

**Minutes**  
**Technical Standards Committee**  
**Wednesday, 31 October 2001**  
**Rosen Centre Hotel**  
**Orlando, FL**

**Acting chairman:** Mike Wood; High End Systems Inc.; principal

**Recording secretary:** Karl G. Ruling; ESTA

**Members attending:** Colin Waters; TMB Associates; principal  
Edward Paget; Jones & Phillips Associates, Inc.; principal  
Edwin S. Kramer; IATSE, Local 1; principal  
Frank Stewart; Specialty Tech Services; principal  
Ken Vannice; NSI Corporation (Leviton Manufacturing Co., Inc.); principal  
Larry Schoeneman; Interesting Products, Inc.; principal  
Lori Rubinstein; ESTA; ex officio  
Mike Garl; James Thomas Engineering, Inc.; principal  
Mitch Hefter; Entertainment Technology (Genlyte Thomas Group LLC); principal  
Rodney F. Kaiser; J.R. Clancy Inc., representing USITT; principal  
Tera Johnson; Electronic Theatre Controls; principal  
Tim Cox; PLASA; principal

**Visitors:** Bill Conner; Schuler & Shook, Inc., representing ASTC  
Baer Long; MGM Grand Productions  
Roger L. Lattin; IATSE Local 728  
Tim Hansen; Oasis Stage Werks  
David Saltiel; Bell, Boyd & Lloyd, LLC

**1 Opening remarks**

The meeting was called to order by Mike Wood at 13:03. Wood welcomed all and explained that Bill Groener was unable to attend and had asked him to lead the meeting.

**2 Attendance and membership**

Mike Wood noted that a quorum was present.

The full voting body for this meeting (including those absent) was:

Name	Company	Representing	Voting status
Bill Groener	Fourth Phase New Jersey		P
Colin Waters	TMB Associates		P
Edward Paget	Jones & Phillips Associates, Inc.		P
Edwin S. Kramer	IATSE, Local 1		P
Frank Stewart	Specialty Tech Services		P
Ken Vannice	NSI Corporation		P
Larry Schoeneman	Interesting Products, Inc.		P
Mike Garl	James Thomas Engineering, Inc.		P
Mike Wood	High End Systems Inc.		P
Mitch Hefter	Entertainment Technology		P
Tera Johnson	Electronic Theatre Controls, Inc.		P
Tim Cox	PLASA	PLASA	P
Tony Douglas-Beveridge	PLASA	PLASA	A
Rodney F. Kaiser	J.R. Clancy Inc.	USITT	P
Jay O. Glerum	Jay O. Glerum & Associates, Inc.	USITT	A
Florian von Hofen	VPLT	VPLT	P
Eckart Steffens	SOUNDLIGHT	VPLT	A
			14

## **2.1 Taking attendance**

Karl Ruling started circulating a hot pink attendance sheet, and asked all present to sign it in the appropriate places.

## **2.2 Welcome to visitors**

Mike Wood welcomed the visitors.

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

Mitch Hefter moved that the minutes be accepted as written. The motion was seconded. The motion was approved unanimously by a show of hands

## **4 Call for patents and anti-trust statement**

The following statements were read aloud by Mike Wood:

"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 protected intellectual property issues were brought to the attention of the assembly.

"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**

Ted Paget moved that the agenda be approved. The motion was seconded. The motion was approved unanimously by show of hands

## **6 Distribution of ESTA committee contact information**

Lori Rubinstein distributed the committee contact lists. Corrections were offered.

## **7 Old business**

### **7.1 Financial reports**

#### **7.1.1 Treasurer's report**

Frank Stewart noted that we are within our budget for the year. There were no questions. Stewart also noted that the expenses et cetera for the PLASA and LDI shows are not shown because not all those invoices have come in yet.

Frank noted that no budget requests had come from working group chairs, other than from Tim Hansen. Because of this, the budget will be lower next year.

### **7.1.2 Status of contributions and pledges**

Lori Rubinstein reported that we'd done well this year and that we are expected to collect all the pledges. She noted, however, that we have only two pledges for next year so far. We'll have to work on getting some pledges, which will be tough because of the bad state of the economy. She said we'd talk extensively about this at the February meeting.

Rubinstein thanked Colin Waters for heading up the PLASA VAT refund donation effort.

### **7.1.3 Accounting of TSP documents sold and on-hand**

Lori Rubinstein noted that we'd had great sales in June, but little in July and August.

## **7.2 Working group reports**

### **7.2.1 Camera Cranes**

Karl Ruling reported that very slow progress was being made on the working group's projects. The camera crane operators handbook was voted in June to be forwarded to the TSC with a recommendation that it be sent to public review, but now, four months later, the handbook still has not been forwarded. He noted that the working group has adopted a once-a-year schedule, which will make progress even slower. If the group starts work on a camera crane standard, as it planned to do at the June meeting, and continues with the once-a-year schedule, the first public review is not likely before 2009 and the comment resolutions are not likely to be finished 2013.

