

**Minutes**  
**Electrical Power Working Group**  
Friday, 29 January 2016  
D/FW Marriott Solana  
Westlake, TX

**Working group leaders:**

Mitch Heffer; USITT; P; U  
Ken Vannice; Ken Vannice LLC; I; G

**Recording secretaries:**

Erin Grabe; ESTA  
Karl G. Ruling; ESTA

**Members attending:**

Justin Bennett; University of the Incarnate Word; P; U  
Richard Cadena; Academy of Production Technology; O; G  
Richard Dale; Bender GmbH & Co. KG (Bender GmbH & Co. KG); A; MP  
James Davey; AC Power Distribution Inc.; P; CP  
James Eade; ABTT; P; G  
Don Earl; Earl Girls, Inc.; P; DR  
Ed Garstkiewicz; Harting Inc., North Americ (Harting KGAA); O; G  
Jerry Gorrell; Theatre Safety Programs; P; U  
Mitch Heffer; USITT; P; U  
Tyrone Mellon\_Jr.; Lex Products (Lex TM3); P; CP  
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U  
Roger Lattin; I.A.T.S.E. Local 728; P; U  
Michael Lay; Philips Color Kinetics (Philips Lighting); P; MP  
George Long; Aggreko Event Services (Aggreko); P; DR  
Gregory Quinkert; Motion Laboratories; P; MP  
Alan M. Rowe; IATSE Local 728; A; U  
Heather Rowe; Contract Services Administration Trust Fund; A; U  
Steve Terry; Electronic Theatre Controls, Inc.; P; MP  
Stephen Vanciel; IATSE Local 631; P; U  
Art Wanuch; Entertainment Electrical Safety Committee of Ontario; P; G  
Keith S. Woods; Lakhri Impressions Ltd. representing IATSE Local 891; P; U

**Visitor:** Mike Garl; Mike Garl Consulting;

**1 Opening remarks**

Ken Vannice called the meeting to order at 09:00. Vannice welcomed all the people present.

He noted that Mitch Heffer, the co-chair, was caught in traffic but was on his way to the meeting.

**2 Attendance and membership**

**2.1 Introduction of those present and taking attendance**

Those present and on-line introduced themselves while a vibrantly green sign-in sheet was circulated.

**2.2 Determination of quorum**

*There are currently 22 votes possible. A quorum is 8; supermajority is 12.*

Vannice asked for a show of hands of voters. The total, including those on-line, was 19, considerably more than the minimum for a quorum.

(Hefter arrived shortly after this, and Eade's status was changed to Principal, so 21 voters were present during the body of the meeting.)

### 2.3 Recognition of alternate voting members

There were no combinations of principal plus alternate members present, so there was no need to remind people of one-vote-per-entity.

Alternate voters were recognized.

### 2.4 Requirements for membership, new

*The following statement is to be read aloud to the assembly:*

*Membership is open to all who are affected by the work of the group. Voters who would be in the designer or dealer/rental company interest category in particular are encouraged to become members. 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 or three consecutive letter ballots without a loss of voting status.*

### 2.5 Changes to observer status

*There are currently no members in jeopardy of a change to Observer status due to lack of attendance.*

### 2.6 Processing of new and other membership requests

*As of 12 January 2016, no new member requests have been received.*

James Eade asked to have his voting status changed from Observer to Principal.

Steve Terry moved that Eade's request be granted. The motion was seconded and then approved unanimously on a voice vote.;

Erin Grabe reported other changes in the membership to the members present.

The following participants had been removed on request:

Paul Mardon; Pulsar Ltd.; O; MP (Paul Mardon has retired)  
Bruno Marx; Eventknowhow; O; G

The following members were removed due to persistent email bounces:

William Drake; Maringo (Power Products, LLC); O; MP  
Steve Brock; Bender ET Inc.; Bender GmbH & Co. KG; A; MP (According to Nathan Leonard, he has left Bender for another company.)

