

Minutes
Control Protocols Working Group
Thursday, 17 October 2002
Las Vegas Hilton

Chairmen: Steve Carlson; High Speed Design, Inc.; principal; producer
Steve Terry; Electronic Theatre Controls; alternate; producer

Recording secretary: Karl G. Ruling; ESTA

Members attending: Arnold Tang; Arnold Tang Productions; principal; user
Tobin Neis; Barbizon Companies; principal; user
George Kindler; Pelton Marsh Kinsella (Carter & Burgess, Inc.); principal; user
Rick Szijarto; Cast Software (Cast Group of Companies, Inc.); principal; producer
(joined at this meeting)
Doug Fleenor; Doug Fleenor Design, Inc.; principal; producer
Joost van Eenbergen; ELC Lighting; observer; producer
Daniel W. Antonuk; Electronic Theatre Controls, Inc.; principal; producer
Tracy Underhill; Electronics Diversified Inc. ; principal; producer
Alfred Langguth; Embedded Controls by Design, LLC; principal; producer
Philip Nye; Engineering Arts; principal; gen. interest
Robert Goddard; Goddard Design Co.; principal; producer
William Wagner; Flying Pig Systems (High End Systems); alternate; producer
(joined at this meeting)
Tom Grimes; High End Systems, Inc.; principal; producer
Peter Willis; Howard Eaton Lighting Ltd.; principal; producer
Scott M. Blair; Scott M. Blair, representing Hubbell Inc.; individual; gen. interest
(new representation at this meeting)
Richard Thornton Brown; Zero 88 Ltd. (i Light Group PLC); principal; producer
Roger Lattin; I.A.T.S.E. Local 728; principal; user
Edward Paget; Jones & Phillips Associates, Inc.; principal; gen. interest
Rick Leinen; Colortran (Leviton Manufacturing Co., Inc.); principal; producer
Tim Bachman; Leviton/Colortran (Leviton Manufacturing Co., Inc.); alternate;
producer
Klaus Amling; Licht-Technik; observer; producer
John ("Javid") D. Butler; Mainstage Theatrical Supply - South (Mainstage Theatrical
Supply); principal; user (joined at this meeting)
Ole Bystrup; Martin Professional A/S; principal; producer (joined at this meeting)
Bruce Lehnus; Martin Professional Inc. (Martin Professional A/S); observer;
producer (joined at this meeting)
Kevin Loewen; Pathway Connectivity Inc.; alternate; producer
Tim Cox; PLASA; principal; gen. interest
Paul F. Mardon; Pulsar Ltd.; principal; producer
Steve Unwin; Pulsar Ltd.; alternate; producer
Andre Broucke; ADB - TTV Technologies (Siemens); observer; producer
Jon R. Farley; Sixteenth Avenue Systems; observer; producer
Richard Lawrence; Strand Lighting Ltd.; principal; producer
Michael Lay; Strand Lighting (Strand Lighting Ltd.); alternate; producer
Brian Dowd; TMB; principal; user
Charles Reese; Vari-Lite, Inc.; principal; producer
Eckart Steffens; SOUNDLIGHT, representing VPLT; observer; gen. interest
Michael Gonzales; Wrightson, Johnson, Haddon & Williams, Inc.; principal; user
(new voting status at this meeting)
Mark Jensen; Wybron, Inc.; principal; producer

Visitors: None.

1 Opening remarks

Steve Terry called the meeting to order at 09:00.

2 Attendance and membership

2.1 Introductions of those present and taking attendance

Steve Terry and Steve Carlson introduced themselves. They asked those present to introduce themselves, which they did, proceeding around the table in a clockwise direction.

2.2 Determination of quorum

Steve Carlson announced that a quorum was present.

2.3 Recognition of alternate voting members

Terry noted the one-vote rule and asked for a show of hands of alternates who would be voting.

2.4 Requirements for membership

Steve Terry reminded those present that membership is available to all who are materially affected by the work of the group, but that voting members must attend meetings (either the principal or alternate must attend) and that they must vote on letter ballots to maintain their voting status.

2.5 Processing of new membership requests

Steve Terry read the applications. One of them was from Woody Smith of Hubbell Entertainment. Scott Blair noted that his primary client is Hubbell Entertainment, so he asked that he be recognized as Hubbell's principal and that Woody Smith be recognized as the alternate.

