# Minutes Control Protocols Working Group

Saturday, 17 July 2004
Dallas/Ft. Worth Airport Marriott South
Ft. Worth, TX

Chairmen: Steve Terry; Electronic Theatre Controls; A; MP

Tracy Underhill; Electronics Diversified Inc. (Colorado); P; MP

Recording secretary: Karl G. Ruling; ESTA

Members attending: Tim Bachman; A.C.T Lighting, Inc.; P; DR

Wayne David Howell; Artistic Licence (UK) Ltd.; P; CP Doug Fleenor; Doug Fleenor Design, Inc.; P; MP

Daniel W. Antonuk; Electronic Theatre Controls, Inc.; P; MP

Robert Goddard; Goddard Design Co.; P; MP Scott M. Blair; High End Systems Inc.; P; MP

Jason Potterf; High End Systems Inc.; A; MP (new company and voting status at

this meeting)

Alan Martello; Horizon Control Inc.; P; MP Robert Bell; Horizon Control Inc.; A; MP Peter Willis; Howard Eaton Lighting Ltd.; P; CP Edwin S. Kramer; I.A.T.S.E, Local 1; P; U Roger Lattin; I.A.T.S.E. Local 728; P; U

George Kindler; Kelley Technologies LLC; P; DR (new company at this meeting)

Rick Leinen; Colortran (Leviton Manufacturing Co., Inc.); P; MP

John (Javid) D. Butler; Mainstage Theatrical Supply, Inc. (Mainstage Theatrical

Supply); P; DR

Daniel Weiermann; Mainstage Theatrical Supply - Milwaukee (Mainstage

Theatrical Supply); A; DR

Gary Douglas; Pathway Connectivity Inc.; P; MP Kevin Loewen; Pathway Connectivity Inc.; A; MP

Charles Reese; Production Resource Group; P; DR (new company at this meeting)

Yngve Sandboe; Sand Network Systems; A; MP Richard Lawrence; Strand Lighting Ltd.; P; MP

Michael Lay; Strand Lighting (Strand Lighting Ltd.); A; MP

Jerry Gorrell; Theatre Safety Programs; O; G

Brian Dowd; TMB; P; U

Mitch Hefter; Entertainment Technology (Genlyte Thomas Group), representing

USITT; P; U

Mark Jensen; Wybron, Inc.; P; MP

Visitors: None

## 1 Opening remarks

The meeting was called to order at 09:01 by Steve Terry.

## 2 Attendance

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

Karl G. Ruling explained the attendance sign-in sheet. While it circulated, those in attendance introduced themselves.

**2.2 Determination of a quorum** (29 voting members: 10 for a quorum, 15 to pass a supermajority vote) Steve Terry asked for a show of hands of principal voting members. After counting them, he announced that a quorum was present.

## 2.3 Recognition of alternate voting members

Steve Terry reminded the assembly that only one representative from a company may vote on a motion. That is, many representatives could be present, but only one may vote.

## 3 Membership

## 3.1 Requirements for membership

Tracy Underhill reminded those present that working group membership is open to all who are affected by the work of the group. Voting members are required to attend meetings and to vote on letter ballots. Voting members and their alternates may not miss three consecutive meetings without a loss of voting status.

## 3.2 Processing of new membership requests

Charles Reese works for VLPS, but this has been acquired by PRG, so he reapplied as PRG's principal representative in the dealer-rental company interest category.

Jean-Francois Canuel and Josh Koffman of Spectrum Manufacturing Inc. (which is owned by AC Lighting Ltd.) applied as voting members in the custom market manufacturing category. Steve Terry noted that neither are present, and our usual practice is to vote in non-attendees as observers, and to entertain a motion to change them to voting status when they attend.

George Kindler applied to represent his new company, Kelley Technologies LLC, in the dealer-rental company category

Jason Potterf, previously with UT Austin, applied to be an alternate for his new employer, High End Systems.

Tim Bachman moved that the above applications be accepted, but with Canuel and Koffman being given observer status. The motion was seconded. The motion was approved by an almost unanimous show of hands. One person voted to abstain.

The voting body during this meeting was thus:

| Name               | Company                                 | Representing                 | Voting | Interest |
|--------------------|---|------------------------------|--------|----------|
|                    |   |                              | status | cat.     |
| Tim Bachman        | A.C.T Lighting, Inc.                    | A.C.T Lighting, Inc.         | Р      | DR       |
| Arnold Tang        | Arnold Tang Productions                 | Arnold Tang Productions      | Р      | U        |
| Wayne David Howell | Artistic Licence (UK) Ltd.              | Artistic Licence (UK) Ltd.   | Р      | CP       |
| Simon Hobday       | Artistic Licence (UK) Ltd.              | Artistic Licence (UK) Ltd.   | Α      | CP       |
| Tobin Neis         | Barbizon Companies                      | Barbizon Companies           | Р      | DR       |
| George Kindler     | Pelton Marsh Kinsella                   | Carter & Burgess, Inc.       | R      | G        |
| Doug Fleenor       | Doug Fleenor Design, Inc.               | Doug Fleenor Design, Inc.    | Р      | MP       |
| Milton Davis       | Doug Fleenor Design, Inc.               | Doug Fleenor Design, Inc.    | Α      | MP       |
| Ken Wagner         | Doug Fleenor Design, Inc.               | Doug Fleenor Design, Inc.    | Α      | MP       |
| Daniel W. Antonuk  | Electronic Theatre Controls,            | Electronic Theatre Controls, | Р      | MP       |
|                    | Inc.                                    | Inc.                         |        |          |
| Steve Terry        | Electronic Theatre Controls             | Electronic Theatre Controls, | Α      | MP       |
|                    |   | Inc.                         |        |          |
| Tracy Underhill    | Electronics Diversified Inc. (Colorado) | Electronics Diversified Inc. | P      | MP       |
| James Johnson      | Electronics Diversified Inc.            | Electronics Diversified Inc. | Α      | MP       |
| Alfred Langguth    | Embedded Controls by                    | Embedded Controls by         | Р      | MP       |
|                    | Design, LLC                             | Design, LLC                  |        |          |
| Philip Nye         | Engineering Arts                        | Engineering Arts             | Р      | G        |
| Robert Goddard     | Goddard Design Co.                      | Goddard Design Co.           | Р      | MP       |
| Scott M. Blair     | High End Systems Inc.                   | High End Systems Inc.        | Р      | MP       |
| Tom Grimes         | High End Systems, Inc.                  | High End Systems, Inc.       | Α      | MP       |
| Jason Potterf      | High End Systems, Inc.                  | High End Systems, Inc.       | Α      | MP       |

| Name                     | Company                                   | Representing                    | Voting      | Interest |
|--------------------------|---|---------------------------------|-------------|----------|
| Alan Martello            | Harizan Cantral Inc                       | Horizon Control Inc.            | status<br>P | cat.     |
| Robert Bell              | Horizon Control Inc. Horizon Control Inc. | Horizon Control Inc.            | A           | MP       |
|                          |   |                                 | P           |          |
| Peter Willis             | Howard Eaton Lighting Ltd.                | Howard Eaton Lighting Ltd.      |             | СР       |
| Edwin S. Kramer          | I.A.T.S.E, Local 1                        | I.A.T.S.E. Local 1              | Р           | U        |
| John Huntington          | I.A.T.S.E. Local 1                        | I.A.T.S.E. Local 1              | Α           | U        |
| Roger Lattin             | I.A.T.S.E. Local 728                      | I.A.T.S.E. Local 728            | Р           | U        |
| Dennis Grow              | I.A.T.S.E. Local 728                      | I.A.T.S.E. Local 728            | А           | U        |
| Alan M. Rowe             | I.A.T.S.E. Local 728                      | I.A.T.S.E. Local 728            | Α           | U        |
| Richard Thornton Brown   | Zero 88 Ltd.                              | i Light Group PLC               | Р           | MP       |
| George Kindler           | Kelley Technologies LLC                   | Kelley Technologies LLC         | Р           | DR       |
| Rick Leinen              | Colortran                                 | Leviton Manufacturing Co., Inc. | Р           | MP       |
| Ken Vannice              | Colortran                                 | Leviton Manufacturing Co., Inc. | А           | MP       |
| John (Javid) D. Butler   | Mainstage Theatrical Supply - South       | Mainstage Theatrical Supply     | Р           | DR       |
| Daniel Weiermann         | Mainstage Theatrical Supply - South       | Mainstage Theatrical Supply     | А           | DR       |
| Ole Bystrup              | Martin Professional A/S                   | Martin Professional A/S         | Р           | MP       |
| Gary Douglas             | Pathway Connectivity Inc.                 | Pathway Connectivity Inc.       | Р           | MP       |
| Dave Higgins             | Pathway Connectivity Inc.                 | Pathway Connectivity Inc.       | Α           | MP       |
| Kevin Loewen             | Pathway Connectivity Inc.                 | Pathway Connectivity Inc.       | Α           | MP       |
| Charles Reese            | Production Resource Group                 | Production Resource Group       | Р           | DR       |
| Hans Lau                 | Sand Network Systems                      | Sand Network Systems            | Р           | MP       |
| Michael A. (Sandy) Twose | Sand Network Systems                      | Sand Network Systems            | Α           | MP       |
| Yngve Sandboe            | Sand Network Systems                      | Sand Network Systems            | Α           | MP       |
| Michael Gonzales         | Spectrum Lighting Inc.                    | Spectrum Lighting Inc.          | Р           | DR       |
| Richard Lawrence         | Strand Lighting Ltd.                      | Strand Lighting Ltd.            | Р           | MP       |
| Michael Lay              | Strand Lighting                           | Strand Lighting Ltd.            | Α           | MP       |
| Brian Dowd               | TMB (NJ)                                  | TMB                             | P           | U        |
| Mitch Hefter             | Entertainment Technology                  | USITT                           | Р           | U        |
| William Fronton          | (Genlyte Thomas Group)                    | 00111                           |             |          |
| Mark Jensen              | Wybron, Inc.                              | Wybron, Inc.                    | Р           | MP       |
|                          |   | Total voters                    | 28          |          |
|                          |   |                                 | 2           | CP       |
|                          |   |                                 | 14          | MP       |
|                          |   | Voters by interest category     | 6           | DR       |
|                          |   | 1                               | 1           | G        |
|                          |   | 1                               | 5           | U        |

