Minutes
Technical Standards Committee
Wednesday, 16 October 2002
Las Vegas Hilton

Chairman: Paul Vincent; Vincent Lighting Systems; principal

Recording secretary: Karl G. Ruling, ESTA

Members attending: William Conner; Schuler & Shook Inc., representing the Amer. Society of Theatre Consultants; principal
Steve Terry; Electronic Theatre Controls; principal
Mitch Hefter; Entertainment Technology (Genlyte Thomas Group LLC); principal
Mike Wood; High End Systems Inc.; principal
Larry Schoeneman; Interesting Products, Inc.; principal
Mike Garl; James Thomas Engineering, Inc.; principal
Edward Paget; Jones & Phillips Associates, Inc.; principal
Ken Vannice; ColorTran (Leviton Manufacturing Co., Inc.); principal
Tim Cox; PLASA; principal
Frank Stewart; Specialty Tech Services; principal
Colin Waters; TMB; principal
Eckart Steffens; SOUNDLIGHT, representing VPLT; alternate
Lori Rubinstein; ESTA (ex officio)

Visitors: Tim Hansen; Oasis Stage Werks
David Saltiel; Bell, Boyd & Lloyd LLC
Roger L. Lattin; IATSE Local 728
Steve Carlson; High Speed Design

1 Opening remarks
Paul Vincent asked those in attendance to turn off their mobi l phones. He reminded people of the short meeting period and the need to cover the agenda expeditiously.

Paul Vincent also mentioned the ESTA Buck program, and said that Lori Rubinstein would give the details later. Vincent also pointed out that Monday, October 14 had been International Standards Day.

2 Attendance and membership
Vincent noted that a quorum was present.

2.1 Taking attendance
A chartreuse sign-in sheet was circulated. The voting body during this meeting was:

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Representing</th>
<th>Voting status</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Conner</td>
<td>Schuler &amp; Shook Inc.</td>
<td>Amer. Society of Theatre Consultants</td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Robin Crewe</td>
<td>Wrightson, Johnson, Haddon &amp; Williams, Inc.</td>
<td>Amer. Society of Theatre Consultants</td>
<td>A</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Steve Terry</td>
<td>Electronic Theatre Controls</td>
<td></td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mitch Hefter</td>
<td>Entertainment Technology (Genlyte Thomas Group)</td>
<td>Amer. Society of Theatre Consultants</td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mike Wood</td>
<td>High End Systems Inc.</td>
<td></td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Edwin S. Kramer</td>
<td>I.A.T.S.E, Local 1</td>
<td></td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Larry Schoeneman</td>
<td>Interesting Products, Inc.</td>
<td></td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mike Garl</td>
<td>James Thomas Engineering, Inc.</td>
<td></td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Ken Vannice</td>
<td>ColorTran (Leviton Manufacturing Co., Inc.)</td>
<td></td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Tim Cox</td>
<td>PLASA</td>
<td>PLASA</td>
<td>P</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Tony Douglas-Beaveridge</td>
<td>PLASA</td>
<td>PLASA</td>
<td>A</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
2.2 Welcome to visitors

Vincent welcomed all and thanked them for donating their time and talents. Vincent stated that the meeting is open to guests, but that he, the chairman, reserves right to limit comments from guests in the interest of keeping on schedule. Vincent also noted that the concerns of guests can also be added to the agenda, but that it is better to do this in advance of the meeting. Vincent invited people who would like to add items to the agenda of a future meeting to contact him (Paul Vincent) or Karl G. Ruling in advance of that meeting.

Self-introductions were omitted at this meeting because all present knew each other.

3 Approval of minutes from the previous meeting

Paul Vincent noted that Kent Jorgensen's name had been misspelled and that Ed Clare had been present for at least part of the meeting, so these corrections needed to be made to the visitors list. Mitch Hefter moved that the minutes of the July meeting with these corrections be approved. The motion was seconded. The motion to approve the corrected minutes was approved unanimously with a show of hands.

4 Call for patents

The following was read aloud by Paul Vincent:

"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."

There were no comments from the assembly.

5 Anti-trust statement

The following was read aloud by Paul Vincent

"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 issues were brought to the attention of the assembly.
6 Approval of agenda
Steve Terry moved that the draft agenda be approved. The motion was seconded. The motion was approved unanimously.

7 Distribution of ESTA committee contact information
Lori Rubinstein distributed the ESTA committee contact information. Corrections were offered.

The ESTA LDI event schedule also was distributed for the information of TSC members.

