

Minutes
Rigging Working Group
Friday, 30 January 2015
Web-conference by WebEx

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

Recording secretaries: Karl G. Ruling and Erin Grabe; PLASA NA; exf; G

Members present:

Jesse Adams; Rose Brand; P; DR
Frank Allison; Frank Allison; O; G
Matthew Antonucci; Contract Services Administration Trust Fund; P; U
John Van_Arsdale; University of Wisconsin - Madison; A; U
Ian Bevan; Walt Disney Company; A; U
William Bradburn; Aerial Arts, Inc.; P; U
Dan Culhane; SECOA; P; CP
Bruce Darden; Rigging Innovators, Inc.; P; CP
Jonathan Deull; JSD Projects LLC; I; U
Nick Fleming; Walt Disney Company; A; U
Mike Garl; Mike Garl Consulting LLC; P; DE
Ethan William Gilson; Advanced Lighting and Production Services; P; U
William B. Gorlin; M.G. McLaren, P.C.; P; G
Jerry Gorrell; Theatre Safety Programs; P; G
Christine L. Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR
Jerald Kraft; JTH Lighting Alliance; P; CP
Ken P. Lager; LaFace & McGovern Associates; O; DR
Jon Lenard; Applied Electronics; A; MP
Sam Michael; Thern, Inc.; P; MP
Reid Neslage; H & H Specialties Inc.; P; MP
Richard J. Nix; Steven Schaefer Associates; P; G
Tracy Nunnally; Hall Associates Flying Effects; P; CP
Kimberly Corbett Oates; Schuler Shook; P; DE
Edward A. (Ted) Paget; Electronic Theatre Controls, Inc.; A; MP
Woody Pyeatt; A V Pro, Inc.; P; DR
Steven Ricks; Electronic Theatre Controls, Inc.; P; MP
John Ringelman; Freeman Companies; P; DR
Joseph S. Schuster; Simpson Gumpertz & Heger; P; DE
Steven Serafin; Chubb Group of Insurance Companies; O; G
Peter V. Svitavsky; Wenger Corp.; P; CP
Steve Walker; Steve A. Walker & Associates; P; G
R. Duane Wilson; Amer. Society of Theatre Consultants; P; DE
Max A. Wilson; Applied Electronics; P; MP
Robert Young; Arup; P; DE

Visitors present:

Eric Johnson, Cisco
Jason Potterf, Cisco
Jason Shupe

1 Opening remarks

The meeting was called to order by Bill Sapsis at 12:01 p.m. Eastern Standard Time.

Jason Potterf briefly explained the Webex interface and meeting etiquette.

2 Attendance and membership

2.1 Introduction of those present

Bill Sapsis read down the list of attendees present.

2.2 Attendance

Attendance was taken during the introduction of the attendees.

2.3 Call for quorum

A poll of attendees determined that a quorum was present.

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 voter has missed the last two meetings and is being moved to Observer status due to lack of attendance at this meeting:

Peter A. Scheu; Scheu Consulting Services, Inc.; P; DE

2.6 Processing of new membership and change in status requests:

As of 29 January 2015, the following applications have been received and logged:

Stephen Lars Klein; I; DE (Applied as Individual voter, but voted in as Observer due to lack of attendance)

Bill Bradburn; Aerial Arts; O to P (Requested change from Observer to Principal)

John Van Arsdale; Univ. of Wisconsin – Madison; O to A (Requested change from Observer to Alternate)

Mike Garl moved to approve the new member and changes in status. The motion was seconded and approved by poll of attendees and voice vote, with no opposition.

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
Shawn Sack	A.C.T. Lighting	P	DR
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

Name	Representing	Voting status	Interest category
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 Invenenterprises, Inc.	P	CP
John Ringelman	Freeman Companies	P	DR
Rocky Paulson	Freeman Companies	A	DR
Chris Schmidt	Freeman Companies	A	DR
Jeremy Hochman	Full Throttle Films/ VER	P	DR
Scott M. Blair	Full Throttle Films/ VER	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
Ed Garstkiewicz	Harting KGAA	P	G
Howard Forryan	Harting KGAA	A	G
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
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
Steven C. Shaw	Levitating Productions, Inc.	P	MP
William Beautyman	Limelight Productions, Inc.	P	DR
Steve (BOZ) Bodzioch	LMG Inc.	P	DR
Douglas M. Eldredge	LMG Inc.	A	DR
Marcus Lopez Jr.	LMG Inc.	A	DR
William B. Gorlin	M.G. McLaren, P.C.	P	G

Name	Representing	Voting status	Interest category
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
Todd Spencer	PSAV Presentation Services	P	U
Carlos Ortega	PSAV Presentation Services	A	U
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
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-Philippe 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
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

Name	Representing	Voting status	Interest category
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
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
Voting Status Key: P = Principal voter, A = Alternate voter, I = Individual voter			
Custom-market producer		CP	10
Designer		DE	6
Dealer or rental company		DR	14
General interest		G	8
Mass-market producer		MP	12
User		U	15
Total votes possible:			65

3 Approval of minutes from the previous meeting

See the draft minutes of the November meeting, *RIGmin11-2014.pdf*.

