

**Minutes**  
**Control Protocols Working Group**  
Saturday, 14 July 2007  
Dallas/ Ft. Worth Airport Marriott South  
Ft. Worth, TX

**Presiding chairman:** Tracy Underhill; Electronics Diversified LLC; P; MP

**Recording secretary:** Karl G. Ruling; ESTA

**Members attending:**

Jean-Francois Canuel; Spectrum Manufacturing Inc. (A.C. Lighting Ltd.); P; CP  
Daniel W. Antonuk; Electronic Theatre Controls, Inc.; P; MP  
Eric Johnson; O; MP (joined at this meeting)  
Michael Lay; Strand Lighting; Genlyte Group LLC; P; MP  
Robert Goddard; Goddard Design Co.; Goddard Design Co.; P; MP  
Alan Martello; Horizon Control Inc.; P; MP  
Robert Bell; Horizon Control Inc.; A; MP  
Gary Douglas; Horizon Control Inc.; A; MP (new company)  
Peter Willis; Howard Eaton Lighting Ltd.; 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  
John (Javid) D. Butler; Integrated Theatre, Inc.; P; CP  
Rick Leinen; Colortran (Leviton Manufacturing Co., Inc.); P; MP  
Kevin Loewen; Pathway Connectivity Inc.; P; MP  
Ron Bonner; PLASA; P; G  
Charles Reese; Production Resource Group; P; DR  
Kimberly Corbett; Schuler Shook; P; G  
Mark Manthei; Shure Inc.; P; G (voting status change at this meeting)  
Mitch Hefter; Entertainment Technology (Genlyte Group), representing USITT; P; U

**Visitors:** None

**1 Opening remarks**

Tracy Underhill called the meeting to order at 09:05.

**2 Attendance**

**2.1 Introductions of those present and circulation of attendance sheet**

A multi-colored sign-in sheet was circulated and those present introduced themselves.

**2.2 Determination of a quorum**

Underhill asked for a show of hands of voters, and then announced that a quorum was present.

**2.3 Recognition of alternate voting members**

Underhill reminded the voting body that there is only one vote per company. An alternate may not vote on the same question as a principal; only one may vote.

**3 Membership**

**3.1 Requirements for membership**

Underhill reminded those present that working group membership is open to all who are affected by the work of the group. People and companies that would be in the general interest, users, and dealer/rental companies interest categories are at this time particularly encouraged to apply for membership. 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.

### 3.2 Processing of new membership requests and reaffirmation of members with new companies

Membership applications had been received from:

- Dominic Vicenty; Television Production Service; observer; dealer/rental company
- Gary Douglas; Horizon Controls; alternate; MP (Douglas formerly represented Pathway)
- Tracy Underhill; Electronics Diversified LLC; principal; MP (EDI has new owners and a new name.)
- Eric Johnson; observer; MP

Javid Butler moved that the applications be accepted. The motion was seconded, and then approved with a unanimous how of hands

Mark Manthei of Shure asked to have his voting status changed to principal voting member. A motion to this effect was made by Dan Antonuk. The motion was seconded, and then approved with a unanimous show of hands.

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

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Jean-Francois Canuel	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	P	CP
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	P	U
Wayne David Howell	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	P	CP
Simon Hobday	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	A	CP
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	MP
Milton Davis	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP
Ken Wagner	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP
Daniel W. Antonuk	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	MP
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	A	MP
Tracy Underhill	Electronics Diversified LLC	Electronics Diversified LLC	P	MP
Ralph Weber	ENDL Texas	ENDL Texas	P	G
Philip Nye	Engineering Arts	Engineering Arts	P	G
Michael Lay	Strand Lighting	Genlyte Group LLC	P	MP
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	MP
Scott M. Blair	High End Systems Inc.	High End Systems Inc.	P	MP
Jason Potterf	High End Systems Inc.	High End Systems Inc.	A	MP
Tom Grimes	High End Systems, Inc.	High End Systems, Inc.	A	MP
Alan Martello	Horizon Control Inc.	Horizon Control Inc.	P	MP
Robert Bell	Horizon Control Inc.	Horizon Control Inc.	A	MP
Gary Douglas	Horizon Control Inc.	Horizon Control Inc.	A	MP
Peter Willis	Howard Eaton Lighting Ltd.	Howard Eaton Lighting Ltd.	P	CP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
John Huntington	City Tech, Ent Tech Department	I.A.T.S.E. Local 1	A	U
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Dennis Grow	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
John (Javid) D. Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	P	CP
Michael Whetstone	Integrated Theatre, Inc.	Integrated Theatre, Inc.	A	CP
Rick Leinen	Colortran	Leviton Manufacturing Co., Inc.	P	MP
Ken Vannice	Colortran	Leviton Manufacturing Co., Inc.	A	MP
Torben Kaas Rasmussen	Martin Professional A/S	Martin Professional A/S	P	G