## 4 Approval of the minutes from the previous meeting

Eddie Kramer moved that the minutes of the previous meeting be approved as written. The motion was seconded. The motion was approved by a unanimous show of hands, except for two abstentions.

## 5 Reading of the call for patents

Tracy Underhill read the following statement aloud to the assembly:

"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."

No issues were raised by those present.

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

Tracy Underhill read the following statement aloud to the assembly:

"The ESTA Board of Directors, the Technical Standards Committee, and the leadership of this working group will reject or nullify any actions that unlawfully restrain trade. Anyone who feels that such an action is being or has been taken is requested to bring that matter to the attention of the chair immediately. Anyone who feels that actions in restraint of trade have been taken and not properly annulled is requested to notify the TSC chair or ESTA president immediately.

"ESTA legal counsel has informed us that violations of the anti-trust laws can have serious consequences. Individuals engaged in certain unlawful conduct can be found criminally liable. An individual convicted of a criminal violation of the Sherman Act may be fined as much as \$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."

No issues were raised by any member of the assembly.

## 7 Approval of agenda

A discussion of patent licensing and the Connectivity Breakfast were proposed for Other Business.

Roger Lattin moved that the agenda, with the above two items included in Other Business, be approved. The motion was seconded. The motion was approved by a unanimous show of hands.

## 8 Old business

## 8.1 Reconsideration of E1.11 and IEC — Hefter

Mitch Hefter asked the group if we want to reconsider not sending E1.11 to the IEC, since we were asked to reconsider our position by our national representative. He said that we would have control in resolving comments. There was discussion.

Dan Antonuk moved that we reaffirm our decision of the last meeting to not pursue making E1.11 an IEC standard. The motion died for lack of a second.

The consensus of the group was that Hefter should clarify the original letter to and introduce the idea of the two-year waiting period.

Mitch Hefter reported on the Uldall-Hansen challenge to the acceptance of E1.11 and how it was handled by the TSC.

## 8.2 BSR E1.20 Remote Device Management

Scott Blair reported that the task group had made some minor changes to the revised draft document. Scott Blair used a projector to go through these most recent changes.

Doug Fleenor moved that the draft standard document that was sent out by email (CP/2003-1003r2, not the newly revised document) be accepted. The motion was seconded. The motion failed with a show of hands.

Peter Willis moved that the working group approve the revised, revised draft standard (CP/2003-1003r2.1) and the comment resolutions (CP/2004-1012). The motion was seconded. The motion was approved by a unanimous show of hands, which constituted a supermajority.

Doug Fleenor moved that the amended draft standard be sent to public review. The motion was seconded. The motion was approved on a roll call ballot, with all present voting in favor.

| Name                        | Company                                    | Representing                      | Voting status | Int.<br>cat. | Vote |
|-----------------------------|--|-----------------------------------|---------------|--------------|------|
| Tim Bachman                 | A.C.T Lighting, Inc.                       | A.C.T Lighting, Inc.              | Р             | DR           | yes  |
| Arnold Tang                 | Arnold Tang Productions                    | Arnold Tang Productions           | Р             | U            | 7    |
| Wayne David Howell          | Artistic Licence (UK) Ltd.                 | Artistic Licence (UK) Ltd.        | Р             | CP           | yes  |
| Simon Hobday                | Artistic Licence (UK) Ltd.                 | Artistic Licence (UK) Ltd.        | Α             | CP           | 7    |
| Tobin Neis                  | Barbizon Companies                         | Barbizon Companies                | Р             | DR           |      |
| George Kindler              | Pelton Marsh Kinsella                      | Carter & Burgess, Inc.            | R             | G            |      |
| Doug Fleenor                | Doug Fleenor Design, Inc.                  | Doug Fleenor Design, Inc.         | Р             | MP           | yes  |
| Milton Davis                | Doug Fleenor Design, Inc.                  | Doug Fleenor Design, Inc.         | Α             | MP           |      |
| Ken Wagner                  | Doug Fleenor Design, Inc.                  | Doug Fleenor Design, Inc.         | Α             | MP           |      |
| Daniel W. Antonuk           | Electronic Theatre Controls, Inc.          | Electronic Theatre Controls, Inc. | Р             | MP           | yes  |
| Steve Terry                 | Electronic Theatre Controls                | Electronic Theatre Controls, Inc. | А             | MP           |      |
| Tracy Underhill             | Electronics Diversified Inc.<br>(Colorado) | Electronics Diversified Inc.      | Р             | MP           | yes  |
| James Johnson               | Electronics Diversified Inc.               | Electronics Diversified Inc.      | Α             | MP           |      |
| Alfred Langguth             | Embedded Controls by Design, LLC           | Embedded Controls by Design, LLC  | Р             | MP           |      |
| Philip Nye                  | Engineering Arts                           | Engineering Arts                  | Р             | G            |      |
| Robert Goddard              | Goddard Design Co.                         | Goddard Design Co.                | Р             | MP           | yes  |
| Scott M. Blair              | High End Systems Inc.                      | High End Systems Inc.             | Р             | MP           | yes  |
| Tom Grimes                  | High End Systems, Inc.                     | High End Systems, Inc.            | Α             | MP           |      |
| Jason Potterf               | High End Systems, Inc.                     | High End Systems, Inc.            | Α             | MP           |      |
| Alan Martello               | Horizon Control Inc.                       | Horizon Control Inc.              | Р             | MP           | yes  |
| Robert Bell                 | Horizon Control Inc.                       | Horizon Control Inc.              | Α             | MP           |      |
| Peter Willis                | Howard Eaton Lighting Ltd.                 | Howard Eaton Lighting Ltd.        | Р             | CP           | yes  |
| Edwin S. Kramer             | I.A.T.S.E, Local 1                         | I.A.T.S.E. Local 1                | Р             | U            | yes  |
| John Huntington             | I.A.T.S.E. Local 1                         | I.A.T.S.E. Local 1                | Α             | U            |      |
| Roger Lattin                | I.A.T.S.E. Local 728                       | I.A.T.S.E. Local 728              | Р             | U            | yes  |
| Dennis Grow                 | I.A.T.S.E. Local 728                       | I.A.T.S.E. Local 728              | Α             | U            |      |
| Alan M. Rowe                | I.A.T.S.E. Local 728                       | I.A.T.S.E. Local 728              | Α             | U            |      |
| Richard Thornton<br>Brown   | Zero 88 Ltd.                               | i Light Group PLC                 | Р             | MP           |      |
| George Kindler              | Kelley Technologies LLC                    | Kelley Technologies LLC           | Р             | DR           | yes  |
| Rick Leinen                 | Colortran                                  | Leviton Manufacturing Co., Inc.   | Р             | MP           | yes  |
| Ken Vannice                 | Colortran                                  | Leviton Manufacturing Co., Inc.   | А             | MP           |      |
| John (Javid) D. Butler      | Mainstage Theatrical Supply - South        | Mainstage Theatrical Supply       | Р             | DR           | yes  |
| Daniel Weiermann            | Mainstage Theatrical Supply -<br>South     | Mainstage Theatrical Supply       | A             | DR           |      |
| Ole Bystrup                 | Martin Professional A/S                    | Martin Professional A/S           | Р             | MP           |      |
| Gary Douglas                | Pathway Connectivity Inc.                  | Pathway Connectivity Inc.         | Р             | MP           | yes  |
| Dave Higgins                | Pathway Connectivity Inc.                  | Pathway Connectivity Inc.         | Α             | MP           |      |
| Kevin Loewen                | Pathway Connectivity Inc.                  | Pathway Connectivity Inc.         | Α             | MP           |      |
| Charles Reese               | Production Resource Group                  | Production Resource Group         | Р             | DR           | yes  |
| Hans Lau                    | Sand Network Systems                       | Sand Network Systems              | Р             | MP           |      |
| Michael A. (Sandy)<br>Twose | Sand Network Systems                       | Sand Network Systems              | A             | MP           |      |
| Yngve Sandboe               | Sand Network Systems                       | Sand Network Systems              | Α             | MP           | yes  |
| Michael Gonzales            | Spectrum Lighting Inc.                     | Spectrum Lighting Inc.            | Р             | DR           |      |

