

**Minutes**  
**Control Protocols Working Group**  
Saturday, 21 July 2018  
D/FW Marriott Solana  
Westlake, TX

**Chairs:**

Milton Davis; Doug Fleenor Design, Inc.; P; MP  
Michael Lay; Signify; P; MP

**Recording secretaries:** Richard Nix & Karl Ruling; ESTA

**Members attending:**

Paul Beasley; Walt Disney Company; P; U  
Andrew Berry; X-Laser; P; MP  
Scott M. Blair; Megapixel; P; CP  
Eric Bloom; Westview Productions; P; DR  
Javid Butler; Integrated Theatre, Inc.; O; CP  
Ian Campbell; Doug Fleenor Design, Inc.; A; MP  
Edward R. Condit; OSRAM Licht AG; O; G  
Bill Ellis; Candela Controls, Inc.; P; DE  
Paul K. Ericson; Stantec; O; DE  
Robert Goddard; Goddard Design Co.; P; MP  
Nick Harper; Nick Harper; I; G  
Robert Haycock; UC Berkeley; I; U  
Mitch Hefter; USITT; P; U  
Jon Hole; Eaton; P; MP  
Wayne David Howell; Artistic Licence Holdings; P; DE  
David Kane; I.A.T.S.E. Local 728; A; U  
Sam Kearney; Electronic Theatre Controls, Inc.; P; MP  
Paul Kleissler; City Theatrical, Inc.; P; MP  
Lucas Korytkowski; Insight Lighting; O; MP  
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U  
Ulrich Kunkel; E3 Engineering & Education for Entertainment GmbH; P; U  
Roger Lattin; I.A.T.S.E. Local 728; P; U  
Kevin Loewen; Acuity Brands Inc.; P; MP  
Rob Love; Insight Lighting; O; MP  
Bill McIntyre; Show Distribution Group, Inc.; P; CP  
Daniel Murfin; Royal National Theatre; P; U  
Simon Newton; Open Lighting Project; P; G  
Soren Sterdorff Peglau; Brother, Brother and Sons; O; MP  
Jason Potterf; Cisco; P; MP  
Larry Schoeneman; DesignLab Chicago, Inc.; P; DR  
Steve Terry; Electronic Theatre Controls, Inc.; A; MP  
John Valus Jr.; Lex TM3; P; CP  
Peter Willis; Howard Eaton Lighting Ltd.; P; CP

**1 Opening remarks**

The meeting was called to order by Milton Davis at 09:05, with a welcome to Texas, a reminder to silence electronic devices, and note to be aware of the locations of the black microphones being used for the meeting audio system so people might speak toward them and not make noise near them.

**2 Attendance**

## 2.1 Introductions of those present and circulation of attendance sheet

Karl Ruling displayed the pink sign-in sheet, which was passed around for everyone to sign. Everyone in the room introduced themselves

## 2.2 Introductions of those present via WebEx

Upon cue from Mike Lay, everyone online introduced themselves

## 2.3 Determination of a quorum

Milton Davis counted the voters present and announced that enough were present to pass a supermajority vote.

## 2.4 Recognition of alternate voting members

## 3 Membership

### 3.1 Requirements for membership

The following statement was read aloud to the assembly by Milton Davis:

Membership is open to all who are affected by the work of the group. People and companies that would be in any interest category other than a manufacturer interest category are, at this time, particularly encouraged to apply for membership. There is an annual \$100 participation fee for all members. Voting members are required to attend meetings and to vote on letter ballots. Voting members and their alternates may not miss three consecutive meetings without a loss of voting status.

### 3.2 Processing of new membership requests and changes in membership status:

*As of 25 June 2018, the following applications and status change requests had been received:*

Michael Lay; Signify; P; MP (company name change)  
Matthew Ardine; IATSE Local 728; A; U  
Soren Sterndorff Peglau; Brother, Brother and Sons; O; MP  
Andrew Berry; X-Laser; P; MP  
Martin Chisnall; Martin Chisnall; O; U  
David Gooch; Chauvet Lighting; O; MP  
Jaxson Patterson; Insight Lighting; O; MP  
Rob Love; Insight Lighting; O; MP  
Lucas Korytkowski; Insight Lighiting; O; MP  
Scott Blair; Megapixel; P; CP  
Bill McIntyre; Niscon; P;  
Dan Lisowski had requested via email a change to observer status due to current workload issues.