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Flemming Jensen	Martin Professional A/S	Martin Professional A/S	A	G
Kevin Loewen	Pathway Connectivity Inc.	Pathway Connectivity Inc.	P	MP
Dave Higgins	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	MP
Ron Bonner	PLASA	PLASA	P	G
Charles Reese	Production Resource Group	Production Resource Group	P	DR
Robert Tooker	Production Resource Group	Production Resource Group	A	DR
Hans Lau	Sand Network Systems, Inc.	Sand Network Systems, Inc.	P	MP
Yngve Sandboe	Sand Network Systems, Inc.	Sand Network Systems, Inc.	A	MP
Kimberly Corbett	Schuler Shook	Schuler Shook	P	G
Mark Manthei	Shure	Shure	P	G
Mitch Hefter	Entertainment Technology (Genlyte Group)	USITT	P	U
		Total possible	25	
		Votes by interest category	4	CP
			10	MP
			1	DR
			4	U
			6	G

**4 Approval of the minutes from the previous meeting**

See CP/2007-1006, file name CPmin03-2007.pdf.

Peter Willis said that he had not agreed to turn over the recommended project to James Eade, as stated in 8.2, although this is what Ron Bonner had reported in the last meeting. Eddie Kramer suggested that a note be put in the March minutes stating that Bonner's statement was repudiated by Willis at the July meeting, since one usually looks at minutes for an answer to a question, and rarely reviews the subsequent minutes to see if the answer was changed. Karl Ruling said he'd add a note.

Kimberly Corbett noted an extra "but" in 8.3.1. Ruling deleted the extra "but."

Mitch Hefter moved that the amended minutes be accepted. The motion was seconded, and then approved with a show of hands.

**5 Reading of the call for patents**

Tracy Underhill read the following statement read aloud to the assembly:

"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 patent or other protected intellectual property issues were brought to the attention of the assembly.

**6 The reading of the anti-trust statement**

Tracy Underhill read the following statement read 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 \$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 some of the easy-to-read pamphlets. No restraint of trade issues were brought to the attention of the assembly.

## **7 Approval of agenda**

Roger Lattin moved that the draft agenda be accepted. The motion was seconded and then approved with a show of hands.

## **8 Old business**

### **8.1 ANSI E1.3-2001 (R2006)**

No news.

### **8.2 E1.11/DMX512-A Recommended Practice: PLASA proposal**

See DMX\_Guide\_Proposal.pdf

Ron Bonner explained the proposal, and then there was a heated discussion, particularly of the short time-line for developing the document. Bob Goddard argued that the document couldn't be published until we have a meeting, debate, and vote. Therefore, it could not be sold at LDI.

Peter Willis argued that the members of the CPWG should be paid to review the document, since James Eade is being paid to write it.

Mitch Hefter moved that we proceed with the PLASA proposal. The motion was seconded and then approved with a show of hands with 13 voting yes, which was a supermajority of the working group.

Ron Bonner was appointed the task group leader, and the following people volunteered or were appointed to be part of the review group:

- Roger Lattin
- Rick Leinen
- Dan Antonuk
- Jean-Francois Canuel
- Charles Reese
- Alan Martello
- Gary Douglas
- Kevin Loewen
- Peter Willis
- Michael Lay
- Robert Goddard
- Javid Butler
- Mitch Hefter
- Karl Ruling
- Tracy Underhill
- Steve Terry

Bonner said that the draft document was available at [www.plasamembers.org/dmxguide](http://www.plasamembers.org/dmxguide) and that it is password protected. Some members of the working group accessed the document immediately,

using the hotel's wireless network, and said that it was not password protected. Bonner announced what the user name and password should be.

