

Minutes
Rigging Working Group
Friday, 24 July 2015
D/FW Marriott Solana
Westlake, TX

Presiding chairperson:

Bill Sapsis; Sapsis Rigging, Inc.; P; U

Recording secretaries:

Erin Grabe; PLASA
Karl G. Ruling; PLASA

Members in attendance:

Mark Ager; Stage Technologies; Tait Towers Manufacturing LLC; A; CP
Matthew Antonucci; Contract Services Administration Trust Fund; P; U
Keith Bohn; I; G
David Carmack; Columbus McKinnon Corp.; A; MP
Dan Culhane; SECOA; P; CP
Bruce Darden; Rigging Innovators, Inc.; P; CP
Jonathan Deull; JSD Projects LLC; I; U
Brad Dittmer; Stage Labor of the Ozarks; P; U
Russ Dusek; I Weiss; P; MP
Don Earl; Earl Girls, Inc.; O; DR
Nick Fleming; Walt Disney Parks and Resorts U.S.; Walt Disney Company; A; U
Mike Garl; Mike Garl Consulting LLC; P; DE
Ethan William Gilson; ALPS; Advanced Lighting and Production Services; P; U
Sanford P. Gilzow; Shur-Rig LLC; O; G
William B. Gorlin; McLaren Engineering Group; M.G. McLaren, P.C.; P; G
Jerry Gorrell; Theatre Safety Programs; P; G
Rod Haney; I.A.T.S.E. Local 891; P; U
Tim Hansen; Oasis Stage Werks; P; DR
Jeremy Hochman; Full Throttle Films/ VER; O; DR
Donald Hoffend_III; Avista Designs, LLC; A; G
Christine L. Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U
Ken P. Lager; LaFace & McGovern Associates; O; DR
Roger Lattin; I.A.T.S.E. Local 728; P; U
Jon Lenard; Applied Electronics; A; MP
Daniel H. Louis; Theta Consulting LLC; P; G
Joseph McGeough; Flying by Foy; Foy Inventerprises, Inc.; P; CP
Sam Michael; Thern, Inc.; P; MP
Orestes Mihaly; Production Resource Group; P; DR
Rick Montgomery; R&M Materials Handling; P; MP
Reid Neslage; H & H Specialties Inc.; P; MP
Richard J. Nix; Entertainment Structures Group; Steven Schaefer Associates; P; G
Shawn Nolan; Production Resource Group; A; DR
Tracy Nunnally; Hall Associates Flying Effects; P; CP
Carlos Ortega; PSAV Presentation Services; O; U
Edward A. (Ted) Paget; Electronic Theatre Controls, Inc.; A; MP
Miriam Paschetto; Geiger Engineers; P; G
Chris Schmidt; Stage Rigging, Inc.; Freeman Companies; A; DR
John C. Snook; Thermotex Industries Inc.; P; CP
Russell Solomon; Texas Scenic Company; A; DR

Peter V. Svitavsky; J.R. Clancy, Inc.; Wenger Corp.; P; CP
Ken Tilson; Columbus McKinnon Corp.; A; MP
Will Todd; Tomcat USA, Inc.; Milos Group; P; MP
Elmer Veith; Total Structures - Eastern US Sales Office; Total Structures, Inc.; A; MP
Steve Walker; Steve A. Walker & Associates; P; G
Charlie Weiner; Tomcat USA; Milos Group; A; MP
Michael Wells; Xtreme Structures and Fabrication; P; MP
Marty Wesstrom; Mountain Productions Inc.; P; DR
R. Duane Wilson; George C. Izenour Associates; Amer. Society of Theatre Consultants; P; DE
Max A. Wilson; P; MP

1 Opening remarks

The meeting was called to order at 09:01 by Bill Sapsis. He welcomed everyone and wished everyone a good morning. He thanked everyone for attending, and said that everyone's participation was appreciated.

2 Attendance and membership

2.1 Introductions of those present and taking attendance

A bright-salmon colored sign-in sheet was passed around for those physically present to sign. Self-introductions took place around the room, and then introductions of those on WebEx were done by roll call, with a self-introduction from each.

2.3 Call for quorum

By a count of raised hands, Bill Sapsis counted more than the required 31 for a supermajority.

2.4 Requirements for membership

The following statement was read aloud to the assembly by Bill Sapsis:

Membership is open to all who are materially affected by the work of the group. People who would be in the designer interest group category are particularly encouraged to join. However, voting members are required to attend meetings and to vote on letter ballots. Any principal member and voting alternate who both miss three consecutive meetings or letter ballots will have their membership status changed to observer.

2.5 Changes of membership status due to lack of attendance

The following voters have missed the last two meetings and are in jeopardy of being moved to Observer status if this meeting is also missed:

Shawn Sack; A.C.T. Lighting; P; DR Not present; moved to observer status.

Edwin S. Kramer; IATSE Local 1; U Present; no change.

Steven C. Shaw; Levitating Productions, Inc.; P; MP Not present; moved to observer status.

Dana Bartholomew, Mark Ager, Patrick Leigh Bettington; Tait Towers Manufacturing LLC; CP Present; no change.

Bill Sapsis announced the change in status to the two voters above, due to lack of attendance.

2.6 Processing of new membership and change in status requests:

As of 24 July 2015, the following applications have been received and logged:

Kristen Kuipers; Newcomb & Boyd; O; DE

Russell Solomon; Texas Scenic Company; A; DR

Dan Louis; Theta Consulting LLC; P; G

Gill Wright; IATSE Local 16; O; G

James Tomlinson; Team Tomlinson; O; G

Jim Neisel, Theatre Projects Consultants (Change from Arup); Principal

Joe McGeogh; Foy Invention Enterprises, Inc.; O change to P; CP

Dan Culhane moved that the applications and changes be accepted. The motion was seconded and approved by a show of hands and voice votes.

