

Minutes
Rigging Working Group
Saturday, 24 January 2009
Dallas/Ft. Worth Marriott Solana
Westlake, TX

Presiding chairmen: Kent H. Jorgensen; IATSE Local 80; P; G
Bill Sapsis; Sapsis Rigging, Inc.; P; U

Recording secretary: Karl G. Ruling; ESTA

Members attending:

William Bradburn; Aerial Arts, Inc.; P; U
James Niesel; Arup; P; G
Donald A. Hoffend, Jr.; Avista Designs, LLC; P; G
Charlie Weiner; ; P; U
Don Dimitroff; Columbus McKinnon Corp.; P; MP
Pat Grenfell; Vortek (Daktronics Inc.); P; CP
Edward A. (Ted) Paget; Vortek Rigging Division (Daktronics Inc.); A; CP
M. Brad Dittmer; Downhome Productions; P; U
Harvey Sweet; Electronic Theatre Controls, Inc. ; P; MP
Michael Lichter; Electronic Theatre Controls GmbH (Electronic Theatre Controls Inc.); O; MP
Rocky Paulson; Stage Rigging, Inc. (Freeman Companies); P; DR
Joseph Champelli; Fisher Technical Services, Inc.; P; CP
Dana Bartholomew; Fisher Technical Services; A; CP
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U
Roger Lattin; I.A.T.S.E. Local 728; P; U
Peter V. Svitavsky; J.R. Clancy Inc.; P; CP
Mike Garl; James Thomas Engineering, Inc.; P; MP
Tray Allen; James Thomas Engineering, Inc.; A; MP
Tim Hansen; Oasis Stage Werks; P; DR
Ron Bonner; PLASA; P; G
Bruce Darden; Rigging Innovators, Inc.; P; CP
Peter A. Scheu; Scheu Consulting Services; P; G
Kimberly Corbett; Schuler Shook; P; G
Dan Culhane; SECOA; P; CP
Knut Skjonberg; Skjonberg Controls, Inc.; P; CP
Monica Skjonberg; Skjonberg Controls, Inc.; A; CP
Steve Walker; Steve A. Walker & Associates; P; G
Richard J. Nix; Entertainment Structures Group (Steven Schaefer Associates); P; G
Christine L. Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR
Stephen G. Surratt; Texas Scenic Company; P; DR
Jerry Gorrell; Theatre Safety Programs; P; G
Theresa Kelley; Total Structures Inc.; A; MP
Keith Bohn; Tomcat USA, Inc. (Vitec Group plc); P; MP
Will Todd; Tomcat USA, Inc. (Vitec Group plc); A; MP
Pete Happe; Walt Disney Imagineering (Walt Disney Company); P; U

Visitors: Stefano Rosellini; Tomcat USA Inc.
Alan Rowe; IATSE Local 728

1 Opening remarks

Bill Sapsis called the meeting to order at 19:02.

2 Attendance and membership

2.1 Introduction of those present

Those present introduced themselves.

2.2 Circulation of attendance sign-in sheet

A hot orange attendance sign-in sheet was circulated.

2.3 Call for quorum

Bill Sapsis asked for a show of hands of voters. He announced 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 affected by the work of the group. People who would be in the dealer/rental company or user interest groups are particularly encouraged to join. However, voting members are required to attend meetings and to vote on letter . Any principal member and voting alternate who both miss three consecutive meetings or letter ballots will have their membership status changed to observer. This action will be taken as the last item of business at each meeting and recorded in the minutes of that meeting."

3 Processing of new membership requests

Membership applications had been received from:

Howard Forryan; Harting Ltd.; Observer; MP
Ethan William Gilson; ALPS; Observer; U
Harvey Sweet; ETC; P; MP
Will Todd; Tomcat USA, Inc.; Vitec Group plc; A; MP
Keith Bohn; Tomcat USA, Inc.; Vitec Group plc; P; MP

Eddie Kramer moved that their applications be accepted. The motion was seconded and then approved with a show of hands.