At this meeting, Robert Haycock requested a change to Individual voting status from Observer.

Eddie Kramer moved to approve the applications. The motion was seconded. The motion was approved unanimously.

### 3.3 Changes to observer status due to lack of attendance

*The following voters have missed the last two meetings and are in jeopardy of being moved to Observer status if they do not attend this one:*

Larry Schoeneman; DesignLab Chicago, Inc; P; DR. Present, no change  
Ulrich Kunkel; E3 Engineering & Education for Entertainment GmbH; P; U. Present, no change  
Michael Karlsson; LumenRadio AB; P; MP. Not present, moved to observer  
Fraser Connolly; Obsidian Controls; P; DE. Not present, moved to observer

### 3.4 Consensus body

The consensus body during this meeting, including those not present, was:

Delegate	Representing	Voting status	Int. cat.
Kevin Loewen	Acuity Brands Inc.	P	MP

<b>Delegate</b>	<b>Representing</b>	<b>Voting status</b>	<b>Int. cat.</b>
Robert Bell	Acuity Brands Inc.	A	MP
Maurits van der Hoorn	Acuity Brands Inc.	A	MP
Wayne David Howell	Artistic Licence Holdings	P	DE
Bill Ellis	Candela Controls, Inc.	P	DE
Brent Boulnois	Candela Controls, Inc.	A	DE
Jim Ohrberg	Candela Controls, Inc.	A	DE
Jason Potterf	Cisco	P	MP
Paul Kleissler	City Theatrical, Inc.	P	MP
Larry Schoeneman	DesignLab Chicago, Inc.	P	DR
Mit Patel	disguise	P	MP
Marcus Bengtsson	disguise	A	MP
Milton Davis	Doug Fleenor Design, Inc.	P	MP
Ian Campbell	Doug Fleenor Design, Inc.	A	MP
Ulrich Kunkel	E3 Engineering & Education for Entertainment GmbH	P	U
Jon Hole	Eaton	P	MP
Sam Kearney	Electronic Theatre Controls, Inc.	P	MP
Steve Terry	Electronic Theatre Controls, Inc.	A	MP
Eric Rasmussen	Electronic Theatre Controls, Inc.	A	MP
Andrew Atienza	Full Throttle Films/ VER	P	DR
Robert Goddard	Goddard Design Co.	P	MP
Peter Willis	Howard Eaton Lighting Ltd.	P	CP
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
John Huntington	I.A.T.S.E. Local 1	A	U
Roger Lattin	I.A.T.S.E. Local 728	P	U
Alan M. Rowe	I.A.T.S.E. Local 728	A	U
David Kane	I.A.T.S.E. Local 728	A	U
Matthew Ardine	IATSE Local 728	A	U
John Valus_Jr.	Lex TM3	P	CP
Scott M. Blair	Megapixel	P	CP
Nick Harper	Nick Harper	I	G
Simon Newton	Open Lighting Project	P	G
Daniel Murfin	Royal National Theatre	P	U
Bill McIntyre	Show Distribution Group, Inc.	P	CP
Michael Lay	Signify	P	MP
Maya Nigrosh	Sonos	P	MP
Andrew Frazer	Stellascapes.com	P	MP

Delegate	Representing	Voting status	Int. cat.
Jim Love	Tait Towers Manufacturing LLC	P	MP
Julian Hoare	Tait Towers Manufacturing LLC	A	MP
Robert Haycock	UC Berkeley	I	U
Mitch Hefter	USITT	P	U
Paul Beasley	Walt Disney Company	P	U
Eric Bloom	Westview Productions	P	DR
Andrew Berry	X-Laser	P	MP
	<b>Total votes possible</b>	<b>31</b>	
	<b>Votes by interest categories</b>	4	CP
		2	DE
		3	DR
		2	G
		13	MP
		7	U

#### 4 Approval of the minutes from the previous meeting

See *CPmin03-2018.pdf*

Scott Blair moved to approve the minutes as written. The motion was seconded, and then approved with no dissenting votes and four abstentions.

#### 5 Reading of the call for patents

The following statement was read aloud to the assembly by Milton Davis.

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

In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent, patent application, copyright, or other intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence.

Nothing was reported.

