

Minutes Control Protocols Working Group

Thursday 21 March 2013
09:00 am– 1:00 pm
Hyatt Regency Milwaukee
Milwaukee, WI

Presiding working group leader: Kimberly Corbett; Schuler Shook; P; DE

Recording secretary: Karl G. Ruling; PLASA

Members attending:

Kevin Loewen; Pathway Connectivity Inc. (Acuity Brands Inc.); P; MP
Paul Kleissler; City Theatrical, Inc.; P; MP
Edward A. (Ted) Paget; Daktronics Automated Rigging Solutions (Daktronics Inc.); P; G
Larry Schoeneman; DesignLab Chicago, Inc.; P; DR
Ulrich Kunkel; E3 Engineering & Education for Entertainment GmbH (DIN, NVBF Committee); P; U
Daniel W. Antonuk; Electronic Theatre Controls, Inc.; P; MP
Maya Nigrosh; Electronic Theatre Controls, Inc.; A; MP
Sang-Kyu Lim; ETRI (Electronics and Telecommunications Research Institute); P; G
Insu Kim; ETRI (Electronics and Telecommunications Research Institute); A; G
Edwin S. Kramer; 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; P; U
Ken Vannice; Leviton Manufacturing Co., Inc.; P; MP
Tyrone Mellon_Jr.; Lex Products Corp.; P; CP
Hans Lau; LumenRadio AB; A; MP
Gordan Rancic; Phoenix Service srl; P; MP
Mitch Hefter; Mitch Hefter (USITT); P; U
Jeff T. Miller; Worldwide Standards and Auditing (Walt Disney Company); P; U
Christopher Tilton; Westlake Reed Leskosky; P; DE

1 Opening remarks

Kimberly Corbett called the meeting to order at 9:02 and asked the group to silence their cellphones.

2 Attendance

2.1 Introductions of those present and circulation of attendance sheet

A hot salmon colored sheet was circulated counterclockwise and self introductions were made.

2.2 Determination of a quorum

Corbett asked for a show of hands and noted that a super-majority was present.

2.3 Recognition of alternate voting members

Corbett noted the alternate voting member present for LumenRadio AB. She reminded those alternates present with their principal that only one may vote on a question.

3 Membership

3.1 Requirements for membership

The following statement was read aloud to the assembly by Kimberly Corbett:

Membership is open to all who are affected by the work of the group. People and companies that would be in any interest category other than a manufacturer interest category 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 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:

None.

3.3 Processing of new membership requests and reaffirmation of members with new companies

The following applications had been received and logged:

Douglas Heirot; O; MP
 Jason Potterf; Cisco; P; MP
 Sean Sill; Open Lighting Project; O; DE
 Simon Newton; Open Lighting Project; P; G

Gordan Rancic asked to be moved from observer to principal voting status.

Ted Paget moved that the requests be accepted, with the exception that Jason Potterf be accepted as an observer due to his absence. The motion was seconded and approved by a show of hands.

3.4 Consensus Body

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

Name	Representing	Voting Status	Interest Category
Jean-Francois Canuel	A.C. Lighting Ltd.	P	CP
Reza Khanmalek	A.C. Lighting Ltd.	A	CP
Kevin Loewen	Acuity Brands Inc.	P	MP
Robert Bell	Acuity Brands Inc.	A	MP
Gary Douglas	Acuity Brands Inc.	A	MP
Alan Martello	Acuity Brands Inc.	A	MP
Philip Nye	Acuity Brands Inc.	A	MP
Garrett Gallant	Acuity Brands Inc.	A	MP
Simon Hobday	Artistic Licence Holdings	P	DE
Wayne David Howell	Artistic Licence Holdings	A	DE
Paul Kleissler	City Theatrical, Inc.	P	MP
Larry Dunn	City Theatrical, Inc.	A	MP
Edward A. (Ted) Paget	Daktronics Inc.	P	G
Larry Schoeneman	DesignLab Chicago, Inc.	P	DR
Ulrich Kunkel	DIN, NVBF Committee	P	U
Doug Fleenor	Doug Fleenor Design, Inc.	P	MP
Milton Davis	Doug Fleenor Design, Inc.	A	MP
Daniel W. Antonuk	Electronic Theatre Controls, Inc.	P	MP
Steve Terry	Electronic Theatre Controls, Inc.	A	MP
Maya Nigrosh	Electronic Theatre Controls, Inc.	A	MP
Sang-Kyu Lim	Electronics and Telecommunications Research Institute	P	G
Insu Kim	Electronics and Telecommunications Research Institute	A	G
Scott M. Blair	Full Throttle Films/ VER	P	DR
Robert Goddard	Goddard Design Co.	P	MP
Ed Garstkiewicz	Harting KGAA	P	G

