

Minutes
Electrical Power Working Group
Friday, 13 July 2007
Dallas/Ft. Worth Airport Marriott South
Ft. Worth, TX

Chairmen: Ken Vannice; Colortran (Leviton Manufacturing Co., Inc.); P; MP
Mitch Hefter; Entertainment Technology (Genlyte Group), representing USITT; P; U

Recording secretary: Karl G. Ruling; ESTA

Members attending:

James Davey; AC Power Distribution Inc.; P; CP
George Long; Aggreko Event Services (Aggreko); P; DR (change of voting status at this meeting)
Paul Menetrey; Bender Inc. (Bender GmbH & Co. KG); A; MP
Elizabeth E. (Lizz) Chancellor; I; U
Ian Foulds; IATSE Local 873, representing the Entertainment Electrical Safety Committee of Ontario;
P; G
Michael Lay; Strand Lighting (Genlyte Group LLC); P; MP
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; IATSE Local 728; A; U
John (Javid) D. Butler; Integrated Theatre, Inc.; P; CP
Stephen J. Kay; K-Tec Corporation; P; MP
Bob Luther; Lex Products Corp.; P; CP
Kenneth M. Makowski; Lex Products Corp.; A; CP
Jeff deRecat; Marinco/ADI (Marinco); P; MP
W. G. Krokaugger, P. E.; Mole-Richardson Co.; P; CP
Vincent J. Cannavale; Motion Laboratories; P; CP
Ron Bonner; PLASA; P; U
Michael Scudday; SSRC, Inc.; P; CP
Jerry Gorrell; Theatre Safety Programs; P; U
Brett Paddor; TMB; P; MP
Richard Wolpert; Union Connector Company; P; CP
William L. Maiman; P; U

Visitor: Jean-Francois Canuel; Specrum Manufacturing Inc.

1 Opening remarks

Mitch Hefter called the meeting to order at 09:00. He asked the attendees to silence their cell phones.

2 Attendance and membership

2.1 Introduction of those present and taking attendance

A red and blue attendance sign-in sheet was circulated. Karl Ruling gave brief instructions on how to fill it out.

Those present introduced themselves.

2.2 Determination of quorum

Ken Vannice asked for a show of hands of voting members. He announced that a quorum was present.

2.3 Recognition of alternate voting members

Alternates were recognized and reminded not to vote on the same motion as their principal, if their principal is present. There is one vote per question per voting entity, no matter how many representatives are present.

2.4 Requirements for membership

Vannice reminded those present that working group membership is open to all who are affected by the work of the group. Companies that would be in the dealer/rental company interest category in particular are encouraged to become 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.

2.5 Processing of new membership requests

There were no new membership requests, but George Long asked to be reinstated as a voting member. Eddie Kramer made a motion to this effect. The motion was seconded and then approved with a unanimous show of hands.

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

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
James Davey	AC Power Distribution Inc.	AC Power Distribution Inc.	P	CP
Greg Mayberry	AC Power Distribution Inc.	AC Power Distribution Inc.	A	CP
George Long	Aggreko Event Services	Aggreko	P	DR
Wolfgang Hofheinz	Bender GmbH & Co. KG	Bender GmbH & Co. KG	P	MP
Joe Boardman	Bender Inc.	Bender GmbH & Co. KG	A	MP
Paul Menetrey	Bender Inc.	Bender GmbH & Co. KG	A	MP
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	P	MP
Elizabeth E. (Lizz) Chancellor	Elizabeth Chancellor	Elizabeth Chancellor	I	U
Ian Foulds	IATSE Local 873	Entertainment Electrical Safety Committee of Ontario	P	G
Michael Lay	Strand Lighting	Genlyte Group LLC	P	MP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
R. Bruce Prochal	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Patric J. Abaravich	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Keith S. Woods	Lakhri Impressions Ltd.	IATSE Local 891	P	U
Simon Hunt	IATSE Local 891	IATSE Local 891	A	U
John (Javid) D. Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	P	CP
Stephen J. Kay	K-Tec Corporation	K-Tec Corporation	P	MP
Ken Vannice	Colortran	Leviton Manufacturing Co., Inc.	P	MP
Bill Grande	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	A	MP
Bob Luther	Lex Products Corp.	Lex Products Corp.	P	CP
Kenneth M. Makowski	Lex Products Corp.	Lex Products Corp.	A	CP
Louis Bradfield	Louis Bradfield	Louis Bradfield	I	U
Jeff deRecat	Marinco/ADI	Marinco	P	MP
Bud Toly	Marinco/ADI	Marinco	A	MP
William Drake	Marinco	Marinco	A	MP
W. G. Krokaugger, P. E.	Mole-Richardson Co.	Mole-Richardson Co.	P	CP
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	P	CP
Peter Herrmann	Motion Laboratories	Motion Laboratories	A	CP
Ron Bonner	PLASA	PLASA	P	U

