

Minutes
Control Protocols Working Group

Thursday, October 21, 2010
Las Vegas Hilton
3000 Paradise Road
Las Vegas, NV 89109 USA

Chairman: Michael Lay; Philips Strand Lighting (Royal Philips Electronics); P; MP

Recording secretary: Karl G. Ruling; ESTA

Members attending:

Jean-Francois Canuel; Spectrum Manufacturing Inc. (A.C. Lighting Ltd.); P; CP
Scott M. Blair; High End Systems Inc. (Barco); P; MP
Bill Ellis; Candela Controls, Inc.; O; U
Larry Dunn; City Theatrical, Inc.; A; MP
Peter Kirkup; Zero 88 (Cooper Controls Ltd.); P; MP
Edward A. (Ted) Paget; Daktronics Automated Rigging Solutions (Daktronics Inc.); P; G
Ulrich Kunkel; E3 Engineering & Education for Entertainment GmbH, representing the DIN, NVBF Committee; P; U
Doug Fleenor; Doug Fleenor Design, Inc.; P; MP
Edward R. Condit; ; O; G
Steve Terry; Electronic Theatre Controls, Inc.; A; MP
Gary Douglas; Horizon Control Inc.; A; MP
Peter Willis; Howard Eaton Lighting Ltd.; P; CP
Roger Lattin; I.A.T.S.E. Local 728; P; U
Hamish Dumbreck; JESE Ltd. (James Embedded Systems Engineering); O; MP
Tyrone Mellon_Jr.; Lex Products Corp.; P; CP
Marcus Bengtsson; LumenRadio AB; A; MP
Hans Lau; LumenRadio AB; A; MP (change of representation and voting status at this meeting)
Stuart Cotts; Oregon Shakespeare Festival; P; U
Kevin Loewen; Pathway Connectivity Inc.; P; MP
Ron Bonner; PLASA; P; G
Robert Tooker; Production Resource Group; A; DR
Simon Newton; I; G
Mitch Hefter; Entertainment Technology (Royal Philips Electronics), representing USITT; P; U
Ben Darrington; Wireless Solutions Sweden AB; O; MP

Visitors: None

1 Opening remarks

Michael Lay called the meeting to order at 9:04. He welcomed all and asked for cell phones and pagers to be silenced. He offered Kimberly Corbett's regrets for not being able to attend the meeting.

2 Attendance

2.1 Introductions of those present and circulation of attendance sheet

A hot pink attendance sign-in sheet was circulated while those present introduced themselves.

2.2 Determination of a quorum

Mike Lay asked for a show of hands of voters. He announced that a quorum was present.

2.3 Recognition of alternate voting members

Alternate voting members were recognized. Voters were reminded of the one vote per company rule, no matter how many voters are present.

3 Membership

3.1 Requirements for membership

The following statement was read aloud to the assembly by Chairman Michael Lay:

"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:

Phil Klapwyk; IATSE Local 891; Observer; User

Hans Lau asked to change representation from Sand Network Systems to LumenRadio; Alternate; MP

Ted Paget 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	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Jean-Francois Canuel	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	P	CP
Scott M. Blair	High End Systems Inc.	Barco	P	MP
Tom Grimes	High End Systems, Inc.	Barco	A	MP
Paul Kleissler	City Theatrical, Inc.	City Theatrical, Inc.	P	MP
Larry Dunn	City Theatrical, Inc.	City Theatrical, Inc.	A	MP
Peter Kirkup	Zero 88	Cooper Controls Ltd.	P	MP
Edward A. (Ted) Paget	Vortek Rigging Division	Daktronics Inc.	P	G
Ulrich Kunkel	E3 Engineering & Education for Entertainment GmbH	DIN, NVBF Committee	P	U
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	MP
Milton Davis	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
Philip Nye	Engineering Arts	Engineering Arts	P	G
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	MP
Ed Garstkiewicz	Harting Inc., North America	Harting KGAA	P	G
Alan Martello	Horizon Control Inc.	Horizon Control Inc.	P	MP
Gary Douglas	Horizon Control Inc.	Horizon Control Inc.	A	MP
Robert Bell	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