### 2.7 Consensus body

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

Delegate	Representing	Interest cat.	Voting status
James Eade	ABTT	P	G
James Davey	AC Power Distribution Inc.	P	CP
George Long	Aggreko	P	DR
Nathan Leonard	Bender GmbH & Co. KG	P	MP
Torsten Gruhn	Bender GmbH & Co. KG	A	MP
Richard Dale	Bender GmbH & Co. KG	A	MP
Matthew Antonucci	Contract Services Administration Trust Fund	P	U
Heather Rowe	Contract Services Administration Trust Fund	A	U

Larry Schoeneman	DesignLab Chicago, Inc.	P	DR
Don Earl	Earl Girls, Inc.	P	DR
Steve Terry	Electronic Theatre Controls, Inc.	P	MP
Elizabeth E. (Lizz) Pittsley	Elizabeth Pittsley	I	U
Art Wanuch	Entertainment Electrical Safety Committee of Ontario	P	G
Ian Foulds	Entertainment Electrical Safety Committee of Ontario	A	G
Rodger Dean	Entertainment Electrical Safety Committee of Ontario	A	G
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Roger Lattin	I.A.T.S.E. Local 728	P	U
Alan M. Rowe	I.A.T.S.E. Local 728	A	U
Stephen Vanciel	IATSE Local 631	P	U
Keith S. Woods	IATSE Local 891	P	U
Ken Vannice	Ken Vannice LLC	I	G
Tyrone Mellon_Jr.	Lex TM3	P	CP
Bob Luther	Lex TM3	A	CP
Brian Eustace	Mole-Richardson Co.	P	CP
Michael G. Davis	Mole-Richardson Co.	A	CP
Gregory Quinkert	Motion Laboratories	P	MP
Michael Lay	Royal Philips	P	MP
Jerry Gorrell	Theatre Safety Programs	P	U
Justin Bennett	University of the Incarnate Word	P	U
Mitch Hefter	USITT	P	U
Jeff T. Miller	Walt Disney Company	P	U
	<b>Total votes possible</b>	<b>23</b>	
		3	CP
		0	DE
		3	DR
	Subtotal of votes by interest categories	3	G
		4	MP
		10	U

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

See EPmin10-2015.pdf.

Steve Terry moved that the minutes be approved as written. The motion was seconded. The motion passed with no objections and one abstention.

### 4 Reading of the NEW call for patents

The following statement was read aloud to the assembly by Ken Vannice:

*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.*

No one noted anything.

## **5 Reading of the NEW anti-trust statement**

*The following statement was read aloud to the assembly by Mitch Heftner:*

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 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.

Karl Ruling held up one of the easy-to-read pamphlets to show it was readily available. Nothing was reported.

## **6 Approval of agenda**

A UL item added by Steve Terry and Roger Lattin. There were no objections. Steve Terry moved that we approve the modified agenda. The motion was seconded, and then approved with no objections or abstentions.

## **7 Other business and announcements**

### **8 Old business - task group reports**

**8.1 ANSI E1.16-2002 (R2012) Configuration Standard for Metal Halide Ballast Power Cables** (Revision, reaffirmation, or withdrawal by 2017)

No news or action at this time.

**8.2 ANSI E1.19 – 2015, Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry** (Revision, reaffirmation, or withdrawal by 2020)

No news or action at this time.

**8.3 ANSI E1.24 - 2012, pin connectors** (Revision, reaffirmation, or withdrawal by 2017)

No news or action at this time.

**8.4 ANSI E1.32 - 2012, Guide for the Inspection of Entertainment Industry Incandescent Lamp Luminaires** (Revision, reaffirmation, or withdrawal by 2017)

*Any news or action at this time?*

Roger Lattin asked for a bulletpoint of the standard, something that would fit into an electrician's back pocket. Karl Ruling suggested that Roger Lattin do a first draft and bring it to the working group for further consideration.

### **8.5 BSR E1.51—A Canadian E1.18**

*The document was in public review through the end of the day 4 January 2016. Comments were received and are being collated for distribution to the working group. Resolutions will need to be drafted and approved.*

There was discussion of Keith Woods' objections and the way forward. Karl Ruling noted that the next step is to draft comment resolutions.

There was a discussion on the document's technical merits, and the work needed to polish it. Furthermore, people questioned if the work would be worth the effort if the document is not needed, as Keith Woods says. The discussion was lengthy, with the small number of Canadians being involved in the process often cited as a problem. That is, there were two Canadians at this meeting: one saying that the document is flawed and not needed and the other saying that it is useful and is needed.