#### 6 Reading of the anti-trust statement

The following statement was read aloud to the assembly by Milton Davis:

ESTA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all ESTA events, all discussions will be limited to those subjects that are permitted by the antitrust laws. All members should refrain from any discussion or mention of competitively sensitive subjects such as the current or future prices charged for any member product or services, current or future marketing plans or strategies, and current or future costs, including employee salaries. There also must be no agreement on the suppliers or customers that members will or will not do business with or the markets in which members will conduct business.

Violations of the antitrust laws can have serious consequences. If you have any questions or concerns about anything that is discussed at a ESTA meeting, please bring your concern to ESTA management. An easy to read pamphlet describing the antitrust laws is available from the ESTA staff.

Richard Nix held up one of the easy-to-read pamphlets.

No anti-trust concerns were reported.

## **7 Approval of agenda**

Scott Blair requested a modification of to the agenda, the addition of an item about discussion of Manufacturer ID ranges. He then moved to approve the agenda as modified. The motion was seconded and approved unanimously.

## **8 Old business**

### **8.1 Standards, Guides & Recommended Practice Maintenance**

*This is a placeholder in the agenda, so we don't forget to maintain them. Documents prefaced with an asterisk (\*) are on the agenda elsewhere for reports or action.*

ANSI E1.3 – 2001 (R2016), Entertainment Technology - Lighting Control Systems - 0 to 10V Analog Control Specification & Application Guide For ANSI E1.3 – 2004 Lighting Control Systems 0 to 10V Analog Control Specifications. (Revision, reaffirmation or withdrawal by 17 February 2021)

\* ANSI E1.11 – 2008 (R2013), Entertainment Technology - USITT DMX512-A, Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories. (Revision, reaffirmation, or withdrawal by 13 March 2018)

ANSI E1.17 – 2015 Entertainment Technology - Architecture for Control Networks (ACN) (Revision, reaffirmation, or withdrawal by 21 May 2020)

\* ANSI E1.20 - 2010, Remote Device Management over USITT DMX512. (Revision, reaffirmation or withdrawal by 4 January 2016 – PINS filed for revision)

ANSI E1.27-1 – 2006 (R2016), Entertainment Technology - Standard for Portable Control Cables for Use with USITT DMX512/1990 and E1.11 (DMX512-A) Products. (Revision, reaffirmation or withdrawal by 8 April 2021)

ANSI E1.27-2 – 2009 (R2014), Entertainment Technology - Recommended Practice for Permanently Installed Control Cables for Use with ANSI E1.11 (DMX512-A) and USITT DMX512/1990 Products. (Revision, reaffirmation, or withdrawal by 9 June 2019)

ANSI E1.30-1 – 2010 (R2016), EPI 23, Device Identification Subdevice. (Revision, reaffirmation or withdrawal by 17 February 2021)

ANSI E1.30-3 – 2009 (R2014), EPI 25, Time Reference in ACN Systems Using SNTP and NTP. (Revision, reaffirmation, or withdrawal by 9 June 2019)

ANSI E1.30-4 – 2010, EPI 26, Device Description Language (DDL) Extensions for DMX512 and E1.31 Devices. (Revision, reaffirmation, or withdrawal by 25 September 2020)

ANSI E1.30-10 – 2009 (R2014), EPI 32, Identification of Draft Device Description Language Modules. (Revision, reaffirmation, or withdrawal by 9 June 2019)

\* ANSI E1.31 - 2016, Lightweight streaming protocol for transport of DMX512 using ACN (Revision, reaffirmation, or withdrawal by 11 October 2021)

ANSI E1.37-1 – 2012 (R2017), Additional Message Sets for ANSI E1.20, Remote Device Management. (Revision, reaffirmation, or withdrawal by 18 May 2022)

ANSI E1.37-2 - 2015, Additional Message Sets for ANSI E1.20 (RDM) – Part 2, IPv4 & DNS Configuration Messages. (Revision, reaffirmation, or withdrawal by 25 September 2020)

Application Guide for ANSI E1.3 - 2001, Lighting Control Systems 0 to 10V Analog Control Specification

Recommended Practice for Ethernet Cabling Systems in Entertainment Lighting Applications

Supplement to the Recommended Practice for Ethernet Cabling in Entertainment Lighting Applications

Withdrawn standards

E1.45 - 2013 (W2015), Unidirectional Transport of IEEE 802 data frames over ANSI E1.11 (DMX512A)

E1.30-7 - 2009 (W2016), EPI 29, Allocation of Internet Protocol Version 4 Addresses to ACN Hosts

**8.2 BSR E1.11 – 2008 (R20xx), Entertainment Technology - USITT DMX512-A, Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories**

It was noted that the former “BSR” draft is now ANSI E1.11-2008 (R2018). Its approval was announced in *Standards Action* on 08 June 2018. It's now published. E1.11's listing in 8.1 will be updated in the next meeting agenda.

