

Minutes
Control Protocols Working Group
Thursday, 29 March 2012
Westin Long Beach

Chairperson: Kimberly Corbett; Schuler Shook; P; DE

Recording secretary: Karl G. Ruling

Members attending:

Scott M. Blair; Full Throttle Films/ VER; P; DR
Ron Bonner; PLASA Technical Resources Office, PLASA EU; P; G
Jean-Francois Canuel; Spectrum Manufacturing Inc.(A.C. Lighting Ltd.); P; CP
Doug Fleenor; Doug Fleenor Design, Inc.; P; MP
Tyrone Mellon_Jr.; Lex Products Corp.; P; CP
Insu Kim; Electronics and Telecommunications Research Institute; O; MP
Paul Kleissler; City Theatrical, Inc.; 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
Hans Lau; LumenRadio AB; A; MP
Sang-Kyu Lim; Electronics and Telecommunications Research Institute; O; MP
Kevin Loewen; Pathway Connectivity Inc. (Acuity Brands Inc.); P; MP
Maya Nigrosh; Electronic Theatre Controls, Inc.; A; MP
Edward A. (Ted) Paget; Daktronics Automated Rigging Solutions (Daktronics Inc.); P; G
Larry Schoeneman; DesignLab Chicago, Inc.; O; DR
Ken Vannice; Leviton Manufacturing Co., Inc.; P; MP

Visitors: Patrick Wallace and Trent Kugler; Shepard University

1 Opening remarks

Kimberly Corbett called the meeting to order at 9:01. She asked people to silence their cell phones.

2 Attendance

2.1 Introductions of those present and circulation of attendance sheet

Those present introduced themselves while a hot pink sign-in sheet was circulated.

2.2 Determination of a quorum

Corbett asked voters to raise a hand. She counted the upraised hands and then announced that a quorum was present.

2.3 Recognition of alternate voting members

Hans Lau was recognized as being present to vote for LumenRadio.

3 Membership

3.1 Requirements for membership

Kimberly Corbett reminded the assembly that 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:

Daniel Darrington; Wireless Solutions Sweden AB; MP

Darrington was not present, so Wireless Solutions was moved to observer status.

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

As of Tuesday, March 13, the following applications had been received and logged:

Joshua Liposky; Lex Products Corp.; CP; Alternate

Martin Searancke; Dream Solutions Ltd.; MP; Observer

Samuli Valo; Picturall Ltd.; MP; Observer

Carlo Venturati; Clay Paky; MP; Observer (Fabiano Pina to be removed as Clay Paky representative when Venturati is approved)

Eddie Kramer moved that the applications be accepted. The motion was seconded and then approved with a show of hands.

3.4 Consensus body

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

Name	Representing	Voting status	Int. cat
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
Eric Johnson	Barco	P	MP
Paul Kleissler	City Theatrical, Inc.	P	MP
Larry Dunn	City Theatrical, Inc.	A	MP
Peter Kirkup	Cooper Controls Ltd.	P	MP
Edward A. (Ted) Paget	Daktronics Inc.	P	G
Ulrich Kunkel	DIN, NVBF Committee	P	U
Doug Fleenor	Doug Fleenor Design, Inc.	P	MP
Milton Davis	Doug Fleenor Design, Inc.	A	MP
Sean Sill	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
Scott M. Blair	Full Throttle Films/ VER	P	DR
Robert Goddard	Goddard Design Co.	P	MP
Ed Garstkiewicz	Harting KGAA	P	G
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
Ken Vannice	Leviton Manufacturing Co., Inc.	P	MP

Name	Representing	Voting status	Int. cat
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
Ron Bonner	PLASA EU	P	G
Charles Reese	Production Resource Group	P	DR
Michael Lay	Royal Philips Electronics	P	MP
Kimberly Corbett	Schuler Shook	P	DE
Simon Newton	Simon Newton	I	G
Mitch Hefter	USITT	P	U
Christopher Tilton	Westlake Reed Leskosky	P	DE
	Total	25	
		3	CP
		2	DE
		2	DR
	Subtotals by interest categories	4	G
		10	MP
		4	U

4 Approval of the minutes from the January meeting

See *CPmin01-2012.pdf*

Scott Blair moved that the draft minutes be approved. The motion was seconded and then passed with a show of hands. There was one abstention.