Keith Woods had objected in public review to clauses he says quote the CEC without permission. Art Wanuch says that he had sent the document to some of his contacts at the CSA and is expecting a letter in return that says they have no problem with the language used in the document.

Eddie Kramer moved that we accept Woods's comment #8 and shelve the project. The motion was seconded. There was discussion in which Art Wanuch asked for more time to respond to the public review objections. There was further discussion, at the end of which Eddie Kramer withdrew his motion to give Art Wanuch the time he asked for at the next meeting, so there was no vote. With no motion on the floor, the chairs called an end to the discussion.

The consensus was that the Canadian community needs a justification statement for this project. That is, what problem would it solve, and is this problem widespread?

## **8.6 A proposal about Portable Power Distribution Equipment for Canada**

*Any word on CSA C22.2, No. 300?*

Ty Mellon reminded the group of the origin of this agenda item: his proposal that UL develop something like UL 1640 for the Canadian market. UL declined, saying that CSA C22.2, No. 300 was being developed, and it would be a CSA equivalent of a UL 1640 for Canada.

Art Wanuch reported that he had found that the CSA committee working on the document and that committee is hoping it will be available for public review by April of this year.

## **8.7 BSR E1.53, Overhead mounting of luminaires, lighting accessories, and other portable devices: specification and practice**

*The document was in public review through the end of the day 4 January 2016. One review form was submitted, but no comments were received; none need to be resolved. See BSRE1-53\_2ndRvwCmmntSmmry.pdf.*

Karl Ruling reported that there had been one public review comment, a simple Yes.

Steve Terry moved that BSR E1.53 be accepted as an American National Standard. Jerry Gorrell seconded the motion. The question would be decided by letter ballot. There was discussion, during which Eddie Kramer said that what constituted "use" was unclear; would everything without a rating have to be proof-tested before every show, or before every hang, or simply the first time it is used? The draft standard was modified to define "use" and to suggest that unrated hardware that has been proof-tested could then be marked, so that it is no longer unrated hardware.

Steve Terry withdrew his motion to accept E1.53 as an ANS to allow the working group to look at the document one more time.

Jerry Gorrell moved to offer the revised draft BSR E1.53 for public review, with the question to be decided by letter ballot. The motion was seconded by Eddie Kramer. Support for the motion was shown by upraised hands and voice votes, but the public review question will be decided by letter ballot.

Ken Vannice urged people to comment if they have objections or suggestions they feel should be addressed, and not to think that someone else will offer the same comment they would.

## **8.8 BSR E1.58 "Electrical Safety Standard for Portable Stage and Studio Equipment Used Outdoors"**

*Any news on this project?*

Steve Vanciel said that he has received a lot of good information and is compiling it. He should have it collated by March to distribute for input.

### **8.9 Special Purpose GFCIs (SPGFCI)**

Ken Vannice reported that language is in the process of being adopted for NEC articles 520 and 530 that makes the GFCI requirements mandated by other sections of the Code for all outdoor installations be optional in these chapters. Steve Terry said that this language will need to be refined, because it looks like the exemptions apply to all branch circuit outlets in outdoor theatres, when we are really only concerned with lighting and other special circuits.

The big problem with requiring GFCI on dimmed lighting circuits is that there are no GFCIs on the market that will work on the outputs of dimmers, and there are no longer any dimmers made that incorporate GFCI. Therefore, a mandate for GFCI on dimmed branch circuits would be impossible to meet.

There was further discussion of GFCIs and entertainment venues.

## **9 New business**

### **10 Other business**

#### **10.1 NEC 2017**

*Any news or action?*

The 2017 NEC was discussed in the GFCI item 8.9 above. Steve Terry said there were many editorial changes to 520, but lots of changes to the NEC overall that are far-reaching and very interesting.

#### **10.2 Above & Beyond Awards**

Mitch Hefter gave this year's Above and Beyond Award to Ty Mellon. He lauded Ty's efforts in developing ANSI E1.19 and ANSI E1.24, and being an essential, active member of the working group on a number of other projects. Karl Ruling took a picture for publication of Ty Mellon receiving the award.

Hefter reminded meeting attendees that the nomination site is open year-round at <http://tsp.esta.org/AboveandBeyond>. Nominate a volunteer who has been particularly helpful, diligent, or hard-working!