**8.3 BSR E1.20 - 201x, Remote Device Management over USITT DMX512**

*From the draft March Minutes:*

*Wayne Howell said that many of the easy things have been taken care of, but some of the hard things will be addressed via WebEx over the next couple weeks.*

Wayne Howell reported progress but nothing to act on at this meeting.

**8.4 BSR E1.31 – 20xx, Entertainment Technology—Lightweight streaming protocol for transport of DMX512 using ACN**

*The working group's approval ballot closed with a supermajority in favor. Resolutions were approved for the No vote reasons. However, the project has been held because an error was discovered in the proposed standard, notice of which was distributed via email on 26 April 2018. A reply to this email suggested that the error was not substantive and should be fixed without further review. The working group needs to decide what to do about it.*

There was discussion about the nature and impact of the error, which appears to be a typographical error. The error has been present in prior versions and had not been called out, which suggests that error had not impeded anyone's understanding of the standard or its implementation, but, of course, the error should be fixed.

Simon Newton moved that the error in E1.31 is non-substantive, and that the document should be edited and published as noted. The motion was seconded and carried with all voting in favor except for on abstention. This was a supermajority vote.

The motion to accept E1.31 shall move on to the Technical Standards Council.

**8.5 BSR E1.33, Transport of ANSI E1.20 (RDM) in an E1.31 environment**

*The public review ended on 9 April 2018. The public review comments were distributed to the working group on 03 May 2018 (see E1-33\_SixthReview\_Summary.pdf). Some of the comments questioned applicability of the requirements relative to the scope as filed in the original PINS. Wording for a revised PINS is provided for your review, discussion and action. (see Updated PINS E1.33 for WG Mtg.pdf). Proposed comment resolutions and a revised document draft have been distributed (See E1.33 CP\_2018-1017 by Comment #.pdf and E1.33 2018-07-06.pdf). An informational document has been provided showing the version changes pre- and post-revision (See E1.33 2018-07-06 DIFF.pdf)*

Scott Blair moved to accept the PR comment resolutions. The motion was seconded and carried by super-majority vote with no dissenting votes, one abstention, and all the rest in favor.

Scott Blair moved to approve the revised PINS form, the motion was seconded. There was a discussion about the reason for the change and how or if it might affect process. No net impact on process except perhaps adding a 30-day PINS filing period. The motion carried by super-majority with no dissenting votes and one abstention. The updated PINS will be filed. (TSM note: A revised PINS form was filed, but ANSI staff advised that it was not necessary since the list of affected parties had not changed. ANSI staff advised that we cancel the revised PINS form application, which ESTA staff did.)

Scott Blair moved to offer the revised E1.33 document for public review. The motion was seconded. There was discussion. One concern was that the Plugfest, happening concurrent with the TSP meetings, might suggest some changes to the draft standard, and it would be better to incorporate those changes before doing another public review. The public review motion was defeated with a supermajority voting against the motion. The current revision will be updated in light of the lessons learned at the Plugfest. A WebEx working group meeting will be held in a few weeks to consider a revised BSR E1.33 document.

Michael Lay thanked the task group members for their efforts in getting the document moved forward.

### **8.6 BSR E1.30-11, EPI 33, Transport of root PDUs over TCP**

*The public review ended on 9 April 2018. The public review comments were distributed to the working group on 03 May 2018. (see E1-30-11\_SecondReviewSummary.pdf). The one comment was "Yes." Any updates or action?*

Scott Blair said E1.30-11 is a corollary to RDMnet (E1.33). No comments need to be resolved; no action now.

### **8.7 BSR E1.37-4, Firmware updates via ANSI E1.20, RDM**

*The public review ended on 9 April 2018. The public review comments were distributed to the working group on 03 May 2018. (See Summary\_BSR\_E1-37-4\_FirstPublicReview.pdf). Any updates or action?*

Peter Willis reported on the number of comments and the work being done to resolve them. He also said that the standard was being tested by writing code in this weekend's Plugfest and trying it. He described questions about what RDM functionality a bootstrap loader might need to provide.