Roger Lattin said that Cal-OSHA was putting pressure on the AMPTP to provide training and certification. Said that stipends are being offered to workers to take the training classes. He suggested that this might propel the working group to be more active, but it also might divert the energies of the working group's principal authors to training projects.

There was a discussion of possibility of closing down the working group. Alternatively, how could the TSC push the group forward?

Ruling noted that there is a German standard for camera cranes. It was suggested that we could translate this and offer it to the working group if they are interested.

Ted Paget moved that Lori Rubinstein, Bill Groener, and Karl Ruling communicate to PERA the TSC's serious concern about the apparent lack of progress within the working group, and that they report the response back to the TSC at the next meeting. The motion was seconded. The motion was approved unanimously with a show of hands.

### **7.2.2 Control Protocols**

#### **7.2.2.1 E1.11 (DMX)**

Mitch Hefter reported that the task group was half way through drafting resolutions to the public review comments. He suggested that the resolutions might be ready to be offered to the working group at the February meeting.

#### **7.2.2.2 E1.17 (ACN)**

Steve Carlson visited the meeting to give his report. He reviewed the parts of the protocol suite:

- NMP- network management protocol
- DMP – device management protocol
- SDT – sessions data transport
- DDL – device description language.

He said that the task group has been testing the SDT. Basically, it works. They have discovered some scalability issues, and the task group is concerned about them. There have been some immense networks recently put in place in the world and this is the trend for the future, so the task group is aware that the system must be able to accommodate immense networks. Major faults right

now could cause the SDT system to collapse. The task group is trying to ameliorate this vulnerability by optimizing the SDT to cut the traffic on the network, so that catastrophic traffic jams don't happen out of minor accidents.

Carlson also reported that the task group is dealing with control authority issues. In large networks there are questions about what kind of authority hierarchy is appropriate without generating vast amounts of network traffic. The immediate goal for this afternoon's task group meeting is to figure out an appropriate control authority protocol.

Mike Wood asked for a goal that the public can see. Carlson said that there isn't one that would be visible. Lori asked for an estimated time for delivering something obvious. Carlson said that a full set of test code should exist in the first quarter of 2002.

The patent concerns of the representatives from Martin were discussed. It had been proposed that letters be written to all and sundry asking for assurance that they have no patents that would have an impact on the ACN project. There were also some proposals for reading into the record every patent that might have any bearing, no matter how remote, on ACN. ESTA's attorney, David Saltiel, advised that writing letters asking for assurance at this time is inappropriate, but that the informational reporting is part of the ESTA patent discovery process.

#### **7.2.2.3 E1.20 (Remote Device Management)**

Mitch Hefter reported that the project is progressing, but the chair of the task group has been laid off, which may complicate things. Mike Wood says that he has staff at High End that could step in, if need be.

### **7.2.3 Fog and Smoke**

#### **7.2.3.1 E1.5, glycol/glycerin fog**

Larry Schoeneman reported that the vote for public review had passed in the working group with objections only from MDG. The group needs to see if the objections can be addressed, but the document will go to public review.

#### **7.2.3.2 Sampling project**

Schoeneman said that the anti-anti-fog hysteria educational program being developed by KSA includes a proposal for ESTA to help producing groups monitor involves testing by people. This may give us data that will be useful in our standards work. Lori Rubinstein described the KSA educational program.

#### **7.2.3.3 Product stewardship**

Schoeneman described the three fog product stewardship documents. These may be approved at the next F&S meeting or at the meeting in February.

### **7.2.4 Photometrics**

#### **7.2.4.1 Samples for E1.9, photometric data presentation standard**

Ruling reported that Jim McHugh is scheduled to present at the working group meeting examples of how data sheets that use the E1.9 standard might look.

#### **7.2.4.2 Public information project**

Ruling reported that a list of possible topics of magazine articles had been drawn up at the last meeting. The intent is to have working group members write on a number of these topics and then to eventually turn the articles into a book, similar to the Drama Book Publishers' Theatre Crafts How-To's, Volumes I and II.

**7.2.4.3 IESNA photometric testing standard**

Ruling said that the IESNA's LM 73 hasn't been approved yet, so the working group doesn't know what it says. If it addresses our needs, that will be great. If it doesn't the working group intends to draft additional documents that will add to the LM 73 procedures or modify them.

**7.2.5 Rigging**

**7.2.5.1 E1.4 – Manual Rigging Systems Standard**

Mike Garl reported that the document is in public review and will be through December 18.

