

Minutes
Technical Standards Committee

Friday, July 16, 1999
D/FW Marriott Hotel
Dallas, TX

Chairman: Bill Groener, Production Arts
Recording secretary: Karl G. Ruling

Members in attendance: Anne Valentino, Vari-Lite, Inc.
Eckart Steffens, VPLT (SOUNDLIGHT)
Edward Paget, Jones & Phillips Associates, Inc.
Frank Stewart, Specialty Tech Services
Ken Vannice, NSI Corporation
Larry Schoeneman, Interesting Products, Inc.
Lori Rubinstein, ESTA (ex officio)
Mike Garl, James Thomas Engineering, Inc.
Mike Wood, High End Systems
Mitch Hefter, Rosco/Entertainment Technology
Rodney F. Kaiser, USITT (J.R. Clancy Inc.)
Steve Terry, PRG Lighting Division
Tim Cox, PLASA

Visitors: Brian Dowd, TMB Associates
Eddie Kramer, IATSE Local 1
Lee J. Bloch, Bloch Design Group
Louis Bradfield, Bally's Casino Resort
Mark M. Witteveen, Chicago Flyhouse Inc.

1 Opening remarks

Bill Groener called the meeting to order at 1:01 p.m.

2 Attendance and membership (Five required for quorum.)

2.1 Attendance

Attendance was taken by circulating a goldenrod sign-in sheet

2.2 Welcome to visitors

Bill Groener welcomed the visitors and the alternate voting members.

Groener announced that we have a quorum.

3 Approval of minutes from the previous meeting

Mitch Hefter moved that the minutes be accepted as written. Mike Wood seconded. Unanimous approval by show of hands, with none opposed, and no abstentions.

4 Call for patents and anti-trust statement

Groener directed the group to read the following statements. Asked if there were any questions. There were none.

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

Ted Paget moved that the agenda be accepted. Larry Schoeneman seconded. Unanimous.

6 Old business

6.1 Financial reports

6.1.1 Treasurer's report

Frank Stewart reported that through the end of June about 44% of the budget had been expensed.

6.1.2 Status of contributions and pledges

Rubinstein and Groener reported on the status on contributions. Groener noted that the new EPWG may generate additional income because it will attract interest from a section of the industry that we had not particularly served before.

6.1.3 Accounting of TSP documents sold and on-hand

Lori Rubinstein reported on the sales of documents and how many were still on hand. The ESTA Wire Rope Ladder Standard is out of print, and will not be printed in anticipation of the acceptance and publication of E1.1.

6.2 Working group reports

6.2.1 Photometrics

6.2.1.1 E1.9, nutrition label

Ruling reported that the working group would be discussing proposed resolutions to the public review comments at this meeting.

6.2.1.2 Revamp/renew IES procedures

The IES has a committee working on developing a procedure for testing stage and studio equipment, Ruling reported.

6.2.1.3 Public information project

Ruling reported that little progress has been made with this.

6.2.2 Control Protocols

6.2.2.1 E1.3

Ruling reported that it is in public review.

6.2.2.2 E1.11 matters:

Mitch Hefter reported that the latest working group and task group comments (not public review comments) on the draft document total approximately 40 pages. The task group is working to resolve them.

Hefter reported that DIN 56930 appears likely to be published.

There was a discussion of what to do about working with the IEC and making this new version of DMX and IEC standard. A proposal to start a new DMX standard has been circulated among the IEC members, but we don't know if it has been accepted.

Ted Paget moved that we continue to follow our normal procedure to draft the E1.11 standard as an ANSI standard, and that, in the process, we see what progress the IEC has made with the proposal to draft an international standard. Motion was seconded by Rod Kaiser. Motion accepted unanimously by show of hands.

Steve Terry said that in the CPWG they will try to find people within the working group to make contact with their own national committees.

6.2.2.3 Report of ACN Task Group

Steve Carlson, the task group leader, was absent. Terry summarized Carlson's written report (appended), and noted that there is a much more positive feeling in the group, and that progress is being made.

6.2.3 Fog and Smoke

6.2.3.1 E1.5, glycol/glycerin fog - The Stink Test

Larry gave a general report of where the F&S Working Group is going. This lead into discussion of a product stewardship program and Mike Wood gave his presentation on product stewardship.

Bill Groener said he plans to report to the Executive Committee that the TSC is enthusiastic about the Product Stewardship Program.

Schoeneman continued with his report, which included 6.2.3.2, the fog book 3rd edition, and 6.2.3.3, the standard for fog machine manuals. A first pass at editing the fog book will done at this coming F&S meeting. The next step in developing the fog machine manual standard will be discussed then, too.