| Name             | Company                  | Representing         | Voting | Int. | Vote |
|------------------|--------------------------|----------------------|--------|------|------|
|                  |                          |                      | status | cat. |      |
| Richard Lawrence | Strand Lighting Ltd.     | Strand Lighting Ltd. | Р      | MP   | yes  |
| Michael Lay      | Strand Lighting          | Strand Lighting Ltd. | Α      | MP   |      |
| Brian Dowd       | TMB (NJ)                 | TMB                  | Р      | U    | yes  |
| Mitch Hefter     | Entertainment Technology | USITT                | Р      | U    | yes  |
|                  | (Genlyte Thomas Group)   |                      |        |      |      |
| Mark Jensen      | Wybron, Inc.             | Wybron, Inc.         | Р      | MP   | yes  |

Twenty-one voted yes out of a voting body of 28. The breakdown by interest category is: 11:14 MP, 2:2 CP, 4:6 DR, 4:5 U, and 0:1 G.

#### 8.3 E1.17 Multipurpose Control Network Protocol Suite

Dan Antonuk reported that the transport layer protocol comment draft resolutions are done. He described the reorganization of the document. The definitions and document references have been moved into a separate document. About half the resolutions have been implemented in the draft standard.

Dan Antonuk moved that when the draft resolutions are finished and a draft standards document is ready, that the two be sent to the working group for resolution approval and a new public review vote by letter ballot. This would only be done if the letter ballot process could result in a completed vote before the next meeting. The motion was seconded. The motion was approved by a show of hands of the majority of the working group present, with all voting yes except for two abstentions.

There was discussion of the ACN logos and self-certification.

Dan Antonuk moved that the working group set as a goal developing logos for ACN and RDM to help users identify these products. The motion was seconded. The motion carried by a simple majority show of hands.

There was a discussion of who should officially be the chairman of the E1.17 project. The working group's co-chairs appointed Dan Antonuk as the chairman of the ACN task group, replacing Steve Carlson, who is now an observer member of the working group.

## 8.4 E1.27-1 Portable cabling

Javid Butler moved that we approve the comment resolutions in CP/2004-2014. The motion was seconded. By show of hands, three voted in favor, and the rest opposed, with three abstentions. The motion failed.

Eddie Kramer moved that we approve the comment resolutions in CP/2004-2014, with the exception of comments 13 and 18. The motion was seconded. By show of hands, all voted in favor except for one abstention and two opposed. The motion carried.

Javid Butler moved that in resolution 13 we change 'Marking of the cable with "ANSI E1.27-1" is recommended.' to 'The cable assembly shall be marked with "ANSI E1.27-1" in a durable manner.' In the resolution to comment 18, a similar change shall be made and the justification for not requiring labeling shall be deleted. The motion was approved by a unanimous show of hands, with no abstentions.

Javid Butler moved that the revised standards document with these changes be sent to public review. The motion was decided by letter ballot, with 19 voting yes out of a voting body of 28. Two people abstained. The votes by interest categories were 10:14 MP, 1:2 CP, 4:6 DR, 4:5 U, and 0:1 G.

| Name        | Company              | Representing         | Voting status | Int.<br>cat. | Vote |
|-------------|----------------------|----------------------|---------------|--------------|------|
| Tim Bachman | A.C.T Lighting, Inc. | A.C.T Lighting, Inc. | Р             | DR           | yes  |