Name	Representing	Voting Status	Interest Category
Howard Forryan	Harting KGAA	A	G
Peter Willis	Howard Eaton Lighting Ltd.	P	CP
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
John Huntington	I.A.T.S.E. Local 1	A	U
Roger Lattin	I.A.T.S.E. Local 728	P	U
Dennis Grow	I.A.T.S.E. Local 728	A	U
Alan M. Rowe	I.A.T.S.E. Local 728	A	U
Hamish Dumbreck	James Embedded Systems Engineering	P	MP
Ken Vannice	Leviton Manufacturing Co., Inc.	P	MP
Tyrone Mellon_Jr.	Lex Products Corp.	P	CP
Joshua Liposky	Lex Products Corp.	A	CP
Michael Karlsson	LumenRadio AB	P	MP
Marcus Bengtsson	LumenRadio AB	A	MP
Hans Lau	LumenRadio AB	A	MP
Peter Kirkup	LumenRadio AB	A	MP
Simon Newton	Open Lighting Project	P	G
Gordan Rancic	Phoenix Service srl	P	MP
Charles Reese	Production Resource Group	P	DR
Michael Lay	Royal Philips Electronics	P	MP
Kimberly Corbett	Schuler Shook	P	DE
Mitch Hefter	USITT	P	U
Jeff T. Miller	Walt Disney Company	P	U
Christopher Tilton	Westlake Reed Leskosky	P	DE
Total votes possible		28	
Votes by interest categories:		3	CP
CP, Custom-market producer DE, Designer DR, Dealer or Rental Company G, General interest MP, Mass-market producer U, User		3	DE
		3	DR
		4	G
		10	MP
		5	U

4 Approval of the minutes from the January meeting

See *CPmin01-2013.pdf*

Eddie Kramer moved to accept the minutes of the January meeting as written. The motion was seconded and approved by a show of hands with one abstention.

5 Reading of the call for patents

The following statement was read aloud to the assembly by Kimberly Corbett:

"PLASA intends not to publish any standard that contains protected intellectual property, unless that information can be licensed by anyone for a reasonable fee. PLASA uses a process of open patent and copyright disclosures to implement its intent. PLASA 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."

Nothing was reported.

6 Reading of the anti-trust statement

The following statement was read aloud to the assembly by Kimberly Corbett:

"The PLASA Board of Directors, the Technical Standards Council, 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 chairs 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 PLASA chair immediately.

"PLASA 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."

No anti-trust issues were raised.

7 Approval of agenda

Kimberly Corbett asked to add an item 8.10, discussion of the standards Wiki.

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

8 Old business

8.1 Standards Maintenance

Any news or action needed on any of these standards? This is a placeholder in the agenda, so we don't forget to maintain them.

ANSI E1.3 – 2001 (R2011), Entertainment Technology - Lighting Control Systems - 0 to 10V Analog Control Specification & Application Guide For ANSI E1.3 – 2004 Lighting Control Systems 0 to 10V Analog Control Specifications. Revision, reaffirmation or withdrawal in 2016.

ANSI E1.11 – 2008, Entertainment Technology - USITT DMX512-A, Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories. Revision, reaffirmation, or withdrawal in 2013. *(See Item 8.2)*

ANSI E1.17 - 2010, Architecture for Control Networks. Revision, reaffirmation or withdrawal in 2016.

