

Minutes
Electrical Power Working Group

Friday, 16 July 2004
Dallas/Ft. Worth Airport Marriott South
Ft. Worth, TX

Chairmen: Ken Vannice; Colortran (Leviton Manufacturing Co., Inc.); P; MP
Bob Luther; Lex Products Corp.; P; CP

Recording secretary: Karl G. Ruling; ESTA

Members attending: George Long; Aggreko Event Services (Aggreko Inc.); P; DR (joined at this meeting)
Paul Menetrey; Menetrey Partners (Bender, Inc.); A; G (joined with new corporate representation at this meeting)
Steve Terry; Electronic Theatre Controls; P; MP
Pat Miller; Hubbell Wiring Devices; 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
Stephen J. Kay; K-Tec Corporation; P; MP
Jeff deRecat; Marinco/ADI; P; MP (joined with new corporate representation at this meeting)
W. G. Krokaugger P.E.; Mole-Richardson Co.; P; CP
Stephen Vanciel; O; U
Michael Lay; Strand Lighting (Strand Lighting Ltd.); P; MP
Jerry Gorrell; Theatre Safety Programs; P; U
Richard D. Thompson; Thompson Associates; P; G
Brian Dowd; TMB; P; MP
Mitch Hefter; Entertainment Technology (Genlyte Thomas Group), representing USITT; P; U
William L. Maiman; P; U (joined representing himself at this meeting)

Visitors: Wally Blount; Columbus McKinnon (part of the meeting)
Beverly Inglesby; ESTA

1 Opening remarks

Ken Vannice called the meeting to order at 08:02. He welcomed all to Ft. Worth.

2 Attendance and membership

2.1 Introduction of those present and taking attendance

Karl Ruling explained the attendance sign-in sheet and started it circulating. Ken Vannice asked those present to introduce themselves.

2.2 Determination of quorum

Ken Vannice asked for a show of hands of voting member. A quorum was present.

2.3 Recognition of alternate voting members

There were none to recognize.

2.4 Requirements for membership

Ken Vannice reminded the assembly that working group membership is open to all who are affected by the work of the group. 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

The following applications had been received:

George Long applied representing his old employer, Aggreko.

Steve and Marsha DuBois of Pintech applied as observers

Paul Menetrey of Menetrey Partners applied to represent Bender

Don Earl of Earl Girls applied as an observer.

Jeff deRecat reapplied on behalf of all the Advanced Devices people because the company was now owned by Marinco.

Bill Maiman applied to represent himself.

Eddie Kramer moved that the applications be accepted. The motion was seconded. The motion was approved by a unanimous show of hands.

The consensus body during this meeting was

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Michael Amorelli	AC Power Distribution Inc.	AC Power Distribution Inc.	P	CP
James Davey	AC Power Distribution Inc.	AC Power Distribution Inc.	A	CP
George Long	Aggreko	Aggreko LLC	P	DR
Kenny Delahoussaye	Aggreko	Aggreko LLC	A	DR
Wolfgang Hofheinz	Bender GmbH & Co. KG	Bender GmbH & Co. KG	P	MP
Paul Menetrey	Menetrey Associates	Bender GmbH & Co. KG	A	MP
Joe Boardman	Bender Inc.	Bender GmbH & Co. KG	A	MP
Wayne Kowalski	Coleman Cable Inc.	Coleman Cable Inc.	P	MP
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	P	MP
Pat Miller	Hubbell Wiring Devices	Hubbell Inc.	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
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
Louis Bradfield	Louis Bradfield	Louis Bradfield	I	U
Jeff deRecat	Marinco/ADI	Marinco	P	MP
Bud Toly	Marinco/ADI	Marinco	A	MP
Michael Klein	Metropolitan Engineering, Inc.	Metropolitan Engineering, Inc.	P	G
W. G. Krokaugger P.E.	Mole-Richardson Co.	Mole-Richardson Co.	P	CP
William N. Masten	SMS Inc. / PGS LLC	SMS Inc. / PGS LLC	P	CP
Richard A. Prey	SMS Inc. / PGS LLC	SMS Inc. / PGS LLC	A	CP
Michael Lay	Strand Lighting	Strand Lighting Ltd.	P	MP
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Richard D. Thompson	Thompson Associates	Thompson Associates	P	G
Brian Dowd	TMB (NJ)	TMB	P	MP
Colin Waters	TMB	TMB	A	MP
Mitch Hefter	Entertainment Technology (Genlyte Thomas Group)	USITT	P	U
William Maiman	William Maiman	William Maiman	P	U
		Total voters	22	
		Voters by interest category	9	MP
			4	CP
			1	DR
			6	U
			2	G

3 Approval of the minutes from the previous meeting

Steve Terry moved that the minutes be approved as written. The motion was seconded. The motion was approved by a unanimous show of hands.

4 Reading of the call for patents

Ken Vannice read the following aloud to the assembly:

"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 disclosure 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 working group of the existence of a patent or copyright that might protect material in a standard being developed by the working group. You need not be the holder of the patent or copyright in order to notify the working group of its existence."

No patent issues were brought to the attention of the assembly.