Ted Paget moved that the applications be accepted. The motion was seconded. The motion was accepted unanimously by show of hands. The following new members and changes of affiliation were thus effected:

Bruce Lehnus; Martin Professional, Inc. (Martin Professional A/S); observer; producer
Jason Poterf; University of Texas at Austin; observer; general interest
John (Javid) D. Butler; Mainstage Theatrical Supply - South; Mainstage Theatrical Supply; principal;
user
Matt Stroud; University of Texas at Austin; observer; general interest
Michael Gonzales; WJHW, Inc.; change from observer to principal; user
Ole Bystrup; Martin Professional A/S; principal; producer
Rick Szijarto; Cast Software; Cast Group of Companies; principal; producer
Scott Blair; change to Hubbell Inc. in parent organization representation; principal; producer
William Wagner; Flying Pig Systems (High End Systems); alternate; producer
Woody Smith; Hubbell Entertainment (Hubbell Inc.); alternate; producer

The complete consensus voting body during this meeting, including those absent, was thus:

Name	Company	Representing (sort field)	Voting status	Int. cat.
John Sellers	AIM Northwest	AIM Northwest	P	G
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	P	U
Wayne David Howell	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	P	P
Tobin Neis	Barbizon Companies	Barbizon Companies	P	U
Rick Szijarto	Cast Software	Cast Group of Companies	P	P
George Kindler	Pelton Marsh Kinsella	Carter & Burgess, Inc.	P	U
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	P
Milton Davis	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	P
Ken Wagner	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	P
Ed Jones	Edwin Jones Co., Inc.	Edwin Jones Co., Inc.	P	P
Daniel W. Antonuk	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	P
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	A	P
Tracy Underhill	Electronics Diversified Inc.	Electronics Diversified Inc.	P	P
James Johnson	Electronics Diversified Inc.	Electronics Diversified Inc.	A	P
Alfred Langguth	Embedded Controls by Design, LLC	Embedded Controls by Design, LLC	P	P
Philip Nye	Engineering Arts	Engineering Arts	P	G

Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	P
Tom Grimes	High End Systems, Inc.	High End Systems, Inc.	P	P
William Wagner	Flying Pig Systems	High End Systems, Inc.	A	P
Steve Carlson	High Speed Design, Inc.	High Speed Design, Inc.	P	P
Peter Willis	Howard Eaton Lighting Ltd.	Howard Eaton Lighting Ltd.	P	P
Scott Blair	Scott Blair	Hubbell Inc.	P	P
Woody Smith	Hubbell Entertainment	Hubbell Inc.	A	P
Richard Thornton Brown	Zero 88 Ltd.	i Light Group PLC	P	P
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
John Huntington	I.A.T.S.E. Local 1	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
Edward Paget	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	P	G
Rick Leinen	Colortran	Leviton Manufacturing Co., Inc.	P	P
Ken Vannice	Colortran	Leviton Manufacturing Co., Inc.	A	P
Tim Bachman	Leviton/Colortran	Leviton Manufacturing Co., Inc.	A	P
John (Javid) D. Butler	Mainstage Theatrical Supply - South	Mainstage Theatrical Supply	P	U
Ole Bystrup	Martin Professional A/S	Martin Professional A/S	P	P
Gary Douglas	Pathway Connectivity Inc.	Pathway Connectivity Inc.	P	P
Dave Higgins	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	P
Kevin Loewen	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	P
Tim Cox	PLASA	PLASA	P	G
Tony Douglas-Beveridge	PLASA	PLASA	A	G
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	P	P
Steve Unwin	Pulsar Ltd.	Pulsar Ltd.	A	P
David George	Spectrum Manufacturing Inc.	Spectrum Manufacturing Inc.	P	P
Richard Lawrence	Strand Lighting Ltd.	Strand Lighting Ltd.	P	P
Michael Lay	Strand Lighting	Strand Lighting Ltd.	A	P
Brian Dowd	TMB (NJ)	TMB	P	U
Mitch Hefter	Entertainment Technology (Genlyte Thomas Group)	USITT	P	U
Charles Reese	Vari-Lite, Inc.	Vari-Lite, Inc.	P	P
Michael Gonzales	Wrightson, Johnson, Haddon & Williams, Inc.	Wrightson, Johnson, Haddon & Williams, Inc.	P	U
Mark Jensen	Wybron, Inc.	Wybron, Inc.	P	P
		TOTALS	34	4 G 9 U 21 P

3 Approval of the minutes from the previous meeting

Doug Fleenor moved that the minutes be approved as written. The motion was seconded. The motion was accepted by a show of hands, with only two abstentions and no negative votes.