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
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
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Dennis Grow	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Ken Vannice	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	P	MP
Tyrone Mellon_Jr.	Lex Products Corp.	Lex Products Corp.	P	CP
Michael Karlsson	LumenRadio AB	LumenRadio AB	P	MP
Hans Lau	LumenRadio	LumenRadio	A	MP
Marcus Bengtsson	LumenRadio AB	LumenRadio AB	A	MP
Stuart Cotts	Oregon Shakespeare Festival	Oregon Shakespeare Festival	P	U
Kevin Loewen	Pathway Connectivity Inc.	Pathway Connectivity Inc.	P	MP
Robert Armstrong	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	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
Michael Lay	Philips Strand Lighting	Royal Philips Electronics	P	MP
Kimberly Corbett	Schuler Shook	Schuler Shook	P	DE
Simon Newton	Simon Newton	Simon Newton	I	G
Mitch Hefter	Entertainment Technology (Royal Philips Electronics)	USITT	P	U
		Total votes possible	26	
		Votes by interest categories	3	CP
			11	MP
			1	DR
			5	U
			5	G
			1	DE

4 Approval of the minutes from the July 2010 meeting

See *CPmin07-2010.pdf*

Scott Blair moved that the draft minutes of the July meeting be approved as written. The motion was seconded and then approved with a show of hands.

5 Reading of the call for patents

The following statement was read aloud to the assembly by Chairman Michael Lay:

"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 protected intellectual property was brought to the attention of the assembly.

6 Reading of the anti-trust statement

The following statement was read aloud to the assembly by Chairman Michael Lay:

"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 one of easy-to-read pamphlets to show that copies were available at the meeting.

No restraint of trade issues were reported to the assembly.

7 Approval of agenda

Additions were offered to the draft agenda:

- Peter Willis asked for a report on the PLASA Connectivity Corner as 10.2
- Simon Newton asked for a report on the Open Lighting Project as 10.3

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

ANSI E1.11 – 2008, Entertainment Technology - USITT DMX512-A, Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories. Revision, reaffirmation or withdraw in 2013.

No news or action.

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 withdraw in 2014.

No news or action.

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

No news or action.

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

No news or action.

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

No news or action.

ANSI E1.31 – 2009, Entertainment Technology – Lightweight streaming protocol for transport of DMX512 using can. Revision, reaffirmation or withdraw in 2014.

No news or action.

8.2 BSR E1.20-20xx, Remote Device Management (revision of ANSI E1.20 - 2006)

Update: CPWG and TSC approved its adoption as an ANS. It goes before the Board.

Steve Terry reported that that the ESTA Board had approved E1.20 at its meeting.

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

The public review ran from 11 June 2010 through 26 July 2010. Discussion and approval/modification of draft comment resolutions.

Scott Blair moved that the draft comment resolutions (document number CP/2010-1031) be accepted. The motion was seconded. There was discussion. Peter Willis had some remarks. The resolutions were approved by a show of hands with 17 yes votes, a supermajority of the voting body of 26.

Scott Blair moved that the revised draft standard (document number CP/2009-1019r2) be offered for a second public review. The motion was seconded. There was discussion. Peter Willis said that the terminology was a mess that would lead to readers misunderstanding the document. However, he was willing to offer his objections as part of a public review.