8 Old business

8.1 Financial reports

8.1.1 Treasurer’s report
Frank Stewart reported that the program is within budget projections to date. The budget for next year will go to the Board tonight. It will have slightly less money for TSP operations. The main changes were moving money out of the individual working group budgets, where it had not been spent, and moving it to main office administration.

Noting that the changes had cut the working group budgets to nil, Stewart asked for ample warning if any projects were being considered that would need funding.

8.1.2 Status of contributions and pledges
Lori Rubinstein reported that the financial pledges are being honored. We expect to collect all the pledges by the end of the year, or slightly after. She reported that Colin Waters will spearhead the VAT refund donation effort again.

8.1.3 Accounting of TSP documents sold and on-hand
Lori Rubinstein reported that there had been no sales during August and September.

8.2 Working group reports

8.2.1 Camera Cranes
Ruling reported that he’d been told that the camera crane operator’s manual will be submitted to the TSC soon.

8.2.2 Control Protocols

8.2.2.1 E1.11 (DMX)
Mitch Hefter reported that the task group has been downsized to six principals and the chair, plus 6 observers. The group is in comment resolution on the second public review, with the intent of resolving the 116 comments for CPWG action in January 2003. Active participation in the Task Group meetings at LDI ’02 will be limited to the Task Group only in order to facilitate processing of the comments.

He said he was disappointed in the large number of comments from task group and working group members that could have and should have been addressed prior to public review, as well as the number of comments that provide no suggested text.

8.2.2.2 E1.17 (ACN)
Steve Carlson praised the work that Dan Antonuk has been doing in modifying the document in response to task group comments, sometimes in just a matter of hours. Carlson reported that a version 1.0 suitable for public review in January is a goal.
8.2.2.3  E1.20 (Remote Device Management)
Steve Terry said that the draft document is making progress, and there is tremendous enthusiasm for RDM. There will be RDM prototype devices shown on the LDI tradeshow floor.

8.2.3  Fog and Smoke

8.2.3.1  E1.5 - Glycol and glycerin fog standard
Larry Schoeneman reported that the draft standard is in public review through December 10.

8.2.3.2  New general fog standard
Schoeneman reported that an initial outline had been drafted and submitted to the working group by Karl Ruling. The distribution didn’t meet the two-week rule, but the group probably will discuss it.

Schoeneman also mentioned the Dr. Alan Kao from ENVIRON International had done some more fog machine/fluid calibration testing at Schoeneman's facility in Chicago.

Mike Wood asked Ruling for an update on ESTA's fog testing program. Ruling reported that there had been a fair amount of interest in receiving more information, but that only one company had rented the fog testing equipment so far.

8.2.4  Photometrics
Ruling stated that all there was to report is contained in the draft minutes of the July meeting. The group is mainly involved in vetting the draft IESNA standard for measuring the light output of stage and studio luminaires.

Paul Vincent praised Bill Klages' article in the recent issue of Protocol about ANSI E1.9.

8.2.5  Rigging

8.2.5.1  E1.2 – Aluminum towers and trusses revision
Mike Garl reported that a revised version of the standard will be discussed at the next working group meeting, which is this evening.

8.2.5.2  E1.4 – Manual Rigging Systems Standard
The document is in public review through November 19, Garl reported.

8.2.5.3  E1.6 – Powered Rigging Systems
Garl reported that the working group will consider a comment resolution document tonight. Hans van der Moolen has some concerns that have been distributed to the working group, and the group will consider them as part of the discussion to accept the resolutions.

8.2.5.4  E1.7 – Recommended Practice for Flying Performers
Garl reported that the working group will consider a comment resolution document tonight.

8.2.5.5  E1.8 – Speaker Enclosures Rigging Standard
Garl reported that the document is in public review through December 10.

8.2.5.6  E1.15 – Manufacture, Assembly, and Use of Theatrical Boom & Base Assemblies
Ruling reported that the working group had voted with a clear supermajority to send the draft document to public review. It was now up the TSC to accept that motion, or not.