2.7 Consensus body

The full consensus body of this working group at the time of this meeting, including those not present, was:

| Name | Representing | Voting status | Interest category |
|-----------------------|---|---------------|-------------------|
| Woody Pyeatt | A V Pro, Inc. | P | DR |
| Ethan William Gilson | Advanced Lighting and Production Services | P | U |
| William Bradburn | Aerial Arts, Inc. | P | U |
| R. Duane Wilson | Amer. Society of Theatre Consultants | P | DE |
| Max A. Wilson | Applied Electronics | P | MP |
| Jon Lenard | Applied Electronics | A | MP |
| Robert Young | Arup | P | DE |
| Michael Parrella | Arup | A | DE |
| Donald A. Hoffend_Jr. | Avista Designs, LLC | P | G |
| Donald Hoffend_III | Avista Designs, LLC | A | G |
| Galen Price | Blue Man Group | P | U |
| Ted Jones | Chicago Spotlight, Inc. | P | U |
| Herb Hart | Columbus McKinnon Corp. | P | MP |
| David Carmack | Columbus McKinnon Corp. | A | MP |
| Jennifer O'Leary | Columbus McKinnon Corp. | A | MP |
| Ken Tilson | Columbus McKinnon Corp. | A | MP |
| Matthew Antonucci | Contract Services Administration Trust Fund | P | U |
| Steven Ricks | Electronic Theatre Controls, Inc. | P | MP |
| Michael Lichter | Electronic Theatre Controls, Inc. | A | MP |
| Nils Becker | Electronic Theatre Controls, Inc. | A | MP |
| Edward A. (Ted) Paget | Electronic Theatre Controls, Inc. | A | MP |
| Joseph Champelli | Entertainment Project Services, LLC | P | DE |
| Steven Michelman | Entertainment Project Services, LLC | A | DE |
| Joseph McGeough | Foy Inveneterprises, Inc. | P | CP |
| John Ringelman | Freeman Companies | P | DR |
| Rocky Paulson | Freeman Companies | A | DR |
| Chris Schmidt | Freeman Companies | A | DR |
| Miriam Paschetto | Geiger Engineers | P | G |
| Reid Neslage | H & H Specialties Inc. | P | MP |
| Tracy Nunnally | Hall Associates Flying Effects | P | CP |
| John P. Moore | Hall Associates Flying Effects | A | CP |
| Pat Grenfell | Hoist Sales & Service | P | DR |
| Edwin S. Kramer | I.A.T.S.E. Local 1 | P | U |
| Roger Lattin | I.A.T.S.E. Local 728 | P | U |
| Rod Haney | I.A.T.S.E. Local 891 | P | U |

| Name | Representing | Voting status | Interest category |
|---------------------------|---|----------------------|--------------------------|
| Russ Dusek | I Weiss | P | MP |
| Jonathan Deull | JSD Projects LLC | I | U |
| Jerald Kraft | JTH Lighting Alliance | P | CP |
| Keith Bohn | Keith Bohn | I | G |
| William Beautyman | Limelight Productions, Inc. | P | DR |
| William B. Gorlin | M.G. McLaren, P.C. | P | G |
| Mike Adamovich | M.G. McLaren, P.C. | A | G |
| Mike Garl | Mike Garl Consulting LLC | P | DE |
| Will Todd | Milos Group | P | MP |
| Scott Johnson | Milos Group | A | MP |
| Charlie Weiner | Milos Group | A | MP |
| Vincent J. Cannavale | Motion Laboratories | P | CP |
| Peter Herrmann | Motion Laboratories | A | CP |
| David Herrmann | Motion Laboratories | A | CP |
| Gregory Quinkert | Motion Laboratories | A | CP |
| Marty Wesstrom | Mountain Productions Inc. | P | DR |
| Tim Hansen | Oasis Stage Werks | P | DR |
| Orestes Mihaly | Production Resource Group | P | DR |
| Shawn Nolan | Production Resource Group | A | DR |
| Rick Montgomery | R&M Materials Handling | P | MP |
| Bruce Darden | Rigging Innovators, Inc. | P | CP |
| Jesse Adams | Rose Brand | P | DR |
| Bill Sapsis | Sapsis Rigging, Inc. | P | U |
| Peter A. Scheu | Scheu Consulting Services, Inc. | P | DE |
| Kimberly Corbett Oates | Schuler Shook | P | DE |
| Joshua Grossman | Schuler Shook | A | DE |
| Bob McVay | Schuler Shook | A | DE |
| Dan Culhane | SECOA | P | CP |
| Joseph Jeremy | Show Distribution Group, Inc. | P | MP |
| Jean-Phillippe Robitaille | Show Distribution Group, Inc. | A | MP |
| Joseph S. Schuster | Simpson Gumpertz & Heger | P | DE |
| Brad Dittmer | Stage Labor of the Ozarks | P | U |
| Steve Walker | Steve A. Walker & Associates | P | G |
| Richard J. Nix | Steven Schaefer Associates | P | G |
| Kyle Kusmer | Steven Schaefer Associates | A | G |
| Christine L. Kaiser | Syracuse Scenery & Stage Lighting Co., Inc. | P | DR |
| Harold Ike Shippers | Syracuse Scenery & Stage Lighting Co. Inc. | A | DR |

| Name | Representing | Voting status | Interest category |
|--|------------------------------------|----------------------|--------------------------|
| Dana Bartholomew | Tait Towers Manufacturing LLC | P | CP |
| Mark Ager | Tait Towers Manufacturing LLC | A | CP |
| Patrick Leigh Bettington | Tait Towers Manufacturing LLC | A | CP |
| Stephen G. Surratt | Texas Scenic Company | P | DR |
| Rick Rosas | Texas Scenic Company | A | DR |
| Joel A Guerra | Texas Scenic Company | A | DR |
| Russell Solomon | Texas Scenic Company | A | DR |
| Jim Niesel | Theatre Projects Consultants, Inc. | P | DE |
| Jerry Gorrell | Theatre Safety Programs | P | G |
| John C. Snook | Thermotex Industries Inc. | P | CP |
| Sam Michael | Thern, Inc. | P | MP |
| Jeff Wilkowski | Thern, Inc. | A | MP |
| Daniel H. Louis | Theta Consulting LLC | P | G |
| Adrian Forbes-Black | Total Structures Inc. | P | MP |
| Elmer Veith | Total Structures, Inc. | A | MP |
| Theresa Kelley | Total Structures Inc. | A | MP |
| Don Halchak | Total Structures Inc. | A | MP |
| Dan Lisowski | University of Wisconsin - Madison | P | U |
| John Van_Arsdale | University of Wisconsin - Madison | A | U |
| Christopher Jacobs | Virginia Beach City Public Schools | P | U |
| Pete Happe | Walt Disney Company | P | U |
| Jeff T. Miller | Walt Disney Company | A | U |
| Earle T. Greene | Walt Disney Company | A | U |
| Ian Bevan | Walt Disney Company | A | U |
| Nick Fleming | Walt Disney Company | A | U |
| Peter V. Svitavsky | Wenger Corp. | P | CP |
| Patrick Finn | Wenger Corp. | A | CP |
| Gregory Orth | WNP Services, Inc. | P | DR |
| Robert Ramsey | WNP Services, Inc. | A | DR |
| Michael Wells | Xtreme Structures and Fabrication | P | MP |
| Mark Newlin | Xtreme Structures and Fabrication | A | MP |
| Robert Dean | ZFX Flying Inc. | P | CP |
| Stu Cox | ZFX Flying Inc. | A | CP |
| Sandy Harned | ZFX Flying Inc. | A | CP |
| Jason Schumacher | ZFX Flying Inc. | A | CP |
| Voting Status Key: P = Principal voter, A = Alternate voter, I = Individual voter | | | |