The public review was approved by a supermajority with a roll call vote:

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.	Vote?
Jean-Francois Canuel	Spectrum Manufacturing Inc.	A.C. Lighting Ltd.	P	CP	Yes
Scott M. Blair	High End Systems Inc.	Barco	P	MP	Yes
Tom Grimes	High End Systems, Inc.	Barco	A	MP	
Paul Kleissler	City Theatrical, Inc.	City Theatrical, Inc.	P	MP	
Larry Dunn	City Theatrical, Inc.	City Theatrical, Inc.	A	MP	Yes
Peter Kirkup	Zero 88	Cooper Controls Ltd.	P	MP	Yes
Edward A. (Ted) Paget	Vortek Rigging Division	Daktronics Inc.	P	G	Yes
Ulrich Kunkel	E3 Engineering & Education for Entertainment GmbH	DIN, NVBF Committee	P	U	Yes
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	MP	Yes
Milton Davis	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	Yes
Philip Nye	Engineering Arts	Engineering Arts	P	G	
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	MP	
Ed Garstkiewicz	Harting Inc., North America	Harting KGAA	P	G	
Alan Martello	Horizon Control Inc.	Horizon Control Inc.	P	MP	
Gary Douglas	Horizon Control Inc.	Horizon Control Inc.	A	MP	Yes
Robert Bell	Horizon Control Inc.	Horizon Control Inc.	A	MP	
Peter Willis	Howard Eaton Lighting Ltd.	Howard Eaton Lighting Ltd.	P	CP	Yes
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U	

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.	Vote?
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	Yes
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U	
Dennis Grow	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U	
Ken Vannice	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	P	MP	
Tyrone Mellon_Jr.	Lex Products Corp.	Lex Products Corp.	P	CP	Yes
Michael Karlsson	LumenRadio AB	LumenRadio AB	P	MP	
Hans Lau	LumenRadio	LumenRadio	A	MP	
Marcus Bengtsson	LumenRadio AB	LumenRadio AB	A	MP	Yes
Stuart Cotts	Oregon Shakespeare Festival	Oregon Shakespeare Festival	P	U	Yes
Kevin Loewen	Pathway Connectivity Inc.	Pathway Connectivity Inc.	P	MP	Yes
Robert Armstrong	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	MP	
Dave Higgins	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	MP	
Ron Bonner	PLASA	PLASA	P	G	Yes
Charles Reese	Production Resource Group	Production Resource Group	P	DR	
Robert Tooker	Production Resource Group	Production Resource Group	A	DR	Yes
Michael Lay	Philips Strand Lighting	Royal Philips Electronics	P	MP	Yes
Kimberly Corbett	Schuler Shook	Schuler Shook	P	DE	
Simon Newton	Simon Newton	Simon Newton	I	G	Yes
Mitch Hefter	Entertainment Technology (Royal Philips Electronics)	USITT	P	U	Yes
					20 Yes

Int. cat.	Yes	Yes with comments	No with reasons	Abstain	Not present/ no vote	Totals
CP	3	0	0	0	0	3
MP	9	0	0	0	2	11
DR	1	0	0	0	0	1
U	4	0	0	0	1	5
G	3	0	0	0	2	5
DE	0	0	0	0	1	1
Totals	20	0	0	0	6	26

8.4 BSR E1.17, Architecture for Control Networks revision project

The public review ran from 9 July 2010 through 23 August 2010. Update: CPWG approved its adoption as an ANS. See CPWG_E1-17_BallotResults.pdf. It goes before the TSC.

Michael Lay reported that the revision to E1.17 had been approved by the TSC. Next, it goes to the Board.

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

8.5.1 BSR E1.30-1, EPI 23 Device Identification Subdevice

Letter Ballot to accept BSR E1.30-1 as an American National Standard ran from 1 July through 29 July 2010. It was noted at the Jul 2010 meeting that this document was now "out of phase" with E1.17 and should be held until E1.17 was approved. Aug-2010 Motion was accepted with 23 Yes votes. The TSC has approved it.

Steve Terry reported that that the ESTA Board had approved E1.30-1 at its meeting.

8.5.2 BSR E1.30-2, EPI 24 Internet Protocol Properties Subdevice

Report on progress. Task Group was optimistic in Nov 2009 that we would have a document for the April 2010 USITT meeting, but no progress was reported at the Jan 2010 session. At the Mar 2010 session, a draft document was promised for the Jul 2010 meeting. At the Jul 2010 meeting, a draft document was promised for the Oct 2010 meeting.