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Michael Scudday	SSRC, Inc.	SSRC, Inc.	P	CP
Stephen Vanciel	Stephen Vanciel	Stephen Vanciel	P	U
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Brett Paddor	TMB	TMB	P	MP
Colin Waters	TMB	TMB	A	MP
Richard Wolpert	Union Connector Company	Union Connector Company	P	CP
Mitch Hefter	Entertainment Technology (Genlyte Group)	USITT	P	U
William L. Maiman	William L. Maiman	William L. Maiman	P	U
		Total votes possible	26	
		Votes by interest category	7	CP
			7	MP
			1	DR
			10	U
			1	G

3 Approval of the minutes from the previous meeting

See document EP/2007-7009, file name EPmin03-2007.pdf.

Eddie Kramer moved that the draft minutes of the March 2007 meeting be approved. The motion was seconded. The motion was approved with a unanimous show of hands. There were no abstentions and no negative votes.

4 Reading of the 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 or 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 protected intellectual property issues were brought to the attention of the assembly.

5 Reading of the anti-trust statement

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

"The ESTA Board of Directors, the Technical Standards Committee, and the leadership of this working group 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 TSC chair or 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 \$1,000,000 and imprisoned for up to ten years. An easy to read pamphlet describing restraint of trade issues is available from the Technical Standards Manager."

Karl Ruling, the Technical Standards Manager, held up one of the easy-to-read pamphlets.

No restraint of trade issues were brought to the attention of the assembly.

6 Approval of agenda

Bob Luther asked for a discussion of LDI presentations under new business.

Eddie moved that the draft agenda with this addition be accepted. The motion was seconded and then approved with a unanimous show of hands.

7 Old business - task group reports

7.1 EMC task group

Vannice reported that he had nothing new to report. Ron Bonner also had nothing to report.

7.2 ANSI E1.24-2006, pin connectors

Roger Lattin reported that one of the Hollywood studios is now requiring the best boy once a week to measure and to log the temperatures of the pin connectors and circular multi-pin connectors. The studio has also replaced all the connectors that were not phenolic with phenolic connectors.

There was a discussion of the ambient temperatures in the studio catwalks. Roger Lattin said he has been in the catwalks when the ambient temperature there was 140 degrees F.

The consensus was that we need to press UL to adopt our standard.

7.3 BSR E1.18 portable feeder cable selection and use public review comment resolution report.

Eddie Kramer reported that the task group has approved a number of resolutions. Some other comment resolutions are being held until the document is rewritten and reorganized.

Kramer said that the task group is on track to have the draft resolution comment document done for the LDI meeting. The task group is rearranging the document, which has caused problems with cross-referencing.

There was a discussion of the timeline. Mitch Hefter cited an earlier proposed timeline and said that the project was behind schedule. Kramer said that that timeline was predicated on a smaller task group. The task group is now larger, and this makes it more difficult to reach consensus.

Ken Vannice asked how the Canadian concerns were being addressed. Kramer explained. Vannice responded that there did not seem to be any plan for what is going to be done to address Canadian concerns and how this is going to be integrated.

There was discussion of dealing with Canadian concerns by simply noting that local codes must be consulted and that the recommendations in this document do not necessarily comply with all codes everywhere. This would also deal with conflicts with local codes within the US. Vannice said that the scope had been changed to put a statement to that effect in it, so perhaps this problem was already solved.

The following plan was proposed:

1. Draft resolutions done and sent to TSM for distribution to the EPWG by mid-August.
2. Then task group reformats and rewrites the draft standard and sends it to the TSM for distribution by September 1. The absolute deadline is October 21.