4 Reading of the call for patents

Steve Carlson read the following aloud:

"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."

Pathway Connectivity's representative revealed a 1998 patent #5,821,703 for distributed processing held by Callahan, Chester, and Goddard. It may have application to the RDM and ACN projects.

Carlson read aloud the letter he gave the Technical Standards Manager stating that High Speed Design will license to anyone for a reasonable fee any of its intellectual property that is necessary to use in order to implement one of our standards for the purpose of implementing that standard.

5 The reading of the anti-trust statement

Steve Carlson read the following aloud:

"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 \$100,000 and imprisoned for up to three years. An easy to read pamphlet describing restraint of trade issues is available from the Technical Standards Manager."

6 Approval of agenda

Peter Willis asked for a discussion of the DMX RP status and a patent discussion under new business. By a show of hands this agenda was approved, with one abstention.

7 Old business

7.1E1.11

Mitch Hefter's report was read aloud:

I regret that I cannot attend the CPWG meeting due to a seminar I am conducting. The following is my report to the CPWG draft (agenda item 7.1):

We have downsized the Task Group to 6 "principals" and the chair, plus 6 observers. We are in comment resolution on the second public review, with the intent of resolving the 116 comments for CPWG action in January 2003. Participation in the Task Group meetings at LDI '02 will be limited to the Task Group only in order to facilitate processing of the comments.

The Chair is disappointed with the amount of comments from task group and working group members that could have and should have been addressed prior to public review, as well as the number of comments that provide no suggested text.

7.2E1.20 Remote Device Management with DMX512

Scott Blair reported that this is the fourth meeting cycle since the first one at LDI. At the July Texas meeting, different products by different manufacturers working with the prototype draft worked pretty much right out of the box. The task group intends to demonstrate more on Friday at a public showing at LDI. There are minor problems.

Blair reported that much work is being done with online discussions via AIM.

Blair said that he will start to prune the reflector list of those who don't contribute. He wants to prune the number who are building product per the draft document, but who are not contributing any feedback to the project.

Scott Blair was asked about the ACN/RDM coordination. Blair said that Antonuk and he had had some conversations. There is a section in the draft of RDM dealing with ACN compatibility. Dan Antonuk will be in the RDM task group meetings at LDI. Doug Fleenor added that they had been talking about the compatibility and where the protocol conversion should happen. There is a need to not burden the light-weight RDM controlled devices with too much work, Fleenor explained, and there are places in a network where the protocol conversion could be done other than at the controlled device on the end of a data link.

Richard Lawrence asked when the draft document would be available to the CPWG. Blair stated that the writing part of the task hasn't made much progress in the last few months because of the trade shows. Scott says, a draft should be available no later than the USITT meeting, but possibly by the January meeting.

There was a long discussion of the restricted distribution of the draft documents. Karl Ruling offered to distribute a copy of the latest RDM document he has to anyone requesting it.

There was a discussion of what the copyright notice should be on draft documents. George Kindler moved that the Technical Standards Manager shall draft boiler plate describing the limitations of the use and distribution of draft standards documents. The motion was seconded. The motion was approved by a show of hands with one opposed, two abstentions, and the rest in agreement.

7.3E1.17 Task Group report

Steve Carlson reported that Bob Barbagallo did a public presentation about ACN at a lighting show in Tokyo on ACN. He thanked Barbagallo.

Philip Nye reported that comments had been received on the documents that had been distributed. More documents and revisions to the previous documents were released last night to the CPWG reflector. Dan Antonuk asked people to particularly look at the DMP document. It has been rewritten to make it easier to understand.

Nye explained that the task group has revised its plan to send documents to public review one by one. It was clear from the comments that people didn't understand the documents without the larger context. Therefore, it would not be helpful to send out the protocol in a piece-meal fashion.

