

**Minutes**  
**Electrical Power Working Group**  
Friday, January 21, 2000  
Dallas/Ft. Worth Airport Marriott  
Irving, TX

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

**Recording secretary:** Mitch Hefter

**Members attending:** Tim Bachman; Barbizon Light (Barbizon Companies); Principal; User  
Colin Waters; TMB Associates; Principal; Producer  
Mitch Hefter; Rosco/Entertainment Technology (USITT); Principal; Gen. Interest  
Trevor Forrest; Helvar Lighting Control; Principal; Producer  
Tim Cox; PLASA; Principal; Gen. Interest  
Edwin S. Kramer; IATSE, Local 1; Principal; User  
Doug Kraus; Advanced Devices, Inc.; Principal; Producer  
Jose J. Flores; Kino Flo, Inc.; Principal; Producer  
Louis Bradfield; Louis Bradfield; Individual; User  
Mitchell Stein; Leviton Manufacturing Co., Inc. Alternate; Producer  
Roger Lattin; IATSE Local 728; Alternate; User  
W. G. Krokaugger P.E.; Mole-Richardson Co.; Principal; Producer  
Warren Mays; TMB Associates; Alternate; Producer  
Jeffrey Measley; Crouse-Hinds Molded Products Inc.; Principal; Producer (joined at this meeting)

## **1 Opening remarks**

The meeting was called to order at 8:03 a.m. by Ken Vannice  
Mitch Hefter acted as recording secretary in Karl Ruling's absence (His plane was delayed ten hours by New York weather. He arrived at 9:30 a.m.)

## **2 Attendance and membership**

A plain white attendance sheet was passed around. Disappointment was expressed by the group at the absence of the normal brightly colored sheet.

### **2.1 Introduction of those present**

Self-introductions were offered.

### **2.2 Determination of quorum (8 needed) -**

Twelve voting members were present at the start of the meeting. Vannice announced a quorum.

### **2.3 Recognition of alternate voting members**

Roger Lattin was recognized as voting for IASTSE 728.

### **2.4 Requirements for membership**

Vannice reminded voting members that on the 3<sup>rd</sup> consecutive missed meeting, they would be changed to observer status.

### **2.5 Processing of new membership requests**

Jeff Measley of Crouse Hinds Molded Products applied as a principal/producer.

Tim Cox moved acceptance, Colin Waters seconded. Motion accepted unanimously by show of hands.

Paul Smith of Strand Lighting applied as an observer/user.

Colin Waters moved acceptance; Eddie Kramer seconded. Motion accepted unanimously by show of

hands.

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

Louis Bradfield moved they be accepted with no changes. Tim Cox seconded. Unanimous by voice vote.

### **4 Call for Patents**

Ken Vannice read:

“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 declarations were offered.

Vannice then read the Anti-Trust Statement:

“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.”

No issues were raised.

### **5 Approval of Agenda**

Tim Cox offered to give a report on IEC 61000-3-2, 61000-3-3, which were added to the agenda under EMC task group report.

Eddie Kramer offered to give a report on the NEC meetings under new business.

Colin Waters asked to have a discussion of the meanings of qualified and competent under new business.

Tim Bachman moved that the agenda with the above additions be accepted. Eddie Kramer seconded. Unanimous approval by voice vote.

### **6 Old Business - Task group reports**

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

Lattin and Kramer reported that not much had been prepared yet. They will develop a survey this weekend.

Roger Lattin has researched the Code.

An email reflector has been set up at [4ought@esta.org](mailto:4ought@esta.org) for use by the task group

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

The appointment of a task group leader had been tabled at the last meeting. Mitch Stein volunteered to head the task group. Colin Waters moved that his offer be accepted. Eddie Kramer seconded the motion. The motion was accepted unanimously on a voice vote.

Mitch Stein said that the issues to address are to setup recommended practices for issues relating to electricity in proximity to water in the Entertainment Industry. He passed around a sign-up sheet.

Colin Waters questioned whether the task group name should be more generic. Tim Bachman noted that weather and GFCI were two different topics in survey. Ken Vannice recommended staying with "RP for use of GFCI". After the task group meets, the task group can come back and recommend to adopt a new name, to change the scope, to split off another task group, or do something else. No objections to this approach were raised

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

Colin Waters reported that a task group meeting was held and further discussion was had. The first step is to poll manufacturers as to their compliance with the PERA document and also to ask if there is any interest in standardizing the head-to-ballast cable configuration, or, at minimum, to provide information on what configurations are used.

### **6.4 EMC task group [Vannice]**

**6.4.1** Vannice read a report, which is appended to these minutes.

**6.4.2** Tim Cox report on IEC 61000-3-2 and 61000-3-3.

IEC has come up with draft clarifying amendments. These have been circulated within the IEC and CENELEC for parallel vote. One problem is that one circulated draft is not the final version and has technical errors. Several organizations have written to European Commission to change the date of withdrawal of the original documents. The EC has responded that standards bodies (CENELEC) set the dates. Thus, it is unlikely that the dates will be changed. There is concern regarding restraint of trade.

IEC Web site ([www.iec.ch](http://www.iec.ch)) has a document of interest: "EMC - The Role and Contribution of IEC Standards.