There was a discussion of the cost of using Ready Conference for conference calls. It's reasonably priced, but the number of people and length of the calls needed to work on this project severely stresses the budget.

Several people in the working group suggested some free conference calling services. See <http://www.freeconference.com/> and <http://www.freeconferencecall.com/>.

7.4 BSR E1.19 GFCI

Karl Ruling reported that the document is in public review through 30 July 2007, and that he had a comment on file.

Bob Luther reported that he has a draft of an EESCO document he received from Ian Foulds that outlines recommendations for using GFCIs in our industry. Luther said it is a different document than our E1.19, but that it is not in fundamental conflict with our document. The recommendations are largely the same, but our document makes reference to the requirements for GFCI in carnivals in NFPA 70.

Ian Foulds agreed to give a copy of the EESCO document to Karl Ruling for distribution to the working group.

7.5 BSR E1.32 luminaire inspection guidance

Ruling reminded people that the draft document is in public review through 30 July 2007. He said he had received a set of comments from Mike Wood.

There was a discussion of the need for frequent inspection. Vannice reminded people that the UL standard for stage and studio luminaires allows higher temperatures than for other luminaires because the assumption is made that there will be frequent inspections by a competent person. Therefore, we need to encourage frequent inspections.

7.6 Next step on reaffirmation of ANSI E1.16-2002, Configuration Standard for Metal Halide Ballast Power Cable

See the document at http://www.esta.org/tsp/documents/docs/ANSI_E1-16_2002.pdf. Ruling reported that no comments were received, so there are no comments to resolve, and the working group can vote to reaffirm the standard, if the working group wants.

Jerry Gorrell moved that ANSI E1.16-2002 be reaffirmed. The motion was seconded. The motion will be decided by letter ballot to allow all voting members a chance to vote.

7.7 Generator earthing

Roger Lattin said he had been injured and this made it so he couldn't do the work to generate a report.

There was a discussion of whether this item should stay on the agenda. Lattin said it should. George Long volunteered to help. No motions were made.

7.8 CANENA report

George Long reported that the rubber boots of different manufacturers don't mate. Vannice said that CANENA had been working on mating the brass. Kramer said that the brass had been the main concern, and that dealing with the rubber was next on the CANENA agenda. However, Kramer has found some cam connectors where the brass doesn't mate, so mating is still a problem.

Lattin said that one of the manufacturer's had changed the composition of the rubber insulator so that it is stickier. This also impedes mating. He reported that some of his fellow workers use a petroleum-based lubricant to ease the mating, which is not a good idea.

Luther expressed concern about the amount of rotation that is nominally required to mate a connector. Some manufacturers specify 45 degrees to 90, but others specify 180, so it is not obvious to the user how much the connectors should turn to mate fully. Long said that some people use locking pliers to help turn the connector, and that destroys the rubber housing. Kramer pointed out

that because of the binding of the rubber, when a connector only turns 45 degrees, the user doesn't know if the restricted rotation is because the rubber has bound or because the brass has fully engaged on a steep ramp.

No motions were made.

8 New business — LDI sessions

Karl Ruling reported that this working group is represented by the following LDI sessions:

Feeder Cable: Will It Go Round in Circles?

Saturday, November 17

9am-10:30pm [SIC. This must be a.m.]

Description: The session will give basic instruction on radial single-conductor portable power distribution systems and more complex closed loop systems. This will include the selection of the cables and connectors, over-current protection, protection against physical damage, and cable layout for controlling heat and harmonic currents.

Moderator: Ken Vannice, Leviton

Panelists: Eddie Kramer; IATSE Local One; Roger Lattin, IATSE Local 728

Water, Electricity, and GFCI

Saturday, November 17

11:00pm [SIC. This must be a.m.] -12:30pm

Water and electricity aren't a good mix, but sometimes shows have to be done in damp or wet locations—or even underwater! Learn how GFCI and Ground Fault Protection can be used to protect personnel and equipment when water and electricity might mix.

Moderator: Bob Luther, Lex Products

Panelists: Steve J. Kay, K-Tec Corporation; Paul Menetrey, Bender GmbH & Co. KG; Steve Terry, ETC

Roger Lattin and Alan Rowe said that their union is sponsoring some sessions highlighting recent installations of note.