| Votes by Interest Category: | | |
|------------------------------------|----|-----------|
| Custom-market producer | CP | 10 |
| Designer | DE | 8 |
| Dealer or rental company | DR | 11 |
| General interest | G | 8 |
| Mass-market producer | MP | 11 |
| User | U | 14 |
| Total votes possible: | | 62 |

3 Approval of minutes from the previous meeting

See the draft minutes of the March meeting, *RIGmin03-2015.pdf*.

Eddie Kramer moved to approve the March minutes as drafted. The motion was seconded and approved with a show of hands and voice votes.

4 PLASA declarations

4.1 Reading of the anti-trust statement

The following statement was read aloud to the assembly by Bill Sapsis:

PLASA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all PLASA events, all discussions will be limited to those subjects that are permitted by the antitrust laws. All members should refrain from any discussion or mention of competitively sensitive subjects such as the current or future prices charged for any member product or services, current or future marketing plans or strategies, and current or future costs, including employee salaries. There also must be no agreement on the suppliers or customers that members will do business with or the markets in which members will conduct business.

Violations of the antitrust laws can have serious consequences. If you have any questions or concerns about anything that is discussed at a PLASA meeting, please bring your concern to PLASA management. An easy to read pamphlet describing the antitrust laws is available from the PLASA staff.

Erin Grabe held up the pamphlet. Nothing was revealed.

4.2 Call for patents

The following statement was read aloud to the assembly by Bill Sapsis:

PLASA intends not to publish any standard that contains protected intellectual property, unless that information can be licensed by anyone for a reasonable fee. PLASA uses a process of open patent and copyright disclosures to implement its intent. PLASA does not conduct patent or copyright searches and does not warrant that its standards contain no protected intellectual property.

In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent or copyright or other intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence.

Nothing was revealed.

5 Approval of the agenda

Bill Sapsis asked that the flying performer standard be dealt with at the top of the list.

Eddie Kramer moved to accept the agenda as modified. The motion was seconded. By a show of hands and voice votes from the remote-attendees, the agenda was approved as amended.

6 New business

6.1 Other new business

7 Old business

7.1 BSR E1.43 - 201x, Live performer flying effect standard

See *BSR_E1-43_Doc2013-2039r9.pdf* and *DraftResols_E1-43_ScndRevwCmmnts.pdf*.

Bill Gorlin said that the comments from the working group were helpful and that the task group considered all of them as if they were public review comments. Tim Hansen moved that the comment resolutions be accepted. The motion was seconded and approved by a unanimous show of hands and voice votes with no opposition or abstentions, other than the chairman's abstention. This was 41 Yes votes: 7 CP, 2 DE, 6 DR, 8 G, 10 MP, and 8 U.

Dan Culhane asked for a clause calling for a user manual in the draft standard. This was agreed to and added at 4.5.1.5.3.

Eddie Kramer moved that the revised draft be offered for public review. The motion was seconded and approved by a unanimous show of hands.

7.2 ANSI E1.1 - 2012, wire rope ladders (revision, reaffirmation, or withdrawal by 2017)

No news or action at this time.

7.3 ANSI E1.2 - 2012, Entertainment Technology - Design, Manufacture and Use of Aluminum Trusses and Towers (revision, reaffirmation, or withdrawal by 2017)

No news or action at this time.

7.4 BSR E1.4-1 - 201x, Entertainment Technology--Manual Counterweight Rigging Systems

See *BSR_E1_4-1-201x_2014-2029r3.pdf* and *DraftResols_E1-4-1_FrstRvwCmmnts.pdf*.

Richard Nix spoke to the resolutions and draft distributed. He said he was seeking approval of the comment resolutions and another public review of the draft standard.

Dan Culhane moved that the comment resolutions be accepted. The motion was seconded.

The group then proposed some changes to the resolutions, including:

#65; Bill Gorlin wanted to add "quality and marking" to the requirements for both internally threaded and externally threaded fasteners.

#30; Eddie Kramer moved that the resolution be changed to accept in principal and modified to say "the angle" rather than "the minimum angle." The motion was seconded and approved by a show of hands and voice votes.

#39 and #40; Tim Hansen said that the capitalization needs to be changed.

#17; Pete Svitavsky proposed a change to "as deemed."

#62 and 73; For #62, Pete Svitavsky argued that the requirements for the load path could be part of the definition of load path. The consensus was not to make this change. With #73 the argument was to not call out a particular yield strength (not be less than 213,738 kPa) but to call for "Batten design loads shall result in a stress no greater than 60% of the capacity permitted by published design standards applicable to the material for static loads" The argument was made against his argument, and was found acceptable to the group, that alternate designs are permitted in 3.2.6. No change, though the clause referenced should be 3.2.6, not 3.2.2.

#86; Bridle angles was discussed. A straw poll determined that the 30 degree angle was preferred over 45. No change.

#87; It was suggested and acceptable to the group that the resolution should be changed to "Accept in principle. Change wording to "The effects of reverse bends shall be considered by a qualified person."

#104; The consensus was to remove clause 3.5.1.7.6.

#117; The redundant (block) shall be removed from all locations.

#114; Removing "uniformly flat" from the resolutions was found acceptable to the group.

Richard Nix moved to accept the revised comment resolutions. The motion was seconded and approved by a unanimous show of hands and voice votes. This was 42 Yes votes: 7 CP, 2 DE, 6 DR, 8 G, 10 MP, and 9 U.

Richard Nix moved that the draft standard be offered for public review as revised in this meeting. The motion was seconded and approved by a unanimous show of hands and voice votes.