Bruce Darden moved to approve the November minutes as drafted. The motion was seconded and approved by polling voters and a voice vote, with no opposition and 3 abstentions.

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 informed the attendees that the pamphlet can be emailed upon request.

4.2 Call for patents

The following statement is to be read aloud to the assembly:

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

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

Karl Ruling explained the addition of item 6.1 regarding the issuance of U.S. Patent 8909379. .

5 Approval of the agenda

Dan Culhane moved to approve the agenda as drafted. The motion was seconded and approved by poll and voice vote.

6 New business

6.1 Patent as possible conflict of interest

Per an email dated 10 December 2014, Joseph Jeremy, representing Show Distribution Group, Inc. would like to present the following patent information to the Rigging Working Group as a possible conflict of interest with a RWG standard:

Number: 8909379

Title: Winch Control System

Inventor: Fisher

Assignee: Tait Towers Manufacturing

<http://www.mikewoodconsulting.com/patentdb/showone.php?pnumber=8909379&inccount=1>

Karl Ruling asked if anyone was concerned that this patent had any bearing on or conflicted with any of our published or draft standards. Bruce Darden noted that there appears to be no issue at this time. Nothing else on the matter was discussed.

6.2 Request from Actors' Equity about equipment fall restraint

Bruce Darden reported that he spoke with Gary Fails of City Theatrical who reported that only about 1% of their accessories sold in the U.S. are equipped with safety cables. He added that the spring-loaded gel retainer that

was added in the 80's is the primary restraint for gel frames and that no brand of luminaires has a safety feature to prevent the gobo holder from falling out. E1.32 requires inspection of the spring clip and requires that the user check to be sure a safety cable is present. Bruce Darden concluded with a recommendation that the RWG not get involved with this issue since the EPWG has already set a precedent with E1.32.

Karl Ruling added that UL 1573 has a testing method and that E1.32 says the cable needs to be present, but does not actually say that it shall be used. Neither UL 1573 nor E1.32 are use standards, they are testing and inspection standards. The EPWG is passionate about this issue. Bill Sapsis agreed that the RWG should keep away from the issue.

Karl Ruling said that the issue would be brought to the EPWG. Bill Sapsis asked to bring the issue back if the EPWG doesn't take action.

6.3 Other new business

There was no other new business at this time.

7 Old business

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

No news or action at this time.

7.2 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.

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

Bill Sapsis mentioned that the draft standard is in public review through the end of the day 2 March 2015.

Erin Grabe reported that two review forms, one with comments and one with no comments, had been received.

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

Jesse Adams reported that the last meeting had fallen apart. Ethan Gilson added that the group had been given homework and that the desire is to have a draft ready for the working group by USITT.

Bill Sapsis added that there is interest from the public on this topic.

7.5 BSR E1.4-3 - 201x - Hand winch rigging

Jerry Kraft reported. The questions from the task group were displayed to the group and are copied below.

1. Drill Motor Drives. We've had extensive discussion about this topic, think it needs to be included in the draft standard. TG wants to preflight this wording to see if anyone has any immediate issue, or maybe better wording.

"8.2 Alternative Drive Augmentation It is common practice to utilize drill motors to augment the drive input speed of these systems. This shall only be done in accordance with the hoist manufacturer's instructions. The supplemental drive augmentation shall not have a detrimental effect upon the function of the load-holding devices, frame or internal components of the hoist."

2. Looking for clarification on reducing redundancy between the E1.4 documents. For example E1.4-1 defines "battens". Does the E1.4-3 need to also define battens OR list battens but state to reference E1.4-1 OR have a general reference for all components define in other E1.4-XX standards OR not list it at all because it is already covered in E1.4 suite of standards. in a similar way how about sections such as Risk Assessment where this should be the same for all the E1.4-XX standards.

Jerry Kraft said that the task group was looking for advice regarding point 1. There was some discussion. Bruce Darden encouraged the task group to add language to the document for how auxiliary drives should be used and

asked for instructions to be mounted next to the winch explaining how the auxiliary drive is to be used. Jerry Kraft will look into implementing some language into the annex.