| Arnold Tang Arnold Tang Productions Arnold Tang Productions P U Wayne David Howell Artistic Licence (UK) Ltd. A CP David Marking Licence (UK) Ltd. Artistic Licence (UK) Ltd. A CP David Marking Licence (UK) Ltd. Artistic Licence (UK) Ltd. A CP David Marking Licence (UK) Ltd. Artistic Licence (UK) Ltd. A CP David Marking Licence (UK) Ltd. Artistic Licence (UK) Ltd. A CP David Marking Licence (UK) Ltd. Artistic Licence (UK) Ltd. A CP David Marking Licence (UK) Ltd. Artistic Lice | Name                   | Company                     | Representing   | Voting | Int. | Vote        |
|--|------------------------|-----------------------------|--|--------|------|-------------|
| Arnold Tang         Arnold Tang Productions         Arnold Tang Productions         P         U           Wayne David Howell         Artistic Licence (UK) Ltd.         Artistic Licence (UK) Ltd.         Artistic Licence (UK) Ltd.         P         CP         yes           Simon Hodday         Artistic Licence (UK) Ltd.         Artistic Licence (UK) Ltd.         A         CP         yes           George Kindler         Pelton Marsh Kinsella         Carter & Burgess, Inc.         R         G         G           Doug Fleenor         Doug Fleenor Design, Inc.         Doug Fleenor Design, Inc.         P         MP         abstain           Millton Davis         Doug Fleenor Design, Inc.         Doug Fleenor Design, Inc.         A         MP         A         MP           Ken Wagner         Doug Fleenor Design, Inc.         Doug Fleenor Design, Inc.         A         MP         MP           Steve Terry         Electronic Theatre Controls Inc.         Electronics Diversified Inc.         Electronics Diversified Inc.         Electronics Diversified Inc.         A         MP         yes           Tracy Underhill         Electronics Diversified Inc.         Electronics Diversified Inc.         Electronics Diversified Inc.         A         MP         yes           Afred Langguth         Endedded Controls by Design, Lt.C  | INAME                  | Company                     | Representing   |        |      | VOIC        |
| Mayme David Howell   | Arnold Tang            | Arnold Tang Productions     | Arnold Tang Productions  |        |      |             |
| Simon Hobday   Artistic Licence (UK) Ltd.   Artistic Licence (UK) Ltd.   A   CP  |                        |                             |  |        |      | VAS         |
| Tobin Nels Barbizon Companies Barbizon Companies Petton Marsh Kinsella Carter & Burgess, Inc. R George Kindler Petton Marsh Kinsella Carter & Burgess, Inc. R Doug Fleenor Design, Inc. Doug Fleenor Design, Inc. Doug Fleenor Design, Inc. Doug Fleenor Design, Inc. A MP Ababatin Milton Davis Doug Fleenor Design, Inc. Doug Fleenor Design, Inc. A MP Dough Fleenor Design, Inc. Dough Fleenor Design, Inc. A MP Dough Fleenor Design, Inc. Dough Flee |                        |                             |  |        |      | yes         |
| George Kindler Pelton Marsh Kinsella Carter & Burgess, Inc. R G Doug Fleenor Doug Fleenor Design, Inc. Doug Fleenor Design, Inc. Doug Fleenor Design, Inc. A MP Design Milton Davis Doug Fleenor Design, Inc. Doug Fleenor Design, Inc. A MP Design Milton Davis Doug Fleenor Design, Inc. Doug Fleenor Design, Inc. A MP Design Milton Davis Pleanor Design, Inc. Doug Fleenor Design, Inc. A MP Design Milton Davis Pleanor Design, Inc. Doug Fleenor Design, Inc. A MP Design Milton Davis Pleanor Design, Inc. Doug Fleenor Design, Inc. Policy Fleenor Design, Inc. Doug Fleenor Design, Inc. Policy Fleenor Design, Inc. Policy Fl |                        |                             |  |        |      |             |
| Doug Fleenor   Doug Fleenor Design, Inc.   A MP  |                        |                             |  |        |      |             |
| Milton Davis   Doug Fleenor Design, Inc.   Ren Wagner   Doug Fleenor Design, Inc.   Doug Fleenor Design, Inc.   A MP   Daniel W. Antonuk   Electronic Theatre Controls   Electronic Theatre Controls   Inc.   Electronic Theatre Controls   Inc.   Electronic Theatre Controls   Inc.   Electronics Diversified Inc.   Colorado   Inc.   Colorado   Inc.   Electronics Diversified Inc.   Electronics Diversified Inc.   A MP   MP   MP   MP   MP   MP   MP   |                        |                             |  |        |      | ahstain     |
| Ren Wagner   Doug Fleenor Design, Inc.   Doug Fleenor Design, Inc.   Daniel W. Antonuk   Electronic Theatre Controls, Inc.   Electronics Diversified Inc.   Colorado)   Electronics Diversified Inc.   Electronics Diversified Inc.   Colorado)   Electronics Diversified Inc.   Electronics Diversified Inc.   A MP   MP   MP   MP   MP   MP   MP   |                        |                             |  |        |      | abstairi    |
| Daniel W. Antonuk   Electronic Theatre Controls, Inc.   Electronics Diversified Inc.   A MP   Antiferd Languith   Embedded Controls by Design, LLC   Design,    |                        |                             |  |        |      |             |
| Inc.   Inc.   Inc.   Inc.   Inc.   Electronic Theatre Controls   Electronic Theatre Controls   Inc.   Inc   |                        |                             |  |        |      | VAS         |
| Electronic Theatre Controls   Electronic Theatre Controls   Inc.   Colorado   Electronics Diversified Inc.   A MP   Alfred Langguth   Embedded Controls by   Embedded Controls by   Design, LLC   Engineering Arts   P MP   Yes   Scott M. Blair   High End Systems Inc.   High End Systems Inc.   P MP   Yes   Scott M. Blair   High End Systems, Inc.   High End Systems, Inc.   A MP   Alan Martello   Horizon Control Inc.   Horizon Control Inc.   Horizon Control Inc.   P MP   Yes   MP   MP   Yes   MP   MP   Yes   MP     | Daniel W. Antonuk      |                             |  | '      | IVII | yes         |
| Inc.   Fracy Underhill   Electronics Diversified Inc.   Electronics Diversified Inc.   Colorado)   Electronics Diversified Inc.   Electronics Diversified Inc.   A   MP  | Steve Terry            | _                           |  | Δ      | MP   |             |
| Tracy Underhill Electronics Diversified Inc. (Colorado)  James Johnson Electronics Diversified Inc. Electronics Diversified Inc. Alfred Langguth Embedded Controls by Design, LLC Design, LLC Engineering Arts P G Robert Goddard Goddard Design Co. Scott M. Blair High End Systems Inc. High End Systems Inc. High End Systems Inc. High End Systems Inc. A MP Yes Jason Potterf High End Systems, Inc. High End Systems, Inc. A MP Jason Potterf High End Systems, Inc. High End Systems, Inc. A MP Alan Martello Horizon Control Inc. A MP Peter Willis Howard Eaton Lighting Ltd. Howard Eaton Lighting Ltd. P Edwin S. Kramer I A.T.S.E. Local 1 I.A.T.S.E. Local 1 Rower Richard Thornton Brown Jero St. Local 1 John Huntington I.A.T.S.E. Local 728 I.A.T.S.E. Local  | Steve reny             | Electronic medic controls   |  |        | 1711 |             |
| Colorado   | Tracy Underhill        | Flectronics Diversified Inc |  | Р      | MP   | ves         |
| James Johnson   Electronics Diversified Inc.   Electronics Diversified Inc.   A   MP   | Tracy Originiii        |                             | Electronics Biversined inc.  |        |      | <i>y</i> 03 |
| Alfred Langguth  Embedded Controls by Design, LLC  Philip Nye Engineering Arts P G Scott M. Blair High End Systems Inc. High End Systems Inc. High End Systems Inc. High End Systems, Inc. High End Systems, Inc. A MP Jesson Potter High End Systems, Inc. High End Systems, Inc. High End Systems, Inc. A MP Alan Martello Horizon Control Inc. Horizon Control Inc. Horizon Control Inc. A MP Peter Willis Howard Eaton Lighting Ltd.  Horizon Control Inc. A MP U yes John Lharts.E. Local 728 La.T.S.E. Local 728 La.T. | James Johnson          |                             | Flectronics Diversified Inc  | Α      | MP   |             |
| Design, LLC Philip Nye Engineering Arts  |                        |                             |  |        |      |             |
| Philip Nye   Engineering Arts   Engineering Arts   P   G   | 7 iii ou Langguin      |                             |  | '      |      |             |
| Robert Goddard   | Philip Nye             |                             |  | Р      | G    |             |
| Scott M. Blair High End Systems Inc. High End Systems Inc. A MP Jason Potterf High End Systems, Inc. High End Systems, Inc. A MP Jason Potterf High End Systems, Inc. High End Systems, Inc. A MP Jason Potterf High End Systems, Inc. High End Systems, Inc. A MP Jason Potterf High End Systems, Inc. High End Systems, Inc. A MP Jason Potterf William Jason Potterf MP Jason Potter William Jason Potterf MP Jason Potter William Jason Potterf MP Jason Potter William Jason Potter William Jason Potter Potte |                        |                             |  |        |      | ves         |
| Tom Grimes High End Systems, Inc. High End Systems, Inc. A MP Jason Potterf High End Systems, Inc. High End Systems, Inc. A MP Alan Martello 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 abstain Edwin S. Kramer I.A.T.S.E. Local 1 I.A.T.S.E. Local 1 P U yes 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 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 yes Dennis Grow I.A.T.S.E. Local 728 I.A.T.S.E. Local 728 A U Richard Thornton Brown Zero 88 Ltd. I.Light Group PLC P MP George Kindler Kelley Technologies LLC Kelley Technologies LLC P DR yes Rick Leinen Colortran Leviton Manufacturing Co., Inc.  Ken Vannice Colortran Leviton Manufacturing Co., Inc.  Mainstage Theatrical Supply - South Martin Professional A/S Martin Professional A/S P MP Gary Douglas Pathway Connectivity Inc. Pathway Connectivity Inc. Pathway Connectivity Inc. P MP Kevin Loewen Pathway Connectivity Inc. Pathway Connectivity Inc. A MP Rose Michael A. (Sandy) Sand Network Systems A MP Michael Lay Strand Lighting Ltd. Strand Lighting Ltd. A MP  |                        |                             |  |        |      |             |
| Jason Potterf         High End Systems, Inc.         High End Systems, Inc.         A         MP           Alan Martello         Horizon Control Inc.         Horizon Control Inc.         P         MP         yes           Robert Bell         Horizon Control Inc.         Horizon Control Inc.         A         MP           Peter Willis         Howard Eaton Lighting Ltd.         P         CP         abstain           Edwin S. Kramer         I.A.T.S.E. Local 1         I.A.T.S.E. Local 1         P         U         yes           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         yes           Dennis Grow         I.A.T.S.E. Local 728         I.A.T.S.E. Local 728         A         U         Ves           Richard Thornton Brown         Zero 88 Ltd.         I.Light Group PLC         P         MP         Wes           Rick Leinen         Colortran         Leviton Manufacturing Co., Inc.         P         MP         yes           John (Javid) D. Butler         Mainstage Theatrical Supply - South         Mainstage Theatrical Supply - South         A         DR         DR         yes           John (Javid) D. Butler<  |                        |                             |  |        |      | jee         |
| Alan Martello 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 abstain Edwin S. Kramer I.A.T.S.E, Local 1 I.A.T.S.E, Local 728 I.A.T. |                        |                             |  |        |      |             |
| Robert Bell  |                        |                             |  |        |      | ves         |
| Peter Willis   |                        |                             |  |        |      | jee         |
| Edwin S. Kramer I.A.T.S.E, Local 1 I.A.T.S.E, Local 728 I.A.T.S.E |                        |                             |  |        |      | abstain     |
| John Huntington   I.A.T.S.E. Local 1   I.A.T.S.E. Local 1   Roger Lattin   I.A.T.S.E. Local 728   I.A.T.S.E. Local 728   I.A.T.S.E. Local 728   I.A.T.S.E. Local 728   A   U   Ves   |                        |                             |  |        |      |             |
| Roger Lattin   |                        |                             |  |        | _    | <i>y</i> 03 |
| Dennis Grow I.A.T.S.E. Local 728 I.A.T.S.E. Local 728 A U  Alan M. Rowe I.A.T.S.E. Local 728 I.A.T.S.E. Local 728 A U  Richard Thornton Brown Zero 88 Ltd. I Light Group PLC P MP  George Kindler Kelley Technologies LLC Kelley Technologies LLC P DR  Rick Leinen Colortran Leviton Manufacturing Co., Inc.  Ken Vannice Colortran Leviton Manufacturing Co., Inc.  Mainstage Theatrical Supply - South Mainstage Theatrical Supply - South Manufacturing Co., Inc.  Daniel Weiermann Mainstage Theatrical Supply - South Martin Professional A/S Martin Professional A/S P MP  Gary Douglas Pathway Connectivity Inc. A MP  Kevin Loewen Pathway Connectivity Inc. Pathway Connectivity Inc. A MP  Charles Reese Production Resource Group Production Resource Group P DR  Michael A. (Sandy) Sand Network Systems Sand Network Systems P MP  Michael Gonzales Spectrum Lighting Inc. Spectrum Lighting Inc. P MP yes  Michael Lay Strand Lighting Ltd. Strand Lighting Ltd. A MP   |                        |                             |  |        |      | ves         |