7.5 BSR E1.4-2 - 201x, Entertainment Technology—Statically Suspended Rigging Systems

From the draft March minutes:

Ethan Gilson reported that the task group hopes to have a document to this group for the July meeting.

The group was offered BSRE 1.4-2_RIG2015-2023.pdf. Ethan Gilson said that the document will need to be updated per E1.4-1 as revised in this meeting. Ethan Gilson asked that the working group send comments to him by Labor Day. He noted that the plan is to have a document ready for public review by the LDI meeting.

7.6 BSR E1.4-3 - 201x, Entertainment Technology - Manually Operated Hoist Rigging Systems

See BSR_E1-4-3-201x_Rig-2015-2022.pdf.

Richard Nix spoke about the draft received and moved to offer it for public review. The motion was seconded.

Dan Culhane suggested that changes be made now, here, before a public review. The changes proposed included:

Clause 3.17; It says see 3.2.3, but should be 3.2.2

Clause 6.2.2.3; It says 6.2.3.4, but should be 6.2.2.4.

Clause 7.7.2.1.1; It should say shall meet or exceed the following...

Clause 7.2.2.6; The following clauses should be subclauses.

Clause 3.37 is out of alphabetical order.

There was discussion on the need to modify some definitions, including changing batten clamp (3.2) to the definition in E1.4 and changing batten (3.1) to match the definition in E1.4-1.

Clause 3.8; Strike entire part b of definition.

Clause 3.11; Change to "characteristic design load," and change throughout document.

Clause 3.17; Change to See 3.22

Clause 3.33; Change to used "in performance venues."

Clause 3.44; Change to read "tensioned wire ropes used to guide the path of counterweights or clews."

Clause 4.5 through 4.14; Need to be subclauses of 4.4.

Clause 6.1.5; Change to E1.4-1 requirement: Strength, material, quality and marking requirements for externally-threaded fasteners shall not be less than SAE J429 Grade 5 or ISO R898 Class 8.8 rating.

Clause 6.2.1.3; The group discussed this clause but agreed to make no change.

Clause 6.2.2.5; The group discussed this clause but agreed to make no change.

Clause 6.2.4.7 Change must to shall.

Clause 6.2.2.3; Change reference to clause 6.2.2.4, not 6.3.2.4.

Clause 7.1.2.1.3; add "to be applied" to the existing structure.

Clause 7.2.1.1; Change to "...shall meet or exceed..."

Clause 7.2.1.1.1; Load, not doad.

Clause 7.2.2.7 and 7.2.2.8 should be 7.2.2.6.1 and 7.2.2.6.2.

Clause 8.1; Change "processes and results" at end to "requirements"

Clause 8.3.1; Change "holding" to "securing."

Clause 11.4.1 No change.

Clause 8.3.2; Change "must" to "shall."

In lieu of these changes and with no further discussion, the motion was changed to offer the draft standard as amended for public review. By a show of hands, there were eleven voters in favor and twenty opposed. There were also two abstentions. The motion to offer E1.4-3 for public review failed.

Richard Nix requested that further working group comments be submitted to him by Labor Day.

[The group took a short break.]

7.6 ANSI E1.6-1 - 2012, Entertainment Technology--Powered Hoist Systems (revision, reaffirmation, or withdrawal by 2017)

Bruce Darden suggested that the group start on a revision of this soon, because it will take at least two years. Karl Ruling noted that as long as the process to revise, reaffirm, or withdraw is done within five years of publication, then ANSI says it is in compliance.

7.7 ANSI E1.6-2 - 2013, Entertainment Technology--Design, Inspection, and Maintenance of Electric Chain Hoists for the Entertainment Industry (revision, reaffirmation, or withdrawal by 2018)

No news or action at this time.

7.8 ANSI E1.6-3 - 2012, Safe Use of Electric Chain Hoists in the Entertainment Industry (revision, reaffirmation, or withdrawal by 2017)

No news or action at this time.

7.9 ANSI E1.6-4 - 2013, Control of Electric Chain Hoists in the Entertainment Industry (revision, reaffirmation, or withdrawal by 2018)

No news or action at this time.

7.10 ANSI E1.8 - 2012, Entertainment Technology--Loudspeaker Enclosures Intended for Overhead Suspension--Classification, Manufacture and Structural Testing (revision, reaffirmation, or withdrawal by 2017)

No news or action at this time.

7.11 ANSI E1.15 - 2006 (R2011), Entertainment Technology--Recommended Practices and Guidelines for the Assembly and Use of Theatrical Boom & Base Assemblies (revision, reaffirmation, or withdrawal by 2016)

No news or action at this time.

7.12 ANSI E1.21 - 2013, Entertainment Technology — Temporary Structures Used for Technical Production of Outdoor Entertainment Events (revision, reaffirmation, or withdrawal by 2018)

No news or action at this time.

7.13 BSR E1.22 - 20xx, Entertainment Technology - Fire Safety Curtain Systems

See *BSR_E1-22-201x_2002-2032r12.pdf* and *E1-22_FrstRvwProposedResols_r1.pdf*.

Dan Culhane moved that the resolutions be accepted. The motion was seconded. The motion carried. This was 41 Yes votes: 7 CP, 2 DE, 6 DR, 8 G, 10 MP, and 8 U. One abstention in the User category.

Dan Culhane then moved that the draft standard be offered for public review. The motion was seconded.

Bill Gorlin's noted comments were addressed. The 1/3rd is at room temperature. Steel loses strength with heat, so this allows a margin for that strength losses. Make no change

Add an engineering analysis "performed by a qualified person" to 4.3.2.

Full strength question was briefly discussed. The group consensus was that full strength is adequate, make no change.

Annex A the use of should instead of shall was agreed to.

Dan Culhane moved that the standard as modified be offered for public review. The motion was seconded and approved by a unanimous by show of hands and voice votes.

7.14 ANSI E1.39 - 2015, Entertainment Technology –Selection and Use of Personal Fall Arrest Systems on Portable Structures Used in the Entertainment Industry (Revision, reaffirmation, or withdrawal by 2020)

No news or action at this time.

7.15 ANSI E1.44 – 2014, Common Show File Exchange Format for Entertainment Industry Automation Control Systems -- Stage Machinery (revision, reaffirmation, or withdrawal by 2019)

No news or action at this time?