Kevin Loewen said not much has been done. Most of the effort is going into BSR E1.33 work.

8.5.3 BSR E1.30-4, EPI 26, (DDL) Extensions for DMX512 and E1.31 Devices

Summary of Control Protocols Working Group Letter Ballot to Accept BSR E1.30-4 as an American National Standard: Results: The motion carried with the required super-majority, with 18 Yes votes out of voting body of 26. At the Jul 2010 meeting it was noted that the ESTA Board of Directors would be voting on this document next. In Sep 2010, the ANSI Board of Standards Review approved ANSI E1.30-4 - 2010, EPI 26. It's published.

It's free! It's now published on the ESTA website, announced Karl Ruling.

8.5.4 BSR E1.30-8, EPI 30 Time Code Properties

Task Group was originally optimistic in Nov 2009 that we would have a draft resolution document for the Jan 2010 meeting, however this slipped to Jul 2010 in the Jan 2010 meeting. At the Mar 2010 session, the Task Group was working towards a document for the Jul 2010 meeting but thought this might be unlikely. At the Jul 2010 meeting the task group had no forward progress to report and were working towards having a draft document for the Jan 2011 meeting.

Kevin Loewen reported no report.

8.5.5 BSR E1.30-9, EPI 31 MIDI System Exclusive Properties

Task Group was originally optimistic in Nov 2009 that we would have a draft resolution document for the Jan 2010 meeting, however had been slipped to the Mar 2010 meeting. At the Mar 2010 session, the Task Group committed to a document for the Jul 2010 meeting. At the Jul 2010 meeting the task group reported much forward progress at their meetings and were working towards having a draft document for the Jan 2011 meeting.

Kevin Loewen reported no report.

8.5.6 BSR E1.30-11, EPI 33, MetaData Device Identification Subdevice.

Progress report from the Task Group. At the Mar 2010 session the Task Group reported forward progress on this document. At the Jul 2010 meeting the task group reported much forward progress at their Jul meetings and were working towards having a draft document for the Mar 2011 meeting.

Kevin Loewen reported no report.

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

Progress report from the Task Group. At the Mar 2010 session the Task Group reported no progress on this document. At the Jul 2010 meeting the task group reported no forward progress on this document. This project is on hold while other EPI's are being worked on.

Kevin Loewen reported that the project is still on hold.

Steve Terry announced that within the next year there will be some interoperability profiles developed by ETC put in public domain. ETC needs people to be able to query and control their equipment via ACN, but that it takes too long for ETC's purposes to create EPIs as American National Standards. He said he didn't know how the EPIs would be distributed, but they will be.

Gary Douglas said he applauded ETC for this pragmatic approach.

8.6 BSR E1.33, Extensions to E1.31 for Transport of ANSI E1.20 (RDM)

Task Group was optimistic in Nov 2009 that we would have a draft document for the Jul 2010 meeting, however a first public review vote would not probably occur until the Oct 2010 session. At the July 2010 meeting the task group reported excellent forward progress and that they were re-calibrated towards having a first draft for the Jan 2011 CPWG meeting.

Scott Blair reported lots of progress. The task group now has a draft standard that is "not a manifesto." Barring technical issues appearing, the task group should have something for the working group's January meeting.

Simon Newton expressed concerns about the scalability of BSR E1.33. There was a brief discussion about how many RDM devices might be on a single universe of DMX512. More than 512?

8.7 ANSI E1.3 – 2001 (R2006), 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

Formation of a task group (or not, since the whole working group can do it) to review the existing two documents, and to make a recommendation at the January 2011 meeting as to if we need to revise, reaffirm or withdraw the documents in 2011.

Steve Terry moved that we reaffirm the existing ANSI E1.3 document and offer it for public review for reaffirmation. The motion was seconded and then approved by a unanimous show of hands. The public review motion will be decided by letter ballot per our current P&P.