Karl Ruling urged people not to make public review comments on British versus US spelling conventions. He noted that we have a number of members of the working group for whom the British spellings are the ones native to them, and even among the US citizens in the group, British spelling is used at times (e.g., "Electronic Theatre Controls"). Comments on British versus US spelling are not substantive, but they add a lot of work to the public review comment resolution and documentation process. However, it's reasonable to want a consistent spelling practice in a document, and that can be done by ESTA staff after a document is drafted, if the working group wishes.

### **8.8 BSR E1.37-5, General Purpose Messages for ANSI E1.20 RDM**

*From the draft March minutes:*

*Scott Blair said that this is in a holding pattern. Resolutions were presented at the last meeting, but E1.20 needs to move forward before the resolutions can be completed. Any news, updates or action?*

Scott Blair gave an update. He intends to have it ready when E1.20 is completed, so that both documents can go to public review simultaneously.

### **8.9 BSR E1.37-6 - 20xx, Additional Message Sets for ANSI E1.20 (RDM) - Parameter Description Messages**

*From the draft March minutes:*

*Scott Blair said that the group is still considering whether or not to break E1.37-5 up into all these parts. Any news or action at this time?*

Scott Blair gave an update. The situation is essentially the same as with E1.37-5. He intends to have it ready when E1.20 is completed, so that both documents can go to public review simultaneously.

#### **8.10 BSR E1.37-7 - 20xx, Additional Message Sets for ANSI E1.20 (RDM) - Gateway and Splitter Configuration**

*The public review ended on 9 April 2018. Proposed comment resolutions and a new draft revision have been distributed (See E1-37-7\_SecondReviewSummary.pdf, E1.37-7 CP\_2018-1018 by Comment #.pdf, E1.37-7 Gateway PIDs 2018-07-02.pdf). An informational document showing the version differences pre- and post-revision has been provided (See E1.37-7 Gateway PIDs 2018-07-02 DIFF.pdf). Fraser Connolly has been added to the task group.*

Scott Blair moved that we approve the comment resolutions. The motion was seconded. Javid Butler asked if the Plugfest would affect these comment resolutions. No. The motion was approved unanimously with no abstentions.

Scott Blair suggested that the public review should be deferred until E1.33 and it can be offered for public review together. The consensus was that this would be a good thing to do.

#### **8.11 BSR E1.59 - 201x, Automation Vector Transmission Protocol**

*From the draft March minutes: Maya Nigrosh said that the group is in the midst of drafting a standard. They are meeting this Saturday to put text on paper. The group feels good about where they are headed. Any news or action at this time?*

Michael Lay noted that Dan Lisowski has had to step back from leading project. Maya Nigrosh will continue leading work on the draft.

#### **8.12 BSR E1.61 – 20xx, NAEP**

*At the March meeting, Jason Potterf reported a productive meeting at NAMM, with anticipation of putting words on paper the following weekend, then scheduling of subsequent meetings. Any news, updates or action at this time?*

Jason Potterf reported that they have a bulleted list of protocols that need to be identified. The standard should be sort, just a calling out of TLVs to be used.

Michael Lay praised Jason Potterf's article about NAEP in the most recent issue of *Protocol*, and suggested that every new project should have such an article.

Jason noted that ESTA does not have all the entertainment industry protocols, but this standard should cover all of them. He asked people to reach out to people in entertainment audio and other allied industries.

#### **8.13 IPv6 task group report**

*According to the draft March minutes, Peter Willis is expected to report on adding IPv6 to E1.37-2. Any news or updates?*

Peter Willis gave a brief update. There was further discussion of what protocols should have IPv6 support. There was no interest in opening ANSI E1.17, ACN, to add such support. That would be a big job.

#### **8.14 Compliance testing study group**

Javid Butler reported that they met via WebEx Tuesday, and are taking things "a step at a time," breaking them down into tasks. The task group has decided to write an article about the project for *Protocol*.

Butler said the task group is going back to the PICS that was in E1.11 in an earlier. They will use that for the basis of the article and an educational outreach, which is the first step.



Bob Goddard said that the PICS might make recommendations for interoperability that are stricter than the actual standard's requirements. This led to a discussion of perhaps adding material to the *Recommended Practice for DMX512*.

