

Minutes
Rigging Working Group
Saturday 06 October 2018
D/FW Marriott Solana
Westlake, TX

Chairpersons:

Bill Sapsis; Sapsis Rigging; P; U (Presiding),
Christine L. Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR

Recording secretaries: Karl Ruling and Richard Nix; ESTA

Members in attendance:

Jacob Abbott; PSAV Presentation Services; O; U
Jesse Adams; Rose Brand; P; DR
Keith Bohn; Keith Bohn; O; G
Joseph Champelli; Entertainment Project Services, LLC; P; DE
Jay Cid; R&M Materials Handling / Stagemaker; A; MP
Dan Culhane; Wenger Corp.; A; MP
Bruce Darden; InterAmerica Stage, Inc.; P; CP
David Darland; PSAV Presentation Services; O; U
Tony Diemont; Texas Scenic Company; P; DR
Russ Dusek; I Weiss; P; MP
Don Earl; Earl Girls, Inc.; P; DR
Mike Garl; Mike Garl Consulting LLC; P; DE
Ethan W Gilson; Entertainment Rigging Services, LLC; P; U
Jerry Gorrell; Theatre Safety Programs; P; G
Pat Grenfell; Hoist Sales & Service; P; DR
Rod Haney; I.A.T.S.E. Local 891; P; U
Tim Hansen; Oasis Stage Werks; P; DR
Robert Haycock; UC Berkeley; I; U
Joseph Jeremy; Show Distribution Group, Inc.; P; CP
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U
Tom Lapp; Cirque Du Soleil, Inc.; A; U
Kalen Larson; ZFX, Inc.; P; CP
Roger Lattin; I.A.T.S.E. Local 728; P; U
Jon Lenard; Applied Electronics; A; MP
Jacob E. Loretto; Musson Theatrical Inc.; P; DR
Bill McIntyre; Show Distribution Group, Inc.; A; CP
Sam Michael; Thern, Inc.; P; MP
Orestes Mihaly; Production Resource Group; P; DR
Rick Montgomery; Motion Laboratories, Inc.; P; MP
John P. Moore; Vertigo; A; CP
Chris Moulton; Contract Services Administration Trust Fund; P; U
Bartholomew J. Mueller; Recreation Engineering Inc.; P; DE
Mark Newlin; Xtreme Structures and Fabrication; A; MP
Jim Niesel; Theatre Projects Consultants, Inc.; P; DE
Demian Purdy; PSAV Presentation Services; A; U
Steven Ricks; Electronic Theatre Controls, Inc.; P; MP
John Ringelman; Freeman Companies; P; DR
Tim Salamon; PSAV Presentation Services; O; DR
Steven Serafin; Chubb Group of Insurance Companies; P; G
Stewart Stephens; Ashford Management Group; O; DR
Jason Tello; Tyler Truss Systems; P; CP
Will Todd; Area Four Industries; P; MP
Stephen Vanciel; IATSE Local 631; O; U

Elmer Veith; Elmer Veith; I; DE
Steve Walker; Steve A. Walker & Associates; P; G
Mike Weston; PSAV Presentation Services; O; DR
R. Duane Wilson; Amer. Society of Theatre Consultants; P; DE
Stephan Jon Wood; Tait Towers Manufacturing LLC; P; CP
Paul Zagajeski; Wenger Corp.; A; CP

1 Opening Remarks

Bill Sapsis called the meeting to order at 19:00, with a welcome to the meeting and thanks to everyone present.

1.1. Introductions

Bill Sapsis asked everyone in the room to introduce themselves. Richard Nix read off the names of the people on-line, who were also verified for the attendance record using the WebEx online session details.

Karl Ruling passed around a Canary yellow sign-in sheet for everyone to indicate their presence in the room.

2 Patent and anti-trust statements

2.1 Reading of the anti-trust statement

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

ESTA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all ESTA 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 or will not do business with or the markets in which members will conduct business.

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

Karl Ruling displayed some of the easy-to-read anti-trust pamphlets.

No anti-trust problems were reported to the assembly.

2.2 Reading of the call for patents

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

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

In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent, patent application, copyright, or other protected 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.

3 Attendance and Membership

3.1 Requirements for membership

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

Membership is open to all parties who are affected by the work of the group; membership in ESTA is not a requirement, but there is a \$100/person/year participation fee to help fund the costs of running the Technical

Standards Program. Voting members are required to attend meetings and vote on letter ballots. Any principal member and alternate that both miss three consecutive meetings or letter ballots will have their membership status changed to observer. This action will be taken at the beginning of the first meeting after such inaction and will be recorded in the minutes of that meeting.