8.8 ANSI E1.27-1 – 2006 , Entertainment Technology - Standard for Portable Control Cables for Use with USITT DMX512/1990 and E1.11 (DMX512-A) Products.

Formation of a task group (or not, since the whole working group can do it) to review the existing document, and to make a recommendation at the January 2011 meeting as to if we need to revise, reaffirm or withdraw the standard in 2011.

Ted Paget moved that we reaffirm the existing ANSI E1.27-1 document and offer it for public review for reaffirmation. The motion was seconded and then approved by a unanimous show of hands. The public review motion will be decided by letter ballot per our current P&P.

9 CPWG marketing efforts

9.1 LDI Sessions Saturday, October 23

Last minute check on progress and call for quick-fixes, if needed.

11:00am-12:30pm, Room N229

ES06: I Didn't Know RDM Could Do That!

(.75 ETCP Renewal Credits)

Members of the ESTA Control Protocols Working Group demonstrate useful applications of the ANSI E1.20 – 2006 - Entertainment Technology Remote Device Management over USITT DMX512 Networks standard. Watch and listen as the authors of this standard use a wide array of manufacturers products from the LDI show floor to demonstrate the time and labor saving features of systems using this control protocol.

Moderator: Scott Blair, High End Systems

Panelists: Milton Davis, Doug Fleenor Design; Robert Goddard, Goddard Design; Robert Tooker, PRG; Ulrich Kunkel, E3 Engineering & Education for Entertainment

1:30pm-3:00pm, Room N229

ES07: I Didn't Know ACN Could Do That!

(.75 ETCP Renewal Credits)

Members of the ESTA Control Protocols Working Group demonstrate useful applications of the ANSI E1.17 – 2006 - Entertainment Technology - Architecture for Control Networks. Watch and listen as the authors of this standard use a wide array of manufacturers products from the LDI show floor to demonstrate the time and labor saving features of systems using this control protocol.

Moderator: Dan Antonuk, ETC

Panelists: Philip Nye, Engineering Arts; Alan Martello, Horizon Control; Ulrich Kunkel, E3 Engineering & Education for Entertainment; Kevin Loewen, Pathway Connectivity

3:30pm-5:00pm, Room N229

ES08: ACN and RDM—Perfect Together!

(.75 ETCP Renewal Credits)

Members of the ESTA Control Protocols Working Group demonstrate the seamless use of the ACN and RDM standards using a wide array of manufacturers products. Let the CPWG demonstrate for you “when it makes sense” to use both of these control protocols in a single system.

Co-Moderators: Dan Antonuk, ETC and Scott Blair, High End Systems

Panelists: Milton Davis, Doug Fleenor Design; Robert Tooker, PRG; Philip Nye, Engineering Arts; Alan Martello, Horizon Control; Ulrich Kunkel; E3 Engineering & Education for Entertainment

There was some discussion of the need for training in the industry, and perhaps video recordings of these sessions could help with that. The consensus was that it's too late now to try to set up recording these sessions.

9.2 LDI Connectivity Pavilion

Report from the task group on Connectivity Pavilion.

Bill Ellis said that the booth is set up and ready for gear—we only need the gear! We have data, power, tables, and trusses. The gear is scheduled to arrive.

Peter Willis thanked Bill Ellis for his work.

Bill Ellis said he'd be willing to organize the Pavilion next year in Orlando. Orlando is home for him.

9.3 Protocol Articles

At the July 2010 meeting Bob Goddard noted that he was close to proposing a Protocol Article. Dan Antonuk will also write an article for an issue in 2011.

Not present, no report.

9.4 January Plugfest

Scott Blair reported that planning has started. He will try to have the schedule modified from what is now shown on the ESTA website so that the Plugfest runs Friday through Sunday.

10 New business

10.1 CPWG Standards Status Wiki

Mike Lay announced that John Huntington has volunteered to maintain a CPWG standards wiki for at least a year. The wiki would be to help track the progress of the numerous projects.

