

Minutes
Electrical Power Working Group
Friday, 20 October 2000
Harrah's Las Vegas
Las Vegas, NV

Chairs: Bob Luther; Lex Products Corp.; Principal; Producer
Ken Vannice; NSI Corporation (Leviton Manufacturing Co., Inc.); Principal; Producer

Recording secretary: Karl G. Ruling, ESTA

Members attending: Jeff deRecat; Advanced Devices, Inc.; Alternate; Producer
George Long; Aggreko Event Services; Principal; Producer
Tim Bachman; Barbizon Light (Barbizon Companies); Principal; User
Wolfgang Hofheinz; Bender GmbH & Co. KG; Principal; Producer
Joe Boardman; Bender Inc. (Bender GmbH & Co. KG); Alternate; Producer
Ron Dahlquist; Dadco; Observer; Producer
Trevor Forrest; Helvar Lighting Control; Principal; Producer
Kevin Stolpe; Hollywood Rental Company; Observer; General interest
Roger Lattin; IATSE Local 728; Alternate (changed to principal at this meeting); User
Jose J. Flores; Kino Flo, Inc.; Principal; Producer
Don Gray; Kohler Event Services (Kohler Co.); Principal; User
Louis Bradfield; Louis Bradfield; Individual; User
W. G. Krokaugger P.E.; Mole-Richardson Co.; Principal; Producer
Tim Cox; PLASA; Principal; General interest
Robert Barbagallo; Proximo Inc.; Principal; General interest
William N. Masten; SMS Inc. / PGS LLC; Principal; Producer
Richard A. Prey; SMS Inc. / PGS LLC; Alternate; Producer
Andy Topinka; Technical Group Services, Inc.; Principal; General interest
Warren Mays; TMB Associates; Alternate; Producer

1 Opening remarks

The meeting was called to order at 19:02 by Ken Vannice.

2 Attendance and membership

2.1 Introduction of those present

Vannice asked those present to introduce themselves. They did so proceeding in a clockwise direction around the hollow square table.

2.2 Determination of quorum (8 needed)

Vannice asked for a show of hands of voting members. Vannice counted them and then announced the presence of a quorum.

2.3 Recognition of alternate voting members

Warren Mays was voting for TMB Associates.
Roger Lattin was voting for IATSE Local 728.
Jeff de Recat was voting for Advanced Devices, Inc.

2.4 Requirements for membership

Ken Vannice reminded people that working group membership is open to all who are affected by the work of the group. Voting members are required to attend meetings.

2.5 Processing of new membership requests

Paul Edwards applied as principal for PRG in the user interest category. Paul Edwards was not present, so Vannice said he would be offered observer status, as is the usual procedure when a person requests voting status, but does not attend the meeting, as a voting member should. Bob Luther noted that Edwards can request a revision of his voting status when he attends a meeting.

Roger Lattin asked for change of his status to principal, which would make Prochal an alternate for IATSE Local 728.

Louis Bradfield moved that Edwards be accepted as an observer member and that Roger Lattin's voting status be changed to principal. The motion was seconded. The motion was approved unanimously by a show of hands. Thus, the voting body for this meeting was:

Name	Company	Parent comp./Org. represented	Voting status	Interest category
Doug Kraus	Advanced Devices, Inc.	Advanced Devices, Inc.	P	P
Bud Toly	Advanced Devices, Inc.	Advanced Devices, Inc.	A	P
Jeff deRecat	Advanced Devices, Inc.	Advanced Devices, Inc.	A	P
George Long	Aggreko Event Services	Aggreko	P	P
David Evaniew	B. I. M. Limited	B. I. M. Limited	P	P
Tim Bachman	Barbizon Light	Barbizon Companies	P	U
Wolfgang Hofheinz	Bender GmbH & Co. KG	Bender GmbH & Co. KG	P	P
Joe Boardman	Bender Inc.	Bender GmbH & Co. KG	A	P
Jeffrey Measley	Crouse-Hinds Molded Products	Crouse-Hinds Molded Products Inc.	P	P
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	P	P
Bill Kanne	Hollywood Rental Co.	Hollywood Rental Co.	P	U
Edwin S. Kramer	IATSE, Local 1	I.A.T.S.E. Local 1	P	U
R. Bruce Prochal	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Roger Lattin	IATSE Local 728	I.A.T.S.E. Local 728	P	U
Patric J. Abaravich	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Earl Williman	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Jose J. Flores	Kino Flo, Inc.	Kino Flo, Inc.	P	P
Don Gray	Kohler Event Services	Kohler Co.	P	U
Ken Vannice	NSI Corporation	Leviton Manufacturing Co., Inc.	P	P
Mitchell Stein	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	A	P
Bob Luther	Lex Products Corp.	Lex Products Corp.	P	P
Louis Bradfield	Louis Bradfield	Louis Bradfield	I	U
Phil Fram	Marinco	Marinco	P	P
W. G. Krokaugger P.E.	Mole-Richardson Co.	Mole-Richardson Co.	P	P
Brian Parker	Mole-Richardson Co.	Mole-Richardson Co.	A	P
Tim Cox	PLASA	PLASA	P	G
Robert Barbagallo	Proximo Inc.	Proximo Inc.	P	G
William N. Masten	SMS Inc. / PGS LLC	SMS Inc. / PGS LLC	P	P
Richard A. Prey	SMS Inc. / PGS LLC	SMS Inc. / PGS LLC	A	P
Andy Topinka	Technical Group Services, Inc.	Technical Group Services, Inc.	P	G
Colin Waters	TMB Associates	TMB Associates	P	P
Brian Dowd	TMB Associates (NJ)	TMB Associates	A	P
Warren Mays	TMB Associates	TMB Associates	A	P
Richard Wolpert	Union Connector Company	Union Connector Company	P	P
Mitch Hefter	Rosco/Entertainment Technology	USITT	P	G
Totals			24	14 P 6 U 4 G

3 Approval of the minutes from the previous meeting

Tim Cox moved that the minutes be approved as written. The motion was seconded. The motion was accepted unanimously by a show of hands.

4 Call for Patents and Anti-Trust Statement

The Call for Patents was read by Ken Vannice:

“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 issues were identified by the assembly.

The Anti-Trust Statement was also read 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 restrain trade. Anyone who feels that an action restraining trade is being or has been taken is requested to bring the matter to the attention of the chair immediately. Anyone who feels that actions in restraint of trade have been taken and not properly annulled is requested to notify the TSC chair or ESTA president immediately."

"ESTA legal counsel has informed us that any member of this working group may be found individually liable for any action that restrains trade taken by this working group. An individual convicted of a violation of the Sherman Act may be fined as much as \$100,000 and be imprisoned for up to three years. An easy to read pamphlet describing restraint of trade is available from the Technical Standards Committee."

Vannice noted that the assembly was silent.

5 Approval of Agenda

Andy Topinka moved the agenda be accepted as written. The motion was seconded. The motion was approved unanimously by a show of hands.

6 Old Business - Task group reports

6.1 Task group on a recommended practice for selection, installation, and use of portable feeder cable

Lattin reported that the survey was posted again, but there had been minimal comments. Only Bob Luther commented on the document as sent to the 4ought reflector, Lattin complained.

It was resolved by consensus that Lattin will send the survey to Ruling, and Ruling will send it out with the minutes. Comments will be due two weeks after minutes are sent out and should be sent to Roger Lattin.

Bob Luther brought up the issue of the Los Angeles inspector deciding that 4/0 cable must be used with a 360A rating by using the 75C ratings. This is a problem because it forces the use of larger cable with 400A breakers. The inspector's interpretation is based on applying the temperature rating of breakers to the cable attached to it. The consensus of the working group is that a transition piece of larger gauge between the single-pole connectors and the breakers should address the inspector's concerns. Several people offered to write letters to the inspectors suggesting this solution.