Pete Svitavsky asked that there be an outline of the hazards which the user should consider. Jerry Kraft thought that would be good annex material, as well.

Ethan Gilson suggested that a totally manual winch be marked as not being for drill motors. Pete Svitavsky thought that the risk assessment should already address this.

There was then discussion as to whether the individual documents in the suite should be stand-alone, or reference each other. Steve Walker and Kimberly Corbett Oates argued for having the standards be self-contained.

Sam Michael asked for a common language from one document to the other.

Jerry Kraft said that he is hearing that the general consensus of the group is that the documents to be stand-alone. Bruce Darden said he didn't agree, and that the original idea was that this document was supposed to be a supplement to the suite for hand winches. Bill Sapsis and Richard Nix agreed with Bruce Darden. Bill Gorlin said this was a good discussion. Karl Ruling recommended that the group focus on getting the content on the page.

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

No news or action at this time.

7.6 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.

7.7 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.

7.8 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.

7.9 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.

7.10 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.

7.11 ANSI E1.21 - 2013, Temporary Ground-Supported Overhead Structures Used To Cover Stage Areas and Support Equipment in the Production of Outdoor Entertainment Events (revision, reaffirmation, or withdrawal by 2018)

Richard Nix said that E1.21 is now referenced in the 2015 International Fire Code.

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

See *E1-22_FrstRvwProposedResols.pdf* and *BSR_E1-22-201x_r11.pdf*.

Dan Culhane moved that the group accept the comment resolutions. The motion was seconded. There was discussion.

Steve Walker objected to several of the resolutions to his comments, many of which asked for a design factor. He objected to the resolutions that leave the determination of the design factor to the qualified design professional. The group went through each of Steve Walker's comments over which there was disagreement and discussed the comments and resolutions.

Pete Svitavsky said he was okay with the resolutions to his comments.

Karl Ruling offered a summation of the discussion: Steve Walker wants a design factor added to the document; Dan Culhane wants to leave the design factor to the design professional; The working group should decide whether to accept or reject these resolutions. By a poll of voters, the motion failed. Karl Ruling asked that the working group make recommendations to the task group as to what to change to make the resolutions acceptable.

The group took a ten minute break and resumed at 12:40.

7.13 BSR E1.39 - 20xx, Entertainment Technology –Selection and Use of Personal Fall Arrest Systems on Portable Structures Used in the Entertainment Industry

Karl Ruling reported that the standard was approved by ANSI and published on 28 January 2015.

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

Bill Sapsis mentioned that the current draft is in its second public review through the end of the day 2 March 2015.

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

From the November draft minutes:

Shawn Nolan apologized for not having drafted any text about design factors and working load limits, but said that he will be doing so very soon. He will offer the text to Christine Kaiser for inclusion in the document.

Christine Kaiser reported that Shawn Nolan had still not offered text yet. Bill Sapsis said that perhaps at USITT we will discuss going in a different direction.

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

Pete Svitavsky reported that there are a lot of comments to resolve. The task group is still working through them.

7.18 BSR E1.50—Video wall project

Bill Sapsis mentioned that the current draft is in public review through the end of the day 2 March 2015.

Erin Grabe reported that two responses had been received, one yes and one no with reasons.

Bruce Darden expressed his confusion within the document on what qualifies as a video wall, for example, a 24" TV mounted on a 10' boom. He explained that it is difficult to determine what's in, what's out, but said that he would offer comments in public review. Richard Nix said that the comments would be welcome.

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

Jonathan Deull reported that the task group members had met and are making progress.

8 Other business and announcements

8.1 Remembering Jyle Nogee

The following press release was issued from Texas Scenic Company:

San Antonio, TX, January 5, 2015 - It is with the utmost sadness that Texas Scenic Company reports the passing of friend and colleague, Jyle Nogee. Jyle had over 15 years of experience in the theatre industry and founded Houston-based Theatre Design Services before joining Texas Scenic in March of 2014, where he served as head of the Rigging Inspection Group. He will be deeply missed.

"Jyle was one of the most thoughtful and caring guys I have ever met. His love and dedication for his work was seen all the way down to every Safety Inspection Report he wrote," said Stephen Surratt, COO.

Texas Scenic expresses our deepest condolences to Lorraine Nogee and her family during this difficult time.

Services for Jyle were held on Friday, January 2, 2015 in Houston, TX.

Bill Sapsis offered his condolences. Christine Kaiser asked Steve Surratt if there was any charity or other way to offer condolences, but no charity is known.