10.2 PLASA Connectivity Corner

Peter Willis reported on the Connectivity Corner at PLASA. He said that it was successful and enjoyed generous support in product and sponsorship from several manufacturers. He described the success of the mini-plugfest that was conducted Monday evening after the soft close of the show.

Peter Willis said that it might be useful to have a website that lists the products that have successfully participated in the Plugfest or Connectivity Events. He urged someone—a trade association or someone—to offer this.

Steve Terry asked Peter Willis if there has been any traction on third-party certification. Willis talked about one of these programs that he had initially supported but that he had had to pull out of it because of problems with the methodology. Scott Blair noted that true compliance testing would cost a lot—unless someone designs a really good automated testing system.

There was a discussion of having NRTLs do compliance testing. It was argued that any testing lab would need a compliance testing standard to be able to do this at any reasonable cost. If the existing standards were given to a NRTL and the NRTL told to develop its own test for compliance and use it, it would be a very costly undertaking. It's not economically viable given the size of the market.

Hans Lau suggested that we use the University of New Hampshire connectivity lab.

10.3 Open Lighting Project

Simon Newton reported that the project is supporting RDM and Artnet, and Open Lighting Project software and devices will be in the LDI Connectivity Pavilion.

11 Other business and announcements

11.1 IEEE Update

Update from Steve Carlson. See IEEE_Update_Oct_2010.pdf

Lay noted that the update had been distributed with the agenda. There was no further discussion.

11.2 IES Lighting Controls Document

Update from Mitch Hefter:

The IES Lighting Control Protocols summary document is being formatted for subcommittee vote. It will be known as Technical Memorandum 23 (TM-23). This document is intended to serve as a technical resource for the various members of the lighting community to increase the basic level of understanding with the hope of encouraging greater coordination among disciplines and to allow for continued integration of lighting control with other major building systems.

Numerous teleconferences over the past several months have changed this document from an incomplete compilation of some control protocols written in different styles and formats to a true summary document. The most frequent participants include Rick Miller (RNM Engineering), Howard Wolfman (Lumispec Consulting), Mitch Hefter (Philips Lighting Controls), Joe Bokelman (ETC), Shoshanna Segal (Luminous Flux), and Melissa Goren (Jaros Baum & Boles). Input was solicited from various members of the Entertainment Industry, including Steve Carlson (High Speed Design) and Charlie Richmond (Richmond Design).

Basic system architecture is discussed, including the idea of front end versus back end protocols (and that some protocols can live in both worlds). Then basic technologies for controlling the light source are described - Forward and Reverse Phase Control, 2-wire, 3-wire, and 4-wire [0-10v current source (ANSI E1.3) and sink methods ANSI/NEMA C82.11] fluorescent dimming, DALI, and PWM. The Physical Layers and the varieties thereof are covered, and then 2-3 paragraph overviews of each protocol are provided. The appendices

provide more details on these subjects for those who wish to delve into greater detail. The boilerplate language developed by the CPWG is incorporated into the document.

Final approval through IES should occur during the next few months with publication after the first of the year.

11.3 Rob Halliday protocol article for Live Design

Announcement that it is in final stages.

Lay announced that it will be published soon.

11.4 TSP On-Line Voting System Launch

Update from Karl Ruling.

Ruling said that it works—the working group has used it—and it seems to be popular. It saves him a lot of time and makes for more accurate vote counts with less effort. We've had a few issues to iron out, but Mike Wood was able to fix things and add features quickly. He noted that the CPWG is very computer and Internet-savvy and had few problems or negative comments.

11.5 Frank Stewart Award

Michael Lay announced that this year's recipients are members of the CPWG: Scott Blair, Eric Johnson, and Peter Willis. They have distinguished themselves by organizing two of our most popular Technical Standards events: The ESTA Control Protocols Plugfest (Scott Blair, Eric Johnson) and The ESTA Connectivity Pavilion (Peter Willis).

11.6 End Of Year Wrap-Up

Michael Lay offered a thanks to all for a very successful year. There was applause.