3.2 Determination of a quorum

There are currently 60 votes possible. A quorum is 21; supermajority is 31.

Bill Sapsis asked for a show of hands and responses from those on-line. A count revealed that a supermajority was present

3.3 Processing of new membership and status change requests

As of 12 September 2018, the following applications and status change requests have been received:

Tony Diemont; Texas Scenic Company; P; DR (new application)
 Phillip Lewis; TAIT Towers; O; DE (new application)
 Miriam Paschetto; Geiger Engineers; P; G (voluntary change request to Observer status)
 Elmer Veith (status change application)
 Keith Bohn, Production Rigging Resources, Pincipal. NOTE THE COMPANY NAME—IT'S ADDED.
 Stewart Stephens, JSAV to become a voting member.

Eddie Kramer moved to accept the applications and requests as submitted. The motion was seconded, and carried by show of hands.

3.4 Changes to observer 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:

Eric Rouse; Chicago Flyhouse; P;CP
 Ian Bevan; Walt Disney Parks & Resorts; P; U
 Tyler Bland; Walt Disney Parks & Resorts; A; U

None of the persons were present, so their status has been changed to that of Observer in accordance with the Policies and Procedures.

3.5 Consensus body

This is the full consensus body during the meeting, after all applications and status changes have been made, and including those not present. (One person withdrew from the working group the day after the meeting.)

Name	Representing	Status	Int Cat
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
Will Todd	Area Four Industries	P	MP
Stewart Stephens	Ashford Management Group	P	DR
Donald Hoffend_III	Avista Designs, LLC	P	G
Steven Serafin	Chubb Group of Insurance Companies	P	G
Jeremy Hodgson	Cirque Du Soleil, Inc.	P	U
Tom Lapp	Cirque Du Soleil, Inc.	A	U
Ken Tilson	Columbus McKinnon Corp.	P	MP
Nick Fleming	Columbus McKinnon Corp.	A	MP
Chris Moulton	Contract Services Administration Trust Fund	P	U
Don Earl	Earl Girls, Inc.	P	DR
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP

Name	Representing	Status	Int Cat
Michael Lichter	Electronic Theatre Controls, Inc.	A	MP
Elmer Veith	Elmer Veith	I	DE
Joseph Champelli	Entertainment Project Services, LLC	P	DE
Steven Michelman	Entertainment Project Services, LLC	A	DE
Ethan W Gilson	Entertainment Rigging Services, LLC	P	U
Charlie Weiner	Eurotruss	P	MP
John Ringelman	Freeman Companies	P	DR
Rocky Paulson	Freeman Companies	A	DR
Chris Schmidt	Freeman Companies	A	DR
Ted Jones	Grand Stage	P	U
Reid Neslage	H & H Specialties Inc.	P	MP
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
Bruce Darden	InterAmerica Stage, Inc.	P	CP
Jonathan Deull	JSD Projects LLC	I	U
William Beautyman	Limelight Productions, Inc.	P	DR
William B. Gorlin	M.G. McLaren, P.C.	P	G
Mike Garl	Mike Garl Consulting LLC	P	DE
Rick Montgomery	Motion Laboratories, Inc.	P	MP
Mike Webb	Motion Laboratories, Inc.	A	MP
Marty Wesstrom	Mountain Productions Inc.	P	DR
Jacob E. Loretto	Musson Theatrical Inc.	P	DR
Tim Hansen	Oasis Stage Werks	P	DR
Orestes Mihaly	Production Resource Group	P	DR
Shawn Nolan	Production Resource Group	A	DR
Keith Bohn	Production Rigging Resources	P	G
Carlos Ortega	PSAV Presentation Services	P	U
Demian Purdy	PSAV Presentation Services	A	U
Sarah Gascoine	PSAV Presentation Services [Withdrew on 7 October 2018]	A	U
Dave Sinkhorn	R&M Materials Handling / Stagemaker	P	MP
Jack Gallagher	R&M Materials Handling / Stagemaker	A	MP
Jay Cid	R&M Materials Handling / Stagemaker	A	MP
Bartholomew J. Mueller	Recreation Engineering Inc.	P	DE
Bennett Brian	Reed Rigging Inc.	P	DR
Richard J. Nix	Richard J. Nix	I	G
Jesse Adams	Rose Brand	P	DR
Bill Sapsis	Sapsis Rigging, Inc.	P	U
Kyle Kusmer	Schaefer, Inc	P	G
Joseph Jeremy	Show Distribution Group, Inc.	P	CP
Bill McIntyre	Show Distribution Group, Inc.	A	CP
Dana Bartholomew	Silver State Wire Rope and Rigging	P	DR