The consensus body during this meeting was:

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
William Bradburn	Aerial Arts, Inc.	Aerial Arts, Inc.	P	U
Wendy Holt	AMPTP	Alliance of Motion Picture and Television Producers	P	G
William Conner	Bill Conner Associates LLC	Amer. Society of Theatre Consultants	P	U
R. Duane Wilson	George C. Izenour Associates	Amer. Society of Theatre Consultants	A	U
Jon Lenard	Applied Electronics	Applied Electronics	P	MP
James Niesel	Arup	Arup	P	G
Donald A. Hoffend, Jr.	Avista Designs, LLC	Avista Designs, LLC	P	G
Charlie Weiner	Charlie Weiner	Charlie Weiner	P	U
Ted Jones	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	P	U
Don Dimitroff	Columbus McKinnon Corp.	Columbus McKinnon Corp.	P	MP
Herb Hart	Columbus McKinnon Corp.	Columbus McKinnon Corp.	A	MP
Pat Grenfell	Vortek	Daktronics Inc.	P	CP
Edward A. (Ted) Paget	Vortek Rigging Division	Daktronics Inc.	A	CP
M. Brad Dittmer	Downhome Productions	Downhome Productions	P	U
Harvey Sweet	ETC	ETC	P	MP
Rocky Paulson	Stage Rigging, Inc.	Freeman Companies	P	DR
John Ringelman	Stage Rigging, Inc.	Freeman Companies	A	DR
Joseph Champelli	Fisher Technical Services, Inc.	FTSI	P	CP
Dana Bartholomew	Fisher Technical Services	FTSI	A	CP
Reid Neslage	H & H Specialties Inc.	H & H Specialties Inc.	P	MP
Peter "Punch" Christian Schmidtke	Hollywood Lighting Services, Inc.	Hollywood Lighting, Inc.	P	DR
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Roger Lattin	I.A.T.S.E .Local 728	I.A.T.S.E. Local 728	P	U
Kent H. Jorgensen	IATSE Local 80	IATSE Local 80	P	G
Peter V. Svitavsky	J.R. Clancy Inc.	J. R. Clancy Inc.	P	CP
Thomas S. Young	J.R. Clancy Inc.	J.R. Clancy, Inc.	A	CP
Rodney F. Kaiser	J.R. Clancy Inc.	J.R. Clancy, Inc.	A	CP
Mike Garl	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	P	MP
Tray Allen	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	A	MP
William Beautyman	Limelight Productions, Inc.	Limelight Productions, Inc.	P	DR
Bob Medve	Limelight Productions, Inc.	Limelight Productions, Inc.	A	DR
Michael J. Carnaby	Mikan Theatricals	Mikan Theatricals	P	DR
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	P	CP
David Herrmann	Motion Laboratories	Motion Laboratories	A	CP
Peter Herrmann	Motion Laboratories	Motion Laboratories	A	CP
Shawn Sack	Mountain Productions Inc.	Mountain Productions Inc.	P	DR
Tim Hansen	Oasis Stage Werks	Oasis Stage Werks	P	DR
Spencer Brown	Oasis Stage Werks	Oasis Stage Werks	A	DR
Ron Bonner	PLASA	PLASA	P	G
Steven Graham	R&M Materials Handling	R&M Materials Handling	P	MP
Joe Ingle	R&M Materials Handling	R&M Materials Handling	A	MP
Bruce Darden	Rigging Innovators, Inc.	Rigging Innovators, Inc.	P	CP
Bill Sapsis	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	P	U
Peter A. Scheu	Scheu Consulting Services	Scheu Consulting Services	P	G
Kimberly Corbett	Schuler Shook	Schuler Shook	P	G
Joshua Grossman	Schuler Shook	Schuler Shook	A	G
Dan Culhane	SECOA	SECOA	P	CP
Jerald Kraft	SECOA	SECOA	A	CP
Knut Skjonberg	Skjonberg Controls, Inc.	Skjonberg Controls, Inc.	P	CP
Monica Skjonberg	Skjonberg Controls, Inc.	Skjonberg Controls, Inc.	A	CP
Nathan Wells	Stage Technologies	Stage Technologies	P	MP
Steve Walker	Steve A. Walker & Associates	Steve A. Walker & Associates	P	G
Richard J. Nix	Entertainment Structures Group	Steven Schaefer Associates	P	G
Jeff Reder	Entertainment Structures Group	Steven Schaefer Associates	A	G
Daniel J. Clark	Entertainment Structures Group	Steven Schaefer Associates	A	G
Kyle Kusmer	Entertainment Structures Group	Steven Schaefer Associates	A	G
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Frank Willard	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Stephen G. Surratt	Texas Scenic Company	Texas Scenic Company	P	DR
Eugene Leitermann	Theatre Projects Consultants, Inc.	Theatre Projects Consultants, Inc.	P	G
Steve Sweet	Theatre Projects Consultants, Inc.	Theatre Projects Consultants, Inc.	A	G
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	G
Jeff Wilkowski	Thern, Inc.	Thern, Inc.	P	MP
Adrian Forbes-Black	Total Structures Inc.	Total Structures Inc.	P	MP
Theresa Kelley	Total Structures Inc.	Total Structures Inc.	A	MP
Elmer Veith	Total Structures - Eastern US Sales Office	Total Structures, Inc.	A	MP
Will Todd	Tomcat USA, Inc.	Vitec Group plc	A	MP
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U
Keith Bohn	Tomcat USA	Vitec Group plc	P	MP
		Total votes possible	45	
		Votes possible by interest category	7	CP
			10	MP
			8	DR
			9	U
			11	G