### **8.15 Next Gen Streaming Study Group**

*At the March meeting, a new study group was formed to evaluate key criteria, and to survey the industry for the "Next Gen Streaming" protocol. Any news, updates or action?*

Jason Potterf reported that nothing is happening on this project. He suggested that an upcoming task group meeting will let them see better if there is a project here worth pursuing or not.

### **8.16 Lighting Protocols Plugfest 2018**

*The event took place 25-27 April 2018. Any news or updates to report?*

Peter Willis reported on a very successful event, with attendees from all over Europe, including Romania. Wayne Howell noted that the Plugfest also covered architectural protocols, such as DALI.

### **8.17 ESTA Plugfest 2018**

*Any news or updates to report?*

Scott Blair reported a good turnout up in the Plugfest room 728. BSR E1.33 implementations tested during the Plugfest, too. Michael Lay had arranged for a lot of Altman equipment to be there, which was helpful.

Peter Willis suggested that those who donate equipment, especially those participating for the first time, need to actually attend in person in order to get the best learning experience. Is there an opportunity for outreach?

### **8.18 Task group leader coordination**

*Scott Blair is the official scheduling liaison between the CPWG task groups and Frances Thompson. Anyone needing a physical task group meeting at an upcoming event should contact Scott.*

*BSR E1.20 Scott Blair and Wayne Howell  
BSR E1.30 No single leader; Generic group  
BSR E1.31 Jason Potterf  
BSR E1.30-11, EPI 33 Simon Newton  
BSR E1.33 Scott Blair and Sam Kearney  
BSR E1.37-2 Simon Newton  
BSR E1.37-4 Peter Willis  
BSR E1.37-5 Scott Blair and Simon Newton  
BSR E1.37-6 Simon Newton  
BSR E1.37-7 Scott Blair  
BSR E1.59 Dan Murfin  
E1.37-x Video Walls Scott Blair  
E1.61 NAEP Jason Potterf and Kevin Loewen  
IPv6 Task Group Jason Potterf  
Plugfest Marketing Task Group Michael Lay  
NAMM Education Task Group Milton Davis  
Task Group Meeting Schedule Liaison Scott Blair*

No news or action, other than noting the above list.

## **9 New business**

### **9.1 Standards permalinks**

No news or action. The consensus was that this should be struck from the agenda.

## **9.2 CPWG project roadmap**

*(See CPWG\_Project\_Roadmap\_Rev\_005\_05-Jul-2018.pdf)*

This may not be useful, it will be updated and published perhaps once more, said Michael Lay.

## **9.3 NAMM Education panels**

Milton Davis said that we need more NAMM sessions. Scott Blair reported that the Plugfest round tables are proposed to be repackaged for NAMM.

## **9.4 Manufacturer ID discussion**

There was discussion of limiting the Manufacturer ID range that can be registered on the ESTA website to values below 8000h to accommodate dynamically assigned IDs in E1.33. Karl Ruling noted that only values below 8000h are valid for the UIDs specified in ANSI E1.20, so no one has asked for or been assigned an ID above 7FFFh. The consensus was that the Manufacturer ID page should include text stating that no IDs 8000h or above may be registered.

## **10 Other business & announcements**

### **10.1 Above & Beyond Awards**

*The Above and Beyond Award nomination form, as well as a list of past recipients, is available at <http://estalink.us/aboveandbeyond>.*

### **10.2 ESTA DMX512/RDM Educational Kit - "Train the Trainer" Session**

No news or action.

## **11 Future meetings**

*The full meeting schedule may always be found at <http://www.esta.org/ESTA/meetings.php>.*

### **11.1 Fall meetings**

Milton Davis announced that the Fall 2018 meetings are scheduled to be held 05-07 October 2018 back here at the D/FW Marriott Solana in Westlake, TX. The CPWG meeting is scheduled for Saturday 06 October from 09:00 to 13:00.

### **11.2 January NAMM meetings**

Milton Davis said that the January ESTA meetings will be in Anaheim, CA, from 23-26 January 2019 in conjunction with the NAMM Show. The meetings will be held at the Sheraton Park Hotel. The CPWG meeting is tentatively scheduled for Saturday, 26 January 2019 from 09:00 to 13:00.