### **8.3 ANSI E1.11 (DMX512-A)**

#### **8.3.1 Questions from China**

Mitch Hefter reported that the questions from China have highlighted errors and confusing text in the existing standard. (See E1-11-2k4 Errata Proposed Corrections.pdf and E1-11-2k4 Vagueness.pdf.) He explained the problems and ask if we want to start a revision process now. There was some discussion of how long a revision might take, if it would open up a Pandora's Box. Hefter asked if people would be upset if the PICS was removed from the standard. No one was.

Javid Butler moved that we start the revision process for ANSI E1.11-2004. The motion was approved by a simple majority with a show of hands. There was no opposition.

Tracy Underhill appointed himself, Javid Butler, Bob Goddard, Doug Fleenor, Dave Higgins, and Mitch Hefter to the revision task group, with Mitch Hefter to be the leader.

#### **8.3.2 E1.11 auf Deutsch**

Karl Ruling reported that the project seems to be stalled. Florian von Hofen has a document, which Ruling was supposed to review at Prolight + Sound in Frankfurt in March, but von Hofen was extremely busy at the show, and they were not able to get together to review the document.

Ruling reported that DIN has expressed an interest in writing a DIN document regarding this standard. He's had heated words with Ulrich Kunkel (E3 Engineering & Education for Entertainment, representing DIN) over any suggestion that DIN should make its own version of ANSI E1.11. The agreed compromise, discussed at a meeting at Prolight + Sound, would be to have DIN make an interpretation document, a German recommended practice, that points to ANSI E1.11 as the definitive standard and to the VPLT translation as the authorized German translation. No work has been done on this as far as he knows, said Ruling. The three DIN stage technology committee members who were supposed to join the CPWG as observer members have not done so yet.

There is a market for a German translation of E1.11 document, although perhaps not a large one, said Ruling.

### **8.4 ANSI E1.20-2006, Remote Device Management**

Peter Willis reported that there are errata that need to be published, but no work has been done. Willis complained that there is work that needs to be done—RDM is not plug and play—but that people came to the RDM-related meeting here, the task group leader was not present, and there was no meeting. Therefore, no work was done.

There was a discussion of the fragmentation of the group's efforts. The general consensus was that people are scattered across too many projects and there are not set task group meeting times or agendas. There need to be set meeting times and agendas.

### **8.5 E1.17 Multipurpose Control Network Protocol Suite**

Parts of the document are impossible to search because the fonts are two-byte Unicode. Dan Antonuk said the task group has not figured out how to fix the character encoding, or completed the list of errata yet.

### **8.6 E1.27-X, cabling**

#### **8.6.1 ANSI E1.27-1-2006 (portable DMX512/E1.11 cabling)**

Javid Butler reported no news and no errata found yet.

## 8.6.2 First public review of E1.27-2 (permanent DMX512/E1.11 cabling)

### 8.6.2.1 Consideration of approval of the comment resolutions

The motion to approve the resolutions offered in file E1-27-2FrstPubRvwResols.pdf failed to reach a supermajority in support at the last meeting (only one had been against the motion, but too few, not more than half the entire consensus body, voted in favor). Javid Butler asked that it be considered again and moved that the first public review resolution document be accepted. The motion was seconded, and then approved by a supermajority with a show of hands, with 14 voting in favor, none opposed, and the rest abstaining.

### 8.6.2.2 Consideration of next steps on the revised draft standard

Javid Butler said that he has tried to write the standard so that it is acceptable in North America and elsewhere. Local laws and practices are not the same everywhere.