6.2.4 Rigging

Mike Garl reported that the working group had a good turnout at the USITT meeting.

6.2.4.1 E1.1 – Wire Rope Ladder Standard

The working group has approved adopting the new standard and withdrawing the current (old) ESTA standard, Garl reported. Ruling reported that the TSC had approved the adoption of the new standard, but that the motion was now being held up in the Board with one negative vote. The ballot is now being recirculated.

6.2.4.2 E1.2 – Aluminum Truss Standard

Garl reported that the task group is working on resolving the comments from the last review. It has not finished yet.

6.2.4.3 E1.4 – Manual Counterweight Flying Systems Standard

Kaiser reported that the task group is working on new revised document.

6.2.4.4 E1.6 – Powered Flying Systems

Garl reported that Tom Young now is heading up the task group. The group met June 17 and 18 to address the comments received during the last review. A new draft is expected by LDI.

6.2.4.5 E1.7 – Recommended Practice for Flying Performers

Ruling reported that resolutions to the comments and a revised document are ready to be voted on at the upcoming Rigging WG meeting.

6.2.4.6 E1.8 – Speaker Enclosures Rigging Standard

Ruling reported that it is in public review.

6.2.4.7 E1.10 – Building Structural Requirements Standard

Ruling reported that it is in public review.

6.2.4.8 British Standards – update

Peter Hind had sent an update, which Garl read. The gist of the message was that British rigging standard Peter has been working on is a two-part piece. BS 7905 - Design of lifting equipment for performance, broadcast and similar applications, is a standard specifying the equipment, while BS.7906 - Use of lifting equipment for performance, broadcast and similar applications, is a code of practice. Part 2 of each standard covers trusses and towers. Part 1 of each document will cover other overhead lifting equipment.

6.2.4.9 E1.13 – Arena Scoreboards and Speakers

Ted Paget reported that a document was ready to submit to the Rigging Working Group at this upcoming meeting.

6.2.5 Camera Cranes

Ruling and Groener reported on the meeting held in June on the Thursday before ShowBiz Expo LA.

6.2.5.1 E1.12, American National Standard Crane task group

No work had been done on a camera crane standard so far.

6.2.5.2 Operators handbook task group

The task group working on the camera crane operator's manual had presented two versions to the working group. The working group then discussed the two drafts in detail at the last meeting. The resolution at the meeting was that further comments would be sent to the task group.

6.2.5.3 Tabled projects: guideline for a manufacturer's assembly manual; a standardized camera crane chart

These projects are still tabled, reported Ruling.

6.2.6 Power

6.2.6.1 Status Report on Formation of Working Group

Ken Vannice reported on the morning's meeting of the task group, which was the first meeting of the group. The group spent most of its time talking about cabling issues. It created a task group on cabling issues charged to identify the tasks that will actually be done. Tim Bachman is the leader.

Ken Vannice was appointed to head the harmonics task group.

6.2.6.2 Report on EMC Issues

(Covered below under 7.2.2)

6.3 Public relations/marketing

Lori Rubinstein handed out the new brochure from KSA. It was well received.

Rubinstein reported on the work with Stage Directions and the proposal from them. We would provide several pages of editorial for two issues a year, in return for a percentage of the revenue.

Ted Paget moved that the TSC endorse the Stage Directions proposal to the Board. The motion was seconded. All were in favor except for one abstention.

7 Old Business

7.1 New WG Chair Orientation

Groener reported on our meeting the previous night. He said that it went well, and that the EPWG meeting went well, probably partly because of the special meeting. Groener said we will do it again with each new working group.

7.2 Report on Liaisons to Other Industry Groups

7.2.1 NFPA

Mitch Hefter reported that that Code Panel 15 will meet January 17-19 Code Panel 15 will meet. The Standards Council meets in October.

Larry Schoeneman reported that the 160 committee is planning meetings and considering dates around Rosh Hoshana and LDI, neither of which are good for maximizing his ability to attend.

7.2.2 EMC Workshop

Vannice presented his written report on the EMC workshops. The Baltimore meeting created a USCCEMC position paper on how to rationally approach harmonics regulations for the maximum benefit and least cost to society. He supports this paper.

Vannice also reported that a Low Frequency Emissions Industry Coalition has been formed of industrial groups affected low-frequency emissions standards and regulations.

Ted Paget moved that the TSC endorse the USCCEMC position paper to the Board. The motion was seconded. All were in favor, except for three abstentions: Tim Cox, Anne Valentino, and Eckart Steffens. The rest were in favor.