## **12 Adjournment**

Scott Blair moved the meeting adjourn. Having reached the end of the agenda, and with no more business to conduct, Milton Davis declared the meeting adjourned at 11:16.

Delegate	Company	Representing	Voting status	Int. cat.
Christian Allabauer	Christian Allabauer	Christian Allabauer	O	G
Matthew Ardine	IATSE Local 728	IATSE Local 728	A	U
Andrew Atienza	Full Throttle Films/ VER	Full Throttle Films/ VER	P	DR
Nick Ballhorn-Wagner	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	O	MP
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	U
Paul Beasley	Walt Disney Imagineering	Walt Disney Company	P	U
Robert Bell	Acuity Brands Lighting	Acuity Brands Inc.	A	MP
Marcus Bengtsson	disguise	disguise	A	MP
Andrew Berry	X-Laser	X-Laser	P	MP
Scott M. Blair	Megapixel	Megapixel	P	CP
Eric Bloom	Westview Productions	Westview Productions	P	DR
Brent Boulnois	Candela Controls, Inc.	Candela Controls, Inc.	A	DE
Javid Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	O	CP
Justyn Butler	JBOTS	JBOTS	O	CP
Ian Campbell	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP
Jean-Francois Canuel	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	O	CP
Steve Carlson	High Speed Design, Inc.	High Speed Design, Inc.	O	MP
Anthony Chiappone	Chauvet Lighting	Chauvet Lighting	O	MP
Martin Chisnall	Martin Chisnall	Martin Chisnall	O	U
Jon Chuchla	Audio Visual Systems, Inc.	Audio Visual Systems, Inc.	O	G
Edward R. Condit	OSRAM Lighting Solutions	OSRAM Licht AG	O	G
Gareth Conner	Creative Conners, Inc.	Creative Conners, Inc.	O	MP

Delegate	Company	Representing	Voting status	Int. cat.
Fraser Connolly	Obsidian Controls	Obsidian Controls	O	DE
Milton Davis	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	MP
Jeremy Day	Lumenpulse Lighting Inc.	Lumenpulse Lighting Inc.	O	MP
Larry Dew	W.A. Benjamin Electric Co.	W.A. Benjamin Electric Co.	O	DE
Rich Dionne	Dept. of Theatre	Purdue University	O	DE
Tucker Downs	Tucker Downs	Tucker Downs	O	U
Hamish Dumbreck	JESE Ltd.	James Embedded Systems Engineering	O	MP
James Eade	ABTT	ABTT	O	G
Bill Ellis	Candela Controls, Inc.	Candela Controls, Inc.	P	DE
Paul K. Ericson	Sparling	Stantec	O	DE
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Andrew Frazer	Stellascapes.com	Stellascapes.com	P	MP
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	MP
George Gong	Philips Lighting	Philips Lighting	O	MP
David Gooch	Chauvet Lighting	Chauvet Lighting	O	MP
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	O	G
Erin Grabe	ESTA	ESTA	exf	G
Sean Harding	Port Lighting Systems	Port Lighting Systems	O	G
Nick Harper	Alphabet	Nick Harper	I	G
Robert Haycock	Cal Performances	UC Berkeley	I	U
Mitch Hefter	Mitch Hefter	USITT	P	U
Bill Hewlett	ImageCue LLC	ImageCue LLC	O	MP
Julian Hoare	Tait Towers	Tait Towers Manufacturing LLC	A	MP

Delegate	Company	Representing	Voting status	Int. cat.
Jon Hole	Zero 88	Eaton	P	MP
Jim Holladay	Luxence	Luxence	O	G
Maurits van der Hoorn	Pathway Connectivity	Acuity Brands Inc.	A	MP
Wayne David Howell	Artistic Licence Engineering Ltd.	Artistic Licence Holdings	P	DE
John Huntington	City Tech, Ent Tech Department	I.A.T.S.E. Local 1	A	U
Eric Johnson	Eric Johnson	Eric Johnson	O	G
Rob Johnston	Interactive Technologies, Inc.	Interactive Technologies, Inc.	O	MP
John Valus_Jr.	LEX Products	Lex TM3	P	CP
David Kane	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Michael Karlsson	LumenRadio AB	LumenRadio AB	O	MP
Sam Kearney	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	MP
Jonathan Kemble	High End Systems	ETC	O	MP
Christopher Kennedy	ChamSys Ltd.	Chauvet Lighting	O	MP
Paul Kleissler	City Theatrical, Inc.	City Theatrical, Inc.	P	MP
Lucas Korytkowski	Rosstech	Insight Lighting	O	MP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Ulrich Kunkel	E3 Engineering & Education for Entertainment GmbH	E3 Engineering & Education for Entertainment GmbH	P	U
Jason Kyle	JPK Systems Ltd.	JPK Systems Ltd.	O	MP
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Michael Lay	Signify	Signify	P	MP
Hans Leiter	ETC GmbH	Electronic Theatre Controls, Inc.	O	MP
Jon Lenard	Applied Electronics	Applied Electronics	O	MP