Javid Butler moved that the document BSR\_E1-27-2\_R3.pdf be offered for another public review. The motion was seconded, and then approved with a roll call ballot:

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.	Yes	No	Abstain
Jean-Francois Canuel	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	P	CP			
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	P	U			
Wayne David Howell	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	P	CP			
Simon Hobday	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	A	CP			
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	MP			
Milton Davis	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP			
Ken Wagner	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP			
Daniel W. Antonuk	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	MP	X		
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	A	MP			
Tracy Underhill	Electronics Diversified LLC	Electronics Diversified LLC	P	MP	X		
Ralph Weber	ENDL Texas	ENDL Texas	P	G			
Philip Nye	Engineering Arts	Engineering Arts	P	G			
Michael Lay	Strand Lighting	Genlyte Group LLC	P	MP	X		
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	MP	X		
Scott M. Blair	High End Systems Inc.	High End Systems Inc.	P	MP			
Jason Potterf	High End Systems Inc.	High End Systems Inc.	A	MP			
Tom Grimes	High End Systems, Inc.	High End Systems, Inc.	A	MP			
Alan Martello	Horizon Control Inc.	Horizon Control Inc.	P	MP			
Robert Bell	Horizon Control Inc.	Horizon Control Inc.	A	MP	X		
Gary Douglas	Horizon Control Inc.	Horizon Control Inc.	A	MP			
Peter Willis	Howard Eaton Lighting Ltd.	Howard Eaton Lighting Ltd.	P	CP	X		
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U	X		
John Huntington	City Tech, Ent Tech Department	I.A.T.S.E. Local 1	A	U			
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U	X		
Dennis Grow	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			
John (Javid) D. Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	P	CP	X		
Michael (Mike) Whetstone	Integrated Theatre, Inc.	Integrated Theatre, Inc.	A	CP			
Rick Leinen	Colortran	Leviton Manufacturing Co., Inc.	P	MP	X		
Ken Vannice	Colortran	Leviton Manufacturing Co., Inc.	A	MP			
Torben Kaas Rasmussen	Martin Professional A/S	Martin Professional A/S	P	G			
Flemming Jensen	Martin Professional A/S	Martin Professional A/S	A	G			
Kevin Loewen	Pathway Connectivity Inc.	Pathway Connectivity Inc.	P	MP	X		

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.	Yes	No	Abstain
Dave Higgins	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	MP			
Ron Bonner	PLASA	PLASA	P	G	X		
Charles Reese	Production Resource Group	Production Resource Group	P	DR	X		
Robert Tooker	Production Resource Group	Production Resource Group	A	DR			
Hans Lau	Sand Network Systems, Inc.	Sand Network Systems, Inc.	P	MP			
Yngve Sandboe	Sand Network Systems, Inc.	Sand Network Systems, Inc.	A	MP			
Kimberly Corbett	Schuler Shook	Schuler Shook	P	G	X		
Mark Manthei	Shure	Shure	P	G			X
Mitch Hefter	Entertainment Technology (Genlyte Group)	USITT	P	U	X		

	Possible	Yes	No	Abstain	Not present
CP	4	2	0	0	2
MP	10	7	0	0	3
DR	1	1	0	0	0
U	4	3	0	0	1
G	6	2	0	1	3
Total	25	15	0	1	9

**8.7 BSR E1.30, Application level equipment interoperability for control of commonly encountered entertainment technology devices using E1.17**

Dan Antonuk reported that substantial progress was made at the task group meeting yesterday (13 July). The task group explored ways of presenting less detailed models of devices in the EPIs. The modeling can be simpler if we focus on modeling the interfaces to the devices rather than the devices themselves—focus more on what it does rather than what it is. This modeling is more understandable for humans.

**8.8 BSR E1.31, Lightweight streaming protocol for transport of DMX512 using ACN**

See the summary of comments, E1-31FrstRvwCmmntSmmry.pdf. Charles Reese reported that the task group has accepted 96 out of the 115 comments that were submitted, and is working on integrated them into the revised standard.

Charles said that Dan Antonuk is taking over most of the writing work, with the rest of the task group providing input.

**8.9 BSR E1.33-200x, Extensions to E1.31 (DMX512 Streaming Protocol) for Transport of ANSI E1.20 (RDM)**

There was some discussion of holding the E1.31 project so that it includes E1.33. No motions were offered and no action was taken.