#### **10.3 TSP participation fees**

Erin Grabe offered a thank you to all the members who have settled the 2016 participation fee. She asked that those who have not done so to please log in soon. She also had a Square and could take payments at the meeting.

#### **10.4 UL**

Ken Vannice reported that the UL 508 STP (Standards Technical Panel) has been dissolved. He asked UL who is responsible for the remains of UL 508. He was told that STP 60947-4-1 would be in charge of what is left in UL 508. So, he urged those interested in various kinds of devices that were covered by UL 508 to get involved in STP 60947-4-1.

Steve Terry spoke about his UL 8750 proposal about limiting leakage currents from UL LED drivers into the control circuits. When many drivers are connected to one control circuit, the multiple drivers in parallel can supply current at hazardous levels. Terry noted that any interested party can use UL's Collaborative Standards Development System (CSDS); you don't need to be a member of a STP or a UL lab customer to watch development activities and offer comments.

Ty Mellon noted that UL had issued a call for proposals on UL 1640. Karl Ruling said the notice with URL links was published in the late January *Standards Watch*.

#### **10.4 Other other business**

None.

#### **11 Schedule for future meetings**

See <http://na.esta.org/news/meetings.php> for the most current schedule.

##### **11.1 USITT 2016**

It was announced that the next meeting, which will be held in conjunction with the USITT Conference and Stage Expo, is scheduled for Wednesday, 16 March 2016, from 14:00 to 18:00 at the Salt Lake City Downtown Marriott.

##### **11.2 July 2016 meetings in conjunction with NATEAC**

*From the draft October minutes:*

*The July 2016 meetings will be held in conjunction with NATEAC in New York City. Meeting dates are tentatively scheduled for 14-18 July, while the conference dates are 17-18 July 2016. Information on the conference is available at <http://www.nateac.org/>.*

Having a meeting in New York City in July was discussed. The general sentiment was negative.

Steve Terry moved that we not have meetings in New York. The motion was seconded. The motion carried with a plurality. Several people pointed out that we can have a meeting by WebEx any time we need to do so; if a July meeting becomes necessary, we can have a teleconference meeting.

#### **12 Adjournment**

Eddie Kramer moved that the meeting adjourn. The motion was seconded. The motion carried with a show of hands. Ken Vannice declared the meeting adjourned at 11:14.

Person	Company	Representing	Voting status	Int. cat.
Matthew Antonucci	Contract Services Administration Trust Fund	Contract Services Administration Trust Fund	P	U
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Justin Bennett	University of the Incarnate Word	University of the Incarnate Word	P	U
Kaleb Best	Tait Towers	Tait Towers	O	MP
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Ron Bonner	PLASA Technical Resources Office	PLASA EU	O	U
Eric Bouchard	Cirque du Soliel	Cirque du Soliel	O	CP
Louis Bradfield	Louis Bradfield	Louis Bradfield	O	U
André Broucke	André Broucke	André Broucke	O	G
Richard Cadena	Academy of Production Technology	Academy of Production Technology	O	G
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	O	CP
Michael J. Carnaby	Mikan Theatricals	Mikan Theatricals	O	DR
Edward R. Condit	Edward R. Condit	Edward R. Condit	O	U
Richard Dale	Bender GmbH & Co. KG	Bender GmbH & Co. KG	A	MP
James Davey	AC Power Distribution Inc.	AC Power Distribution Inc.	P	CP
Michael G. Davis	Mole-Richardson Co.	Mole-Richardson Co.	A	CP
Jeremy Day	Lumenpulse Lighting Inc.	Lumenpulse Lighting Inc.	O	MP
Rodger Dean	R. Dean Lighting Limited	Entertainment Electrical Safety Committee of Ontario	A	G
Kenny Delahoussaye	Aggreko	Aggreko	O	DR
Jim Digby	The Collaborative Endeavor Group	Linkin Park Touring/The Collective	O	U
Marsha DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP
Steve DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP
James Eade	ABTT	ABTT	P	G
Don Earl	Earl Girls, Inc.	Earl Girls, Inc.	P	DR
Brian Eustace	Mole-Richardson Co.	Mole-Richardson Co.	P	CP
Jose J. Flores	Kino Flo, Inc.	Kino Flo, Inc.	O	MP
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Howard Forryan	Harting Ltd.	Harting KGAA	O	G
Ian Foulds	IATSE Local 873	Entertainment Electrical Safety Committee of Ontario	A	G
Ed Garstkiewicz	Harting Inc., North America	Harting KGAA	O	G
Reuben Goldberg	Technic Services	Technic Services	O	U
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Erin Grabe	ESTA	ESTA	exf	G
Bill Grande	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	O	MP
Torsten Gruhn	Bender Inc.	Bender GmbH & Co. KG	A	MP
Robert P. Harris	IATSE Local 891	IATSE Local 891	O	U
Mike Harwood	William F. White International	William F. White International	O	DR