4 Approval of minutes from the previous meeting

(See RIGmin10-2008.pdf.) Dan Culhane moved that the draft minutes be accepted. The motion was seconded and then approved with a show of hands.

5 ESTA declarations

5.1 Anti-trust statement

The following statement was read aloud to the assembly by Kent Jorgensen:

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

"ESTA legal counsel has informed us that violations of the anti-trust laws can have serious consequences. Individuals engaged in certain unlawful conduct can be found criminally liable. An individual convicted of a criminal violation of the Sherman Act may be fined as much as \$1,000,000 and imprisoned for up to ten years. An easy-to-read pamphlet describing restraint of trade issues is available from the Technical Standards Manager."

The Technical Standards Manager held up one of the easy-to-read pamphlets to show its availability. No restraint of trade issues were reported to the assembly.

5.2 Call for patents

The following statement was read aloud to the assembly by the 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 or copyright or other intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence."

No patented or copyrighted material was reported.

6 Approval of the agenda

Amendments to the draft agenda were offered, including removing the E1.6-5 project proposal, adding a temporary structure wind load project, and adding a fact-finding project on recommended connectors for chain hoists.

Dan Culhane moved that the amended agenda be accepted. The motion was seconded and then approved with a show of hands.

7 Old business

7.1 ANSI E1.1-2006, wire rope ladders revision

No news or action.

7.2 ANSI E1.2-2006, aluminum towers and trusses revision

No news or action.

7.3 BSR E1.4, manual rigging systems

Karl Ruling reported the outcome of the letter ballot to accept BSR E1.4, Entertainment Technology — Manual Counterweight Rigging Systems (doc. number Rig/1997-2002r17) as an American National Standard. (See E1-4_WGAcceptTotal.pdf.) The motion passed with the required supermajority, with 40 out of a possible 44 votes being cast as "Yes." Four ballots were not returned. No ballots were received from:

Donald A. Hoffend, Jr.; Avista Designs, LLC: G
Steven Graham and Joe Ingle; R&M Materials Handling; MP
Michael J. Carnaby; Mikan Theatricals; DR
Ted Jones; Chicago Spotlight, Inc.; U

Ruling explained that the Technical Standards Committee will vote on the motion tomorrow (January 25) at its meeting.

7.4 BSR E1.6-1, powered winch hoist systems

Harvey Sweet reported that the task group had met for 24 hours over three days and have completely revised the document. They need to work on the resolution document. He said they may have a document for the working group to consider for public review by the March meeting, but perhaps not. He praised the work of the task group members.