5 Reading of the anti-trust statement

Ken Vannice read the following aloud to the assembly:

"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 \$100,000 and imprisoned for up to three years. An easy to read pamphlet describing restraint of trade issues is available from the Technical Standards Manager."

No anti-trust or restraint of trade issues were brought to the attention of the assembly.

6 Approval of agenda

Steve Terry asked to add an item under other business, a discussion of UL 924 and KCYC. Mitch Hefter asked for a discussion of UL 334. Roger Lattin asked for time to distribute some informative documents. The chairmen noted that Beverly Inglesby wanted to do a post-it note session for developing *Protocol* story ideas, and that we should do that before proceeding with any other business.

Eddie Kramer moved that the modified agenda be accepted. The motion was seconded. The motion was approved by a unanimous show of hands.

7 Post-It Note session

Beverly Inglesby, the new editor of *Protocol*, conducted a Post-It Note session for story ideas and author suggestions. It lasted five minutes. She said she would post the notes in the Hospitality Suite so we can read them and continue to think about story ideas.

8 Old business - task group reports

8.1 EMC task group

Ken Vannice reported no news. Vannice said that the push had come from the electrical power industry, which is looking to put broad-band on power lines. It was not a drive to clean up power for the benefit of power distribution equipment. This has actually been stated in Canada.

8.2 BSR E1.24 pin connectors

Mitch Hefter reported that the task group has a meeting on the evening of the day following this meeting. He said he has gotten no responses from the rest of the task group. No task group meeting requested for ETS. He knows that there are errors in the tables, but nobody has commented on them.

Lattin suggested that UL should test connectors against other connectors and look for heat rise. Terry explained that the possible number of "other connector" combinations is limitless, so an independent dimensional standard is necessary. Vannice pointed out that this project is for a configuration standard, and is not a testing standard. UL will develop the testing standard that verifies conformity with this standard.

Kramer talked about some of the heat problems with UL-listed NEMA twist-lock connectors. He suggested that this shows our project won't solve all our problems. Hefter said our project is a first step. Kramer accepted that.

Wally Blount pointed out that connectors are used outdoors without outdoor ratings. Furthermore, people do maintenance on connector failures; they don't do maintenance to prevent failures. Vannice says the National Electrical Code says we can use indoor connectors as long as we monitor them and don't use them in the rain without protection.

Luther pointed out that the project was to improve, make the best of a connector that is not the best design.

Lattin said he accepted that the E1.24 is a first step, but he wants the heat rise issue to be addressed. He says overheating connectors are a big issue in Hollywood.

It was the consensus of the group that the E1.24 project is the first step toward ensuring the safety of connectors used in the entertainment industry. It addresses the most obvious problem with one of our most common connector types in the industry. It will not address all the issues, and other standards for testing and safety, possibly from this working group, from UL, or from other standards bodies, will be needed.

8.3 BSR E1.18 portable feeder cable selection and use task group

Eddie Kramer said the task group is continuing to work on the document. He has rewritten a lot of it, but gotten stalled in chapter 3. It needs a different conceptual reorganization. Table 400b is a problem because people in the industry do things that aren't listed in 400b. Bundling, cable enclosed for more than 24 inches, or stacked are all issues. The layout of information on ambient temperature correction is also an issue. Lots of work has been done and more needs to be done. He predicted that a draft for review would be ready for the ETS meeting.

George Long and Steve Terry volunteered to help with the sections that Kramer has trouble writing.

8.4 BSR E1.19 GFCI task group

Bob Luther reported that he had gotten extensive comments at the last meeting from Joe Boardman of Bender. He rewrote sections and sent it back. He has received no response, so he thinks its okay. He described the work he has done with reformatting it and making it readable. He has had problems with incompatible versions of Word and its review markup features.

Richard Thompson reported that he is on the STP for UL 943 and that he has found it has no procedure for testing products in a harmonic environment. Steve Terry challenged this since his company (ETC) has a listed GFP product for use on non-sinusoidal currents. UL specifically tested it for that, so UL must have a procedure for testing with harmonics.

Steve Terry volunteered to help Bob Luther write the section on handling non-sinusoidal currents. Luther thanked him. Lattin offered to write the section on testing an installation.

Luther said it was his sincere hope to have the E1.19 document ready for consideration of a public review by January. It won't be done in time for the ETS meeting.

9 New business

None.

10 Other business

10.1 KCYC

Terry reported that he'd asked UL to have a dimmer tested per the KCYC card operating at 20 mA with assured grounding. UL said No, not unless there is a ground monitoring system and the grounding path is assured all the way from the power-using appliance back to the building ground. The 20 mA trip point does not assure let-go.

10.2 UL 924

Terry reported that he has an article in the next issue of *Protocol* about UL 924 load control relays being used as UL 1008 transfer switches. He had a discussion with engineers at UL, and they have confirmed you can't do that. The requirements for the two are different.

The engineers also indicated that UL has funding for industry participation in outside groups. They have told Steve Terry that they intend to apply for position on this working group. This news was well received.