Name	Representing	Status	Int Cat
Brad Dittmer	Stage Labor of the Ozarks	P	U
Steve Walker	Steve A. Walker & Associates	P	G
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Harold Ike Shippers	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Stephan Jon Wood	Tait Towers Manufacturing LLC	P	CP
Russell Solomon	Texas Scenic Company	P	DR
Tony Diemont	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
Jason Tello	Tyler Truss Systems	P	CP
Tracie Allen	Tyler Truss Systems	A	CP
Robert Haycock	UC Berkeley	I	U
Tracy Nunnally	Vertigo	P	CP
John P. Moore	Vertigo	A	CP
Peter V. Svitavsky	Wenger Corp.	P	CP
Dan Culhane	Wenger Corp.	A	CP
Paul Zagajeski	Wenger Corp.	A	CP
Michael Wells	Xtreme Structures and Fabrication	P	MP
Mark Newlin	Xtreme Structures and Fabrication	A	MP
Theresa Kelley	Xtreme Structures and Fabrication	A	MP
Kalen Larson	ZFX, Inc.	P	CP
Total possible votes:		60	
Votes by interest category:	Mass market producer	MP	11
	Custom market producer	CP	8
	Dealer or rental company	DR	13
	Designer	DE	6
	General Interest	G	9
	User	U	13
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			

4 Approval of the minutes from the last meeting

See *RIGmin07-2018r1DRAFT.pdf*

Dan Culhane moved. Seconded. Approved with a show of hands and

5 Approval of agenda

The agenda must be approved, either as drafted or with modifications, by a vote of the working group.

Roger Lattin moved to approve the agenda as submitted. The motion was seconded and carried by show of hands.

6 Old business

6.1 BSR E1.1 – 201x, wire rope ladders (open for revision)

Task group members: Sandy Gilzow (Chair), Chris Schmidt, and Chris Kaiser

It was approved by ANSI on 27 September 2018!

Will publish it next week, said Richard Nix.

Our first is now our most recent, said Bill Sapsis.

6.2 BSR E1.2 - 20xx, Entertainment Technology - Design, Manufacture and Use of Aluminum Trusses and Towers (Last published in 2012 – Open for revision)

Task group members: Keith Bohn (Chair), Jason Tello, Will Todd, Jacob Abbott, Jerry Gorrell, Elmer Veith, and Mike Garl

From the July minutes:

Elmer Veith reported that he had lunch with Keith Bohn, who said that he would have some progress to report for the October meeting.

Keith Bohn said that he has reinvigorated the group and might have a document for the January meeting.

6.3 ANSI E1.4-1 - 2016, Entertainment Technology--Manual Counterweight Rigging Systems (Revise, reaffirm, or withdrawal by 11 October 2021)

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

Task group members: Bart Mueller (Chair) Ethan Gilson, Ted Jones, Jesse Adams, and Brad Dittmer.

Any updates?

Bart Mueller reported that they have comments, and need to have one more task group meeting to work them in to the document, a draft of which should be ready in time for the January meeting.

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

Task group members: Richard Nix and Sam Michael

Any news, action, or updates to report?

Sam Michael reported that they have worked on language about drill-drives to include in the draft standard.

6.6 BSR E1.6-1 - 201x, Entertainment Technology--Powered Hoist Systems (last published in 2012--currently open for revision)

Task group members: Bruce Darden (chair), Chris Kaiser, Dan Culhane, Pete Svitavsky, Stephan Wood, Steve Ricks, Jim Niesel, Sandy Gilzow, Joe Champelli, and Steve Walker.

It's in public review until 23 October 2018.

Bruce Darden reported that it is still in public review. He moved that if the document does not have public review comments that a letter ballot be issued to accept the document as an American National Standard. The motion was seconded, and carried with one dissenting vote, one abstention, and the remaining votes in favor of the motion.