7.5 BSR E1.6-2, electric chain hoists

7.5.1 End of recirculation vote

(See E1-6-2_WGAcceptTotal.pdf and E1_6-2_2005-2040r4.pdf.)

The comments that were submitted with No votes by the time of the meeting were displayed on the projection screen and discussed.

We have reviewed revised draft 4 of E1.6-2, and find that we do not recommend it in its current state as an American National Standard. As Harvey Sweet noted in the second public review, "There are many places where the language is very awkward." This comment was rejected as it did not include specific action. However, we find that the language continues to be brief and awkward in places and prefer further wordsmithing and refinement before passing the draft to ANSI.

-We recommend re-wording of the definitions for dynamic and static load test:

2.3 Dynamic Load Test: A test of the hoist wherein a test load is applied to the hoist and lifted a minimum distance equal to one revolution of the lift wheel.

2.12 Static Load Test: A test of the hoist wherein a test load is applied to the hoist, after which the hoist shall be observed in a motionless state with no movement of the lift wheel.

-Clarify wording of 2.7:

*"Lift wheel: a powered sprocket device that causes the load chain to raise and lower."
Raise and lower what? The load? The hoist? Does it matter?*

-Consider defining "load path". This term is used in sections 4.4, 4.5, and 4.8.

-Consider defining "operational test". This term is used in section 5.

-Consider rewording 4.2:

The hoist shall be designed such that, under full rated load, no component is stressed more than 20% of the minimum ultimate strength as determined by empirical testing, or 15% of the minimum ultimate strength as calculated.

-Both 4.4 and 4.5 are so succinct as to be awkward. .

-The sentence "The replacement of load chain is specifically excluded from dynamic load testing, however an operational test of the hoist shall be made prior to returning the hoist to service." is unclear. Should it be reworded :

"The replacement of load chain is specifically excluded from requiring dynamic load testing; however, an operational test shall be made prior to returning the hoist to service."

*Kimberly Corbett
Schuler Shook*

I have reviewed the objections raised, and agree in principle that the text cited could be better. I believe that the text in question could be changed during a RWG meeting without causing a substantial change and the resultant public review. If this were done at USITT or even in Dallas, for example, the improvement to the standard would be worth the minimum amount of delay.

*Jim Niesel
Senior Theatre Consultant
Arup*

The proposed 4.7 Overload Detection Device section does not clearly define how an operator is to be alerted. If it is simply the load not moving up when the up button is depressed, then this meets with the industry standard and ANSI / ASME HST-1. If it is another form of alert, then this will cause a re-design of all of the current hoist units being produced. It may also challenge other related ANSI hoist standards.

Additionally, none of the current serially produced electric chain hoists offered in the North American entertainment and industrial markets have any sort of "alert function" outside of the load not moving up when the operator is depressing the up button.

Page 4- 4.7 Overload Detection Device- All serially produced electric chain hoists offered in North America (for both the entertainment and industrial markets) are fitted with a mechanical overload device which is in the drivetrain of the hoist. This device is designed in accordance with ANSI / ASME HST-1 Section 3.9. Section 3.9 states that the overload is a safety device "designed to permit the operation of the hoist within its rated load and to limit the amount of overload that can be lifted by a properly maintained hoist under normal operating circumstances" ... "and shall not be used to sense the overload imposed by a constrained load." The new section 4.7 appears to contradict ANSI / ASME HST-1.

*Steve Graham
Sales Manager-Entertainment
R&M Materials Handling, Inc.*

There was extended discussion.

The last of the recirculation ballots were returned. The final vote was 25 Yes, 16 No, and one abstention. The motion did not have the required supermajority support (a majority of the voting body voting Yes and out-numbering the No votes by 2 to 1) and failed. Two ballots were not returned. Ted Jones of Chicago Spotlight Inc. and Michael Carnaby of Mikan Theatricals did not vote.

7.5.2 Revision to resolve objections

7.5.2.1

Kimberly Corbett moved that clauses 2.3, 2.12, and 4.2 be reworded to read

2.3 Dynamic Load Test: A test of the hoist wherein a test load is applied to the hoist and lifted a minimum distance equal to one revolution of the lift wheel.