## **7 New business**

### **7.1 Report on NEC Meetings**

Kramer reported on the work done on sections 518, 520, 525, 530, and 540 of the National Electrical Code.

- Chapter 540 has been renamed to "Motion Picture Projection Rooms."
- A panel proposal deleted the 518-2(a) List of Examples - which creates confusion.
- Romex proposals for 518 & 520 venues were defeated.
- Chapter 525 was reorganized with some changes more in line with industry practice.
- GFCI applications changes were made for 525 (e.g., when receptacles are used for connecting parts of a ride, GFCI is not required)
- Kramer noted that these are proposals and are subject to change in the comment phase.
- USITT will be addressing the Report on Proposals (ROP), which will be available free from the NFPA in June, and which can be downloaded as well). People can join the process by contacting Ken Vannice.
- Kramer also noted that "fixtures" are now being know as "luminaires," SI units are now used, and a new number format similar to International Standards (e.g., 520-5 becomes 520.5) is being used.

### **7.2 Qualified Persons**

Colin Waters distributed two sheets: the NEC definition of "Qualified Person," which is ultimately up to Authority Having Jurisdiction (AHJ); and the old version of the "Manual of Style" which defines this, but it is

unclear whether its definition is actually official. It was the sense of the EPWG that such definitions should be area specific (e.g., the NEC definition is different from the Rigging Working Group's definition, and the NEMA definition is different from both of those). This should be deferred to the Certification Task Group.

Karl Ruling was requested to post the current version of the "Manual of Style" and the P&P on the ESTA website so they are available to all working groups and, more importantly, to task group members.

#### **8. Other business**

Bob Luther noted that Jeff Measley has requested to join the Feeder Cable Task Group. The Feeder Cable Task Group was to meet after adjournment

#### **9. Schedule for future meetings**

The chairs announced the future meeting times:

Wed., March 22, 2000, 8am - 12 noon at USITT Annual Conference in Denver

Fri., July 14, 2000, 8am - 12 noon in Irving (DFW Airport Marriott, Irving, TX)

#### **10. Adjournment**

Tim Cox moved the meeting adjourn. Colin Waters seconded the motion. Unanimous acceptance by voice vote. Vannice declared the meeting adjourned at 9:47 a.m.

ESTA Harmonics Update  
by  
Ken Vannice  
1/20/00

1. The US FCC is considering upgrading its requirements to be similar to the IEC International Special Committee on Radio Interference (CISPR) 22 on conducted emission limits. The FCC is seeking comments.
2. The Canadians that helped to write the USCCEMC 99-01 "white paper" apparently weren't representative of Canada. The Canadian TAG and CSA wants to amend the "white paper" before adopting it. This will require the US group to meet and consider.
3. The pressure to delay the effectively date of the IEC standard 61000-3-2 isn't progressing very smoothly. There is a lot of finger-pointing going on. The IEC and CENELEC feel it is an EC issue and the EC thinks it is a standards issue. The justification for the delay is that the standard has "holes" in it. CENELEC is pressuring WG1 to band-aid the standard immediately.
4. As we surmised the US is being accused of pressing issues after the fact. This has resulted in the surfacing of numerous US documents over the years that have been ignored or buried during the standards-making process.
5. There was a meeting of the US TAG to regroup on Jan 13 and 14 in Philadelphia. I don't have the results of that meeting yet.

## Working Group Membership and Contact Information at the End of the 21 January 2000 Meeting

Name	Company	Parent Co./Org Represented	Vot. Stat.	Int. Cat.
Andre Broucke	ADB - TTV Technologies	Siemens	O	P
Bud Toly	Advanced Devices, Inc.	Advanced Devices, Inc.	A	P
Doug Kraus	Advanced Devices, Inc.	Advanced Devices, Inc.	P	P
Jeff deRecat	Advanced Devices, Inc.	Advanced Devices, Inc.	A	P
David Evaniew	B. I. M. Limited	B. I. M. Limited	P	P
Tim Bachman	Barbizon Light	Barbizon Companies	P	U
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	P	P
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	P	P
R. Bruce Prochal	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Edwin S. Kramer	IATSE, Local 1	I.A.T.S.E. Local 1	P	U
Roger Lattin	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Jose J. Flores	Kino Flo, Inc.	Kino Flo, 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

Name	Company	Parent Co./Org Represented	Vot. Stat.	Int. Cat.
Ken Vannice	NSI Corporation	Leviton Manufacturing Co., Inc.	P	P
Tim Cox	PLASA	PLASA	P	G
Steve Terry	PRG Lighting Division	PRG	P	U
Teddy Van Bommel	PRG Lighting Division	PRG	A	U
George Sabbi	PRG Lighting Group	PRG	O	U
Robert Barbagallo	Proximo Inc.	Proximo Inc.	P	G
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	P	P
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
Warren Mays	TMB Associates	TMB Associates	A	P
Brian Dowd	TMB Associates (NJ)	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	P	G
Bruce Whitehead	Whitehead Engineering Services	Whitehead Engineering Services	O	G
Peter Brooks	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 electrical power devices or products
- U User of electrical power devices
- G General interest in electrical power devices