ANSI E1.20 - 2010, Remote Device Management over USITT DMX512. Revision, reaffirmation or withdrawal in 2016.

ANSI E1.27-1 – 2006 (R2011), Entertainment Technology - Standard for Portable Control Cables for Use with USITT DMX512/1990 and E1.11 (DMX512-A) Products. Revision, reaffirmation or withdrawal in 2016.

ANSI E1.27-2 – 2009, Entertainment Technology - Recommended Practice for Permanently Installed Control Cables for Use with ANSI E1.11 (DMX512-A) and USITT DMX512/1990 Products. Revision, reaffirmation, or withdrawal in 2014.

ANSI E1.30-1 - 2010, EPI 23, Device Identification Subdevice. Revision, reaffirmation or withdrawal in 2016.

ANSI E1.30-3 – 2009, EPI 25, Time Reference in ACN Systems Using SNTP and NTP. Revision, reaffirmation, or withdrawal in 2014.

ANSI E1.30-4 – 2010, EPI 26, Device Description Language (DDL) Extensions for DMX512 and E1.31 Devices. Revision, reaffirmation, or withdrawal in 2015.

ANSI E1.30-7 – 2009, EPI 29, Allocation of Internet Protocol Version 4 Addresses to ACN Hosts. Revision, reaffirmation, or withdrawal in 2014.

ANSI E1.30-10 – 2009, EPI 32, Identification of Draft Device Description Language Modules. Revision, reaffirmation, or withdrawal in 2014.

ANSI E1.37-1 - 2012, Additional Message Sets for ANSI E1.20, Remote Device Management

8.2 ANSI E1.11- 2008 (R201x) reaffirmation

Karl Ruling reported that it had been approved by ANSI and is now published. It will be posted for sale soon.

8.3 ANSI E1.17 - 2010, Architecture for Control Networks

Karl Ruling said that the PINS form has been filed.

Maya Nigrosh said that an EPI 19 draft will be out to members in a month or so.

8.4 BSR E1.31 with Universe Synchronization

The PINS form has been filed for revising ANSI E1.31 to allow the inclusion of a universe synchronization protocol.

Ulrich Kunkel reported that the task group has been working on merging the universe synchronization protocol into E1.31, and making some other updates to E1.31.

Ulrich Kunkel moved that the revised E1.31 be offered for public review, with the vote to be conducted by letter ballot, when the draft standard is available. Ted Paget seconded the motion. There were no objections from the working group members to this plan. The public review vote will be by letter ballot.

8.5 BSR E1.33, Transport of ANSI E1.20 (RDM) in an E1.31 environment

Karl Ruling reported that there are no public review comments received thus far.

8.6 BSR E1.37-2, Additional Message Sets for ANSI E1.20 (RDM) – Part 2, IPv4 & DNS Configuration Messages

From the draft January minutes:

Simon Newton said he hopes to have a set of comment resolutions drafted for consideration by the work group at the January 2013 meeting.

Simon Newton said that he has been focused on the E1.33 project. He hopes to have some E1.37-2 material for the March meeting.

Simon Newton was not present. There was no progress report.

8.7 BSR E1.37-x, Additional Message Sets for ANSI E1.20, LED walls and video displays

From the draft January minutes:

No progress, reported Scott. He hopes to have made progress by July, but he has been focusing on E1.33.

Scott Blair was not present. There was no progress report.

8.8 BSR E1.45, Visible Light Communication control protocol proposal

It's in public review which closes at the end of the day on 01 April 2013. Any comments or updates?

The "Yes with comments" comments from Peter Willis were discussed.

8.9 OpenDMX proposal

From the draft January minutes:

We have a proposal to take up adopting a proprietary protocol as an American National Standard. See [OpenDMX Business Proposal.pdf](#), [OpenDMX 2 Class 2 Protocol Specification.pdf](#), and [RancicEmail2.pdf](#). The last file is the one that made the intention clear to your Technical Standards Manager, and that removed his fundamental objections to the project. It is now on your agenda.