Mike Garl moved that BSR E1.15 (Rig/1998-2032r7) be sent to public review. The motion was seconded. The motion was passed with a roll call ballot.
<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Representing</th>
<th>Voting status</th>
<th>Accept</th>
<th>Accept in principle</th>
<th>Accept in part</th>
<th>Reject</th>
<th>Abstain</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Conner</td>
<td>Schuler &amp; Shook Inc.</td>
<td>ASTC</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Robin Crews</td>
<td>Wrightson, Johnson, Haddon &amp; Williams, Inc.</td>
<td>ASTC</td>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Steve Terry</td>
<td>Electronic Theatre Controls</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mitch Heffer</td>
<td>Entertainment Technology (Genlyte Thomas Group)</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mike Wood</td>
<td>High End Systems Inc.</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Edwin S. Kramer</td>
<td>I.A.T.S.E, Local 1</td>
<td>P</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Larry Schoeneman</td>
<td>Interesting Products, Inc.</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mike Garl</td>
<td>James Thomas Engineering, Inc.</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Edward Paget</td>
<td>Jones &amp; Philips Associates, Inc.</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ken Vannice</td>
<td>Colortran (Leviton Manufacturing Co., Inc.)</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tim Cox</td>
<td>PLASA</td>
<td>PLASA</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tony Douglas-Beveridge</td>
<td>PLASA</td>
<td>PLASA</td>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Frank Stewart</td>
<td>Specialty Tech Services</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tera Johnson</td>
<td>The Starfish Group</td>
<td>P</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colin Waters</td>
<td>TMB</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rodney F. Kaiser</td>
<td>J.R. Clancy Inc.</td>
<td>USITT</td>
<td>P</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jay O. Glerum</td>
<td>Jay O. Glerum &amp; Associates, Inc.</td>
<td>USITT</td>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Paul Vincent</td>
<td>Vincent Lighting Systems</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Florian von Hofen</td>
<td>VPLT</td>
<td>VPLT</td>
<td>P</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Eckart Steffens</td>
<td>SOUNDLIGHT</td>
<td>VPLT</td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

TOTALS: 16 13 0 0 0 0

Three voters were absent. The motion was approved by a supermajority of 13 of a possible 16 voting in favor.

### 8.2.5.7 E1.21 – Portable roof systems
Garl reported that the task group has been meeting and working to create a first draft.

### 8.2.5.8 E1.22 – Fire curtain systems
Bill Conner, the head of the BSR E1.22 task group, reported that a big meeting to work on the draft document is scheduled for tomorrow (October 17).

### 8.2.6 Electrical Power

#### 8.2.6.1 E1.17 – Task group on a recommended practice for selection, installation, and use of portable feeder cable.
Ken Vannice reported that work on the document is proceeding.

#### 8.2.6.2 E1.18 – Task group for a recommended practice for use of residual current devices in entertainment applications.
Ken Vannice reported that work on the document is proceeding.

#### 8.2.6.3 E1.16 – HMI ballast power cables
Vannice reported that this document is now an approved ANSI standard. It is available on our website and the ANSI Standards Store website for free download.

#### 8.2.6.4 EMC task group (including EMC Workshops/LFEIC report)
Vannice reported that he had no new information from his source at General Electric.

#### 8.2.6.5 Pin connector issue
Vannice reported that, after talking to UL, it is clear that the best thing for USITT and ESTA to do right now would be to make the USITT standard an ANSI standard. He’ll also write to the Chief Engineer to urge resolution to the intermatability problem.
As a sidebar, Vannice reported that there are a lot of changes happening at UL. They now have their first non-technical president, and are finally using computers and cell phones. They will also have standards people that will be in charge of writing the standards, rather than the standards-writing be a job the testing engineers do when they have slack time between tests. There is also a move to harmonize the UL standards with the IEC standards.

8.2.6.6 Task lists
Vannice reported that the working group is using task lists at the end of the meeting to keep the working group on track.

8.2.7 Floors
Tim Hansen reported that they had a meeting this morning. They expect to have a scope statement and an outline for a standard by the January meeting. He reported that there is an ANSI committee that deals with pedestrian slip resistance. One of the guys on it has sent info about slip resistance testing equipment.

Hansen also reported that Mark Foley, a recognized expert on dance floors in the UK, is interested in the group now.

Hansen also reported that the first distribution of ESTA bucks was well received this morning.

8.3 Report on liaisons to other industry groups

8.3.1 NFPA
Larry Schoeneman reported no news regarding NFPA 1126 (pyrotechnics) and NFPA 160 (flame effects).


Ruling reported no news regarding his 20 September letter to Steven E. Younis about the delay in appointments of committee members with experience in fire curtains to NFPA 80.

8.3.2 UL
There was no additional news about UL other than the sidebar notes in Ken Vannice's report in 8.2.6.5.

8.4 Review of action items from last meeting not covered above
Ruling was directed to continue to pursue the NFPA committee appointment issue.

9 New Business – Standards Watch at a different frequency
There was a general discussion of the benefits of a more frequent publication schedule and the cessation of paper distribution. The consensus was that Standards Watch should go to an email distribution with a two-week frequency and the paper version should cease. There was a discussion of the possibility of distributing website links.