12 Schedule for future meetings

Lay announced that the next meeting is scheduled for Monday, January 24 from 09:00 to 13:00 at the Dallas/Forth Worth Marriott Solana.

13 Adjournment

Kevin Loewen moved that the meeting adjourn. The motion was seconded. Hearing no objections, Michael Lay declared the meeting adjourned at 11:00.

Working Group Membership and Contact Information as of 29 October 2010

Name	Company	Representing (This is the primary sort field.)	Voting status	Int. cat.
Tracy Underhill	4U Consulting	4U Consulting	O	G
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
Larry Busch	ADB Lighting Technologies	ADB Lighting Technologies	O	MP
John Sellers	AIM Northwest	AIM Northwest	O	G
André Broucke	André Broucke	André Broucke	O	G
Jon Lenard	Applied Electronics	Applied Electronics	O	MP
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	O	U
Wayne David Howell	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	O	CP
Simon Hobday	Artistic Licence (UK) Ltd.	Artistic Licence (UK) Ltd.	O	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
Scott M. Blair	High End Systems Inc.	Barco	P	MP
Tom Grimes	High End Systems, Inc.	Barco	A	MP
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

Name	Company	Representing (This is the primary sort field.)	Voting status	Int. cat.
Bob Toms	Catalyst Microsystems LLC	Catalyst Microsystems LLC	O	G
Chuck Seifried	Phoenix Civic Plaza	City of Phoenix	O	U
Paul Kleissler	City Theatrical, Inc.	City Theatrical, Inc.	P	MP
Larry Dunn	City Theatrical, Inc.	City Theatrical, Inc.	A	MP
Fabiano Pina	Clay Paky S.P.A.	Clay Paky S.P.A.	O	MP
Yehuda Shukram	Compulite Systems	Compulite Systems	O	MP
Dietmar Rottinghaus	Connex GmbH	Connex GmbH	O	G
Peter Kirkup	Zero 88	Cooper Controls Ltd.	P	MP
Paul Kenneth McEwan	Zero 88	Cooper Controls Ltd.	O	MP
Edward A. (Ted) Paget	Daktronics Automated Rigging Solutions	Daktronics Inc.	P	G
David Bertenshaw	David Bertenshaw	David Bertenshaw	O	G
Larry Schoeneman	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	O	DR
Ulrich Kunkel	E3 Engineering & Education for Entertainment GmbH	DIN, NVBF Committee	P	U
Doug Fleenor	Doug Fleenor Design, Inc.	Doug Fleenor Design, Inc.	P	MP
Milton Davis	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
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
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
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	A	MP
Ralph Weber	ENDL Texas	ENDL Texas	O	G
Philip Nye	Engineering Arts	Engineering Arts	P	G

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Eric Johnson	Eric Johnson	Eric Johnson	O	MP
Eric Proce	Eric Proce	Eric Proce	O	U
Erwin Rol	Erwin Rol Software Engineering	Erwin Rol	O	G
Robert Goddard	Goddard Design Co.	Goddard Design Co.	P	MP
Sierk Janszen	Kiss Box	Ground Zero	O	U
Ed Garstkiewicz	Harting Inc., North America	Harting KGAA	P	G
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Bill Hewlett	Hewlett Electronics	Hewlett Electronics	O	CP
Steve Carlson	High Speed Design, Inc.	High Speed Design, Inc.	O	MP
Kirk D. Keen	Hollywood Lighting Services, Inc.	Hollywood Lighting, Inc.	O	DR
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
Phil Klapwyk	IATSE Local 891	IATSE Local 891	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.	O	CP
Michael (Mike) Whetstone	Integrated Theatre, Inc.	Integrated Theatre, Inc.	O	CP
Rob Johnston	Interactive Technologies, Inc.	Interactive Technologies, Inc.	O	MP
Hamish Dumbreck	JESE Ltd.	James Embedded Systems Engineering	O	MP
David Timmins	Jands Electronics	Jands Electronics	O	MP