2.12 Static Load Test: A test of the hoist wherein a test load is applied to the hoist, after which the hoist shall be observed in a motionless state with no movement of the lift wheel.

4.2 The hoist shall be designed such that, under full rated load, no component is stressed more than 20% of the minimum ultimate strength as determined by empirical testing, or 15% of the minimum ultimate strength as calculated.

and that the sentence in "5 Inspections" reading

"The replacement of load chain is specifically excluded from dynamic load testing, however an operational test of the hoist shall be made prior to returning the hoist to service."

shall be reworded to read:

"The replacement of load chain is specifically excluded from requiring dynamic load testing; however, an operational test shall be made prior to returning the hoist to service."

Corbett's motion to change these four sentences was seconded, and then accepted with a show of hands.

7.5.2.2

There was spirited discussion of R&M's objections to "4.7 Overload Detection Device," and the ways to mitigate the risks from overload conditions. The consensus that emerged was that load monitoring is not required in all hoist applications, so monitoring devices should not be included in all hoists, and that when and how loads shall be monitored and operators alerted would be better addressed in E1.6-3 than in E1.6-2.

There was discussion in which clause 4.7 was modified to read:

4.7 Overload Protection Device

The hoist shall have an overload protection device that prevents the hoist from lifting a load that exceeds the hoist's design load.

In addition, the references to "overload detection devices" in section 5 were changed to "overload protection devices."

Brad Dittmer moved that the changes to 4.7 and 5.0 be accepted. The motion was seconded and then approved with a show of hands.

The modified BSR E1.6-2 was assigned the document number of Rig/2005-2040r5.

7.5.3 Vote for public review of r5 version

Tim Hansen moved that the BSR E1.6-2 (document Rig/2005-2040r5) be offered for public review. The motion was seconded, and then accepted with a roll call vote, with 30 voting Yes, and one voting No.

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.	Yes	No	Abstain
William Bradburn	Aerial Arts, Inc.	Aerial Arts, Inc.	P	U	X		
Wendy Holt	AMPTP	Alliance of Motion Picture and Television Producers	P	G			
William Conner	Bill Conner Associates LLC	Amer. Society of Theatre Consultants	P	U			
R. Duane Wilson	George C. Izenour Associates	Amer. Society of Theatre Consultants	A	U			
Jon Lenard	Applied Electronics	Applied Electronics	P	MP			
James Niesel	Arup	Arup	P	G	X		
Donald A. Hoffend, Jr.	Avista Designs, LLC	Avista Designs, LLC	P	G	X		
Charlie Weiner	Charlie Weiner	Charlie Weiner	P	U	X		
Ted Jones	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	P	U			
Don Dimitroff	Columbus McKinnon Corp.	Columbus McKinnon Corp.	P	MP	X		
Herb Hart	Columbus McKinnon Corp.	Columbus McKinnon Corp.	A	MP			
Pat Grenfell	Vortek	Daktronics Inc.	P	CP	X		
Edward A. (Ted) Paget	Vortek Rigging Division	Daktronics Inc.	A	CP			
M. Brad Dittmer	Downhome Productions	Downhome Productions	P	U	X		
Harvey Sweet	ETC	ETC	P	MP		X	
Rocky Paulson	Stage Rigging, Inc.	Freeman Companies	P	DR	X		
John Ringelman	Stage Rigging, Inc.	Freeman Companies	A	DR			
Joseph Champelli	Fisher Technical Services, Inc.	FTSI	P	CP	X		
Dana Bartholomew	Fisher Technical Services	FTSI	A	CP			
Reid Neslage	H & H Specialties Inc.	H & H Specialties Inc.	P	MP			