In discussion it was said that the notes from Scott Blair are the only documentation that exists for BSR E1.33. There is one task group that is working on both E1.31 and E1.33. The task group is focusing on E1.31 at this time. Reese leads the task group, but Antonuk is the editor for BSR E1.31 and Blair is the editor for BSR E1.33.

**8.10 BSR E1.37-200x—Additional Message Sets for ANSI E1.20, Remote Device Management**

There was no BSR E1.37 progress report. Scott Blair was not present.

Gary Douglas reported that Pathway had developed a bulk data transfer method that works for that company, and a proposal document was posted on the RDM forum. It seemed to be overly complex to many on the forum, but Pathway feels that it is just complex enough to do the job and a

little bit more. The document is not written in a formal standard style. Peter Willis felt that, aside from any technical issues, the document needs to be reformatted.

A flow chart or state machine diagram has been requested for the Pathway method, but no one has written one yet.

## 9 **New business: Nomination of new co-chair**

Nominees were submitted for people stand for election to the co-chair position now held by Steve Terry. The nominees were:

Scott Blair  
Eddie Kramer  
Roger Lattin  
Mike Lay  
Charles Reese  
Steve Terry  
Doug Fleenor

Karl Ruling will check with those nominees not present to see if they are willing to serve. Then he will send out the final list of nominees to voters and will asked for ranked votes for an instant-run-off election, as described in the minutes of the October 2004 meeting.

## 10 **Other business**

The CPWG-related LDI sessions were listed and briefly discussed:

### ***Connecting This to That: Cross Discipline Systems Integration***

Friday, November 16

3:30pm-5pm

Digital controls are used just about everywhere today, but there are many situations where a simple analog interface is preferable. When integrating systems that involve multiple disciplines it can be difficult to sort out protocols and system management. This session will discuss ESTA's ANSI E1.3 analog protocol as well as systems integration using contact closures and digital I/O points. A brief overview of digital protocols such as MIDI, SMPTE, DALI, and other protocols and how they integrate will be included.

Moderator: Javid Butler, Integrated Theatre

Panelists: Milton Davis, Doug Fleenor Design; Bob Goddard, Goddard Design Company; Dave Higgins, Pathway Connectivity; Peter Willis, Howard Eaton Lighting

### ***ACN CAN!***

Saturday, November 17

1:30pm-3pm

ANSI E1.17-2006, Entertainment Technology—Architecture for Control Networks (ACN) is the new standard that offers plug-and-play capability on lighting control networks and that breaks through the limit of 512 parameters on a data cable. Members of the Control Protocols Working Group, the group that created the standard, explain how it works and what it offers lighting technicians, designers, and equipment manufacturers.

Moderator: Steve Terry, ETC

Panelists: Dan Antonuk, ETC; Kevin Loewen, Pathway Connectivity; Philip Nye, Engineering Arts; Michael Lay, Strand Lighting

### ***Running RDM***

Saturday, November 17

3:30pm-5pm

ANSI E1.20-2006, Entertainment Technology--Remote Device Management over USITT DMX512, popularly known as "RDM," allows bi-directional communications over a USITT DMX512/1990 data link and lets a lighting controller monitor the status of controlled devices



and remotely set parameters such as DMX starting address. It's a useful extension to the DMX512 protocol to work, but to work reliably there are some rules for network layout that have to be followed. Members of the Control Protocols Working Group, the group that created the standard, explain how it works and what the constraints are on network layout.  
Moderator: Mitch Hefter, Entertainment Technology  
Panelists: Scott Blair, High End Systems; Javid Butler, Integrated Theatre; Milton Davis, Doug Fleenor Design; Peter Willis, Howard Eaton Lighting

**11 Schedule for future meetings**

Tracy Underhill announced that the next meeting is scheduled for Thursday, 15 November 2007, 09:00 to 13:00, at the Rosen Plaza Hotel, 9700 International Drive, Orlando, Florida.

Eddie Kramer said that the July 2008 meeting will be in New York City.