7.2.3 IEEE 802.3 committee report

Steve Carlson, who was not present, had submitted a written report of his attendance at an IEEE 802.3 Plenary Meeting, July 5 through 8, 1999 in Montreal, Quebec, Canada. At this meeting, Carlson had lead an ad hoc group to generate a presentation on the usefulness of providing device power via network cabling to the final 802.3 meeting on Thursday. A study group was formed, of which Carlson is a member, to produce either a recommendation for a standard for DTE power via MDI, or a technical report detailing why such a standard is not possible. DTE power via MDI would be a useful feature for our own ACN. The work of the study group will be posted at http://grouper.ieee.org/groups/802/3/power_study/public/index.html.

Carlson's report was not read aloud. People felt they could read it themselves.

7.3 How to work better and faster

Groener felt that this topic had been adequately covered in discussing the other items on the agenda.

8 New Business

8.1 VPLT participation as seated member of TSC

Mitch Hefter moved, and Ted Paget seconded a motion to give VPLT a seat on the TSC. Unanimous approval of the motion.

Eckart Steffens said Florian von Hofen should be the principal and he would be the alternate. Rubinstein said Florian had asked for a letter stating that VPLT is a full member so that he can have something to show his board. Bill Groener agreed to write the letter.

8.2 Copyright issues pertaining to PLASA, USITT, PERA and VPLT

Eckart Steffens said he wants to report in the work of the working groups in the VPLT magazine. Terry said this is okay, but that the reporting must not violate the restrictions already put on ESTA's Protocol Staff.

Terry moved that VPLT shall be our official German translation agency and be allowed to reproduce ESTA documents in German at no charge, as long as no substantive changes are made and that credit is given to the ESTA for developing the documents. Furthermore, if there is any difference between the original documents and the translated version, it shall be noted that the original document shall prevail. The motion was seconded. All in favor, except Eckart abstained. Bill Groener will write a letter to VPLT stating this agreement.

By consensus it was decided that other requests will be dealt with on a case by case basis.

8.3 Copyright issues pertaining to ESTA members, specifically ETC

Groener explained that Ellen White has asked to be able to reproduce part of the Ethernet RP glossary in an ETC training publication.

Terry moved that we grant ETC's request to use the glossaries providing they are reproduced in their entirety, that appropriate credit to ESTA be provided, and that it is noted that ESTA maintains the copyright. Information on how to get the entire document shall also be provided. Mike Wood seconded the motion. Unanimous by show of hands.

9 Other business

Groener asked Frank Stewart if he needs more information now for the budget for the year 2000. Stewart said that he did not now.

Groener asked if we should change the make up of the TSC committee. No one expressed a need to change it.

Steffens noted that Florian von Hoffen will be at the Technical Standards Update session at LDI. Florian von Hoffen will be attending the TSP meetings at that time.

10 Schedule for future meetings

Wednesday, November 17:

13:00 to 17:00 – TSC

19:00 to 23:00 – Rigging

8:00 to 12:00 and 19:00 to 23:00 – DMX task group

Thursday, November 18:

9:00 to 18:00 – CPWG

13:00 to 18:00 – DMX task group breakout

18:30 to 19:30 – Cocktails

19:30 to 22:00 – ESTA dinner

Friday, November 19:

19:00 to 23:00 – EPWG

Saturday, November 20:

9:00 to 12:00 – Photometrics WG

18:30 to 23:00 – F&S WG

11 Adjournment

Groener announced that the meeting was adjourned at 5:03 p.m. There were no objections.

ACN Task Group Report

July 1999

by

Steve Carlson

The ACN Task Group decided at the January meeting to investigate Sun Microsystems "Jini" networking technology. Jini (pronounced "genie") is intended to create a world where any type of intelligent device can interact with any other device without any user intervention. Jini has received tremendous attention in the trade press, and has had a number of high-profile companies e.g. Sony, Fujitsu, Kodak, H-P, IBM, among others, announced support for Jini. Jini is the networking component of Sun's Java programming language.

The TG agreed to read the Jini specifications, which comprise twelve separate documents totaling some 500 pages, and be prepared to discuss them at the March USITT meeting in Toronto. During this meeting, the sense of the working group was that Jini might well offer everything we needed, but that the Jini documentation did not have the depth required for the TG to 1) really understand Jini and 2) decide whether it was useful. It was decided to continue investigating other technologies while asking Sun Microsystems to provide further information.

At the conclusion of the Toronto meetings the ACN "Retreat" meeting was planned. All of the TG members have been frustrated at the lack of "face-to-face" time, especially in the context of trade shows where people have many other responsibilities. An interim ACN meeting was planned for May in Madison, WI, to coincide with COMDEX in Chicago.