| Alan M. Rowe       I.A.T.S.E. Local 728       I.A.T.S.E. Local 728       A       U         Richard Thornton Brown       Zero 88 Ltd.       i Light Group PLC       P       MP         George Kindler       Kelley Technologies LLC       Kelley Technologies LLC       P       DR       yes         Rick Leinen       Colortran       Leviton Manufacturing Co., Inc.       P       MP       yes         Ken Vannice       Colortran       Leviton Manufacturing Co., Inc.       A       MP       MP         John (Javid) D. Butler       Mainstage Theatrical Supply - South       Mainstage Theatrical Supply - South       P       DR       yes         Daniel Weiermann       Mainstage Theatrical Supply - South       Mainstage Theatrical Supply - South       A       DR       DR         Ole Bystrup       Martin Professional A/S       Martin Professional A/S       P       MP       MP         Gary Douglas       Pathway Connectivity Inc.       Pathway Connectivity Inc.       P       MP       yes         Dave Higgins       Pathway Connectivity Inc.       Pathway Connectivity Inc.       A       MP       MP         Kevin Loewen       Pathway Connectivity Inc.       Pathway Connectivity Inc.       A       MP       yes         Hans Lau       Sand Network Syst  |                        |                             |  |        |      | 100         |
| Richard Thornton Brown George Kindler Kelley Technologies LLC Rick Leinen Colortran Leviton Manufacturing Co., Inc.  Ken Vannice Colortran Leviton Manufacturing Co., Inc.  Ken Vannice Colortran Leviton Manufacturing Co., Inc.  Mainstage Theatrical Supply South Daniel Weiermann Mainstage Theatrical Supply South Martin Professional A/S Martin Professional A/S Dave Higgins Pathway Connectivity Inc. Phantau Sand Network Systems Production Resource Group Production Resource Group Production Resource Group Production Resource Group Progressional A MP  Martin Professional A MP  Meresource Group Production Resource Production  |                        |                             |  |        |      |             |
| George KindlerKelley Technologies LLCKelley Technologies LLCPDRyesRick LeinenColortranLeviton Manufacturing Co., Inc.PMPyesKen VanniceColortranLeviton Manufacturing Co., Inc.AMPJohn (Javid) D. ButlerMainstage Theatrical Supply - SouthMainstage Theatrical Supply - SouthPDRyesDaniel WeiermannMainstage Theatrical Supply - SouthMartin Professional A/SPMPGary DouglasMartin Professional A/SMartin Professional A/SPMPGary DouglasPathway Connectivity Inc.Pathway Connectivity Inc.PMPDave HigginsPathway Connectivity Inc.Pathway Connectivity Inc.AMPCharles ReeseProduction Resource GroupProduction Resource GroupProduction Resource GroupPDRyesHans LauSand Network SystemsSand Network SystemsPMPMPMichael A. (Sandy)Sand Network SystemsSand Network SystemsAMPyesMichael GonzalesSpectrum Lighting Inc.Spectrum Lighting Inc.PDRNPMichael LayStrand LightingStrand Lighting Ltd.AMPyes  |                        |                             |  |        |      |             |
| Rick Leinen Colortran Leviton Manufacturing Co., Inc.  Ken Vannice Colortran Leviton Manufacturing Co., Inc.  Leviton Manufacturing Co., Inc.  A MP  John (Javid) D. Butler  Mainstage Theatrical Supply - South  Martin Professional A/S  Gary Douglas Pathway Connectivity Inc. Pathway Connectivity In |                        |                             |  |        |      | VAS         |
| Inc.   Inc.     Inc.     Inc.     Inc.     Inc.     |                        |                             |  |        |      |             |
| Ken Vannice  Colortran  Leviton Manufacturing Co., Inc.  John (Javid) D. Butler  Mainstage Theatrical Supply - South  Mainstage Theatrical Supply - A DR  South  Martin Professional A/S  Martin Professional A/S  P MP  Gary Douglas  Pathway Connectivity Inc.  Pathway Connectivity Inc.  Pathway Connectivity Inc.  Pathway Connectivity Inc.  A MP  Kevin Loewen  Pathway Connectivity Inc.  Pathway Connectivity Inc.  Pathway Connectivity Inc.  A MP  Charles Reese  Production Resource Group  Hans Lau  Sand Network Systems  Sand Network Systems  Sand Network Systems  P MP  Michael A. (Sandy)  Twose  Yngve Sandboe  Sand Network Systems  Sand Network Systems  Sand Network Systems  Sand Network Systems  A MP  yes  Michael Gonzales  Spectrum Lighting Inc.  Strand Lighting Ltd.  Strand Lighting Ltd.  A MP   | THOR Edition           | Colorwan                    | _  | '      |      | ,00         |
| Inc.   John (Javid) D. Butler   Mainstage Theatrical Supply - South   Mainstage Theatrical Supply   P DR yes   | Ken Vannice            | Colortran                   |  | Α      | MP   |             |
| John (Javid) D. Butler   Mainstage Theatrical Supply - South   Mainstage Theatrical Supply   P   DR   yes  | Tron vanings           |                             | I  | '      |      |             |
| - South Daniel Weiermann Mainstage Theatrical Supply - South  Martin Professional A/S Gary Douglas Pathway Connectivity Inc. A MP  Charles Reese Production Resource Group Production Resource Group Production Resource Group P DR yes  Michael A. (Sandy) Sand Network Systems Sand Network Systems P MP  Michael A. (Sandy) Twose Sand Network Systems Sand Network Systems A MP  Wes  Michael Gonzales Spectrum Lighting Inc. Spectrum Lighting Inc. P DR  Richard Lawrence Strand Lighting Strand Lighting Ltd. A MP  | John (Javid) D. Butler | Mainstage Theatrical Supply |  | Р      | DR   | ves         |
| Daniel Weiermann  Mainstage Theatrical Supply - South  Martin Professional A/S  Martin Professional A/S  P  MP  Gary Douglas  Pathway Connectivity Inc.  A  MP  Charles Reese  Production Resource Group  Production Resource Group  P  DR  yes  Michael A. (Sandy)  Twose  Yngve Sand Network Systems  Sand Network Systems  Sand Network Systems  A  MP  yes  Michael Gonzales  Spectrum Lighting Inc.  Spectrum Lighting Inc.  P  MP  yes  Michael Lay  Strand Lighting Ltd.  A  MP  | (                      |                             | The state of the s |        |      | , , ,       |
| - South Ole Bystrup Martin Professional A/S Martin Professional A/S P MP Gary Douglas Pathway Connectivity Inc. Dave Higgins Pathway Connectivity Inc. A MP Charles Reese Production Resource Group Production Resource Group Production Resource Group P DR Me Michael A. (Sandy) Sand Network Systems Sand Network Systems P MP Michael Gonzales Spectrum Lighting Inc. Spectrum Lighting Inc. P MP  Me Michael Lay Strand Lighting Strand Lighting Ltd. A MP  MP  MP  MP  MP  MP  MP  MP  MP  M   | Daniel Weiermann       |                             | Mainstage Theatrical Supply  | Α      | DR   |             |
| Ole BystrupMartin Professional A/SMartin Professional A/SPMPGary DouglasPathway Connectivity Inc.Pathway Connectivity Inc.PMPDave HigginsPathway Connectivity Inc.Pathway Connectivity Inc.AMPKevin LoewenPathway Connectivity Inc.Pathway Connectivity Inc.AMPCharles ReeseProduction Resource GroupProduction Resource GroupPDRyesHans LauSand Network SystemsSand Network SystemsPMPMichael A. (Sandy)Sand Network SystemsSand Network SystemsAMPTwoseSand Network SystemsSand Network SystemsAMPYngve SandboeSand Network SystemsSand Network SystemsAMPMichael GonzalesSpectrum Lighting Inc.Spectrum Lighting Inc.PDRRichard LawrenceStrand Lighting Ltd.Strand Lighting Ltd.AMP   |                        |                             |  |        | '    |             |
| Gary DouglasPathway Connectivity Inc.Pathway Connectivity Inc.PMPyesDave HigginsPathway Connectivity Inc.Pathway Connectivity Inc.AMPKevin LoewenPathway Connectivity Inc.Pathway Connectivity Inc.AMPCharles ReeseProduction Resource GroupProduction Resource GroupPDRyesHans LauSand Network SystemsSand Network SystemsPMPMichael A. (Sandy)Sand Network SystemsSand Network SystemsAMPTwoseSand Network SystemsSand Network SystemsAMPYngve SandboeSand Network SystemsSand Network SystemsAMPMichael GonzalesSpectrum Lighting Inc.Spectrum Lighting Inc.PDRRichard LawrenceStrand Lighting Ltd.Strand Lighting Ltd.AMP  | Ole Bystrup            |                             | Martin Professional A/S  | Р      | MP   |             |
| Dave HigginsPathway Connectivity Inc.Pathway Connectivity Inc.AMPKevin LoewenPathway Connectivity Inc.Pathway Connectivity Inc.AMPCharles ReeseProduction Resource GroupProduction Resource GroupPDRyesHans LauSand Network SystemsSand Network SystemsPMPMichael A. (Sandy)Sand Network SystemsSand Network SystemsAMPTwoseSand Network SystemsSand Network SystemsAMPYngve SandboeSand Network SystemsSand Network SystemsAMPMichael GonzalesSpectrum Lighting Inc.Spectrum Lighting Inc.PDRRichard LawrenceStrand LightingStrand Lighting Ltd.AMP   |                        |                             |  | Р      | MP   | ves         |
| Kevin LoewenPathway Connectivity Inc.Pathway Connectivity Inc.AMPCharles ReeseProduction Resource GroupProduction Resource GroupPDRyesHans LauSand Network SystemsSand Network SystemsPMPMichael A. (Sandy)<br>TwoseSand Network SystemsSand Network SystemsAMPYngve SandboeSand Network SystemsSand Network SystemsAMPMichael GonzalesSpectrum Lighting Inc.Spectrum Lighting Inc.PDRRichard LawrenceStrand LightingStrand Lighting Ltd.AMP   |                        |                             |  | Α      |      | ,           |
| Charles ReeseProduction Resource GroupProduction Resource GroupPDRyesHans LauSand Network SystemsSand Network SystemsPMPMichael A. (Sandy)<br>TwoseSand Network SystemsAMPYngve SandboeSand Network SystemsAMPMichael GonzalesSpectrum Lighting Inc.Spectrum Lighting Inc.PRichard LawrenceStrand Lighting Ltd.Strand Lighting Ltd.PMichael LayStrand LightingStrand Lighting Ltd.A  |                        |                             | 1 2 2  |        |      |             |
| Hans Lau       Sand Network Systems       Sand Network Systems       P       MP         Michael A. (Sandy)       Sand Network Systems       A       MP         Twose       Sand Network Systems       A       MP         Yngve Sandboe       Sand Network Systems       A       MP         Michael Gonzales       Spectrum Lighting Inc.       Spectrum Lighting Inc.       P       DR         Richard Lawrence       Strand Lighting Ltd.       Strand Lighting Ltd.       P       MP       yes         Michael Lay       Strand Lighting       Strand Lighting Ltd.       A       MP   |                        |                             |  |        |      | yes         |
| Michael A. (Sandy) Twose  Yngve Sandboe Sand Network Systems Sand Network Systems Sand Network Systems Sand Network Systems A MP yes Michael Gonzales Spectrum Lighting Inc. Spectrum Lighting Inc. P DR Richard Lawrence Strand Lighting Ltd. Strand Lighting Ltd. P MP yes Michael Lay Strand Lighting Strand Lighting Ltd. A MP   |                        |                             |  |        |      |             |
| Twose       Sand Network Systems       Sand Network Systems       A       MP       yes         Michael Gonzales       Spectrum Lighting Inc.       Spectrum Lighting Inc.       P       DR         Richard Lawrence       Strand Lighting Ltd.       Strand Lighting Ltd.       P       MP       yes         Michael Lay       Strand Lighting       Strand Lighting Ltd.       A       MP   |                        |                             |  |        |      |             |
| Yngve SandboeSand Network SystemsAMPyesMichael GonzalesSpectrum Lighting Inc.Spectrum Lighting Inc.PDRRichard LawrenceStrand Lighting Ltd.Strand Lighting Ltd.PMPyesMichael LayStrand LightingStrand Lighting Ltd.AMP  |                        |                             | ,  |        |      |             |
| Michael GonzalesSpectrum Lighting Inc.Spectrum Lighting Inc.PDRRichard LawrenceStrand Lighting Ltd.Strand Lighting Ltd.PMPyesMichael LayStrand LightingStrand Lighting Ltd.AMP   |                        | Sand Network Systems        | Sand Network Systems   | Α      | MP   | yes         |
| Richard Lawrence Strand Lighting Ltd. Strand Lighting Ltd. P MP yes Michael Lay Strand Lighting Strand Lighting Ltd. A MP  |                        |                             |  |        |      |             |
| Michael Lay Strand Lighting Strand Lighting Ltd. A MP  |                        |                             |  |        |      | yes         |
|  |                        |                             |  |        |      |             |
|  | Brian Dowd             | TMB (NJ)                    | TMB  | P      | U    | yes         |