Person	Company	Representing	Voting status	Int. cat.
Mitch Hefter	Mitch Hefter	USITT	P	U
Peter Herrmann	Motion Laboratories	Motion Laboratories	O	CP
David Herrmann	Motion Laboratories	Motion Laboratories	O	CP
Jim Holladay	Luxence	Luxence	O	G
Simon Hunt	IATSE Local 891	IATSE Local 891	O	U
Tyrone Mellon_Jr.	Lex Products	Lex TM3	P	CP
Hiroshi Kita	Marumo Electric Co., Ltd.	Marumo Electric Co., Ltd.	O	MP
Wayne Kowalski	Coleman Cable Inc.	Coleman Cable Inc.	O	MP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Kristen Kuipers	Newcomb & Boyd	Newcomb & Boyd	O	DE
Charles (Chuck) Kurten	Underwriters Laboratories, Inc.	Underwriters Laboratories, Inc.	O	G
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Michael Lay	Philips Color Kinetics	Royal Philips	P	MP
Nathan Leonard	Bender Group	Bender GmbH & Co. KG	P	MP
Dave Lester	Clair Global	Clair Global	O	U
George Long	Aggreko Event Services	Aggreko	P	DR
Bob Luther	Lex Products	Lex TM3	A	CP
William L. Maiman	William L. Maiman	William L. Maiman	O	U
Greg Mayberry	AC Power Distribution Inc.	AC Power Distribution Inc.	O	CP
Pat Miller	Hubbell Wiring Devices	Hubbell Inc.	O	MP
Jeff T. Miller	Worldwide Standards and Auditing	Walt Disney Company	P	U
Kevin O'Brien	Bestek Lighting & Staging	Bestek Lighting & Staging	O	U
Natti Pierce-Thomson	North American Theatre Technology	North American Theatre Technology	O	U
Elizabeth E. (Lizz) Pittsley	Elizabeth Pittsley	Elizabeth Pittsley	I	U
Gregory Quinkert	Motion Laboratories	Motion Laboratories	P	MP
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Heather Rowe	Contract Services Administration Trust Fund	Contract Services Administration Trust Fund	A	U
Karl G. Ruling	ESTA	ESTA	exf	G
Jared Saltzman	Jared Saltzman	Jared Saltzman	O	U
Larry Schoeneman	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	P	DR
Ford Sellers	Chauvet Lighting	Chauvet Lighting	O	MP
Mike Skinner	CBS Studio Center	Alliance of Motion Picture and Television Producers	O	U
Jonny Starr	TMB	TMB	O	MP
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	O	G
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	P	MP
Robert Timmerman	Philips Color Kinetics	Royal Philips	O	MP

Person	Company	Representing	Voting status	Int. cat.
James Tomlinson	Team Tomlinson	Team Tomlinson	O	G
Stephen Vanciel	IATSE Local 631	IATSE Local 631	P	U
Ken Vannice	Ken Vannice LLC	Ken Vannice LLC	I	G
Art Wanuch	Entertainment Electrical Safety Committee of Ontario	Entertainment Electrical Safety Committee of Ontario	P	G
Colin Waters	TMB	TMB	O	DR
Richard Wolpert	Union Connector Company (MO)	Union Connector Company	O	CP
Keith S. Woods	Lakhri Impressions Ltd.	IATSE Local 891	P	U
Jiantong Wu	Beijing Special Engineering Design & Research Institute	Beijing Special Engineering Design & Research Institute	O	G

**Key to codes:**

P = principal voter

A = alternate voter

I = individual voter

O = observer, non-voter

CP = custom-market producer

DE = designer

DR = dealer/rental company

G = general interest

MP = mass-market producer

U = user