7.16 Rigging Glossary

The group was offered *RWG_Definitions_Rig2015-2024.pdf*.

There was discussion of the purpose of this document and whether it is to be a standard, part of our style guide, or a reference for use within the working group.

Eddie Kramer moved that the task group become permanent and that we use this glossary as an internal document. The motion was seconded and approved by a unanimous show of hands.

7.18 BSR E1.47 - 201x Recommended Guidelines for Entertainment Rigging System Inspections

Chris Kaiser said that the task group had met and worked on the comment resolutions.

Richard Nix explained his unhappiness with the original resolutions. He still feels that we should not be specifying the scope of the work to be done in an inspection. He admittedly has not read the revised draft, but will do so and will offer comments to the task group.

Christine Kaiser and Pete Svitavsky said that a set of proposed comment resolutions will be offered at the next meeting, along with a revised draft standard.

7.19 BSR E1.50—Video wall project

See *E1-50_DisplaySystems_2013-2056r3.pdf* and *DraftResols_E1-50_FrstRevw.pdf*.

Charlie Weiner moved that we accept the comment resolutions document. The motion was seconded. After some discussion on the resolutions, Charlie Weiner withdrew his motion.

The group consensus was that comments from the working group on the comment resolutions document be sent to the task group by Labor Day. Action will be delayed until the next meeting.

7.20 BSR E1.56, Rigging Support Points Design, Fabrication, Installation, and Testing

Shawn Nolan reported that the task group is making progress. They are now looking at having something for this group to consider by LDI.

8 Other business and announcements

8.1 NATEAC 2016

Bill Sapsis reminded the group that NATEAC will be held 17-18 July 2016 in New York City. Information is available at <http://www.nateac.org/>.

8.2 Above & Beyond Awards

Bill Sapsis reminded the group that the nomination site is open year round at tsp.plasa.org/AboveandBeyond.

8.3 TSP Funding

Mike Garl said that we are continuing to look for additional support.

Roger Lattin noted that his Local gave a \$3000 donation and it wasn't that hard an argument to make to them.

8.4 CEN standards update

No report.

9 Schedule for future meetings

Erin Grabe noted that the next meeting is scheduled for 21 October 2015, from 7 to 11:00, in conjunction with the LDI trade show. See <http://na.plasa.org/news/meetings.php> for the most current schedule.

Bill Sapsis reminded the group that the March meeting will be held in conjunction with the USITT trade show in March 2016 in Salt Lake City, UT.

10 Adjournment

Ethan Gilson moved to adjourn. The motion was seconded. Hearing no objections, Bill Sapsis declared the meeting adjourned at 12:59.

| Name | Company | Representing | Voting status | Int cat |
|--------------------------|---|---|---------------|---------|
| Mike Adamovich | McLaren Engineering Group | M.G. McLaren, P.C. | A | G |
| Jesse Adams | Rose Brand | Rose Brand | P | DR |
| Mark Ager | Stage Technologies | Tait Towers Manufacturing LLC | A | CP |
| Frank Allison | Frank Allison | Frank Allison | O | G |
| Matthew Antonucci | Contract Services Administration Trust Fund | Contract Services Administration Trust Fund | P | U |
| Brent Armstrong | Alpine Rigging & Structural Design | Alpine Rigging & Structural Design | O | U |
| John Van_Arsdale | University of Wisconsin - Madison | University of Wisconsin - Madison | A | U |
| William Ian Auld | Auld Entertainment | Auld Entertainment | O | U |
| Warren A. Bacon | Warren A. Bacon | Warren A. Bacon | O | U |
| Rinus Bakker | Rhino Rigs B.V. | Rhino Rigs B.V. | O | G |
| Robert Barbagallo | Solotech Inc. | Solotech Inc. | O | DR |
| Roger Barrett | Star Events Group Ltd. | Star Events Group Ltd. | O | DR |
| Dana Bartholomew | Fisher Technical Services | Tait Towers Manufacturing LLC | P | CP |
| F. Robert Bauer | F.R. Bauer & Associates, LLC | F.R. Bauer & Associates, LLC | O | G |
| William Beautyman | Limelight Productions, Inc. | Limelight Productions, Inc. | P | DR |
| Nils Becker | Electronic Theatre Controls, Inc. | Electronic Theatre Controls, Inc. | A | MP |
| Maria Bement | MGM Grand | MGM Grand | O | U |
| Patrick Leigh Bettington | Stage Technologies | Tait Towers Manufacturing LLC | A | CP |
| Ian Bevan | Walt Disney Parks and Resorts | Walt Disney Company | A | U |
| Roy Bickel | Roy Bickel | Roy Bickel | O | G |
| Scott M. Blair | Full Throttle Films/ VER | Full Throttle Films/ VER | O | DR |
| Lee J. Bloch | Bloch Design Group, Inc. | Bloch Design Group, Inc. | O | G |
| Steve (BOZ) Bodzioch | LMG Inc. | LMG Inc. | O | DR |
| Keith Bohn | Keith Bohn | Keith Bohn | I | G |

| Name | Company | Representing | Voting status | Int cat |
|------------------------|---------------------------------------|---------------------------------------|---------------|---------|
| Ron Bonner | PLASA Technical Resources Office | PLASA EU | O | G |
| William Bradburn | Aerial Arts, Inc. | Aerial Arts, Inc. | P | U |
| Louis Bradfield | Louis Bradfield | Louis Bradfield | O | U |
| Buddy Braile | Bestek Lighting & Staging | Bestek Lighting & Staging | O | U |
| Barry Brazell | Barry Brazell | Barry Brazell | O | U |
| André Broucke | André Broucke | André Broucke | O | G |
| David M. Campbell | Geiger Engineers | Geiger Engineers | O | G |
| Vincent J. Cannavale | Motion Laboratories | Motion Laboratories | P | CP |
| Timothy Carlson | Circus Juventas | Circus Juventas | O | G |
| David Carmack | Columbus McKinnon Corp. | Columbus McKinnon Corp. | A | MP |
| Michael J. Carnaby | Mikan Theatricals | Mikan Theatricals | O | DR |
| Joseph Champelli | Entertainment Project Services, LLC | Entertainment Project Services, LLC | P | DE |
| Daniel J. Clark | Clark-Reder Engineering, Inc. | Clark-Reder Engineering, Inc. | O | G |
| Benjamin Cohen | Reed Rigging, Inc. | Reed Rigging, Inc. | O | DR |
| Ian Coles | Total Structures, Inc. | Total Structures, Inc. | O | MP |
| Gregory C. Collis | I.A.T.S.E. Local 16 | I.A.T.S.E. Local 16 | O | G |
| Stu Cox | ZFX Flying Inc. | ZFX Flying Inc. | A | CP |
| Dan Culhane | SECOA | SECOA | P | CP |
| Bruce Darden | Rigging Innovators, Inc. | Rigging Innovators, Inc. | P | CP |
| Randall W. A. Davidson | Risk International & Associates, Inc. | Risk International & Associates, Inc. | O | U |
| Robert Dean | ZFX Flying Inc. | ZFX Flying Inc. | P | CP |
| François Deffarges | Nexo | Nexo | O | MP |
| Jonathan Deull | JSD Projects LLC | JSD Projects LLC | I | U |
| Jim Digby | The Collaborative Endeavor Group | Linkin Park Touring/The Collective | O | U |
| Brad Dittmer | Stage Labor of the Ozarks | Stage Labor of the Ozarks | P | U |