Steve Terry moved that Standards Watch shall go to a bi-weekly distribution as an emailed PDF of a Word document and that the paper version shall be abandoned. The motion was seconded. The motion was approved by a unanimous show of hands.

The consensus was that this will start at the beginning of next year. This will give time to publicize the change.

10 Other business
Lori Rubinstein explained the ESTA bucks program.
Eckart Steffens reported that VPLT is running the Event Academy with what is effectively the German chamber of commerce. Now it is required that people taking the course need to be able to prove a minimum level of electrical skills before the course can be taken. This has been adopted by legislation. This will ensure that everyone working in the field has basic electrical skills.

Paul Vincent asked how we are doing with the abbreviated agenda. Is there enough discussion? Steve Terry praised the speed of this meeting. He feels that this is expedient. We don't need the review of information that is printed in working group minutes.

There were no negative comments.

Frank Stewart asked that PDF documents be sent out with the security set so that notes can be added to the documents. Ruling agreed to change the default security settings on his copy of Acrobat Distiller.

11 Schedule for future meetings
Lori Rubinstein pointed out the schedules and asked committee chairs to review the AV requirements. She asked that the AV requests be cancelled if they are not needed. She also advised that additions and changes to USITT schedule must be made soon. Time and space is tight there.

12 Adjournment
Steve Terry moved we adjourn. The motion was seconded. The motion was approved by a unanimous show of hands. Paul Vincent declared the meeting adjourned at 14:55.

Post-Meeting Agenda
1 Session on the rules for discussion forum operation for working group and task group leaders
The informative meeting was held 15:30 to 16:11. During this meeting, David Saltiel, ESTA's legal counsel, reviewed the terms and conditions of use of ESTA forums. There was a long discussion of the types of comments that are appropriate or inappropriate on the ESTA forums.

2 Discussion of closer ESTA/PLASA collaboration in the Technical Standards Program
Starting at about 16:30, there was a discussion among TSC members and the ESTA staff of how there might be closer cooperation between ESTA and PLASA in the Technical Standards Program.

At the end of the discussion, Ted Paget moved that the Technical Standards Committee, in conjunction with the ESTA Board of Directors, enter into detailed discussions with PLASA with the view toward developing a partnership in the Technical Standards Program. The motion was seconded. The motion was accepted by a show of hands, with one TSC member voting against the motion, one abstention, and a supermajority of 11 voting in favor.

This meeting adjourned at 17:28.
<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Representing</th>
<th>Voting status</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Conner</td>
<td>Schuler &amp; Shook Inc.</td>
<td>ASTC</td>
<td>P</td>
</tr>
<tr>
<td>Robin Crews</td>
<td>Wrightson, Johnson, Haddon &amp; Williams, Inc.</td>
<td>ASTC</td>
<td>A</td>
</tr>
<tr>
<td>Steve Terry</td>
<td>Electronic Theatre Controls</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Mitch Hefter</td>
<td>Entertainment Technology (Genlyte Thomas Group LLC)</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Mike Wood</td>
<td>High End Systems Inc.</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Edwin S. Kramer</td>
<td>I.A.T.S.E, Local 1</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Larry Schoeneman</td>
<td>Interesting Products, Inc.</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Mike Garl</td>
<td>James Thomas Engineering, Inc.</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Ken Vannice</td>
<td>Colortran (Leviton Manufacturing Co., Inc.)</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Tony Douglas-Beveridge</td>
<td>PLASA</td>
<td>PLASA</td>
<td>A</td>
</tr>
<tr>
<td>Tim Cox</td>
<td>PLASA</td>
<td>PLASA</td>
<td>P</td>
</tr>
<tr>
<td>Frank Stewart</td>
<td>Specially Tech Services</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Tera Johnson</td>
<td>The Starfish Group</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Colin Waters</td>
<td>TMB</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Rodney F. Kaiser</td>
<td>J.R. Clancy Inc.</td>
<td>USITT</td>
<td>P</td>
</tr>
<tr>
<td>Jay O. Glerum</td>
<td>Jay O. Glerum &amp; Associates, Inc.</td>
<td>USITT</td>
<td>A</td>
</tr>
<tr>
<td>Paul Vincent</td>
<td>Vincent Lighting Systems</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Florian von Hofen</td>
<td>VPLT</td>
<td>VPLT</td>
<td>P</td>
</tr>
<tr>
<td>Eckart Steffens</td>
<td>SOUNDLIGHT</td>
<td>VPLT</td>
<td>A</td>
</tr>
</tbody>
</table>