6.2 Task group for a recommended practice for use of GFCI (Residual Current Devices) in entertainment applications

Joe Boardman read the beginning of a draft standard for the use of GFCI in entertainment applications. There was a discussion of what approach should be taken: should there be a standard or a recommended practice or an informational pamphlet? Boardman suggested that he continue to write and that we can consider what to do with the project later when what he's been working on has a more definite shape.

Don Gray moved that the scope outline be accepted and that the task group be encouraged to continue to work on the document, which might become a standard or an informational paper, and that the membership of the task group be enlarged to include a wide variety of views. The motion was seconded. The motion was accepted unanimously by a show of hands.

Ken Vannice encouraged Ruling to publicize this GFCI project to help increase the number of non-producers involved in the project.

6.3 Task group to write a configuration standard for HMI power cables and/or head to ballast cables

There was a discussion of what to do with the draft HMI ballast power cable standard that Warren Mays presented at the last meeting. The chairs directed Karl Ruling to circulate the document again with the minutes. The working group was instructed to send comments on the document to the task group, Warren Mays.

Warren said he is gathering information on the connections used for Head to ballast cable connections. An informational document is planned.

6.4 EMC task group

Vannice reported that the 105th CENELEC Technical Board ratified the amendment A14 to the standard EN 61000-3-2:1995 – Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current up to and including 16A per phase) at its meeting in Lucerne, October 3 through 5. The implementation dates for EN 61000-3-2:1995/A14 are:

Date of ratification: October 3, 2000

Date of announcement: December 1, 2000

Date of publication: January 1, 2001

Date of withdrawal: January 1, 2004

The Low Frequency Emissions Industry Coalition has complained to WTO that EN 61000-3-2:1995/A14 constitutes a technical barrier to trade. The WTO has said there isn't a barrier to trade with this restrictive EMC standard because it is a voluntary standard. Other means of demonstrating conformity with the essential requirements of the EMC Directive can be used if the amended EN 61000-3-2:1995 is too stringent.

The LFEIC is preparing a public relations campaign for the US public. Vannice thinks the strategy is to create enough issues that no 120V version of EN 61000-3-2:1995 will ever be written using the current 240V philosophy.

6.5 Task group on troubleshooting power quality problems

Andy Topinka reported that he's on schedule to complete the first portion of his book for the January meeting. It will be two documents. The first will be done by January and will offer case studies, solutions, and introduction to other power quality issues, and will run 120 to 140 pages. Then he will write another concise document that will deal with transients, noise, flickering, swells, et cetera.

In response to the interest shown in harmonics and generator control electronics malfunctioning at the last working group meeting, Topinka checked into harmonics with generators and could find no standards addressing it.

7 New business

The derating of feeder cable in Los Angeles that was listed on the agenda under new business was discussed as part of the portable feeder cable task group's report above.

8 Other business

None.

9 Schedule for future meetings

Vannice announced that the next meeting will be Friday morning, 19 January 2001, 8:00 to noon, at the Dallas/Ft. Worth Airport Marriott. The next meeting will be Wednesday 21 March in Long Beach, CA.

10 Adjournment

Bob Barbagallo moved the meeting adjourn. The motion was seconded. The motion was accepted unanimously on a voice vote. Ken Vannice declared the meeting adjourned at 21:00.