| Name | Company | Representing | Voting status | Int cat |
|----------------------|---|---|---------------|---------|
| Russ Dusek | I Weiss | I Weiss | P | MP |
| Don Earl | Earl Girls, Inc. | Earl Girls, Inc. | O | DR |
| Noga Eilon-Bahar | Eilon Engineering Industrial Weighing Systems | Eilon Engineering Industrial Weighing Systems | O | MP |
| Douglas M. Eldredge | LMG Inc. | LMG Inc. | O | DR |
| James B. Evans | Mountain Productions Inc. | Mountain Productions Inc. | O | DR |
| Patrick Finn | J.R. Clancy Inc. | Wenger Corp. | A | CP |
| Nick Fleming | Walt Disney Parks and Resorts U.S. | Walt Disney Company | A | U |
| Adrian Forbes-Black | Total Structures, Inc. | Total Structures Inc. | P | MP |
| Howard Forryan | Harting Ltd. | Harting KGAA | O | G |
| Tim Franklin | Theta Consulting LLC | Theta Consulting LLC | O | G |
| Luca Galante | Alfa System Sas | Alfa System Sas | O | CP |
| Tony J. Galuppi | Tony J. Galuppi | Tony J. Galuppi | O | U |
| Mike Garl | Mike Garl Consulting LLC | Mike Garl Consulting LLC | P | DE |
| Ed Garstkiewicz | Harting Inc., North America | Harting KGAA | O | G |
| Chris Geisler | Fluid Design Inc. | Fluid Design Inc. | O | DE |
| Ethan William Gilson | ALPS | Advanced Lighting and Production Services | P | U |
| Sanford P. Gilzow | Shur-Rig LLC | Shur-Rig LLC | O | G |
| Rand Goddard | W.E. Palmer Co. | W.E. Palmer Co. | O | CP |
| Reuben Goldberg | Technic Services | Technic Services | O | U |
| William B. Gorlin | McLaren Engineering Group | M.G. McLaren, P.C. | P | G |
| Jerry Gorrell | Theatre Safety Programs | Theatre Safety Programs | P | G |
| Michael P. Gosenski | Rigging Systems LLC | Rigging Systems LLC | O | U |
| Erin Grabe | PLASA NA | PLASA NA | exf | G |
| Thomas M. Granucci | Associated Students, Cox Arena | San Diego State University | O | U |
| Earle T. Greene | Walt Disney Parks and Creative Entertainment | Walt Disney Company | A | U |

| Name | Company | Representing | Voting status | Int cat |
|-----------------------|------------------------------------|------------------------------------|---------------|---------|
| Pat Grenfell | Hoist Sales & Service | Hoist Sales & Service | P | DR |
| Joshua Grossman | Schuler Shook | Schuler Shook | A | DE |
| Joel A Guerra | Texas Scenic Company | Texas Scenic Company | A | DR |
| Don Halchak | Total Structures Inc. | Total Structures Inc. | A | MP |
| Rod Haney | I.A.T.S.E. Local 891 | I.A.T.S.E. Local 891 | P | U |
| Tim Hansen | Oasis Stage Werks | Oasis Stage Werks | P | DR |
| Pete Happe | Walt Disney Imagineering | Walt Disney Company | P | U |
| Sean Harding | High Output, Inc. | High Output, Inc. | O | G |
| Greg Hareld | Kleege Industries | Kleege Industries | O | U |
| Sandy Harned | ZFX Flying Inc. | ZFX Flying Inc. | A | CP |
| Dean Hart | Stage Rigging, Inc. | Freeman Companies | O | U |
| Herb Hart | Columbus McKinnon Corp. | Columbus McKinnon Corp. | P | MP |
| Philip Heron | San Francisco Opera Assn. | San Francisco Opera Assn. | O | U |
| Peter Herrmann | Motion Laboratories | Motion Laboratories | A | CP |
| David Herrmann | Motion Laboratories | Motion Laboratories | A | CP |
| Ted Hickey | OAP Audio Products | OAP Audio Products | O | MP |
| Chris Higgs | Total Solutions Group | Total Solutions Group | O | G |
| Jeremy Hochman | Full Throttle Films/ VER | Full Throttle Films/ VER | O | DR |
| Donald Hoffend_III | Avista Designs, LLC | Avista Designs, LLC | A | G |
| Donald A. Hoffend_Jr. | Avista Designs, LLC | Avista Designs, LLC | P | G |
| Daniel Lynn Houser | Real Rigging Solutions, LLC | Real Rigging Solutions, LLC | O | U |
| Christopher Jacobs | Virginia Beach City Public Schools | Virginia Beach City Public Schools | P | U |
| Wes Jenkins | Down Stage Right Industries | Down Stage Right Industries | O | CP |
| Joseph Jeremy | Niscon Inc. | Show Distribution Group, Inc. | P | MP |
| Peter Johns | Total Structures, Inc. | Total Structures, Inc. | O | MP |