There was a discussion of the proposal, but action was deferred until the March meeting when it was expected that Gordan Rancic will be present.

Gordan Rancic described the need for his OpenDMX. Dan Antonuk asked for an explanation of the technical issues. There was further discussion dealing primarily with connectors, frame length, and name.

Eddie Kramer moved that we should accept the OpenDMX proposal for development as an American National Standard. The motion was seconded. By a show of hands, there were 11 votes in favor, one opposed, and five abstentions. The motion failed to achieve the supermajority required, at least 15 yes votes with a voting body of 28.

Maya Nigrosh moved that we start a project with the assistance of the OpenDMX protocol and its support group to develop a protocol for the architectural market. The motion was seconded. The motion was accepted by the required supermajority on a show of hands, with 16 voting yes, none opposed, and one abstention.

Karl Ruling asked for a name for this project. He proposed "BSR E1.49, DMX512 Extensions for Architectural Lighting." This was acceptable to the working group, and names can be changed.

Kimberly Corbett appointed a task group for the project: Gordan Rancic, Jeff Miller, Kevin Loewen, Larry Schoeneman, Chris Tilton, San-Kyu Lim, Maya Nigrosh, Ulrich Kunkel, and with Paul Kleissler as the leader.

8.10 European Plugfest

It was announced that next EU Plugfest would be 25, 26, 27 April at Gatwick Manor.

8.11 Texas Plugfest

It was announced that another Texas Plugfest is planned for our summer meetings in Westlake.

8.12 Standards Wiki

John Huntington suggested we end upkeep on the CP Standards Wiki. He moved that we take the page down. The motion was seconded and approved by a show of hands.

9 New business

None.

10 Other business

Hans Lau suggested that we should have anonymous Manufacturer IDs for the convenience of OEMs who make products for several companies. Karl Ruling said, No. There are a limited number of IDs possible. Managing them, assigning only one per manufacturer, is impossible if the manufacturers are anonymous.

11 Next meeting

Kimberly Corbett announced that the next meeting is scheduled for Saturday 03 August 2013 at the Marriott Solana in Westlake, TX. She promised the weather would be warmer there than it is here now in Milwaukee.

12 Adjournment

Ted Paget moved that the meeting adjourn. The motion was seconded and approved by a show of hands. Corbett declared the meeting adjourned at 11:38.

Working Group Membership and Contact Information as of 28 March 2013

Name	Company	Representing	Voting Status	Int. Cat.
Charles Alicea	Philips- Professional Luminaires	Royal Philips Electronics	O	MP
Simon Alpert	Lighttech Event Technologies	Lighttech Event Technologies	O	CP
Klaus Amling	Licht-Technik	Licht-Technik	O	MP
Daniel W. Antonuk	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	MP
Matthew Ardine	IATSE Local 728	IATSE Local 728	O	U
Avraham Mendall Mor "Avi"	Lightswitch	Lightswitch	O	U
Timothy Baarsch	Artistic Licence Engineering Ltd.	Artistic Licence Holdings	O	DE
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	U
Robert Bell	Acuity Brands Lighting	Acuity Brands Inc.	A	MP
BenDarrington	Wireless Solutions Sweden AB	Wireless Solutions Sweden AB	O	MP
Marcus Bengtsson	LumenRadio AB	LumenRadio AB	A	MP
Adam Bennette	Electronic Theatre Controls Ltd.	Electronic Theatre Controls, Inc.	O	MP
David Bertenshaw	David Bertenshaw	David Bertenshaw	O	G
Stephen Bickford	T. Kondos Associates	T. Kondos Associates	O	U
Torrey Bievenour	Vision Quest Lighting	Vision Quest Lighting	O	G
Scott M. Blair	Full Throttle Films/ VER	Full Throttle Films/ VER	P	DR
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
David A. Boller	Organic Machines LLC	Organic Machines LLC	O	CP
Ron Bonner	PLASA Technical Resources Office	PLASA EU	O	G
André Broucke	André Broucke	André Broucke	O	G
John (Javid) D. Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	O	CP
Jean-Francois Canuel	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	P	CP
Steve Carlson	High Speed Design, Inc.	High Speed Design, Inc.	O	MP
Nyasha Chigwamba	Dept. of Computer Science	Rhodes University	O	U
Soo-Myong Chung	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Paul J. Clark	HxDx	HxDx	O	CP
Edward R. Condit	Edward R. Condit	Edward R. Condit	O	G
Kimberly Corbett	Schuler Shook	Schuler Shook	P	DE