Delegate	Company	Representing	Voting status	Int. cat.
Dan Lisowski	Dept. Of Theatre and Drama	University of Wisconsin - Madison	O	DE
Kevin Loewen	Pathway Connectivity	Acuity Brands Inc.	P	MP
Jim Love	Tait Towers	Tait Towers Manufacturing LLC	P	MP
Rob Love	Rosstech	Insight Lighting	O	MP
Royal Marty	ZFX, Inc.	ZFX, Inc.	O	MP
Bill McIntyre	Niscon Inc.	Show Distribution Group, Inc.	P	CP
John Mehlretter	Lehigh Electric Products Co.	Lehigh Electric Products Co.	O	MP
Daniel Murfin	Royal National Theatre	Royal National Theatre	P	U
John Musarra	John Musarra	John Musarra	O	U
Simon Newton	Open Lighting Project	Open Lighting Project	P	G
Maya Nigrosh	Sonos	Sonos	P	MP
Richard J. Nix	ESTA	ESTA	exf	G
Jim Ohrberg	Candela Controls, Inc.	Candela Controls, Inc.	A	DE
Danilo Oliveira	Chauvet Lighting	Chauvet Lighting	O	MP
Mit Patel	disguise	disguise	P	MP
Jaxon Patterson	Insight Lighting	Insight Lighting	O	MP
Soren Sterdorff Peglau	Brother, Brother and Sons	Brother, Brother and Sons	O	MP
Jason Potterf	Cisco	Cisco	P	MP
Gary Pritchard	LSC Lighting Systems (Aust) PTY Ltd	LSC Lighting Systems PTY Ltd	O	MP
Eric Rasmussen	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	A	MP
Charles Reese	Production Resource Group	Production Resource Group	O	DR
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Karl G. Ruling	ESTA	ESTA	exf	G

Delegate	Company	Representing	Voting status	Int. cat.
Yngve Sandboe	Sand Network Systems, Inc.	Sand Network Systems, Inc.	O	MP
Nicolai Gubi Schmidt	Gobo & Highlight A/S	Gobo & Highlight A/S	O	DR
Larry Schoeneman	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	P	DR
Ford Sellers	Chauvet Lighting	Chauvet Lighting	O	MP
Sean Sill	Sean Sill	Sean Sill	O	CP
Ralph Stillinger	Strand Lighting	Philips Lighting	O	MP
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	A	MP
Christopher B. Tilton	About the Stage, LLC	About the Stage, LLC	O	DE
Robert Timmerman	Philips Color Kinetics	Philips Lighting	O	MP
James Tomlinson	Team Tomlinson	Team Tomlinson	O	G
Tracy Underhill	Triple C Lighting & Controls	Triple C Lighting & Controls	O	G
Carlo Venturati	Clay Paky S.P.A.	Clay Paky S.P.A.	O	MP
Will Wagner	Carallon Ltd.	Carallon Ltd.	O	MP
Colin Waters	TMB	TMB	O	DR
Ralph Weber	ENDL Texas	ENDL Texas	O	G
Peter Willis	Howard Eaton Lighting Ltd.	Howard Eaton Lighting Ltd.	P	CP
Loren Wilton	Showman Systems	Showman Systems	O	CP
David Yellin	Sumolight GmbH	Sumolight GmbH	O	MP
Jeong Sik Yoo	Ghost LX	Ghost LX	O	DE

**Voting Status Key:** P = Principal voter, A = Alternate voter, I = Individual voter, O = Observer member, exf = Ex Officio member

**Interest Category Key:** CP = Custom-market producer, DE = Designer, DR = Dealer or rental company, G = General interest, MP = Mass-market producer, U = User

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