| Name | Company | Representing | Voting status | Int cat |
|----------------------|---|---|---------------|---------|
| Scott Johnson | Tomcat USA, Inc. | Milos Group | A | MP |
| Ted Jones | Chicago Spotlight, Inc. | Chicago Spotlight, Inc. | P | U |
| Kent H. Jorgensen | IATSE Local 80 | IATSE Local 80 | O | G |
| Gary Justesen | Oasis Stage Werks | Oasis Stage Werks | O | DR |
| John Kaes | John Kaes | John Kaes | O | U |
| Christine L. Kaiser | Syracuse Scenery & Stage Lighting Co., Inc. | Syracuse Scenery & Stage Lighting Co., Inc. | P | DR |
| JoAnna Kamorin-Lloyd | Vincent Lighting Systems | Vincent Lighting Systems | O | U |
| Theresa Kelley | Total Structures, Inc. | Total Structures Inc. | A | MP |
| Nevin Kleege | Kleege Industries | Kleege Industries | O | U |
| Stephen Lars Klein | Stephen Lars Klein | Stephen Lars Klein | O | DE |
| Jerald Kraft | JTH Lighting Alliance | JTH Lighting Alliance | P | CP |
| Edwin S. Kramer | I.A.T.S.E. Local 1 | I.A.T.S.E. Local 1 | P | U |
| Kristen Kuipers | Newcomb & Boyd | Newcomb & Boyd | O | DE |
| Kyle Kusmer | Entertainment Structures Group | Steven Schaefer Associates | A | G |
| Ken P. Lager | LaFace & McGovern Associates | LaFace & McGovern Associates | O | DR |
| Jon Lagerquist | South Coast Repertory | South Coast Repertory | O | U |
| Roger Lattin | I.A.T.S.E. Local 728 | I.A.T.S.E. Local 728 | P | U |
| Jon Lenard | Applied Electronics | Applied Electronics | A | MP |
| John Van Lennep | Theatrix Inc. | Theatrix Inc. | O | DR |
| Mylan Lester | Creation Logics Ltd. | Creation Logics Ltd. | O | U |
| Michael Lichter | Electronic Theatre Controls, Inc. (DE) | Electronic Theatre Controls, Inc. | A | MP |
| Dan Lisowski | Dept. Of Theatre and Drama | University of Wisconsin - Madison | P | U |
| Baer Long | Ninja Rigging | Act 1 Rigging Inc. | O | G |
| Dennis J. Lopez | Automatic Devices Co. | Automatic Devices Co. | O | MP |
| Marcus Lopez Jr. | LMG Inc. | LMG Inc. | O | DR |

| Name | Company | Representing | Voting status | Int cat |
|------------------------|---|---|---------------|---------|
| Daniel H. Louis | Theta Consulting LLC | Theta Consulting LLC | P | G |
| Jeff Lucas | Cirque Du Soleil, Inc. | Cirque Du Soleil, Inc. | O | G |
| Darren Lucier | North Guard Fall protection Inc. | North Guard Fall protection Inc. | O | U |
| Sam Lunetta | Michael Andrews | Michael Andrews | O | DR |
| Wendy Manson | Cirque Du Soleil, Inc. | Cirque Du Soleil, Inc. | O | U |
| Magali Marcheschi | Polytechnic Montreal | Polytechnic Montreal | O | G |
| Gary Mardling | Kish Rigging | Kish Rigging | O | DR |
| Chuck McClelland | Jeamar Winches Inc. | Jeamar Winches Inc. | O | MP |
| Joseph McGeough | Flying by Foy | Foy Invenerprises, Inc. | P | CP |
| Bob McVay | Schuler Shook | Schuler Shook | A | DE |
| Richard C. Mecke | Texas Scenic Company | Texas Scenic Company | O | DR |
| Sam Michael | Thern, Inc. | Thern, Inc. | P | MP |
| Steven Michelman | Entertainment Project Services, LLC | Entertainment Project Services, LLC | A | DE |
| Orestes Mihaly | Production Resource Group | Production Resource Group | P | DR |
| Hank Miller | W.E. Palmer Co. | W.E. Palmer Co. | O | CP |
| Jeff T. Miller | Worldwide Standards and Auditing | Walt Disney Company | A | U |
| John Miller | University of North Carolina School of the Arts | University of North Carolina School of the Arts | O | U |
| Shaun Millington | SEW-Eurodrive, Inc. | SEW-Eurodrive, Inc. | O | MP |
| Timothy Mills | Geiger Engineers | Geiger Engineers | O | G |
| Scott Mohr | R&R Cases and Cabinets | R&R Cases and Cabinets | O | G |
| Rick Montgomery | R&M Materials Handling | R&M Materials Handling | P | MP |
| John P. Moore | Hall Associates Flying Effects | Hall Associates Flying Effects | A | CP |
| Bartholomew J. Mueller | Recreation Engineering Inc. | Recreation Engineering Inc. | O | DE |
| John "Andrew" Munro | animaenagerie | animaenagerie | O | U |
| Bob Murphy | Occams Razor Technical Services | Occams Razor Technical Services | O | G |

| Name | Company | Representing | Voting status | Int cat |
|------------------------|---------------------------------------|---------------------------------------|---------------|---------|
| Reid Neslage | H & H Specialties Inc. | H & H Specialties Inc. | P | MP |
| Mark Newlin | Xtreme Structures and Fabrication | Xtreme Structures and Fabrication | A | MP |
| Rikki Newman | Rikki Newman | Rikki Newman | O | U |
| Jim Niesel | Theatre Projects Consultants, Inc. | Theatre Projects Consultants, Inc. | P | DE |
| Richard J. Nix | Entertainment Structures Group | Steven Schaefer Associates | P | G |
| Shawn Nolan | Production Resource Group | Production Resource Group | A | DR |
| Tracy Nunnally | Hall Associates Flying Effects | Hall Associates Flying Effects | P | CP |
| Jennifer O'Leary | Columbus McKinnon Corp. | Columbus McKinnon Corp. | A | MP |
| Kimberly Corbett Oates | Schuler Shook | Schuler Shook | P | DE |
| Carlos Ortega | PSAV Presentation Services | PSAV Presentation Services | O | U |
| Gregory Orth | WNP Services, Inc. | WNP Services, Inc. | P | DR |
| Edward A. (Ted) Paget | Electronic Theatre Controls, Inc. | Electronic Theatre Controls, Inc. | A | MP |
| Michael Parrella | Arup | Arup | A | DE |
| Miriam Paschetto | Geiger Engineers | Geiger Engineers | P | G |
| Michael Patterson | Pook Diemont & Ohl, Inc. | Pook Diemont & Ohl, Inc. | O | CP |
| Rocky Paulson | Stage Rigging, Inc. | Freeman Companies | A | DR |
| Ben Peoples | Pittsburgh Hoist & Sandbag Company | Pittsburgh Hoist & Sandbag Company | O | CP |
| G. Anthony Phillips | I.A.T.S.E. Local 16 | I.A.T.S.E. Local 16 | O | U |
| Philip J. Piszczak | The National Telephone Supply Company | The National Telephone Supply Company | O | G |
| Kurt Pragman | Pragman Associates, LLC | Pragman Associates, LLC | O | G |
| Galen Price | Blue Man Group | Blue Man Group | P | U |
| Woody Pyeatt | A V Pro, Inc. | A V Pro, Inc. | P | DR |
| Gregory Quinkert | Motion Laboratories | Motion Laboratories | A | CP |
| Robert Ramsey | WNP Services, Inc. | WNP Services, Inc. | A | DR |
| Steven Ricks | Electronic Theatre Controls, Inc. | Electronic Theatre Controls, Inc. | P | MP |