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Name	Company	Representing	Voting Status	Int. Cat.
Eric Cornwell	West Side Systems	West Side Systems	O	U
Stuart Cotts	Oregon Shakespeare Festival	Oregon Shakespeare Festival	O	U
Klas Dalbjorn	Labgruppen AB	TC Group	O	MP
Milton Davis	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP
Jeremy Day	Philips Color Kinetics	Royal Philips Electronics	O	MP
Gilray Densham	CAST Software	CAST Group Inc	O	MP
Gary Douglas	Acuity Brands Lighting	Acuity Brands Inc.	A	MP
Gary Dove	Dove Systems	Dove Systems	O	MP
Yongshun Duan	Macostar Physics Application Technology Development (Wuhan) Ltd.	Macostar International Ltd.	O	CP
Hamish Dumbreck	JESE Ltd.	James Embedded Systems Engineering	P	MP
Larry Dunn	City Theatrical, Inc.	City Theatrical, Inc.	A	MP
Jerry Durand	Durand Interstellar, Inc.	Durand Interstellar, Inc.	O	CP
James Eade	PLASA	PLASA EU	O	G
Andrew Eales	Wellington Institute of Technology	Rhodes University	O	U
Bill Ellis	Candela Controls, Inc.	Candela Controls, Inc.	O	U
Paul K. Ericson	Syska Hennessy Group Lighting Design	Syska Hennessy Group Lighting Design	O	U
Jon R. Farley	Sixteenth Avenue Systems	Sixteenth Avenue Systems	O	CP
Martin Farnik	Robe Show Lighting s.r.o.	Robe Show Lighting s.r.o.	O	MP
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	MP
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Howard Forryan	Harting Ltd.	Harting KGAA	A	G
Steve Friedlander	Auerbach Pollock Friedlander	Auerbach Pollock Friedlander	O	U
Garrett Gallant	Pathway Connectivity Inc.	Acuity Brands Inc.	A	MP
Ed Garstkiewicz	Harting Inc., North America	Harting KGAA	P	G
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	MP
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	O	G
Tom Grimes	High End Systems, Inc.	Barco	O	MP
Dennis Grow	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Josh Gubler	Josh Gubler	Josh Gubler	O	CP

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Name	Company	Representing	Voting Status	Int. Cat.
Rob Halliday	Rob Halliday	Rob Halliday	O	U
Sean Harding	High Output, Inc.	High Output, Inc.	O	G
Mitch Hefter	Mitch Hefter	USITT	P	U
Douglas Heriot	Douglas Heriot	Douglas Heriot	O	MP
Bill Hewlett	Hewlett Electronics	Hewlett Electronics	O	CP
Simon Hobday	Artistic Licence Engineering Ltd.	Artistic Licence Holdings	P	DE
Helge Hoffmann	JB Lighting	JB Lighting	O	MP
Jim Holladay	Luxence	Luxence	O	G
Wayne David Howell	Artistic Licence Engineering Ltd.	Artistic Licence Holdings	A	DE
John Huntington	City Tech, Ent Tech Department	I.A.T.S.E. Local 1	A	U
Osedum P. Igumbor	Dept. of Computer Science	Rhodes University	O	U
Sierk Janszen	Kiss Box	Ground Zero	O	U
Eric Johnson	Eric Johnson	Eric Johnson	O	G
Rob Johnston	Interactive Technologies, Inc.	Interactive Technologies, Inc.	O	MP
Ed Jones	Edwin Jones Co., Inc.	Edwin Jones Co., Inc.	O	CP
Tyrone Mellon_Jr.	Lex Products Corp.	Lex Products Corp.	P	CP
Jussi Kallioinen	Eastway Sound & Lighting	Eastway Sound & Lighting	O	U
Tae Gyu Kang	ETRI	Electronics and Telecommunications Research Institute	O	G
Michael Karlsson	LumenRadio AB	LumenRadio AB	P	MP
Reza Khanmalek	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	A	CP
Insu Kim	ETRI	Electronics and Telecommunications Research Institute	A	G
Peter Kirkup	LumenRadio AB	LumenRadio AB	A	MP
Hiroshi Kita	Marumo Electric Co., Ltd.	Marumo Electric Co., Ltd.	O	MP
Phil Klapwyk	IATSE Local 891	IATSE Local 891	O	U
Paul Kleissler	City Theatrical, Inc.	City Theatrical, Inc.	P	MP
Mark T. Kraft	Lehigh Electric Products Co.	Lehigh Electric Products Co.	O	MP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Ulrich Kunkel	E3 Engineering & Education for Entertainment GmbH	DIN, NVBF Committee	P	U
Jason Kyle	JPK Systems Ltd.	JPK Systems Ltd.	O	MP