Name	Company	Representing (This is the primary sort field.)	Voting status	Int. cat.
Helge Hoffmann	JB Lighting	JB Lighting	O	MP
Josh Gubler	Josh Gubler	Josh Gubler	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
Ken Vannice	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	P	MP
Rick Leinen	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	O	MP
Lars Wernlund	Lewlight	Lewlight	O	MP
Tyrone Mellon_Jr.	Lex Products Corp.	Lex Products Corp.	P	CP
Klaus Amling	Licht-Technik	Licht-Technik	O	MP
David Yellin	LightMinded Industries, Inc.	LightMinded Industries, Inc.	O	MP
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 (Aust) PTY Ltd	LSC Lighting Systems PTY Ltd	O	MP
Michael Karlsson	LumenRadio AB	LumenRadio AB	P	MP
Marcus Bengtsson	LumenRadio AB	LumenRadio AB	A	MP
Hans Lau	LumenRadio AB	LumenRadio AB	A	MP
Bart Swinnen	Luminex LCE	Luminex LCE	O	MP
Jim Holladay	Luxence	Luxence	O	G
Torben Kaas Rasmussen	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	P	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
Robert Armstrong	Pathway Connectivity Inc.	Pathway Connectivity Inc.	A	MP

Name	Company	Representing (This is the primary sort field.)	Voting status	Int. cat.
Ron Bonner	PLASA	PLASA	P	G
James Eade	PLASA	PLASA	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
Andrew Eales	Wellington Institute of Technology	Rhodes University	O	U
Osedum P. Igumbor	Dept. of Computer Science	Rhodes University	O	U
Nyasha Chigwamba	Dept. of Computer Science	Rhodes University	O	U
Charlie Richmond	Richmond Sound Design Ltd.	Richmond Sound Design Ltd.	O	CP
Rob Halliday	Rob Halliday	Rob Halliday	O	U
Martin Farnik	Robe Show Lighting s.r.o.	Robe Show Lighting s.r.o.	O	MP
Michael Lay	Philips Strand Lighting	Royal Philips Electronics	P	MP
Mike Blackwell	Philips/Color Kinetics	Royal Philips Electronics	O	MP
John Warwick	Philips/Color Kinetics	Royal Philips Electronics	O	MP
Yngve Sandboe	Sand Network Systems, Inc.	Sand Network Systems, Inc.	O	MP
Kimberly Corbett	Schuler Shook	Schuler Shook	P	DE
Lars F. Paape	Scientific Algorithms and Embedded Systems	Scientific Algorithms and Embedded Systems	O	U
Mick Martin	ShowCAD Control Systems	ShowCAD Control Systems	O	MP
Loren Wilton	Showman Systems	Showman Systems	O	CP
Mark Manthei	Shure Inc.	Shure Inc.	O	G
Kehang Wu	Shure Inc.	Shure Inc.	O	G
Simon Newton	Simon Newton	Simon Newton	I	G
Jon R. Farley	Sixteenth Avenue Systems	Sixteenth Avenue Systems	O	CP
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	U

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Ujjal Kar	Standard Robotics & Lighting	Standard Robotics & Lighting	O	G
Storm K. Staley	Stormwerx	Stormwerx	O	U
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
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	O	G
Colin Waters	TMB	TMB	O	DR
Phillip M. Gallo	TMB	TMB	O	DR
Sean Harding	Trinity Repertory Company	Trinity Repertory Company	O	U
Mitch Hefter	Entertainment Technology (Royal Philips Electronics)	USITT	P	U
Torrey Bievenour	Vision Quest Lighting	Vision Quest Lighting	O	G
Eric Cornwell	West Side Systems	West Side Systems	O	U
Ben Darrington	Wireless Solutions Sweden AB	Wireless Solutions Sweden AB	O	MP
John Sondericker_III	Wybron, Inc.	Wybron, Inc.	O	MP
Larry Zoll	Zoll Design & Consulting, LLC	Zoll Design & Consulting, LLC	O	U

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
DE designer