Ron Bonner announced that the PLASA Controls Protocol Breakfast will be held Tuesday, 11 September at Earl's Court.

**12 Changes to observer status due to lack of attendance**

Voting members who have missed the previous two meetings and will be moved to observer status if this meeting also is missed:

Arnold Tang; Arnold Tang Productions  
Torben Kaas Rasmussen and Flemming Jensen; Martin Professional

Tracy Underhill announced that Tang and the Martin Professional representatives are now observers, since they have not met the attendance requirements.

Mark Manthei, Shure's principal, reported that Yelena Akhramkov is no longer with Shure, so Karl Ruling removed her from the membership list.

**13 Adjournment**

Javid Butler moved that the meeting adjourn. The motion was seconded. The motion was approved by acclamation. Tracy Underhill announced that the meeting was adjourned at 12:05.

**Working Group Membership and Contact Information as of 20 July 2007**

Name	Company	Representing (This is the sort field.)	Vot. stat.	Int. cat.
Jean-Francois Canuel	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	P	CP
Tim Bachman	A.C.T Lighting, Inc.	A.C.T Lighting, Inc.	O	DR
Andre Broucke	ADB - TTV Technologies	ADB-TTV Group	O	MP
John Sellers	AIM Northwest	AIM Northwest	O	G
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	O	U
Wayne David Howell	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	P	CP
Simon Hobday	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	A	CP
Steve Friedlander	Auerbach Pollock Friedlander	Auerbach Pollock Friedlander	O	U
J. B. Toby	Avolites Ltd.	Avolites Ltd.	O	MP
Shahid Anwar	Avolites Ltd.	Avolites Ltd.	O	MP
Richard Salzedo	Avolites Ltd.	Avolites Ltd.	O	MP
Barbara Wohlsen	Barbara Wohlsen	Barbara Wohlsen	O	U
Tobin Neis	Barbizon Companies	Barbizon Companies	O	DR
Jiantong Wu	Beijing Special Engineering Design & Research Institute	Beijing Special Engineering Design & Research Institute	O	G
Bernardo Benito Rico	Ben-Ri Electronica S.A.	Ben-Ri Electronica S.A.	O	MP
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Soo-Myong Chung	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Bill Ellis	Candela Controls, Inc.	Candela Controls, Inc.	O	U
Will Wagner	Carallon Ltd.	Carallon Ltd.	O	MP
Steve Roberts	Carr & Angier	Carr & Angier	O	G
Bob Toms	Catalyst Microsystems LLC	Catalyst Microsystems LLC	O	G
Marty Lazarus	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	O	G
Chuck Seifried	Phoenix Civic Plaza	City of Phoenix	O	U
Larry Dunn	City Theatrical, Inc.	City Theatrical, Inc.	O	CP
Fabiano Pina	Clay Paky S.P.A.	Clay Paky S.P.A.	O	MP
Ohad Ashery	Compulite Systems	Compulite Systems	O	MP
Simeon Aladjem	Compulite Systems	Compulite Systems	O	MP
Yehuda Shukram	Compulite Systems	Compulite Systems	O	MP
Dietmar Rottinghaus	Connex GmbH	Connex GmbH	O	G
David Bertenshaw	David Bertenshaw	David Bertenshaw	O	G
Larry Schoeneman	Designlab Chicago, Inc.	Designlab Chicago, Inc.	O	DR
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	MP
Milton Davis	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP
Ken Wagner	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP
Gary Dove	Dove Systems	Dove Systems	O	MP
Jerry Durand	Durand Interstellar, Inc.	Durand Interstellar, Inc.	O	CP
Dirk Beiner	e:cue GmbH & Co. KG	e:cue GmbH & Co. KG	O	MP
Jussi Kallioinen	Eastway Sound & Lighting	Eastway Sound & Lighting	O	U
Edward R. Condit	Edward R. Condit	Edward R. Condit	O	G
Ed Jones	Edwin Jones Co., Inc.	Edwin Jones Co., Inc.	O	CP
Joost van Eenbergen	ELC Lighting	ELC Lighting	O	MP
Bill Fehrmann	Electrol Engineering, Inc.	Electrol Engineering, Inc.	O	MP
Daniel W. Antonuk	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	MP
Adam Bennette	Electronic Theatre Controls Ltd.	Electronic Theatre Controls, Inc.	O	MP
Hans Leiter	ETC GmbH	Electronic Theatre Controls, Inc.	O	MP
Anders Ekvall	Transtechnik Lichtsysteme GmbH	Electronic Theatre Controls, Inc.	O	MP
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	A	MP
Tracy Underhill	Electronics Diversified LLC	Electronics Diversified LLC	P	MP