| Name         | Company   | Representing | Voting | Int. | Vote |
|--------------|---|--------------|--------|------|------|
|              |   |              | status | cat. |      |
| Mitch Hefter | Entertainment Technology (Genlyte Thomas Group) | USITT        | Р      | U    | yes  |
| Mark Jensen  | Wybron, Inc.                                    | Wybron, Inc. | Р      | MP   | yes  |

## 8.5 Other E1.27 projects

Javid Butler reported that the permanent cabling project is coming along. He thinks that a draft standard will be ready for a public review vote by ETS.

## 8.6 Leadership nomination ad hoc committee

Scott Blair reported that the task group has developed a plan. He read it aloud to the working group. It will be circulated to the group for a vote at the next meeting.

There was a discussion. Letter ballot seemed to be the preferred method of voting, with nominations in July and instant run-off with a point system. The results of the vote would be presented to the TSC and the working group at their ETS-LDI meetings, with the recommended new officers to start serving in January.

The current action item for the task group is the amend the document and send it to the working group.

#### 9 New business -- E1.11 Recommended Practice

Tim Bachman reported that a task group to work on this was founded in 2001, but then tabled. He would like to revive it with himself and Peter Willis as the leaders of the project. Bachman and Willis asked for volunteers to work on the RP and asked that the minutes show that people not attending this meeting are welcome to join the effort.

A show of hands was asked to show support for the project. It received strong support.

#### 10 Other business

## 10.1 Patent Licensing

Ruling reported that he had not yet received letters re-confirming Vari-Lite's or High End System's willingness to license for a reasonable fee and on a non-discriminatory basis any protected intellectual property needed to implement BSR E1.17 or BSR E1.20. The companies had guaranteed this in the past, but both had had either a change of ownership or management since then.

### 10.2 Connectivity Breakfast

Peter Willis and Dan Antonuk volunteered to develop the two-to-five minute presentation needed to promote the projects at the new products breakfast. Seminar time will be used to talk about ACN, RDM, and DMX512-A in more depth.