**7.2.5.2 E1.6 – Powered Rigging Systems**

Mike Garl reported that the document is in public review and will be through December 18.

**7.2.5.3 E1.7 – Recommended Practice for Flying Performers**

Mike Garl reported that the working group has two versions of the document to discuss. They differ on how often and when proof testing is required for a levitation system.

**7.2.5.4 E1.8 – Speaker Enclosures Rigging Standard**

Karl Ruling reported that the document had come back from public review with many comments, and that a set of suggested comment resolutions was expected from the document's task group soon.

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

Karl Ruling pointed out that the document imposes requirements on the stagehand that can only be met by a manufacturer with an engineering staff. For example, it requires a stagehand to do a full structural analysis of a lighting tree, to document the analysis, to affix appropriate warning labels to the tree, and to maintain records of each tree and the components used. The document's requirements are impossible for a stagehand to satisfy so no one is likely to ever use the document. The industry will derive no benefit from it, but lawyers will use it as evidence of a stagehand's negligence whenever an accident occurs with a boom and base assembly.

Colin Waters moved that the TSC recommend to the Rigging Working Group that this standards project be abandoned. The motion was seconded. By roll call, the following votes were recorded on the motion:

Name	Company	Representing	Voting status	Accept	Accept in principle	Accept in part	Reject	Abstain
Bill Groener	Fourth Phase New Jersey		P					
Colin Waters	TMB Associates		P	X				
Edward Paget	Jones & Phillips Associates, Inc.		P	X				
Edwin S. Kramer	IATSE, Local 1		P	X				
Frank Stewart	Specialty Tech Services		P	X				
Ken Vannice	NSI Corporation		P	X				
Larry Schoeneman	Interesting Products, Inc.		P	X				
Mike Garl	James Thomas Engineering		P	X				
Mike Wood	High End Systems Inc.		P	X				
Mitch Hefter	Entertainment Technology		P	X				
Tera Johnson	Electronic Theatre Controls, Inc.		P	X				
Tim Cox	PLASA	PLASA	P	X				
Rodney F. Kaiser	J.R. Clancy Inc.	USITT	P	X				
Florian von Hofen	VPLT	VPLT	P					
Eckart Steffens	SOUNDLIGHT	VPLT	A					
			14	12	0	0	0	0

The motion passed with a supermajority voting in favor.

The consensus was that Ted Paget and Karl Ruling should present the TSC's opinion that E1.15 is an unworkable standard to the working group.

#### **7.2.5.6 Portable roof systems**

Mike Garl reported that there is a task group investigating drafting a standard for portable roof systems. These are most often roofs that are constructed of aluminum truss components and are used to protect outdoor stages from the weather.

#### **7.2.5.7 VPLT truss standard.**

Tim Cox said that comments had been offered by PLASA on the German truss recommended practice, and that the document will be revised in light of them and the comments from others.

#### **7.2.5.8 Fire curtains.**

Bill Conner reported that there is some discussion within the NFPA of undertaking writing performance requirements for fire curtains into NFPA 80 or 105. This could obviate our undertaking a similar project.

#### **7.2.5.9 Chain hoist control connectors**

Mike Garl reported that the working group will discuss the PSA's request for guidance on control connectors for chain hoists at the upcoming meeting.

### **7.2.6 Electrical Power**

#### **7.2.6.1 E1.18 - Task group on a recommended practice for selection, installation, and use of portable feeder cable**

Ken Vannice said that surveys had been sent out to collect information on what is current practice. The surveys came back, and they have provided some information, but not a lot. The task group has started on a draft standard.

Eddie Kramer said that he is trying to find out what the physical differences are other than labeling between hard usage and extra hard usage cable.

#### **7.2.6.2 E1.19 - Task group for a recommended practice for use of GFCI (Residual Current Devices) in entertainment applications**

Vannice reported that the working group has a draft document, but that there is disagreement as to whether it takes an approach that will address the needs of the industry.

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

Tera Johnson returned her ballot accepting the motion to send the draft E1.16 standard to public review. Ruling announced that the balloting on the motion was now finished, that all had voted in favor of the motion, and the draft standard would go to first public review.

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

Ken Vannice reported that Ed Yandek had managed to get a harmonics standard adopted, ANSI C82.77-2001, that is essentially a documentation of a current practice of harmonics control and mitigation used here in the US. Vannice read the parts of the standard that are relevant to our industry. The standard has no requirement for testing, but if there is a problem with harmonics and the power company, the solution has to be worked out by mutual agreement with the user and power company and the mitigation shall be done per IEEE 519. There are more stringent standards for general lighting than there are for entertainment lighting, but the ballast manufacturers and other affected parties have been involved in the standard's writing and have supported it.