Name	Company	Representing (This is the sort field.)	Vot. stat.	Int. cat.
Ralph Weber	ENDL Texas	ENDL Texas	P	G
Philip Nye	Engineering Arts	Engineering Arts	P	G
Eric Johnson	Eric Johnson	Eric Johnson	O	MP
Erwin Rol	Erwin Rol Software Engineering	Erwin Rol	O	G
Michael Lay	Strand Lighting	Genlyte Group LLC	P	MP
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	MP
Sierk Janszen	Ground Zero	Ground Zero	O	U
Liao Wei Min	GuangZhou HeDong Electronic Co., Ltd.	GuangZhou HeDong Electronic Co., Ltd.	O	G
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Bill Hewlett	Hewlett Electronics	Hewlett Electronics	O	CP
Scott M. Blair	High End Systems Inc.	High End Systems Inc.	P	MP
Tom Grimes	High End Systems, Inc.	High End Systems, Inc.	A	MP
Jason Potterf	High End Systems Inc.	High End Systems Inc.	A	MP
Steve Carlson	High Speed Design, Inc.	High Speed Design, Inc.	O	MP
Alan Martello	Horizon Control Inc.	Horizon Control Inc.	P	MP
Robert Bell	Horizon Control Inc.	Horizon Control Inc.	A	MP
Gary Douglas	Horizon Control Inc.	Horizon Control Inc.	A	MP
Peter Willis	Howard Eaton Lighting Ltd.	Howard Eaton Lighting Ltd.	P	CP
Paul J. Clark	HxDx	HxDx	O	CP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
John Huntington	City Tech, Ent Tech Department	I.A.T.S.E. Local 1	A	U
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Dennis Grow	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
Gian Carlo C. Bartolotti	Ibeam SP / Banco de Eventos	Ibeam SP / Banco de Eventos	O	U
Geoffrey O. Thompson	Nortel Networks, Inc.	IEEE 802.3/Nortel Networks	O	G
John (Javid) D. Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	P	CP
Michael Whetstone	Integrated Theatre, Inc.	Integrated Theatre, Inc.	A	CP
Mark Jensen	Intelligent Control Devices	Intelligent Control Devices	O	CP
Rob Johnston	Interactive Technologies, Inc.	Interactive Technologies, Inc.	O	MP
David Timmins	Jands Electronics	Jands Electronics	O	MP
Helge Hoffmann	JB Lighting	JB Lighting	O	MP
Edward Paget	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	O	G
Christopher Purpura	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	O	G
Josh Gubler	Josh Gubler	Josh Gubler	O	CP
Lawrence Neal	Lawrence Neal	Lawrence Neal	O	CP
John Mehlretter	Lehigh Electric Products Co.	Lehigh Electric Products Co.	O	MP
Mark T. Kraft	Lehigh Electric Products Co.	Lehigh Electric Products Co.	O	MP
Rick Leinen	Colortran	Leviton Manufacturing Co., Inc.	P	MP
Ken Vannice	Colortran	Leviton Manufacturing Co., Inc.	A	MP
Lars Wernlund	Lewlight	Lewlight	O	MP
Klaus Amling	Licht-Technik	Licht-Technik	O	P
Andrew Sherar	Lightmoves PLC	Lightmoves PLC	O	MP
Avraham Mendall Mor "Avi"	Lightswitch	Lightswitch	O	U
Simon Alpert	Lighttech Event Technologies	Lighttech Event Technologies	O	CP
Gary Pritchard	LSC Lighting Systems PTY Ltd	LSC Lighting Systems PTY Ltd	O	MP
Bart Swinnen	Luminex LCE	Luminex LCE	O	MP
J. P. Steiner	Lutron Electronics	Lutron Electronics	O	MP
Jim Holladay	Luxence	Luxence	O	G