#### 11 Schedule for future meetings

Karl Ruling announced that the next working group meeting will be at Harrah's Las Vegas Casino & Hotel in Las Vegas, Nevada, Thursday, 21 October 2004, 09:00 - 13:00. The following task group meetings are scheduled:

BSR E1.17 (ACN)Task Group Tuesday, 19 October 2004, 09:00 - 17:00 Wednesday, 20 October 2004, 09:00 - 17:00

BSR E1.20 (RDM) Task Group Monday, 25 October 2004, 09:00 - 18:00 Tuesday, 26 October 2004, 09:00 - 13:00 BSR E1.27-x (DMX cabling) Task Group Thursday, 21 October 2004, 13:00 - 18:00

The January TSP meetings will be held at the Dallas/Ft. Worth Airport Marriott South in Ft. Worth, Texas, on Friday through Sunday, January 14 through 16, 2005.

## 12 Changes to observer status due to lack of attendance None.

## 13 Adjournment

Mitch Hefter 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 12:23.

## Working Group Membership as of 06 September 2004

| Name                 | Company                                 | Representing                      | Voting status | Int.<br>cat. |
|----------------------|---|-----------------------------------|---------------|--------------|
| Jean-Francois Canuel | Spectrum Manufacturing Inc.             | A.C. Lighting Ltd.                | 0             | CP           |
| Josh Koffman         | Spectrum Manufacturing Inc.             | A.C. Lighting Ltd.                | 0             | CP           |
| Tim Bachman          | A.C.T Lighting, Inc.                    | A.C.T Lighting, Inc.              | P             | DR           |
| Andre Broucke        | ADB - TTV Technologies                  | ADB-TTV Group                     | 0             | MP           |
| John Sellers         | AIM Northwest                           | AIM Northwest                     | 0             | G            |
| Arnold Tang          | Arnold Tang Productions                 | Arnold Tang Productions           | P             | U            |
| Wayne David Howell   | Artistic Licence (UK) Ltd.              | Artistic Licence (UK) Ltd.        | P             | CP           |
| Simon Hobday         | Artistic Licence (UK) Ltd.              | Artistic Licence (UK) Ltd.        | A             | CP           |
| Steve Friedlander    | Auerbach Pollock Friedlander            | Auerbach Pollock Friedlander      | 0             | U            |
| Raymond Wynn         | AVL Systems Pty Ltd.                    | AVL Systems Pty Ltd.              | 0             | MP           |
| J. B. Toby           | Avolites Ltd.                           | Avolites Ltd.                     | 0             | MP           |
| Shahid Anwar         | Avoilles Ltd.  Avoiltes Ltd.            | Avolites Ltd.                     | 0             | MP           |
| Richard Salzedo      |   | Avolites Ltd.                     | 0             | MP           |
| Barbara Wohlsen      | Avolites Ltd.  Barbara Wohlsen          | Barbara Wohlsen                   | 0             | U            |
|                      |   |                                   | P             |              |
| Tobin Neis           | Barbizon Companies                      | Barbizon Companies                |               | DR           |
| Bernardo Benito Rico | Ben-Ri Electronica S.A.                 | Ben-Ri Electronica S.A.           | 0             | MP           |
| Lee J. Bloch         | Blue Sky Design, Ltd.                   | Blue Sky Design, Ltd.             | 0             | G            |
| Soo-Myong Chung      | Blue Sky Design, Ltd.                   | Blue Sky Design, Ltd.             | 0             | G            |
| Bradley Klinkradt    | Bradley Klinkradt                       | Bradley Klinkradt                 | 0             | G            |
| Ted Fregon           | Bytecraft Pty. Ltd.                     | Bytecraft Pty. Ltd.               | 0             | MP           |
| Bill Ellis           | Candela Controls, Inc.                  | Candela Controls, Inc.            | 0             | U            |
| Rick Szijarto        | Cast Software                           | Cast Group of Companies, Inc.     | 0             | CP           |
| Marty Lazarus        | Chicago Spotlight, Inc.                 | Chicago Spotlight, Inc.           | 0             | G            |
| Larry Dunn           | City Theatrical, Inc.                   | City Theatrical, Inc.             | 0             | CP           |
| Fabiano Pina         | Clay Paky S.P.A.                        | Clay Paky S.P.A.                  | 0             | MP           |
| Woody Smith          | Coemar USA Inc.                         | Coemar USA Inc.                   | 0             | MP           |
| Ohad Ashery          | Compulite Systems                       | Compulite Systems                 | 0             | MP           |
| Simeon Aladjem       | Compulite Systems                       | Compulite Systems                 | 0             | MP           |
| Yehuda Shukram       | Compulite Systems                       | Compulite Systems                 | 0             | MP           |
| Dietmar Rottinghaus  | Connex GmbH                             | Connex GmbH                       | 0             | G            |
| David Bertenshaw     | David Bertenshaw                        | David Bertenshaw                  | 0             | G            |
| Bob Toms             | Design Advantage LLC                    | Design Advantage LLC              | 0             | G            |
| Doug Fleenor         | Doug Fleenor Design, Inc.               | Doug Fleenor Design, Inc.         | Р             | MP           |
| Milton Davis         | Doug Fleenor Design, Inc.               | Doug Fleenor Design, Inc.         | Α             | MP           |
| Ken Wagner           | Doug Fleenor Design, Inc.               | Doug Fleenor Design, Inc.         | Α             | MP           |
| Gary Dove            | Dove Systems                            | Dove Systems                      | 0             | MP           |
| Jussi Kallioinen     | Eastway Sound & Lighting                | Eastway Sound & Lighting          | 0             | U            |
| Ed Jones             | Edwin Jones Co., Inc.                   | Edwin Jones Co., Inc.             | 0             | СР           |
| Joost van Eenbergen  | ELC Lighting                            | ELC Lighting                      | 0             | MP           |
| Bill Fehrmann        | Electrol Engineering, Inc.              | Electrol Engineering, Inc.        | 0             | MP           |
| Daniel W. Antonuk    | Electronic Theatre Controls, Inc.       | Electronic Theatre Controls, Inc. | Р             | MP           |
| Adam Bennette        | Electronic Theatre Controls Ltd.        | Electronic Theatre Controls, Inc. | 0             | MP           |
| Hans Leiter          | Transtechnik Lichtsysteme GmbH & Co. KG | Electronic Theatre Controls, Inc. | 0             | MP           |
| Anders Ekvall        | Transtechnik Lichtsysteme GmbH          | Electronic Theatre Controls, Inc. | 0             | MP           |
| Steve Terry          | Electronic Theatre Controls             | Electronic Theatre Controls, Inc. | A             | MP           |
| Tracy Underhill      | Electronics Diversified Inc. (Colorado) | Electronics Diversified Inc.      | P             | MP           |
| James Johnson        | Electronics Diversified Inc.            | Electronics Diversified Inc.      | A             | MP           |
| Alfred Langguth      | Embedded Controls by Design, LLC        | Embedded Controls by Design, LLC  | P             | MP           |
| Philip Nye           | Engineering Arts                        | Engineering Arts                  | P             | G            |
| Erwin Rol            | Erwin Rol                               | Erwin Rol                         | 0             | G            |