9 Other business

9.1 Cabling checklist

Roger Lattin suggested that the industry could use a checklist for cables and distribution equipment, similar to the BSR E1.32, with an additional training requirement component. Ron Bonner says there is a document, BS 7909, that covers this.

Jerry Gorrell said that the new OSHA regs [29 CFR Part 1910, Subpart S] require that cable be inspected before being put into service. He argued that if we write a guidance document this will be a service to help people meet the OSHA requirements. If we don't, OSHA might write something for us. Eddie Kramer noted that a lot of this advice is contained in the draft BSR E1.18.

Mitch Hefter charged Roger Lattin with forming a study group and developing a scope document for a cabling checklist project. Hefter suggested that this can be on a "back burner" since Lattin has so many other projects and is fully occupied with them. This project will be reviewed under "Old business" in January 2008.

9.2 NFPA 70E ROP

Jerry Gorrell reported that the Report On Proposals for NFPA 70E has been published, so now comments are being solicited on the proposals. The comment closing date is 31 August 2007, with the Report on Comments being scheduled to be mailed on 22 February 2008. Any Notice of Intent to Make a Motion (NITMAM) made in response to the ROP or ROC must be made by 4 April 2008. The NITMAMs that graduate to be Certified NITMAMs will be announced on 4 May 2008.

9.3 ESA spec 003 and the Ontario Electrical Code

Ian Foulds reported that there is a rewrite of ESA spec 003, which is a set of guidelines for stage, studio, and events work. There is also a newly printed booklet of amendments to the 23rd edition of the Ontario Electrical Code.

9.4 UL's new pricing scheme

Vannice said that UL is now quoting projects based--not on time expected to be spent on a project--but on the perceived value of the project to the customer. This quote is given from a rate table by clerks. No engineer now evaluates a project initially. The engineer only looks at a project after the initial quote is accepted. Then, when the scope of the work becomes apparent, the price can go up quickly. If you reject the later increase and decline to have UL provide the testing and listing service, UL charges 50% of the quote for dropping the project.

Vannice's report on UL's new pricing scheme was greeted with amused disbelief by the working group members.

10 Changes to observer status

10.1 Notice to the working group of those who missed three letter ballots

None now.

10.2 Members in danger of losing voting status because of excessive absence

Members who have missed the previous two meetings and who will not have met the minimum attendance requirements if this meeting is missed:

None.

11 Schedule for future meetings

Mitch Hefter announced that the next working group meeting is scheduled for Friday, 16 November 2007, 19:00 to 23:00, at the Rosen Plaza Hotel, 9700 International Drive, Orlando, Florida. He suggested that the meeting will take the full four hours because we will be discussing BSR E1.18.

Kramer noted that there are plans to have the July 2008 TSP meetings be held in Manhattan.

12 Adjournment

Javid Butler moved that the meeting adjourn. The motion was seconded and then approved with a unanimous show of hands. Mitch Hefter declared the meeting adjourned at 11:22.