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 sessions at USITT 2015

On 18 March 2015 at 6pm, members of the TSP will be presenting, "I've got my Halloween Fog Machine, They are all the same, right?" And on 19 March 2015 at 1pm, "PLASA Standards - Where are they? What are they? How do I use them?"

Erin Grabe reported that these two sessions are reprises of the LDI sessions.

Kimberly Corbett Oates said that programming for 2016 will be finalized at the upcoming USITT Conference.

Bill Sapsis reported that NATEAC will happen again in New York City in 2016 at the Roosevelt Hotel.

8.4 TSP sessions at LDI 2015

Erin Grabe reported that information on PLASA sessions at LDI are due by USITT. We would like to increase the technical level of our sessions this year, and have two to three available slots for the RWG. Ideas can be submitted to erin.grabe@plasa.org. The schedule and all details will be confirmed at or before our next meeting.

8.5 CEN standards update

No news or updates at this time.

9 Schedule for future meetings

Bill Sapsis announced that the next meeting is scheduled for Thursday, 19 March 2015, from 7-11pm, at the Hilton Cincinnati Netherland Plaza, in conjunction with the 2015 USITT Conference and Stage Expo.

Jason Potterf asked for a poll on the WebEx experience. 57% of attendees found the meeting to be acceptable and just as good as a face-to-face meeting.

10 Adjournment

Jerry Kraft moved to adjourn. The motion was seconded, and, hearing no objections, Bill Sapsis declared the meeting adjourned at 1:56.

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	A	DR
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Steve (BOZ) Bodzioch	LMG Inc.	LMG Inc.	P	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
Noga Eilon-Bahar	Eilon Engineering Industrial Weighing Systems	Eilon Engineering Industrial Weighing Systems	O	MP
Douglas M. Eldredge	LMG Inc.	LMG Inc.	A	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	A	G
Tim Franklin	Theta-Consulting	Theta-Consulting	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	P	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
Pat Grenfell	Hoist Sales & Service	Hoist Sales & Service	P	DR

Name	Company	Representing	Voting Status	Int. cat.
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	P	DR
Daniel Lynn Houser	Real Rigging Solutions, LLC	Real Rigging Solutions, LLC	O	U
Donald Hoffend_III	Avista Designs, LLC	Avista Designs, LLC	A	G
Karl V. Sutter_III	Kimley-Horn and Associates, Inc.	Kimley-Horn and Associates, Inc.	O	DE
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
Scott Johnson	Tomcat USA, Inc.	Milos Group	A	MP

Name	Company	Representing	Voting Status	Int. cat.
Ted Jones	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	P	U
Kent H. Jorgensen	IATSE Local 80	IATSE Local 80	O	G
Donald A. Hoffend_Jr.	Avista Designs, LLC	Avista Designs, LLC	P	G
Marcus Lopez Jr.	LMG Inc.	LMG Inc.	A	DR
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
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
Jeff Lucas	Cirque Du Soleil, Inc.	Cirque Du Soleil, Inc.	O	G

Name	Company	Representing	Voting Status	Int. cat.
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
Reid Neslage	H & H Specialties Inc.	H & H Specialties Inc.	P	MP
Mark Newlin	Xtreme Structures and Fabrication	Xtreme Structures and Fabrication	A	MP

Name	Company	Representing	Voting Status	Int. cat.
Rikki Newman	Rikki Newman	Rikki Newman	O	U
James Niesel	Arup	Arup	O	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	A	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
Michael Reed	Reed Rigging, Inc.	Reed Rigging, Inc.	O	DR
Steven Ricks	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	MP
Mark Riddlesperger	LA ProPoint, Inc.	LA ProPoint, Inc.	O	CP

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John Ringelman	Stage Rigging, Inc.	Freeman Companies	P	DR
Timo Risku	Akumek	Akumek	O	DE
Jean-Philippe 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	P	DR
Bill Sapsis	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	P	U
Peter A. Scheu	Scheu Consulting Services, Inc.	Scheu Consulting Services, Inc.	O	DE
Chris Schmidt	Stage Rigging, Inc.	Freeman Companies	A	DR
Peter "Punch" Christian Schmidtke	Hollywood Lighting Services, Inc.	Hollywood Lighting, Inc.	O	DR
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.	P	MP
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
Todd Spencer	PSAV Presentation Services	PSAV Presentation Services	P	U
Michael L. Savage, Sr.	Middle Dept. Inspection Agency, Inc.	Middle Dept. Inspection Agency, Inc.	O	G
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
Andy Sutton	AFX UK Ltd.	AFX UK Ltd.	O	U

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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
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
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