Name	Company	Representing (This is the sort field.)	Vot. stat.	Int. cat.
Daniel Weiermann	Mainstage Theatrical Supply - Milwaukee	Mainstage Theatrical Supply	O	DR
Torben Kaas Rasmussen	Martin Professional A/S	Martin Professional A/S	O	G
Flemming Jensen	Martin Professional A/S	Martin Professional A/S	O	G
Hiroshi Kita	Marumo Electric Co., Ltd.	Marumo Electric Co., Ltd.	O	MP
Stuart Cotts	Oregon Shakespeare Festival	Oregon Shakespeare Festival	O	U
David A. Boller	Organic Machines LLC	Organic Machines LLC	O	CP
William Benner	Pangolin Laser Systems	Pangolin Laser Systems	O	MP
Kevin Loewen	Pathway Connectivity Inc.	Pathway Connectivity Inc.	P	MP
Dave Higgins	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	MP
Ron Bonner	PLASA	PLASA	P	G
James Eade	PLASA	PLASA	O	G
Mac Perkins	PNTA Inc.	PNTA Inc.	O	G
Charles Reese	Production Resource Group	Production Resource Group	P	DR
Robert Tooker	Production Resource Group	Production Resource Group	A	DR
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	O	MP
Steve Unwin	Pulsar Ltd.	Pulsar Ltd.	O	MP
Stephen J. Tyrrell	Quantum Logic	Quantum Logic	O	MP
Douglas Franz	QVC Network	QVC Network	O	U
Sean Harding	Rhode Island College	Rhode Island College	O	U
Charlie Richmond	Richmond Sound Design Ltd.	Richmond Sound Design Ltd.	O	CP
Martin Farnik	Robe Show Lighting s.r.o.	Robe Show Lighting s.r.o.	O	MP
Hans Lau	Sand Network Systems, Inc.	Sand Network Systems, Inc.	P	MP
Yngve Sandboe	Sand Network Systems, Inc.	Sand Network Systems, Inc.	A	MP
Kenneth Mockler	Sceno Plus	Sceno Plus	O	U
Kimberly Corbett	Schuler Shook	Schuler Shook	P	G
Mick Martin	ShowCAD Control Systems	ShowCAD Control Systems	O	MP
Loren Wilton	Showman Systems	Showman Systems	O	CP
Mark Manthei	Shure Inc.	Shure Inc.	P	G
Kehang Wu	Shure Inc.	Shure Inc.	O	G
Jon R. Farley	Sixteenth Avenue Systems	Sixteenth Avenue Systems	O	CP
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	U
Michael Gonzales	Spectrum Lighting Inc.	Spectrum Lighting Inc.	O	DR
Ujjal Kar	Standard Robotics & Lighting	Standard Robotics & Lighting	O	G
Paul K. Ericson	Syska Hennessy Group Lighting Design	Syska Hennessy Group Lighting Design	O	U
Stephen Bickford	T. Kondos Associates	T. Kondos Associates	O	U
Tad Trylski	Tad Trylski	Tad Trylski	O	U
Klas Dalbjorn	Labgruppen AB	TC Group	O	MP
Dominic Vincenty	TPS	Television Production Service	O	DR
Pete Baselici	The Watt Stopper	The Watt Stopper	O	MP
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	O	G
Colin Waters	TMB	TMB	O	U
Mitch Hefter	Entertainment Technology (Genlyte Group)	USITT	P	U
Torrey Bievenour	Vision Quest Lighting	Vision Quest Lighting	O	G
Eckart Steffens	SOUNDLIGHT	VPLT	O	G
Eric Cornwell	West Side Systems	West Side Systems	O	U
John Sondericker III	Wybron, Inc.	Wybron, Inc.	O	MP
Paul Kenneth McEwan	Zero 88 Lighting Limited	Zero 88 Lighting Ltd.	O	MP

**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