5 Reading of the call for patents

Kimberly Corbett read the following statement aloud to the assembly:

"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."

Hans Lau noted that Samsung has a massive portfolio for Visible Light Communication patents and suggested that we should get a blanket letter from them about licensing their patents on a non-discriminatory basis for a reasonable fee. Karl Ruling noted that we are not working on any projects that require the use of VLC.

6 Reading of the anti-trust statement

Kimberly Corbett read the following statement aloud to the assembly:

"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."

The Technical Standards Manager, Karl Ruling, held up some of the easy-to-read pamphlets to show their availability.

No restraint of trade issues were reported.

7 Approval of agenda

Ted Paget moved that the agenda be approved as written. The motion was seconded and then accepted with 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.

Kimberly Corbett asked if there were any updates for the listed standards. None were offered.

- **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.
- **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 E1.31 – 2009**, Entertainment Technology – Lightweight streaming protocol for transport of DMX512 using ACN. Revision, reaffirmation or withdrawal in 2014.
- **ANSI E1.37-1 - 2012**, Additional Message Sets for ANSI E1.20, Remote Device Management

8.2 BSR E1.30-12, EPI 34, E1.31 Universe Synchronization

Progress report from the Task Group headed by Ulrich Kunkel.

Ulrich Kunkel was not present and had submitted no written report.

Karl Ruling reported that he spoken to Kunkel at the Prolight+Sound trade show in Frankfurt during the previous week (show days: March 21-24) and Kunkel said he'd been in an automobile collision. He was injured, but he is healing. However, the accident is under investigation, and he would not be able to leave the country until that investigation is concluded. Thus, his absence at this meeting.

Kimberly Corbett said that the working group will need to assess the need for a new project leader in July, if this project continues to make no progress.

8.3 BSR E1.33, RDMnet

Progress report from the Task Group. Task group is working on comment resolution.

Scott Blair reported that the document had received 131 comments, and that the task group has drafted resolutions for all but about half a dozen. The task group has been wrestling with problem of synchronizing controllers to keep updated device status and queued messages. A new solution is to open a TCP connection between controllers. The short-term goal is to have a set of proposed resolutions and a revised draft ready for the July meeting.

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

Karl Ruling reported that it's In public review through April 23, but that no responses had been received yet.

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

LED wall and video display monitoring and device control. Discussion of project initiation and task group creation.

Scott Blair reported that no work had been done on this yet. He and his colleagues will work on this after the current work on the E1.33 project is done. He plans to talk to people at InfoComm about this at their June meeting. The project will focus on configuration methods for image displays

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

Ruling reported that there would be a task group meeting to work on a draft immediately following this meeting. There was further discussion about licensing concerns. The project is general to IEEE 802 communication over DMX and not specific to VLC, although VLC is one use for it. Some topics the task group will be working through are alternate start codes and error correction. Several working group members stressed that something more than check sum correction seemed necessary.

8.7 CPWG marketing efforts

8.7.1 Protocol Articles

Possible Protocol articles were discussed. Simon Newton mentioned a possible article on dealing with devices that don't fully comply with the E1.20 protocol.

8.7.2 July Connectivity Demo at CUNY

There was a discussion of the possibility of a connectivity demo at thwe New York City College of Technology. A show of hands of support had none against the project, but only three for it, so there were 11 abstentions.

Finally it was decided that perhaps there should be a table-top exhibit at NATEAC. Kimberly Corbett will contact Bill Sapis to see if this would be a good idea and possible. If so, a task group of Doug Fleenor, Ted Paget, Bob Goddard, and Paul Kleisser will organize the exhibit.

8.7.3 European Plugfest

Ron Bonner reported that it will be held at the end of April. So far, they have at least 30 participants expected for the first day, which is a day of presentations. The next two days are more the plugfest format used at our meetings in Texas. So far, there are five or six participants registered from the USA,. There is a lot of interest from across Europe, including Hungary.

He will have a report for how it all went for the July meeting. However, Bonner probably will not be attending the meeting in New York because the cost of flying in and out of the UK during the London Olympics is prohibitive.

8.7.4 Connectivity Pavilions

Planning for PLASA and LDI.