7.4 Letter of thanks to Geoff Thompson for his service to the industry

Steve Carlson reported that he will give the letter to Geoff Thompson at a meeting in Hawaii in a couple of weeks when the IEEE meets there.

7.5 IEEE report

Steve Carlson reported on IEEE activities of interest to CPWG members.

The "Get 802 Free" program is back. You can buy the standard as soon as it is published, but six months later the standards will be available for free. See <http://standards.ieee.org/getieee802/> for more information.

10 gigabit Ethernet is making progress, Carlson reported. The project, formally P802.3ae 10G Ethernet, was passed by IEEE Standards Board, and it will be part of P803.3-2003 Edition. There will be a 10GBASE-T call for interest at the meeting at the Hawaii IEEE meetings. The goal will be to send data at 10Gbit/second over 100m of UTP.

The power on Ethernet group is finished for now. Formally called "P802.3af DTE Power via MDI" has gone through various comment resolutions and recirculations. Carlson expects the standard to be issued in March 2003.

The optical side of the "Ethernet in the First Mile" P802.3ah project is doing well, but the copper is a mess, reported Carlson. Related to this project, link security in 802 networks is becoming an issue. The "Ethernet in the First Mile" group is funded by content providers, who want to encrypt everything at the link-layer level. A call for interest has been issued that could result in the development of physical layer encryption for all of 802.

A call for interest has been issued for 10GBASECX-4. This is to provide a low-cost, equipment-to-equipment linkage at 10G over copper interconnect using InfiniBand 4 cable/connectors. The distance would be about 15m, which is good for some of our stuff, reported Carlson.

There is a low-power wireless project in the works, 802.15.4, which would run at 250Kb/s The proposed 15-meter range would be useful for many of our applications, said Carlson.

There is work on an 802.11k: Radio Resource Measurement standard for measuring site quality for wireless Ethernet, reported Carlson. This announcement was greeted with audible enthusiasm from some of the members of the CPWG. Related to this is an 802.18: Radio Regulatory TAG, which is intended to coordinate all the various 802 wireless groups with global radio standards. Right now there is a lot of overlap, with people keep picking the same parts of the spectrum, which causes problems.

Carlson also reported that there is an IEC group, ISO/IEC 11801 and TR-42, dealing with industrial and building automation wiring. That would include entertainment venues. The Technical Advisory Group contact for Europe is Alan Flatman (a_flatman@compuserve.com). The TAG contact for North America is Dave Hess (Dave.Hess@Berktek.com).

For our general information, the 802.3 Working Group officers are:

Chair: Bob Grow, bob.grow@intel.com

Vice-Chair: David Law, David_Law@3com.com

Secretary: Steve Carlson, scarlson@esta.org

Geoff Thompson is now 1st . Vice-Chair of 802

The website URL is <http://grouper.ieee.org/groups/802/3/index.html>

8 New business

ESTA Bucks were distributed to the attendees by Steve Terry, who also explained what the ESTA Bucks program.

Peter Willis asked for a volunteers for working on the DMX RP. The chairs directed all interested to send an email stating their interest to Peter Willis (andera@compuserve.com).

There was a patent discussion as Willis had requested. Carlson was asked why he had submitted the letter. Carlson explained that he has given the patent assurance letter as a matter of good form. He urged others to do the same. It is standard procedure in many other standards organizations for participants in the standards drafting to agree up-front that they will license whatever is necessary to implement the standards being developed to anyone on a non-discriminatory basis for a reasonable fee.

9 Other business

Steve Terry stated that Task group forums will go on-line soon and explained some of the rules. Terry asked Karl Ruling to explain the importance of having clear records that present an unambiguous story of how a standard is developed and how this will affect the record-keeping for the on-line forums. Steve Carlson talked about the evolving record-keeping policy with forums at the IEEE

10 Schedule for future meetings

The next working group meeting is scheduled for Saturday, 18 January 2003 at the Dallas/Ft. Worth Airport Marriott South in Ft. Worth. The meeting is scheduled to start at 09:00 in the morning and to run no later than 18:00 that evening. The following meeting is scheduled for Thursday, 20 March 2003 at the Hilton Minneapolis.

11 Adjournment

Ted Paget moved that the meeting adjourn. The motion was seconded. The motion was approved by a unanimous show of hands. Steve Terry declared the meeting adjourned at 10:50.