| Name                     | Company                                 | Representing   | Voting status | Int.<br>cat. |
|--------------------------|---|--|---------------|--------------|
| Robert Goddard           | Goddard Design Co.                      | Goddard Design Co.                                       | Р             | MP           |
| Sierk Janszen            | Ground Zero                             | Ground Zero  | 0             | U            |
| Liao Wei Min             | GuangZhou HeDong Electronic Co., Ltd.   | GuangZhou HeDong Electronic Co., Ltd.                    | 0             | G            |
| Alan P. Symonds          | Harvard College                         | Harvard University                                       | 0             | U            |
| Trevor Forrest           | Helvar Lighting Control                 | Helvar Lighting Control                                  | 0             | MP           |
| Bill Hewlett             | Hewlett Electronics                     | Hewlett Electronics                                      | 0             | CP           |
| Scott M. Blair           | High End Systems Inc.                   | High End Systems Inc.                                    | Р             | MP           |
| Tom Grimes               | High End Systems, Inc.                  | High End Systems, Inc.                                   | Α             | MP           |
| Jason Potterf            | High End Systems Inc.                   | High End Systems Inc.                                    | Α             | MP           |
| Steve Carlson            | High Speed Design, Inc.                 | High Speed Design, Inc.                                  | 0             | MP           |
| Alan Martello            | Horizon Control Inc.                    | Horizon Control Inc.                                     | Р             | MP           |
| Robert Bell              | Horizon Control Inc.                    | Horizon Control Inc.                                     | Α             | MP           |
| Peter Willis             | Howard Eaton Lighting Ltd.              | Howard Eaton Lighting Ltd.                               | Р             | CP           |
| Edwin S. Kramer          | I.A.T.S.E, Local 1                      | I.A.T.S.E. Local 1                                       | Р             | U            |
| John Huntington          | I.A.T.S.E. Local 1                      | I.A.T.S.E. Local 1                                       | Α             | U            |
| Roger Lattin             | I.A.T.S.E. Local 728                    | I.A.T.S.E. Local 728                                     | Р             | U            |
| Dennis Grow              | I.A.T.S.E. Local 728                    | I.A.T.S.E. Local 728                                     | Α             | U            |
| Alan M. Rowe             | I.A.T.S.E. Local 728                    | I.A.T.S.E. Local 728                                     | Α             | Ū            |
| Richard Thornton Brown   | Zero 88 Ltd.                            | i Light Group PLC  | Р             | MP           |
| Gian Carlo C. Bartolotti | Ibeam SP / Banco de Eventos             | Ibeam SP / Banco de Eventos                              | 0             | U            |
| Geoffrey O. Thompson     | Nortel Networks, Inc.                   | IEEE 802.3/Nortel Networks                               | 0             | G            |
| Rob Johnston             | Interactive Technologies, Inc.          | Interactive Technologies, Inc.                           | 0             | MP           |
| Larry Schoeneman         | Interesting Products, Inc.              | Interesting Products, Inc.                               | 0             | G            |
| David Timmins            | Jands Electronics                       | Jands Electronics  | 0             | MP           |
| Helge Hoffmann           | JB Lighting                             | JB Lighting  | 0             | MP           |
| Edward Paget             | Jones & Phillips Associates, Inc.       | Jones & Phillips Associates, Inc.                        | 0             | G            |
| Christopher Purpura      | Jones & Phillips Associates, Inc.       | Jones & Phillips Associates, Inc.                        | 0             | G            |
| George Kindler           | Kelley Technologies LLC                 | Kelley Technologies LLC                                  | P             | DR           |
| John Mehltretter         | Lehigh Electric Products Co.            | Lehigh Electric Products Co.                             | 0             | MP           |
| Mark T. Kraft            | Lehigh Electric Products Co.            | Lehigh Electric Products Co.                             | 0             | MP           |
| Rick Leinen              | Colortran                               | Leviton Manufacturing Co., Inc.                          | P             | MP           |
| Ken Vannice              | Colortran                               | Leviton Manufacturing Co., Inc.                          | A             | MP           |
| Klaus Amling             | Licht-Technik                           | Licht-Technik  | 0             | P            |
| Andrew Sherar            | Lightmoves PLC                          | Lightmoves PLC   | 0             | MP           |
| Simon Alpert             | Lighttech Event Technologies            | Lighthech Event Technologies                             | 0             | CP           |
| Gary Pritchard           | LSC Lighting Systems PTY Ltd            | LSC Lighting Systems PTY Ltd                             | 0             | MP           |
| Bart Swinnen             | Luminex LCE                             | Luminex LCE  | 0             | MP           |
| J. P. Steiner            | Lutron Electronics                      | Lutron Electronics                                       | 0             | MP           |
| Jim Holladay             | Luxence                                 | Luxence  | 0             | G            |
| John (Javid) D. Butler   | Mainstage Theatrical Supply, Inc.       | Mainstage Theatrical Supply                              | P             | DR           |
| Daniel Weiermann         | Mainstage Theatrical Supply - Milwaukee | Mainstage Theatrical Supply  Mainstage Theatrical Supply | A             | DR           |
| Ole Bystrup              | Martin Professional A/S                 | Martin Professional A/S                                  | Р             | MP           |
| Hiroshi Kita             | Marumo Electric Co., Ltd.               | Marumo Electric Co., Ltd.                                | 0             | MP           |
| Petri Laine              | Obelux Oy                               | Obelux Oy  | 0             | CP           |
| Edward R. Condit         | On Location Lighting Systems            | On Location Lighting Systems                             | 0             | DR           |
| Stuart Cotts             | Oregon Shakespeare Festival             | Oregon Shakespeare Festival                              | 0             | U            |
| David A. Boller          | Organic Machines LLC                    | Organic Machines LLC                                     | 0             | CP           |
| William Benner           | Pangolin Laser Systems                  | Pangolin Laser Systems                                   | 0             | MP           |
| Gary Douglas             | Pathway Connectivity Inc.               | Pathway Connectivity Inc.                                | P             | MP           |
| Dave Higgins             | Pathway Connectivity Inc.               | Pathway Connectivity Inc.                                | A             | MP           |
| Kevin Loewen             | Pathway Connectivity Inc.               | Pathway Connectivity Inc.                                | A             | MP           |
| NOVIII LUCWOII           | i aniway Conficulting IIIC.             | i attiway Confidentially IIIC.                           |               | IVIE         |

| Name                 | Company   | Representing                  | Voting | Int. |
|----------------------|---|-------------------------------|--------|------|
|                      |   |                               | status | cat. |
| James Eade           | PLASA   | PLASA                         | 0      | G    |
| Mac Perkins          | PNTA Inc.                                       | PNTA Inc.                     | 0      | G    |
| Charles Reese        | Production Resource Group                       | Production Resource Group     | Р      | DR   |
| Paul F. Mardon       | Pulsar Ltd.                                     | Pulsar Ltd.                   | 0      | MP   |
| Steve Unwin          | Pulsar Ltd.                                     | Pulsar Ltd.                   | 0      | MP   |
| Stephen J. Tyrrell   | Quantum Logic                                   | Quantum Logic                 | 0      | MP   |
| Douglas Franz        | QVC Network                                     | QVC Network                   | 0      | U    |
| Charlie Richmond     | Richmond Sound Design Ltd.                      | Richmond Sound Design Ltd.    | 0      | CP   |
| Martin Farnik        | Robe Show Lighting s.r.o.                       | Robe Show Lighting s.r.o.     | 0      | MP   |
| Hans Lau             | Sand Network Systems                            | Sand Network Systems          | Р      | MP   |
| Michael A. (Sandy)   | Sand Network Systems                            | Sand Network Systems          | А      | MP   |
| Twose                | ·   |                               |        |      |
| Yngve Sandboe        | Sand Network Systems                            | Sand Network Systems          | Α      | MP   |
| Kenneth Mockler      | Sceno Plus                                      | Sceno Plus                    | 0      | U    |
| Mick Martin          | ShowCAD Control Systems                         | ShowCAD Control Systems       | 0      | MP   |
| Loren Wilton         | Showman Systems                                 | Showman Systems               | 0      | CP   |
| Jon R. Farley        | Sixteenth Avenue Systems                        | Sixteenth Avenue Systems      | 0      | CP   |
| Robert Barbagallo    | Solotech Inc.                                   | Solotech Inc.                 | 0      | U    |
| Michael Gonzales     | Spectrum Lighting Inc.                          | Spectrum Lighting Inc.        | Р      | DR   |
| Ujjal Kar            | Standard Robotics & Lighting                    | Standard Robotics & Lighting  | 0      | G    |
| Richard Lawrence     | Strand Lighting Ltd.                            | Strand Lighting Ltd.          | Р      | MP   |
| Michael Lay          | Strand Lighting                                 | Strand Lighting Ltd.          | Α      | MP   |
| Paul K. Ericson      | Syska Hennessy Group Lighting                   | Syska Hennessy Group Lighting | 0      | U    |
|                      | Design  | Design                        |        |      |
| Stephen Bickford     | T. Kondos Associates                            | T. Kondos Associates          | 0      | U    |
| Tad Trylski          | Tad Trylski                                     | Tad Trylski                   | 0      | U    |
| Klas Dalbjorn        | Labgruppen AB                                   | TC Group                      | 0      | MP   |
| Jerry Gorrell        | Theatre Safety Programs                         | Theatre Safety Programs       | 0      | G    |
| Colin Waters         | TMB   | TMB                           | 0      | U    |
| Matt Stroud          | University of Texas at Austin                   | University of Texas at Austin | 0      | G    |
| Mitch Hefter         | Entertainment Technology (Genlyte Thomas Group) | USITT                         | Р      | U    |
| Torrey Bievenour     | Vision Quest Lighting                           | Vision Quest Lighting         | 0      | G    |
| Eckart Steffens      | SOUNDLIGHT                                      | VPLT                          | 0      | G    |
| Eric Cornwell        | West Side Systems                               | West Side Systems             | 0      | U    |
| John Sondericker III | Wybron, Inc.                                    | Wybron, Inc.                  | 0      | MP   |

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 Key to codes: P principal voting member A alternate voting member I individual voting member O observer, non-voting