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Name	Company	Representing	Voting Status	Int. Cat.
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Hans Lau	LumenRadio AB	LumenRadio AB	A	MP
Michael Lay	Philips Color Kinetics	Royal Philips Electronics	P	MP
Rick Leinen	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	O	MP
Hans Leiter	ETC GmbH	Electronic Theatre Controls, Inc.	O	MP
Jon Lenard	Applied Electronics	Applied Electronics	O	MP
Maarten Lepelaars	eldoLED	eldoLED	O	MP
Sang-Kyu Lim	ETRI	Electronics and Telecommunications Research Institute	P	G
Joshua Liposky	Lex Products Corp.	Lex Products Corp.	A	CP
Kevin Loewen	Pathway Connectivity Inc.	Acuity Brands Inc.	P	MP
Mark Manthei	Shure Inc.	Shure Inc.	O	G
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	O	MP
Alan Martello	Acuity Brands Lighting	Acuity Brands Inc.	A	MP
Mick Martin	ShowCAD Control Systems	ShowCAD Control Systems	O	MP
Paul Kenneth McEwan	Zero 88	Cooper Controls Ltd.	O	MP
John Mehlretter	Lehigh Electric Products Co.	Lehigh Electric Products Co.	O	MP
Jeff T. Miller	Worldwide Standards and Auditing	Walt Disney Company	P	U
John Musarra	John Musarra	John Musarra	O	U
Tobin Neis	Barbizon Companies	Barbizon Companies	O	DR
Simon Newton	Open Lighting Project	Open Lighting Project	P	G
Dan T. Nguyen	LynTec	LynTec	O	MP
Maya Nigrosh	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	A	MP
Philip Nye	Acuity Brands Lighting	Acuity Brands Inc.	A	MP
Lars F. Paape	Scientific Algorithms and Embedded Systems	Scientific Algorithms and Embedded Systems	O	U
Edward A. (Ted) Paget	Daktronics Automated Rigging Solutions	Daktronics Inc.	P	G
Jason Potterf	Cisco	Cisco	O	MP
Gary Pritchard	LSC Lighting Systems (Aust) PTY Ltd	LSC Lighting Systems PTY Ltd	O	MP
Gordan Rancic	Phoenix Service srl	Phoenix Service srl	P	MP
Torben Kaas Rasmussen	Martin Professional A/S	Martin Professional A/S	O	G