#### **7.2.6.5 Power quality task group**

Vannice reported that the task group's primary author wasn't at the last several working group meetings, and that nothing appears to have been done on the book that was being written.

#### **7.2.6.6 the rules for cabling and the assumptions that are behind them project**

This project is an article that Ken Vannice is going to write for Protocol. He reported that he hasn't gotten it done yet.

### 7.2.6.7 Pin connector standard

Vannice reported that there is some interest in developing an ANSI standard for the compatibility of pin connectors used on stage. There is a study group looking into how much trouble there is because no American National Standard for this exists.

### 7.2.7 Floors

Tim Hansen said that the working group had had a good meeting that morning. The committee defined the structure of a draft document that defines criteria for testing and measurement of slip resistance, rake, shock absorption, and durability. People have been tapped for actually writing the standard.

## 7.3 Report on liaisons to other industry groups

### 7.3.1 ASTC

Ted Paget says that he and Bill Conner are continuing to work on building bridges to the ASTC.

### 7.3.2 NFPA

NFPA 160-2001 (flame effects before an audience) has been published, reported Larry Schoeneman.

NEC 2002 has been published, reported Mitch Hefter. He also reported that the scopes of the NEC panels are being revised. Code Panel 15 will no longer handle transfer switches but will now handle health care facilities.

Karl Ruling reported that he is going to an assembly occupancy technical committee meeting working on NFPA 5000, the building code, after LDI is over. He said that the hot issue continues to be fire curtains. There are some people who want to see more fire curtains installed in theatres. They are doing this by proposing to change the definition of a "legitimate stage" so that almost all stages would be legitimate stages and would have to have proscenium arches. Black box theatres and other flexible performance spaces would be effectively eliminated if these proposals are accepted.

### 7.3.3 UL

No report.

## 7.4 P&P Revision

Some changes were made by consensus to version 4.3 to create version 4.4. Mike Garl moved that the P&P version 4.4 be accepted, pending approval by the ESTA Board and ANSI. The motion was seconded. By roll call, the motion was accepted unanimously by all present, which was enough to constitute a supermajority.

Name	Company	Representing	Voting status	Accept	Accept in principle	Accept in part	Reject	Abstain
Bill Groener	Fourth Phase New Jersey		P					
Colin Waters	TMB Associates		P	X				
Edward Paget	Jones & Phillips Associates, Inc.		P	X				
Edwin S. Kramer	IATSE, Local 1		P	X				
Frank Stewart	Specialty Tech Services		P	X				
Ken Vannice	NSI Corporation		P	X				
Larry Schoeneman	Interesting Products, Inc.		P	X				
Mike Garl	James Thomas Engineering		P	X				
Mike Wood	High End Systems Inc.		P	X				
Mitch Hefter	Entertainment Technology		P	X				
Tera Johnson	Electronic Theatre Controls, Inc.		P	X				
Tim Cox	PLASA	PLASA	P	X				
Rodney F. Kaiser	J.R. Clancy Inc.	USITT	P	X				
Florian von Hofen	VPLT	VPLT	P					
Eckart Steffens	SOUNDLIGHT	VPLT	A					
			14	12	0	0	0	0

**7.5 Review of action items from last meeting not covered above**

None.

**8 New Business**

Lori described the efforts being made to recognize the financial contributors to the program at the ESTA Banquet. Working group members will also be recognized. She said that other ideas for ways to recognize contributions of various types are welcome.

**9 Other business**

None.

**10 Schedule for future meetings**

Lori pointed out the February USITT meeting schedule had been handed out at the beginning of the meeting. She asked for AV requirements for the meetings. The next set of meetings will be May 3 through 6 at the Marriott South hotel in Ft. Worth, Texas.

**11 Adjournment**

Ted Paget moved that the meeting adjourn. The motion was seconded. The motion was approved unanimously by a show of hands. Mike Wood declared the meeting adjourned at 16:26.

### Membership List and Contact Information as of Mid-January

Name	Company	Parent Company or Representation	Voting status
Mitch Hefter	Entertainment Technology	Genlyte Thomas Group LLC	P
Mike Wood	High End Systems Inc.	High End Systems Inc.	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	PLASA	A
Bill Groener	Fourth Phase New Jersey	PRG	P
Frank Stewart	Specialty Tech Services	Specialty Tech Services	P
Tera Johnson	Tera Johnson	Tera Johnson	P
Colin Waters	TMB Associates	TMB Associates	P
Rodney F. Kaiser	J.R. Clancy Inc.	USITT	P
Jay O. Glerum	Jay O. Glerum & Associates, Inc.	USITT	A
Florian von Hofen	VPLT	VPLT	P
Eckart Steffens	SOUNDLIGHT	VPLT	A
			14