| Name | Company | Representing | Voting status | Int cat |
|-----------------------------------|---|---|---------------|---------|
| Mark Riddlesperger | LA ProPoint, Inc. | LA ProPoint, Inc. | O | CP |
| John Ringelman | Stage Rigging, Inc. | Freeman Companies | P | DR |
| Timo Risku | Akumek | Akumek | O | DE |
| Jean-Phillippe Robitaille | Show Distribution Group, Inc. | Show Distribution Group, Inc. | A | MP |
| Rick Rosas | Texas Scenic Company | Texas Scenic Company | A | DR |
| Karl G. Ruling | PLASA NA | PLASA NA | exf | G |
| Shawn Sack | A.C.T. Lighting | A.C.T. Lighting | O | DR |
| Bill Sapsis | Sapsis Rigging, Inc. | Sapsis Rigging, Inc. | P | U |
| Peter A. Scheu | Scheu Consulting Services, Inc. | Scheu Consulting Services, Inc. | P | DE |
| Chris Schmidt | Stage Rigging, Inc. | Freeman Companies | A | DR |
| Peter "Punch" Christian Schmidtke | Hollywood Lighting Services, Inc. | Hollywood Lighting, Inc. | O | DR |
| Jason Schumacher | ZFX Flying Inc. | ZFX Flying Inc. | A | CP |
| Joseph S. Schuster | Simpson Gumpertz & Heger | Simpson Gumpertz & Heger | P | DE |
| Ford Sellers | Chauvet Lighting | Chauvet Lighting | O | MP |
| Steven Serafin | Chubb Group of Insurance Companies | Chubb Group of Insurance Companies | O | G |
| Steven C. Shaw | Levitating Productions, Inc. | Levitating Productions, Inc. | O | MP |
| Harold Ike Shippers | Syracuse Scenery & Stage Lighting Co.Inc. | Syracuse Scenery & Stage Lighting Co.Inc. | A | DR |
| Q. Brian Sickels | Q. Brian Sickels | Q. Brian Sickels | O | G |
| Monica Skjonberg | Skjonberg Controls, Inc. | Skjonberg Controls, Inc. | O | CP |
| Knut Skjonberg | Skjonberg Controls, Inc. | Skjonberg Controls, Inc. | O | CP |
| William Scott Sloan | William Scott Sloan | William Scott Sloan | O | U |
| John C. Snook | Thermotex Industries Inc. | Thermotex Industries Inc. | P | CP |
| Russell Solomon | Texas Scenic Company | Texas Scenic Company | A | DR |
| Todd Spencer | PSAV Presentation Services | PSAV Presentation Services | O | U |
| Michael L. Savage, Sr. | Middle Dept. Inspection Agency, Inc. | Middle Dept. Inspection Agency, Inc. | O | G |

| Name | Company | Representing | Voting status | Int cat |
|----------------------|---|---|---------------|---------|
| Rob Stevenson | SEW-Eurodrive, Inc. | SEW-Eurodrive, Inc. | O | MP |
| Joachim Stoecker | CAMCO GmbH | CAMCO GmbH | O | MP |
| Stephen G. Surratt | Texas Scenic Company | Texas Scenic Company | P | DR |
| Karl V. Sutter-III | Kimley-Horn and Associates, Inc. | Kimley-Horn and Associates, Inc. | O | DE |
| Andy Sutton | AFX UK Ltd. | AFX UK Ltd. | O | U |
| Peter V. Svitavsky | J.R. Clancy, Inc. | Wenger Corp. | P | CP |
| Ross Taylor | Taylor & Taylor Associates | Taylor & Taylor Associates | O | G |
| Ken Tilson | Columbus McKinnon Corp. | Columbus McKinnon Corp. | A | MP |
| Will Todd | Tomcat USA, Inc. | Milos Group | P | MP |
| James Tomlinson | Team Tomlinson | Team Tomlinson | O | G |
| Stephen Vanciel | Stephen Vanciel | Stephen Vanciel | O | U |
| Elmer Veith | Total Structures - Eastern US Sales Office | Total Structures, Inc. | A | MP |
| Michael Viehmeyer | Michael Viehmeyer | Michael Viehmeyer | O | U |
| Steve Walker | Steve A. Walker & Associates | Steve A. Walker & Associates | P | G |
| Charlie Weiner | Tomcat USA | Milos Group | A | MP |
| Michael Wells | Xtreme Structures and Fabrication | Xtreme Structures and Fabrication | P | MP |
| Marty Wesstrom | Mountain Productions Inc. | Mountain Productions Inc. | P | DR |
| Jeff Wilkowski | Thern, Inc. | Thern, Inc. | A | MP |
| R. Duane Wilson | George C. Izenour Associates | Amer. Society of Theatre Consultants | P | DE |
| Max A. Wilson | Applied Electronics | Applied Electronics | P | MP |
| Nicholas Gill Wright | I.A.T.S.E. Local 16 | I.A.T.S.E. Local 16 | O | G |
| Jiantong Wu | Beijing Special Engineering Design & Research Institute | Beijing Special Engineering Design & Research Institute | O | G |
| Robert Young | Arup | Arup | P | DE |

Voting Status Key: P = Principal voter, A = Alternate voter, I = Individual voter, O = Observer member, exf = Ex Officio member (staff)

Interest Category Key: CP = Custom-market producer, DE = Designer, DR = Dealer or rental company, G = General interest, MP = Mass-market producer, U = User