6.7 BSR E1.6-2 - 20xx, Entertainment Technology--Design, Inspection, and Maintenance of Electric Chain Hoists for the Entertainment Industry (last published in 2018 – Open for revision)

Task group members: Ken Tilson, John Ringleman, Ben Brian, Marty Westrom, Rick Montgomery, Chris Schmidt, Mike Weston, Sandy Gilzow, and Elmer Veith (Chair)

Any news, action, or updates to report?

Elmer Veith reported that the task group met today. Not great attendance at today's meeting, and they will need a few more task group meetings before they have a document for the working group.

6.8 BSR E1.6-3 - 201x, The Use of Electric Chain Hoists in the Entertainment Industry (Last published 2012 – Open for revision)

Task group members: John Ringleman, Ben Brian, Pat Grenfell, Nick Fleming, Charlie Weiner, Rod Haney, Mike Weston, Greg Williams and Elmer Veith (Chair)

With promises of great things to come echoing from July's meeting, we're anxious to hear of any news, action, or updates to report.

Elmer Veith reported that the document was ready for a public review, but was not completed in time to distribute prior to the meeting. He moved that the document be sent to public review, and that the vote be by letter ballot. The motion was seconded and carried with no abstentions or objections. Elmer said he would get the document to ESTA staff next week.

6.9 BSR E1.6-4 - 201x, Control of Electric Chain Hoists in the Entertainment Industry (Last published in 2013 – Open for revision)

Task group members: Rick Montgomery, John Ringleman, Elmer Veith, Jim Hodgson, Steve Wood, Mike Webb, Joe Jeremy (chair).

Any news, action or updates to report?

Joseph Jeremy said that they are holding on further work until further progress is made to either point to or include BSR E1.64, being worked on in the SMWG.

6.10 BSR E1.8 – 20xx, Entertainment Technology—Loudspeaker Enclosures Intended for Overhead Suspension—Classification, Manufacture and Structural Testing (Last published in 2013 – Open for revision)

Task group members: Sandy Gilzow and Jim Niesel

See Smmry_RWG_Ballot for E1-8_AcceptANS.pdf.

Richard Nix showed the working group an email he had received from the commenter regarding his objection to one comment resolution. He then gave an overview of a subsequent telephone conversation he had with Mr. Schneider, in which they discussed the intent of the standard's requirement relative to the comment's objection. Richard reported that Mr. Schneider was evaluating the standard for internal use by Meyer, and had been comparing it with other EU standards, which address the subject matter in a slightly different way. Mr. Schneider acknowledged in his email that he would not pursue the objection further.

Chris Kaiser thanked Richard for the extra effort in outreach in order to better understand the commenter's point of view, then moved that we reaffirm our original comment resolution. The motion was seconded and carried unanimously.

6.11 ANSI E1.15 - 2006 (R2016), Entertainment Technology--Recommended Practices and Guidelines for the Assembly and Use of Theatrical Boom & Base Assemblies (revision, reaffirmation, or withdrawal by 23 September 2021)

No news or action at this time.

6.12 BSR E1.21 - 20xx, Entertainment Technology — Temporary Structures Used for Technical Production of Outdoor Entertainment Events (originally published 19 December 2013 – open for revision)
Task group members: Richard Nix (Chair), Kyle Kusmer, Bill Gorlin, Dan Louis, Steve Serafin, Elmer Veith, Sandy Gilzow, and Rod Haney

Any news, action or updates to report?

Richard Nix said that they are about ready to recirculate a final draft within the task group and expected to send it to the working group by January.

6.13 ANSI E1.22 - 2016, Entertainment Technology - Fire Safety Curtain Systems (Revise, reaffirm, or withdrawal by 11 October 2021)

6.14 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 28 January 2020)

6.15 ANSI E1.43 - 2016, Live performer flying effect standard (Revise, reaffirm, or withdrawal by 12 February 2021)

6.16 ANSI E1.44 – 2014, Common Show File Exchange Format for Entertainment Industry Automation Control Systems -- Stage Machinery (revision, reaffirmation, or withdrawal by 6 February 2019)
Any news or action at this time? There are two meeting cycles left before action is required.

From the July meeting minutes:

Joseph Jeremy said that he was not aware of anyone using this. Bill Sapsis directed Joseph Jeremy to convene the task group for the purpose of recommending some action for the next meeting.

There was discussion about the relevance of this draft standard now that the SMWG has started their Stage Machinery controls project. Various options, including abandonment, were mentioned.

