code of practice for using trusses, VPLT SR1.0. It is now in public review, and PLASA has made an English translation available to its members.

7.2.6 Electrical Power

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

Bob Luther reported that a power feeder survey is being circulated. At the morning's EPWG meeting, the project was voted to be an American National Standard, so it is now BSR E1.18.

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

Bob Luther reported that the task group wrote a document, but that it did not appropriately address our identified concerns. The task group has been redirected by the working group, and all seem to be happy with the new direction. This project also has been voted to become an American National Standard, so it is now BSR E1.19

7.2.6.3 E1.16 – Task group to write a configuration standard for HMI power cables

Luther reported that Warren Mays is no longer with TMB Associates and so no longer with the working group. TMB's Brian Dowd has taken over the project. A draft document was submitted to the working group, and a motion was made at the morning's meeting to send it to public review. The motion will be decided by letter ballot.

7.2.6.4 EMC task group (including EMC Workshops/LFEIC report)

Ken Vannice reported that Phase 1 of the LFEIC's research on European power quality has been completed. Its results do not support the current limits on low frequency power line emissions at the product level. The limits should be relaxed, not expanded. The next step, Phase 2, will involve measuring the identical residences for a period of one week in order to determine:

1. The validity of the general conclusions reached during the Phase 1 study, which is that harmonic distortion in low-voltage European networks is much lower than what has been predicted by some analytical studies, with all sites measuring below the 8% V_{THD} compatibility level.
2. To identify the increase in voltage distortion over a period of one year. This would also test the hypothesis that as the use of distributed nonlinear loads increases; the voltage distortion of the supply network will also increase.
3. To see the difference in voltage harmonic distortion at different times of the year due to the differences in the ratio of non-linear loads to linear loads in use at the time. Most likely the time of the year that voltage distortion measurements will be made for the Phase 2 study will be different than the Phase 1 study, thus shedding some light on the seasonal variation of harmonic voltage distortion.

If it is possible to have access to the utility low-voltage side of the network as well as the medium-voltage side of the network, then another useful activity during the Phase 2 study would be to simultaneously measure at different levels of the network and determine how network impedance affects the voltage-distortion profile across the network.

More money is being sought to support Phase 2, reported Vannice. He recommended that our money is better spent elsewhere since the work has all been for residential systems, which are not our concern. However, the LFEIC is a valuable source of information, so we should support it at some minimal level to ensure our access to the LFEIC.

7.2.6.5 Power quality task group

Luther reported that Andy Topinka was not at the working group meeting, so little was done on this project. However, the working group plans to continue to look at Topinka's draft document.

7.2.6.6 Discussion of the rules for cabling and the assumptions that are behind them.

It was reported that there had been a discussion of the origin of the rules that are in the NEC (ANSI/NFPA 70). Ken Vannice had agreed to write an article for Protocol about the rules and assumptions.

7.2.7 Floors

Tim Hansen reported the DIN standard for sports floors had been obtained and translated so that it can be consulted. The upcoming meeting will be attended by a physical therapist in person and a doctor by phone.

7.3 Report on liaisons to other industry groups

7.3.1 ASTC

Ted Paget, who usually reports on ASTC matters, was not present. Bill Conner, who was attending his first TSC meeting, did not have any comments at this time.

7.3.2 NFPA

Karl Ruling said that he'd be attending the SAF-AXM (assembly occupancies technical committee) meeting next week. Hot items of discussion are expected to include fire curtains. Bill Conner said that there is an unpublicized meeting scheduled on the Sunday before to discuss fire curtains.

Mitch Hefter said that the NEC (ANSI/NFPA 70) panels are being reorganized. Code Panel 15 now will take care of health facilities in addition to its other interest areas, but will no longer handle batteries and fire pumps.

7.3.3 UL

No report.

7.4 P&P Revision

Karl Ruling said that Lori Rubinstein had given him some comments, which he intended to work into the document. He asked for more comments from others.

7.5 Review of action items from last meeting not covered above

There were none.

8 New Business

8.1 Standardized policy for hard copy or web publishing

There was a discussion of developing an uniform policy for what gets published in hard copy and what goes on the Web.

Eddie Kramer moved that the TSC chair and ESTA president, in consultation with the ESTA staff, decide on a case by case basis how TSP documents shall be published with a prejudice toward web publication. The motion was seconded by Mitch Hefter. The motion was approved unanimously with a show of hands.

8.2 Patent licensing form

There was a discussion of whether we should use the IEEE's standard letter for statements regarding the licensability of patents or the ANSI form for the same purpose.

Mike Wood suggested that we table this until the new version of the P&P is accepted. Version 4 recently presented to the TSC seems to address the problem and either the ANSI form or the IEEE form letter would address the requirements in version 4.

8.3 Moving lights reporting proposal

Paul Pelletier from Martin Canada had sent an email to Karl G. Ruling proposing a standard for defining a common reporting form for the parameters of robotic luminaires. He had suggested that the standard might require the reporting of:

- Complete photometric data with candlepower
- Precise information about pan/tilt degrees and speed
- List of gobos with their order and bitmap files in 200 x 200 resolution
- RGB equivalents for each color used in the luminaire
- Strobe frequency in hertz

By consensus, this proposal was referred to the CPWG for consideration.

9 Other business

9.1 PR matters

9.1.1 Lori Rubinstein reported that IATSE convention is being held and that the International had requested TSP information for the delegate packets.

9.1.2 Lori Rubinstein reported that we have a new version of the KSA fog & smoke outreach campaign proposal. It is tighter and better focused.

9.2 Hotel matters

9.2.1 Lori Rubinstein reported that she and Frank Stewart had visited the new Marriott South. They were impressed favorably by the hotel and the staff.

9.2.2 Lori Rubinstein reported that the concierge floor on 18th floor will be open to us on Friday and Saturday nights. Room 1915 is the conference room open for impromptu meetings.

9.2.3 Lori Rubinstein reported that the Marriott Café will be available for seating at night. We can sit there to avoid the smoke in Pitcher's and order food from the Pitcher's menu.

10 Schedule for future meetings

The LDI TSP meeting schedule was handed out by Lori Rubinstein. The TSC meeting is scheduled for Wednesday, 31 October 2001, 1:00 to 5:00 p.m. All the LDI TSP meetings are scheduled to take place at the Rosen Center Hotel. Mitch Hefter said that his Wednesday October 31 DMX task group meeting might need to be cancelled because he needs to be at an LDI session.

The following TSP meetings will be held at the USITT Conference and Stage Expo in February, Rubinstein reminded the assembly. The meetings following that may be May 3-5, and then July 26-28. LDI next year will be in October in Vegas.

11 Adjournment

Mike Garl moved that we adjourn. The motion was seconded. By voice vote, the motion was approved unanimously. Groener declared the meeting adjourned at 16:40.

Technical Standards Committee Membership List and Contact Information

Name	Company	Voting status
Tera Johnson	Electronic Theatre Controls, Inc.	P
Mitch Hefter	Entertainment Technology (Rosco)	P
Mike Wood	High End Systems Inc.	P
Edwin S. Kramer	IATSE, Local 1	P
Larry Schoeneman	Interesting Products, Inc.	P
Mike Garl	James Thomas Engineering, Inc.	P
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Florian von Hofen	VPLT	P
Eckart Steffens	SOUNDLIGHT representing VPLT	A
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