Electrical Power Working Group Membership at End of 20 October 2000 Meeting

Name	Company	Parent comp./Org. represented	Voting status	Int. cat.
Doug Kraus	Advanced Devices, Inc.	Advanced Devices, Inc.	P	P
Bud Toly	Advanced Devices, Inc.	Advanced Devices, Inc.	A	P
Jeff deRecat	Advanced Devices, Inc.	Advanced Devices, Inc.	A	P
George Long	Aggreko Event Services	Aggreko	P	P
David Evaniew	B. I. M. Limited	B. I. M. Limited	P	P
Tim Bachman	Barbizon Light	Barbizon Companies	P	U
Wolfgang Hofheinz	Bender GmbH & Co. KG	Bender GmbH & Co. KG	P	P
Joe Boardman	Bender Inc.	Bender GmbH & Co. KG	A	P
Lee J. Bloch	Bloch Design Group Inc.	Bloch Design Group Inc.	O	G
Jeffrey Measley	Crouse-Hinds Molded Products	Crouse-Hinds Molded Products Inc.	P	P
Ron Dahlquist	Dadco	Dadco	O	P
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	P	P
Bill Kanne	Hollywood Rental Co.	Hollywood Rental Co.	P	U
Kevin Stolpe	Hollywood Rental Company	Hollywood Rental Company	O	G
Edwin S. Kramer	IATSE, Local 1	I.A.T.S.E. Local 1	P	U
R. Bruce Prochal	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Roger Lattin	IATSE Local 728	I.A.T.S.E. Local 728	P	U
Patric J. Abaravich	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Earl Williman	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Jose J. Flores	Kino Flo, Inc.	Kino Flo, Inc.	P	P

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Don Gray	Kohler Event Services	Kohler Co.	P	U
Ken Vannice	NSI Corporation	Leviton Manufacturing Co., Inc.	P	P
Mitchell Stein	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	A	P
Bob Luther	Lex Products Corp.	Lex Products Corp.	P	P
Louis Bradfield	Louis Bradfield	Louis Bradfield	I	U
Phil Fram	Marinco	Marinco	P	P
Hiroshi Kita	Marumo Electric Co., Ltd.	Marumo Electric Co., Ltd.	O	P
Brian Parker	Mole-Richardson Co.	Mole-Richardson Co.	A	P
W. G. Krokaugger P.E.	Mole-Richardson Co.	Mole-Richardson Co.	P	P
Tim Cox	PLASA	PLASA	P	G
Mac Perkins	PNTA	PNTA Inc.	O	G
Steve Terry	Fourth Phase New Jersey	PRG	O	U
George Sabbi	PRG Lighting and Audio Group	PRG	O	U
Paul Edwards	Fourth Phase New Jersey	PRG	O	U
Robert Barbagallo	Proximo Inc.	Proximo Inc.	P	G
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	O	P
Andre Broucke	ADB - TTV Technologies	Siemens	O	P
William N. Masten	SMS Inc. / PGS LLC	SMS Inc. / PGS LLC	P	P
Richard A. Prey	SMS Inc. / PGS LLC	SMS Inc. / PGS LLC	A	P
Milton Davis	Strand Lighting	Strand Lighting Ltd.	O	G

Name	Company	Parent comp./Org. represented	Voting status	Int. cat.
Paul Smith	Strand Lighting Ltd.	Strand Lighting Ltd.	O	U
Andy Topinka	Technical Group Services, Inc.	Technical Group Services, Inc.	P	G
Colin Waters	TMB Associates	TMB Associates	P	P
Brian Dowd	TMB Associates (NJ)	TMB Associates	A	P
Warren Mays	TMB Associates	TMB Associates	A	P
Richard Wolpert	Union Connector Company	Union Connector Company	P	P
Mitch Hefter	Rosco/Entertainment Technology	USITT	P	G
Eckart Steffens	SOUNDLIGHT	VPLT	O	G
Bruce Whitehead	Whitehead Engineering Services	Whitehead Engineering Services	O	G
Richard Thornton Brown	Zero 88 Ltd.	Zero 88 Ltd.	O	P

Voting Status

- P Principal voting representative for a company or organization
- A Alternate voting representative for a company or organization
- I Individual representing no organization other than himself or herself
- O Observer; non-voting

Interest Categories

- P Producer (manufacturer) of power distribution equipment
- U User of power distribution equipment
- G General interest in power distribution equipment