Note to the membership: David George of Spectrum Manufacturing did not attend this meeting, which was the third meeting he had missed in a row. Having failed to meet the attendance requirements for a voting member, he is now listed as an observer on the membership roster.

Working Group Membership and Contact Information as of 2002-11-25

Name	Company	Representing	Voting status	Int. cat.
John Sellers	AIM Northwest	AIM Northwest	P	G
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	P	U
Wayne David Howell	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	P	P
Steve Friedlander	Auerbach Pollock Friedlander	Auerbach Pollock Friedlander	O	U
J. B. Toby	Avolites Ltd.	Avolites Ltd.	O	P
Shahid Anwar	Avolites Ltd.	Avolites Ltd.	O	P
Richard Salzedo	Avolites Ltd.	Avolites Ltd.	O	P
Barbara Wohlsen	Barbara Wohlsen	Barbara Wohlsen	O	U
Tobin Neis	Barbizon Companies	Barbizon Companies	P	U
Bernardo Benito Rico	Ben-Ri Electronica S.A.	Ben-Ri Electronica S.A.	O	P
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
Bradley Klinkradt	Bradley Klinkradt	Bradley Klinkradt	O	G
Ted Fregon	Bytecraft Pty. Ltd.	Bytecraft Pty. Ltd.	O	P
Bill Ellis	Candela Controls, Inc.	Candela Controls, Inc.	O	U
George Kindler	Pelton Marsh Kinsella	Carter & Burgess, Inc.	P	U
Rick Szijarto	Cast Software	Cast Group of Companies, Inc.	P	P
Marty Lazarus	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	O	G
Jason Friedman	Creative Realities, Inc.	Creative Realities, Inc.	O	G
David Bertenshaw	David Bertenshaw	David Bertenshaw	O	P
Bob Toms	Design Advantage LLC	Design Advantage LLC	O	G
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	P
Milton Davis	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	P
Ken Wagner	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	A	P
Gary Dove	Dove Systems	Dove Systems	O	P
Jussi Kallioinen	Eastway Sound & Lighting	Eastway Sound & Lighting	O	U
Ed Jones	Edwin Jones Co., Inc.	Edwin Jones Co., Inc.	P	P
Joost van Eenbergen	ELC Lighting	ELC Lighting	O	P
Bill Fehrmann	Electrol Engineering, Inc.	Electrol Engineering, Inc.	O	P
Adam Bennette	Electronic Theatre Controls Ltd.	Electronic Theatre Controls, Inc.	O	P
Hans Leiter	Transtechnik Lichtsysteme GmbH & Co. KG	Electronic Theatre Controls, Inc.	O	P
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	A	P
Daniel W. Antonuk	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	P
Paul Bennett	Electronics Diversified Inc.	Electronics Diversified Inc.	O	P
Tracy Underhill	Electronics Diversified Inc.	Electronics Diversified Inc.	P	P
James Johnson	Electronics Diversified Inc.	Electronics Diversified Inc.	A	P
Alfred Langguth	Embedded Controls by Design, LLC	Embedded Controls by Design, LLC	P	P
Philip Nye	Engineering Arts	Engineering Arts	P	G
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	P
Sierk Janszen	Ground Zero	Ground Zero	O	U
Alan P. Symonds	Harvard College	Harvard University	O	U
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	P
Bill Hewlett	Hewlett Electronics	Hewlett Electronics	O	P
William Wagner	Flying Pig Systems	High End Systems	A	P
Tom Grimes	High End Systems, Inc.	High End Systems, Inc.	P	P
Steve Carlson	High Speed Design, Inc.	High Speed Design, Inc.	P	P
Peter Willis	Howard Eaton Lighting Ltd.	Howard Eaton Lighting Ltd.	P	P
Scott M. Blair	Scott M. Blair	Hubbell Inc.	P	G
Woody Smith	Hubbell Entertainment, Inc.	Hubbell Inc.	A	P
John Huntington	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	A	U
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Richard Thornton Brown	Zero 88 Ltd.	i Light Group PLC	P	P
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
Rob Johnston	Interactive Technologies, Inc.	Interactive Technologies, Inc.	O	P
Larry Schoeneman	Interesting Products, Inc.	Interesting Products, Inc.	O	G
David Timmins	Jands Electronics	Jands Electronics	O	P
Helge Hoffmann	JB Lighting	JB Lighting	O	P
Edward Paget	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	P	G
John Mehlretter	Lehigh Electric Products Co.	Lehigh Electric Products Co.	O	P
Mark T. Kraft	Lehigh Electric Products Co.	Lehigh Electric Products Co.	O	P