Joseph Jeremy moved that this be moved to the Stage Machinery Working Group. The motion was seconded, and carried by unanimous consent.

6.17 Rigging Glossary

Any news or action at this time?

6.18 BSR E1.47 – 20xx, Recommended Guidelines for Entertainment Rigging System Inspections (Originally published on 28 April 2017 – open for revision)

Task group members: Bart Mueller, Chris Kaiser (chair), Tracy Nunally, Ted Jones, Duane Wilson, Pete Svitavsky, Eric Rouse, Ian Bevan, Russell Solomon

See October Task Group Report BSR E1-47.pdf.

Chris Kaiser reported. She had several questions from their last task group meeting, a summary of which, including those questions, was distributed to the working group. One question was if they can recommend its use for future standards, which have not yet been approved. The discussion was that the task group is faced with a dilemma of either having to mandate inspections processes for future, as-yet unapproved draft standards, or the alternative is for each standard that deal with equipment include their own sections on inspections that are specific to the standards' respective subject matters. The task group will continue to attempt to resolve these challenges.

6.19 ANSI E1.50-1 – 2017, Requirements for the Structural Support of Temporary LED, Video & Display Systems (Revision, reaffirmation, or withdrawal by 14 August 2022)

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

Task group members: Carlos Ortega (Chair), Demian Purdy, Mike Wells, Shawn Nolan, Jonathan Duell, and Chris Schmidt

*See Smmry_RWG Ltr_Ballot for E1-56_AcceptANS.pdf. It's in TSC letter ballot until 10 October.
See BSRE1-56_Rig2015-2034r7a_SupportPoints.pdf for corrections made to address TSC concerns. Okay?
Is this what the working group intended?*

Karl Ruling reported that the document draft had been approved by the RWG, so it was forwarded to the TSC for letter ballot approval, where a few editorial errors were found, which Karl corrected based on the cross-referenced annex note, while Richard Nix contacted Shawn Nolan to verify that the intent of the annex note was in fact consistent with Karl's edits (Shawn confirmed the changes).

Orestes Mihahly moved to accept the changes made by Karl, so that the TSC would have the RWG validation of the action. The motion was seconded, and carried with unanimous consent.

6.21 BSR E1.59 – 20xx, Automation Vector Transmission Protocol

Task group members: [RWG] Jem Hodgson, Joe Jeremy, Jim Love, Bill McIntyre, and Michael Lichter.
[CPWG] Julian Hoare, Roger Lattin, Scott Blair, Dan Murfin, Kevin Loewen, and Rich Dionne

Any news, actions, or updates to report?

Bill McIntyre said that they are making progress.

7 New business

Jacob Abbott asked if there is a standard for manually powered chain hoists. Bart Mueller said that B30.21, Lever Hoists, covers manual hoists. There was not a lot of interest in developing one.

8 Other business and announcements

8.1 BSR E1.64 --201x, Stage machinery controls

Any news, updates or action to report?

Joseph Jeremy repeated the report he gave to the Stage Machinery Working Group. They are making good progress.

8.2 Above & Beyond Awards

The nomination site is open year round at estalink.us/aboveandbeyond.

8.3 CEN standards update

Karl Ruling read part of an email letter from Michael Lichter about the state of the CEN standards progress. While some have moved forward, none have been approved, and the consensus seems to be that it will take a considerably longer amount of time than originally anticipated.

Sapsis said there was lots of talk at the PLASA show about this subject, particularly that progress is being complicated by BREXIT.

8.4 Investors in Innovation

Go on-line and make a donation.

8.5 New World Rigging Symposium at USITT

Bill Sapsis said they are looking for sponsors, too.

9 Schedule for future meetings

The full meeting schedule may be found at <http://www.esta.org/ESTA/meetings.php>.

9.1 January meetings

The January meetings will be held In Anaheim as part of the Winter NAMM show, 24-27 January 2019. The RWG meeting is scheduled for Friday, 25 January 2019, from 19:00 to 23:00 at the Sheraton Park Hotel.

9.2 March meetings

The March meetings will again be held in conjunction with the USITT annual Conference and Stage Expo, to be held 20 - 23 March in Louisville KY. ESTA meeting schedules have not yet been set.

10 Adjournment

Bruce Darden moved that we adjourn. The motion was seconded. Hearing no objections, Bill Sapsis declared the meeting adjourned at 20:21.