Bonner reported that he's booked the space for the PLASA trade show.

9 Upcoming Meetings

It was announced that the next meeting will be Saturday, July 21, from 9:00 a.m. to 1:00 p.m. at the New York Hilton in New York, New York.

10 New business

10.1 Call for LDI sessions

Richard Cadena has to turn them in two weeks after this meeting. Proposals?

Scott Blair suggested "Techniques for troubleshooting Ethernet networks using Wire Shark," moderated by Simon Newton. Blair said he's willing to participate in a session, but not moderate one.

10.2 Other new business

Nothing.

11 Other business and announcements

Nothing.

12 Adjournment

Ted Paget moved that the meeting adjourn. The motion was seconded and then approved with a show of hands. Kimberly Corbett declared the meeting adjourned at 11:45.

Membership as of 17 April 2012

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
Shahid Anwar	Avolites Ltd.	Avolites Ltd.	O	MP
Avraham Mendall Mor "Avi"	Lightswitch	Lightswitch	O	U
Daniel Ayers	Norcostco (Sales-Midwest)	Norcostco	O	DR
Timothy Baarsch	Artistic Licence Engineering Ltd.	Alderamin Group	O	DE
Tim Bachman	A.C.T Lighting, Inc.	A.C.T Lighting, Inc.	O	DR
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	U
Robert Bell	Acuity Brands Lighting	Acuity Brands Inc.	A	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	P	G
André Broucke	André Broucke	André Broucke	O	G
Larry Busch	ADB Lighting Technologies	ADB Lighting Technologies	O	MP
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

Name	Company	Representing	Voting status	Int. cat.
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
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
Daniel Darrington	Wireless Solutions Sweden AB	Wireless Solutions Sweden AB	O	MP
Milton Davis	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	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	O	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	O	G
Andrew Eales	Wellington Institute of Technology	Rhodes University	O	U
Joost van Eenbergen	ELC Lighting	ELC Lighting	O	MP
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

Name	Company	Representing	Voting status	Int. cat.
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
Phillip M. Gallo	TMB	TMB	O	DR
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
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
Bill Hewlett	Hewlett Electronics	Hewlett Electronics	O	CP
Simon Hobday	Artistic Licence Engineering Ltd.	Alderamin Group	O	DE
Helge Hoffmann	JB Lighting	JB Lighting	O	MP
Jim Holladay	Luxence	Luxence	O	G
Wayne David Howell	Artistic Licence Engineering Ltd.	Alderamin Group	O	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	High End Systems	Barco	P	MP
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

Name	Company	Representing	Voting status	Int. cat.
Tae Gyu Kang	ETRI	Electronics and Telecommunications Research Institute	O	MP
Ujjal Kar	Standard Robotics & Lighting	Standard Robotics & Lighting	O	G
Michael Karlsson	LumenRadio AB	LumenRadio AB	P	MP
Kirk D. Keen	Hollywood Lighting Services, Inc.	Hollywood Lighting, Inc.	O	DR
Reza Khanmalek	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	A	CP
Insu Kim	ETRI	Electronics and Telecommunications Research Institute	O	MP
Peter Kirkup	Zero 88	Cooper Controls Ltd.	P	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
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	O	MP
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

Name	Company	Representing	Voting status	Int. cat.
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
Tobin Neis	Barbizon Companies	Barbizon Companies	O	DR
Simon Newton	Simon Newton	Simon Newton	I	G
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
Gary Pritchard	LSC Lighting Systems (Aust) PTY Ltd	LSC Lighting Systems PTY Ltd	O	MP
Eric Proce	Eric Proce	Eric Proce	O	U
Torben Kaas Rasmussen	Martin Professional A/S	Martin Professional A/S	O	G
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.	O	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

Name	Company	Representing	Voting status	Int. cat.
Andrew Sherar	Lightmoves PLC	Lightmoves PLC	O	MP
Yehuda Shukram	Compulite Systems	Compulite Systems	O	MP
Sean Sill	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	MP
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
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
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

Name	Company	Representing	Voting status	Int. cat.
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

P principal voting member
A alternate voting member
I individual voting member
O observer, non-voting member

MP mass-market producer
CP custom-market producer
DR dealer or rental company
U user
G general interest
DE designer (specifies the products in designs)