Sun Microsystems flew Dan Hushon, a "Practice Manager" from Sun's Java Center Enterprise Solutions Group in McLean, VA, to this meeting. Mr. Hushon is an engineer specializing in Java/Jini applications. The TG had prepared a series of questions for Mr. Hushon, which he answered at a very rapid pace.

It soon became clear that Jini at its present state of development is not ready for complex, real-time applications such as ACN. Jini really seems at this time to be more of a design philosophy than an actual product. This is probably fortunate, since while some parts of Jini are free, other parts are really expensive. Over the next few years Jini may solve all of these problems and may very well become what it set to be. In the meantime, other technologies will have to be used for ACN. The Home Plug and Play initiative promises to provide the same sort of functionality by using standard Internet protocols. The TG is watching this effort carefully.

ACN is intended to be built on top of industry-standard protocols with TCP/IP at the core. Unfortunately, TCP does not provide several key technologies. The largest hole is the lack of reliable multicasting. This is a key to the design of ACN. A number of reliable multicasting protocols have been put forth in the Internet Engineering Task Force. The major player is Reliable Multicast Protocol. This is a very complex and extensive protocol designed to give reliable multicasting in the context of the Internet. It is therefore a "heavy" protocol in the sense that it requires substantial computing resources to operate. This does not meet the ACN criteria of "lightweight" ACN devices which should be as simple and inexpensive as possible.

RMP has a junior partner called Lightweight Reliable Multicasting Protocol (LRMP) which is designed for smaller local networks. Unfortunately, LRMP is too lightweight and is missing some key constructs required by ACN. Adding these constructs to an existing protocol turns out not to be practical. It is somewhat like remodeling a house. By the time you fix everything that gets broken while you are fixing something else, you could have built a new house much faster and at less cost.

Greg Heinzle is researching some other reliable multicasting techniques and is creating a "litmus test" to match them against ACN's requirements.

Richard Lawrence presented his report on simplifying the Component Management Protocol (CMP). The concept of a fixed unique world-wide component ID (CID) was introduced. This CID is 64 bits long and has a 16-bit manufacturer ID and a 48-bit unique identifier. There was debate about extending this to a 128-bit CID. This allows the Device Management Protocol server code to simply be a list of CIDs making minimal DMP servers easy to implement in simple controllers.

Steve Carlson and Dexter McNeil presented a report on the use of DHCP to assign IP addresses. In systems without DHCP services a "random address" assignment based on the DHCP RFC 2462 will be used. A report on the state of network-ready embedded processors was given, with primary focus on the NET+ARM family from Netsilicon.

Jon Ide brought up the possible use of Extended Markup Language (XML) as a basis for the class description language. Jon had several books on XML and after some discussion and Web research the group was enthusiastic about this idea. XML will be the basis for the class description in the Home Plug and Play project, so this looks like the right direction. Philip Nye created some XML test cases and felt that the results were very promising. Jon agreed to write an XML parser for testing and has posted it to the ACN FTP site and write up the description of control authority in each device.

Rich Leinen is developing the ACN Applications Programming Interface (API), initially for the Win32 platform.

Assignments were made for the next meeting. The group felt that the retreat had been extremely productive. It was decided to repeat the format for the July meeting. The group decided to hold the meeting in Portland, much to the relief of the two Portland-based TG members.

Steve Carlson was asked by IEEE 802.3 to provide them with help in establishing a Study Group for power over Ethernet. This will allow many ACN devices to be built without an internal power supply. While at the 802.3 meeting, Steve Adams from the Intel Architecture Labs in Hillsboro, OR, expressed interest in the ACN project. He has been invited to attend the Friday sessions and will make a presentation on Intel's plans for embedded networking. Michael Karagosian of the AES24 (AES SC-10-01) may also attend one session as part of the ESTA/AES liaison.

TSC Membership and Company Affiliations as of the End of the July 16, 1999 Meeting

Name	Company	Vote Stat.
Mike Wood	High End Systems	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	P
Tim Cox	PLASA	P
Tony Douglas-Beveridge	PLASA	A
Steve Terry	PRG Lighting Division	P
Bill Groener	Production Arts (NJ)	P
Mitch Hefter	Rosco/Entertainment Technology	P
Steve Carlson	Rosco/Entertainment Technology	P
Frank Stewart	Specialty Tech Services	P
Colin Waters	TMB Associates	P
Rodney F. Kaiser	USITT (J.R. Clancy Inc.)	A
Jay O. Glerum	USITT (Jay O. Glerum & Associates)	P
Anne Valentino	Vari-Lite, Inc.	P
Eckart Steffens	VPLT	A
Florian Von Hofen	VPLT	P