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Name	Company	Representing	Voting Status	Int. Cat.
Charles Reese	Production Resource Group	Production Resource Group	P	DR
Charlie Richmond	Richmond Sound Design Ltd.	Richmond Sound Design Ltd.	O	CP
Bernardo Benito Rico	Ben-Ri Electronica S.A.	Ben-Ri Electronica S.A.	O	MP
Steve Roberts	Carr & Angier	Carr & Angier	O	G
Erwin Rol	Erwin Rol Software Engineering	Erwin Rol	O	G
Dietmar Rottinghaus	Connex GmbH	Connex GmbH	O	G
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Richard Salzedo	Avolites Ltd.	Avolites Ltd.	O	MP
Yngve Sandboe	Sand Network Systems, Inc.	Sand Network Systems, Inc.	O	MP
Larry Schoeneman	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	P	DR
Martin Searancke	Dream Solutions Ltd.	Dream Solutions Ltd.	O	MP
Chuck Seifried	Phoenix Civic Plaza	City of Phoenix	O	U
John Sellers	AIM Northwest	AIM Northwest	O	G
Andrew Sherar	Lightmoves PLC	Lightmoves PLC	O	MP
Yehuda Shukram	Compulite Systems	Compulite Systems	O	MP
Sean Sill	Open Lighting Project	Open Lighting Project	O	DE
Storm K. Staley	Stormwerx	Stormwerx	O	U
Ralph Stillinger	Strand Lighting	Royal Philips Electronics	O	MP
Bart Swinnen	Luminex LCE	Luminex LCE	O	MP
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	O	U
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	A	MP
Geoffrey O. Thompson	Nortel Networks, Inc.	IEEE 802.3/Nortel Networks	O	G
Christopher Tilton	Westlake Reed Leskosky	Westlake Reed Leskosky	P	DE
Robert Timmerman	Philips Color Kinetics	Royal Philips Electronics	O	MP
David Timmins	Jands Electronics	Jands Electronics	O	MP
J. B. Toby	Avolites Ltd.	Avolites Ltd.	O	MP
Bob Toms	Catalyst Microsystems LLC	Catalyst Microsystems LLC	O	G
Robert Tooker	Robert Tooker	Robert Tooker	O	U
Tad Trylski	Tad Trylski	Tad Trylski	O	U

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Name	Company	Representing	Voting Status	Int. Cat.
Stephen J. Tyrrell	Quantum Logic	Quantum Logic	O	MP
Tracy Underhill	4U Consulting	4U Consulting	O	G
Steve Unwin	Pulsar Ltd.	Pulsar Ltd.	O	MP
Samuli Valo	Picturall Ltd.	Picturall Ltd.	O	MP
Ken Vannice	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	P	MP
Carlo Venturati	Clay Paky S.P.A.	Clay Paky S.P.A.	O	MP
Will Wagner	Carallon Ltd.	Carallon Ltd.	O	MP
Oliver Waits	Avolites Ltd.	Avolites Ltd.	O	MP
John Warwick	Philips Color Kinetics	Royal Philips Electronics	O	MP
Colin Waters	TMB	TMB	O	DR
Ralph Weber	ENDL Texas	ENDL Texas	O	G
Lars Wernlund	Lewlight	Lewlight	O	MP
Michael (Mike) Whetstone	Integrated Theatre, Inc.	Integrated Theatre, Inc.	O	CP
Peter Willis	Howard Eaton Lighting Ltd.	Howard Eaton Lighting Ltd.	P	CP
Loren Wilton	Showman Systems	Showman Systems	O	CP
Barbara Wohlsen	Barbara Wohlsen	Barbara Wohlsen	O	U
C. S. Wong	Macostar International Ltd.	Macostar International Ltd.	O	CP
Jiantong Wu	Beijing Special Engineering Design & Research Institute	Beijing Special Engineering Design & Research Institute	O	G
Kehang Wu	Shure Inc.	Shure Inc.	O	G
David Yellin	LightMinded Industries, Inc.	LightMinded Industries, Inc.	O	MP
Larry Zoll	Zoll Design & Consulting, LLC	Zoll Design & Consulting, LLC	O	U

Key to voting status and interest categories:

Voting Status		Interest Category	
P	Principal voting member	CP	Custom-market Producer
A	Alternate voting member	MP	Mass-market Producer
I	Individual voting member	DE	DEsigner
O	Observer non-voting member	DR	Dealer/Rental company
		U	User
		G	General interest