Working Group Membership and Contact Information as of 27 July 2007

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
James Davey	AC Power Distribution Inc.	AC Power Distribution Inc.	P	CP
Greg Mayberry	AC Power Distribution Inc.	AC Power Distribution Inc.	A	CP
Andre Broucke	ADB - TTV Technologies	ADB-TTV Group	O	MP
George Long	Aggreko Event Services	Aggreko	P	DR
Kenny Delahoussaye	Aggreko	Aggreko	O	DR
Brian Merriken	Airpax Corporation	Airpax Corporation	O	MP
Richard L. Eberth Jr.	North Shore Safety	Airpax Corporation	O	MP
Mike Skinner	CBS Studio Center	Alliance of Motion Picture and Television Producers	O	U
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	O	G
Jiantong Wu	Beijing Special Engineering Design & Research Institute	Beijing Special Engineering Design & Research Institute	O	G
Wolfgang Hofheinz	Bender GmbH & Co. KG	Bender GmbH & Co. KG	P	MP
Joe Boardman	Bender Inc.	Bender GmbH & Co. KG	A	MP
Paul Menetrey	Bender Inc.	Bender GmbH & Co. KG	A	MP
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Marty Lazarus	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	O	DR
Eric Bouchard	Cirque du Soliel	Cirque du Soliel	O	CP
Julie Rogers	City of Phoenix Civic Plaza	City of Phoenix	O	G
Wayne Kowalski	Coleman Cable Inc.	Coleman Cable Inc.	O	MP
Ford Sellers	Cornell University	Cornell University	O	U
Ron Dahlquist	Dadco	Dadco	O	MP
Don Earl	Earl Girls, Inc.	Earl Girls, Inc.	O	DR
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	P	MP
Elizabeth E. (Lizz) Chancellor	Elizabeth Chancellor	Elizabeth Chancellor	I	U
Ian Foulds	IATSE Local 873	Entertainment Electrical Safety Committee of Ontario	P	G
Art Wanuch	Robertson Electric Wholesale	Entertainment Electrical Safety Committee of Ontario	O	G
Michael Lay	Strand Lighting	Genlyte Group LLC	P	MP
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Pat Miller	Hubbell Wiring Devices	Hubbell Inc.	O	MP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
R. Bruce Prochal	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Patric J. Abaravich	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Keith S. Woods	Lakhri Impressions Ltd.	IATSE Local 891	P	U
Simon Hunt	IATSE Local 891	IATSE Local 891	A	U
Gian Carlo C. Bartolotti	Ibeam SP / Banco de Eventos	Ibeam SP / Banco de Eventos	O	U
Bill Kanne	Illumination Dynamics	Illumination Dynamics	O	U
John (Javid) D. Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	P	CP
David Murray	IPC Resistors Inc.	IPC Resistors Inc.	O	CP
Stephen J. Kay	K-Tec Corporation	K-Tec Corporation	P	MP
Jose J. Flores	Kino Flo, Inc.	Kino Flo, Inc.	O	MP
Don Gray	Kohler Event Services	Kohler Co.	O	U
Ken Vannice	Colortran	Leviton Manufacturing Co., Inc.	P	MP
Bill Grande	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	A	MP
Bob Luther	Lex Products Corp.	Lex Products Corp.	P	CP
Reinhold Luther	Lex Products Corp.	Lex Products Corp.	O	CP
Kenneth M. Makowski	Lex Products Corp.	Lex Products Corp.	A	CP
Louis Bradfield	Louis Bradfield	Louis Bradfield	I	U
Jim Holladay	Luxence	Luxence	O	G
Jeff deRecat	Marinco/ADI	Marinco	P	MP
Phil Fram	Marinco	Marinco	O	MP
Bud Toly	Marinco/ADI	Marinco	A	MP
William Drake	Marinco	Marinco	A	MP
Hiroshi Kita	Marumo Electric Co., Ltd.	Marumo Electric Co., Ltd.	O	MP
Michael Klein	Metropolitan Engineering, Inc.	Metropolitan Engineering, Inc.	O	G
W. G. Krokaugger, P. E.	Mole-Richardson Co.	Mole-Richardson Co.	P	CP
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	P	CP

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Peter Herrmann	Motion Laboratories	Motion Laboratories	A	CP
Marsha DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP
Steve DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP
Ron Bonner	PLASA	PLASA	P	U
James Eade	PLASA	PLASA	O	G
Mac Perkins	PNTA Inc.	PNTA Inc.	O	G
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	O	MP
Douglas Franz	QVC Network	QVC Network	O	U
Eric Tishman	Rosco Laboratories	Rosco Laboratories	O	MP
Richard B. Glickman	Gliconen Corporation	Rosco Laboratories	O	MP
Jeremy B. Collins	Selecon	Selecon	O	MP
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Michael Scudday	SSRC, Inc.	SSRC, Inc.	P	CP
Stephen Vanciel	Stephen Vanciel	Stephen Vanciel	P	U
Reuben Goldberg	Technic Services	Technic Services	O	U
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Brett Paddor	TMB	TMB	P	MP
Colin Waters	TMB	TMB	A	MP
Richard Wolpert	Union Connector Company	Union Connector Company	P	CP
Mitch Hefter	Entertainment Technology (Genlyte Group)	USITT	P	U
Eckart Steffens	SOUNDLIGHT	VPLT	O	G
William L. Maiman	William L. Maiman	William L. Maiman	P	U

Key to codes:

P	principal voting member	MP	mass-market producer interest category
A	alternate voting member	CP	custom-market producer interest category
I	individual voting member	DR	dealer or rental company interest category
O	observer, non-voting	U	user interest category
		G	general-interest interest category