RWG membership 18 October 2018

Name	Representing	Status	Int Cat
Jacob Abbott	PSAV Presentation Services	O	U
Jesse Adams	Rose Brand	P	DR
Tracie Allen	Tyler Truss Systems	A	CP
Matthew Antonucci	Contract Services Administration Trust Fund	O	U
Brent Armstrong	Alpine Rigging & Structural Design	O	CP
William Ian Auld	Auld Entertainment	O	U
Robert Barbagallo	Solotech Inc.	O	DR
Dana Bartholomew	Silver State Wire Rope and Rigging	P	DR
William Beautyman	Limelight Productions, Inc.	P	DR
Ian Bevan	Walt Disney Parks & Resorts	O	U
Roy Bickel	Roy Bickel	O	G
Tyler Bland	Walt Disney Parks & Resorts	O	U
Keith Bohn	Production Rigging Resources	P	G
David Bond	Kinesys	O	MP
William Bradburn	Aerial Arts, Inc.	P	U
Louis Bradfield	Louis Bradfield	O	U
Bennett Brian	Reed Rigging Inc.	P	DR
David M. Campbell	Geiger Engineers	O	G
Joseph Champelli	Entertainment Project Services, LLC	P	DE
Jay Cid	R&M Materials Handling / Stagemaker	A	MP
Daniel J. Clark	Clark-Reder Engineering, Inc.	O	G
Benjamin Cohen	Chicago Flyhouse Inc.	O	CP
David Collette	PSAV Presentation Services	O	U
Dan Culhane	Wenger Corp.	A	MP
Bruce Darden	InterAmerica Stage, Inc.	P	CP
David Darland	PSAV Presentation Services	O	U
Robert Dean	ZFX, Inc.	O	CP
Jonathan Deull	JSD Projects LLC	I	U
Tony Diemont	Texas Scenic Company	P	DR

RWG membership 18 October 2018

Name	Representing	Status	Int Cat
Jim Digby	Event Safety Alliance	O	U
Brad Dittmer	Stage Labor of the Ozarks	P	U
Russ Dusek	I Weiss	P	MP
Don Earl	Earl Girls, Inc.	P	DR
Nick Fleming	Columbus McKinnon Corp.	A	MP
Tim Franklin	Theta Consulting LLC	O	G
Jack Gallagher	R&M Materials Handling / Stagemaker	A	MP
Mike Garl	Mike Garl Consulting LLC	P	DE
James M. Garner	Walt Disney Studios	O	G
Ethan W Gilson	Entertainment Rigging Services, LLC	P	U
Sanford P. Gilzow	Shur-Rig LLC	O	G
William B. Gorlin	M.G. McLaren, P.C.	P	G
Jerry Gorrell	Theatre Safety Programs	P	G
Michael P. Gosenski	Rigging Systems LLC	O	U
Erin Grabe	ESTA	exf	G
Pat Grenfell	Hoist Sales & Service	P	DR
Rod Haney	I.A.T.S.E. Local 891	P	U
Tim Hansen	Oasis Stage Werks	P	DR
Pete Happe	Pete Happe	O	G
Sean Harding	Port Lighting Systems	O	G
Robert Haycock	UC Berkeley	I	U
Chris Higgs	Total Solutions Group	O	G
Jeremy Hodgson	Cirque Du Soleil, Inc.	P	U
Donald Hoffend_III	Avista Designs, LLC	P	G
Joseph Jeremy	Show Distribution Group, Inc.	P	CP
Ted Jones	Grand Stage	P	U
Kent H. Jorgensen	IATSE Local 80	O	G
Gary Justesen	Oasis Stage Werks	O	DR
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR

RWG membership 18 October 2018

Name	Representing	Status	Int Cat
Theresa Kelley	Xtreme Structures and Fabrication	A	MP
Jerald Kraft	JTH Lighting Alliance	O	CP
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Kyle Kusmer	Schaefer, Inc	P	G
Tom Lapp	Cirque Du Soleil, Inc.	A	U
Kalen Larson	ZFX, Inc.	P	CP
Roger Lattin	I.A.T.S.E. Local 728	P	U
Jon Lenard	Applied Electronics	A	MP
Phillip Lewis	Tait Towers Manufacturing LLC	O	MP
Michael Lichter	Electronic Theatre Controls, Inc.	A	MP
Dan Lisowski	University of Wisconsin - Madison	O	U
Ross Long	I.A.T.S.E. Local 891	O	G
Jacob E. Loretto	Musson Theatrical Inc.	P	DR
Daniel H. Louis	Theta Consulting LLC	P	G
Wendy Manson	Cirque Du Soleil, Inc.	O	U
Joseph McGeough	Foy Invenerprises, Inc.	O	CP
Bill McIntyre	Show Distribution Group, Inc.	A	CP
Sam Michael	Thern, Inc.	P	MP
Steven Michelman	Entertainment Project Services, LLC	A	DE
Orestes Mihaly	Production Resource Group	P	DR
Rick Montgomery	Motion Laboratories, Inc.	P	MP
John P. Moore	Vertigo	A	CP
Chris Moulton	Contract Services Administration Trust Fund	P	U
Bartholomew J. Mueller	Recreation Engineering Inc.	P	DE
John Neal	Rhino Staging	O	G
Reid Neslage	H & H Specialties Inc.	P	MP
Mark Newlin	Xtreme Structures and Fabrication	A	MP
Jim Niesel	Theatre Projects Consultants, Inc.	P	DE
Richard J. Nix	Richard J. Nix	I	G

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Name	Representing	Status	Int Cat
Richard J. Nix	ESTA	exf	G
Shawn Nolan	Production Resource Group	A	DR
Tracy Nunnally	Vertigo	P	CP
Carlos Ortega	PSAV Presentation Services	P	U
Gregory Orth	WNP Services, Inc.	O	DR
Miriam Paschetto	Geiger Engineers	O	G
Rocky Paulson	Freeman Companies	A	DR
Kurt Pragman	Pragman Associates, LLC	O	G
Demian Purdy	PSAV Presentation Services	A	U
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP
Mark Riddlesperger	LA ProPoint, Inc.	O	CP
John Ringelman	Freeman Companies	P	DR
Eric Rouse	Chicago Flyhouse	O	CP
Karl G. Ruling	ESTA	exf	G
Tim Salamon	PSAV Presentation Services	O	DR
Bill Sapsis	Sapsis Rigging, Inc.	P	U
Peter A. Scheu	Scheu Consulting Services, Inc.	O	DE
Chris Schmidt	Freeman Companies	A	DR
Ford Sellers	Chauvet Lighting	O	MP
Steven Serafin	Chubb Group of Insurance Companies	P	G
Steven C. Shaw	Levitating Productions, Inc.	O	MP
Harold Ike Shippers	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Dave Sinkhorn	R&M Materials Handling / Stagemaker	P	MP
Monica Skjonberg	Skjonberg Controls, Inc.	O	CP
Knut Skjonberg	Skjonberg Controls, Inc.	O	CP
John C. Snook	Thermotex Industries Inc.	P	CP
Russell Solomon	Texas Scenic Company	P	DR
Todd Spencer	PSAV Presentation Services	O	U
Stewart Stephens	Ashford Management Group	P	DR

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Name	Representing	Status	Int Cat
Peter V. Svitavsky	Wenger Corp.	P	CP
Ross Taylor	Taylor & Taylor Associates	O	G
Jason Tello	Tyler Truss Systems	P	CP
Ken Tilson	Columbus McKinnon Corp.	P	MP
Will Todd	Area Four Industries	P	MP
James Tomlinson	Team Tomlinson	O	G
Stephen Vanciel	IATSE Local 631	O	U
Elmer Veith	Elmer Veith	I	DE
Steve Walker	Steve A. Walker & Associates	P	G
Patrick Wallace	PSAV Presentation Services	O	U
Mike Webb	Motion Laboratories, Inc.	A	MP
Charlie Weiner	Eurotruss	A	MP
Michael Wells	Xtreme Structures and Fabrication	P	MP
Drew Wending	PSAV Presentation Services	O	DR
Marty Wesstrom	Mountain Productions Inc.	P	DR
Mike Weston	PSAV Presentation Services	O	DR
Jeff Wilkowski	Thern, Inc.	A	MP
Greg Williams	PSAV Presentation Services	O	G
R. Duane Wilson	Amer. Society of Theatre Consultants	P	DE
Max A. Wilson	Applied Electronics	P	MP
Stephan Jon Wood	Tait Towers Manufacturing LLC	P	CP
Jeong Sik Yoo	Ghost LX	O	DE
Paul Zagajeski	Wenger Corp.	A	CP