Rick Leinen	Colortran	Leviton Manufacturing Co., Inc.	P	P
Ken Vannice	Colortran	Leviton Manufacturing Co., Inc.	A	P
Tim Bachman	Leviton/Colortran	Leviton Manufacturing Co., Inc.	A	P
Klaus Amling	Licht-Technik	Licht-Technik	O	P
Andrew Sherar	Lightmoves PLC	Lightmoves PLC	O	P
Gary Pritchard	LSC Lighting Systems PTY Ltd	LSC Lighting Systems PTY Ltd	O	P
J. P. Steiner	Lutron Electronics	Lutron Electronics	O	P
Jim Holladay	Luxence	Luxence	O	G
John ("Javid") D. Butler	Mainstage Theatrical Supply - South	Mainstage Theatrical Supply	P	U
Ole Bystrup	Martin Professional A/S	Martin Professional A/S	P	P
Bruce Lehnus	Martin Professional Inc.	Martin Professional A/S	O	P
Hiroshi Kita	Marumo Electric Co., Ltd.	Marumo Electric Co., Ltd.	O	P
David A. Boller	Organic Machines LLC	Organic Machines LLC	O	P
William Benner	Pangolin Laser Systems	Pangolin Laser Systems	O	P
Dave Higgins	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	P
Gary Douglas	Pathway Connectivity Inc.	Pathway Connectivity Inc.	P	P
Kevin Loewen	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	P
Tony Douglas-Beveridge	PLASA	PLASA	A	G
Tim Cox	PLASA	PLASA	P	G
Mac Perkins	PNTA	PNTA Inc.	O	G
Robert Barbagallo	Proximo Inc.	Proximo Inc.	O	U
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	P	P
Steve Unwin	Pulsar Ltd.	Pulsar Ltd.	A	P
Stephen J. Tyrrell	Quantum Logic	Quantum Logic	O	P
Douglas Franz	QVC Network	QVC Network	O	U
Charlie Richmond	Richmond Sound Design Ltd.	Richmond Sound Design Ltd.	O	P
Kenneth Mockler	Sceno Plus	Sceno Plus	O	U
Mick Martin	ShowCAD Control Systems	ShowCAD Control Systems	O	P
Andre Broucke	ADB - TTV Technologies	Siemens	O	P
Jon R. Farley	Sixteenth Avenue Systems	Sixteenth Avenue Systems	O	P
David George	Spectrum Manufacturing Inc.	Spectrum Manufacturing Inc.	O	P
Ujall Kar	Standard Robotics & Lighting	Standard Robotics & Lighting	O	G
John Mitchell	Sterling Technical Services	Sterling Technical Services	O	U
Richard Lawrence	Strand Lighting Ltd.	Strand Lighting Ltd.	P	P
Michael Lay	Strand Lighting	Strand Lighting Ltd.	A	P
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
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	O	G
Colin Waters	TMB	TMB	O	U
Brian Dowd	TMB	TMB	P	U
Anders Ekvall	AVAB Scandinavia	Transtechnik GmbH	O	P
Matt Stroud	University of Texas at Austin	University of Texas at Austin	O	G
Jason Potterf	University of Texas at Austin	University of Texas at Austin	O	G
Mitch Hefter	Entertainment Technology (Genlyte Thomas Group)	USITT	P	U
Charles Reese	Vari-Lite, Inc.	Vari-Lite, Inc.	P	P
Eckart Steffens	SOUNDLIGHT	VPLT	O	G
Eric Cornwell	West Side Systems	West Side Systems	O	U
Michael Gonzales	Wrightson, Johnson, Haddon & Williams, Inc.	Wrightson, Johnson, Haddon & Williams, Inc.	P	U
John Sondericker III	Wybron, Inc.	Wybron, Inc.	O	P
Mark Jensen	Wybron, Inc.	Wybron, Inc.	P	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 control devices or products
- U User of control devices or products
- G General interest in control devices or products