10.3 General UL stuff

Steve Terry reported that Gary Siggins is back in charge of theatre switchboards and Steven Holmes has moved on to other topics. Mike Schulman is also a good person, sensitive to our industry's concerns, at UL, Terry reported.

Ken Vannice also mentioned other battles with UL and changes in its organization. He described the fight about UL 1573 and the proposed touch-voltage requirement. He has argued that they need to show us the data that indicates there is a problem with touch voltages. There was a discussion of the proposal to have a meeting at the ETS show, but Vannice argued that they shouldn't waste our time with discussions at meetings until UL produces the data that has prompted this proposal.

Vannice has not received a commitment to take the UL 1573 back through the ANSI process, but he has received a commitment to take any changes to UL 1573 through public review.

10.4 UL 334

Mitch Hefter described the history of the UL 334 draft document. It's not a standard, but an internal reference on how to interpret UL standards and apply them to theatrical equipment. It was started in about 1985, but not finished. Vannice said that as part of UL's reorganization and ISO 9000 certification, they have to get rid of unofficial "desk standards." Terry agreed that these are unfair because companies with ETL certification, for example, don't have to comply with these unpublished "desk standards."

10.5 Roger Lattin's document

Roger Lattin distributed a document from the IAEI Southern California Chapter about grounding generators. Kramer pointed out that it was not new information but a careful selection and interpretation of existing standards.

11 Changes to observer status with third meeting missed

Wayne Kowalski; Coleman Cable Inc. and Michael Klein; Metropolitan Engineering, Inc. were not at this meeting and now had failed to meet the minimum attendance requirement. Therefore, Bob Luther announced that they were now moved to observer status.

12 Schedule for future meetings

Karl Ruling announced that the next meeting would be at Harrah's Las Vegas Casino & Hotel in Las Vegas, Nevada, Friday, October 22 from 19:00 to 23:00.

13 Adjournment

Steve Terry moved that the meeting adjourn. The motion was seconded. The motion was approved by a unanimous show of hands. Ken Vannice announced adjourned at 10:23.

Working Group Membership as of 6 September 2004

Name	Company	Representing (sort field)	Voting status	Int. cat
Michael Amorelli	AC Power Distribution Inc.	AC Power Distribution Inc.	P	CP
James Davey	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 Inc.	P	DR
Kenny Delahoussaye	Aggreko	Aggreko LLC	A	DR
Mike Skinner	CBS Studio Center	Alliance of Motion Picture and Television Producers	O	U
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	O	G
Lowell R. Nutter	Array Connector Corp.	Array Connector Corp.	O	MP
Wolfgang Hofheinz	Bender GmbH & Co. KG	Bender GmbH & Co. KG	P	MP
Joe Boardman	Bender Inc.	Bender GmbH & Co. KG	A	MP
Paul Menetrey	Menetrey Partners	Bender GmbH & Co. KG	A	MP
Lee J. Bloch	Blue Sky Design, Ltd.	Blue Sky Design, Ltd.	O	G
Wayne Kowalski	Coleman Cable Inc.	Coleman Cable Inc.	O	MP
Jeffrey Measley	Crouse-Hinds Molded Products	Cooper Crouse-Hinds Molded Products Inc.	O	MP
Stewart Cox	Crouse-Hinds Molded Products	Cooper Crouse-Hinds Molded Products Inc.	O	MP
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
Art Wanuch	M.C. Lights & Manufacturing, Ltd.	Entertainment Electrical Safety Committee of Ontario	O	G
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Pat Miller	Hubbell Wiring Devices	Hubbell Inc.	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
Richard Thornton Brown	Zero 88 Ltd.	i Light Group PLC	O	MP
Gian Carlo C. Bartolotti	Ibeam SP / Banco de Eventos	Ibeam SP / Banco de Eventos	O	U
Bill Kanne	Illumination Dynamics	Illumination Dynamics	O	U
Kevin Stolpe	Illumination Dynamics	Illumination Dynamics	O	U
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
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
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

Name	Company	Representing (sort field)	Voting status	Int. cat
Chris Guptill	Ohlone College	Ohlone College	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	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
William N. Masten	SMS Inc. / PGS LLC	SMS Inc. / PGS LLC	P	CP
Richard A. Prey	SMS Inc. / PGS LLC	SMS Inc. / PGS LLC	A	CP
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Stephen Vanciel	Stephen Vanciel	Stephen Vanciel	O	U
Michael Lay	Strand Lighting	Strand Lighting Ltd.	P	MP
Reuben Goldberg	Technic Services	Technic Services	O	U
Andy Topinka	Technical Group Services, Inc.	Thea & Schoen, Inc.	O	G
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Richard D. Thompson	Thompson Associates	Thompson Associates	P	G
Colin Waters	TMB	TMB	P	MP
Richard Wolpert	Union Connector Company	Union Connector Company	O	CP
Mitch Hefter	Entertainment Technology (Genlyte Thomas 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
- A alternate voting member
- I individual voting member
- O observer, non-voting
- MP mass-market producer interest category
- CP custom-market producer interest category
- DR dealer or rental company interest category
- U user interest category
- G general-interest interest category