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.	Yes	No	Abstain
Peter "Punch" Christian Schmidtke	Hollywood Lighting Services, Inc.	Hollywood Lighting, Inc.	P	DR			
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U	X		
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U	X		
Kent H. Jorgensen	IATSE Local 80	IATSE Local 80	P	G	X		
Peter V. Svitavsky	J.R. Clancy Inc.	J. R. Clancy Inc.	P	CP	X		
Thomas S. Young	J.R. Clancy Inc.	J.R. Clancy, Inc.	A	CP			
Rodney F. Kaiser	J.R. Clancy Inc.	J.R. Clancy, Inc.	A	CP			
Mike Garl	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	P	MP	X		
Tray Allen	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	A	MP			
William Beautyman	Limelight Productions, Inc.	Limelight Productions, Inc.	P	DR			
Bob Medve	Limelight Productions, Inc.	Limelight Productions, Inc.	A	DR			
Michael J. Carnaby	Mikan Theatricals	Mikan Theatricals	P	DR			
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	P	CP			
David Herrmann	Motion Laboratories	Motion Laboratories	A	CP			
Peter Herrmann	Motion Laboratories	Motion Laboratories	A	CP			
Shawn Sack	Mountain Productions Inc.	Mountain Productions Inc.	P	DR			
Tim Hansen	Oasis Stage Werks	Oasis Stage Werks	P	DR	X		
Spencer Brown	Oasis Stage Werks	Oasis Stage Werks	A	DR			
Ron Bonner	PLASA	PLASA	P	G	X		
Steven Graham	R&M Materials Handling	R&M Materials Handling	P	MP			
Joe Ingle	R&M Materials Handling	R&M Materials Handling	A	MP			
Bruce Darden	Rigging Innovators, Inc.	Rigging Innovators, Inc.	P	CP	X		
Bill Sapsis	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	P	U	X		
Peter A. Scheu	Scheu Consulting Services	Scheu Consulting Services	P	G	X		
Kimberly Corbett	Schuler Shook	Schuler Shook	P	G	X		
Joshua Grossman	Schuler Shook	Schuler Shook	A	G			
Dan Culhane	SECOA	SECOA	P	CP	X		
Jerald Kraft	SECOA	SECOA	A	CP			
Knut Skjonberg	Skjonberg Controls, Inc.	Skjonberg Controls, Inc.	P	CP	X		
Monica Skjonberg	Skjonberg Controls, Inc.	Skjonberg Controls, Inc.	A	CP			
Nathan Wells	Stage Technologies	Stage Technologies	P	MP			
Steve Walker	Steve A. Walker & Associates	Steve A. Walker & Associates	P	G	X		
Richard J. Nix	Entertainment Structures Group	Steven Schaefer Associates	P	G	X		
Jeff Reder	Entertainment Structures Group	Steven Schaefer Associates	A	G			
Daniel J. Clark	Entertainment Structures Group	Steven Schaefer Associates	A	G			
Kyle Kusmer	Entertainment Structures Group	Steven Schaefer Associates	A	G			
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR	X		
Frank Willard	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR			
Stephen G. Surratt	Texas Scenic Company	Texas Scenic Company	P	DR	X		
Eugene Leitermann	Theatre Projects Consultants, Inc.	Theatre Projects Consultants, Inc.	P	G			
Steve Sweet	Theatre Projects Consultants, Inc.	Theatre Projects Consultants, Inc.	A	G			
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	G	X		
Jeff Wilkowski	Thern, Inc.	Thern, Inc.	P	MP			
Adrian Forbes-Black	Total Structures Inc.	Total Structures Inc.	P	MP			
Theresa Kelley	Total Structures Inc.	Total Structures Inc.	A	MP	X		
Elmer Veith	Total Structures - Eastern US Sales Office	Total Structures, Inc.	A	MP			
Will Todd	Tomcat USA, Inc.	Vitec Group plc	A	MP			
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U	X		
Keith Bohn	Tomcat USA	Vitec Group plc	P	MP	X		
		Total votes	45		30	1	0
		Votes by interest categories	7	CP	6	0	0
			10	MP	4	1	0
			8	DR	4	0	0
			9	U	7	0	0
			11	G	9	0	0

7.6 BSR E1.6-3, Selection and Use of Serially Manufactured Electric Chain Hoists in the Entertainment Industry

Charlie Weiner submitted a draft BSR E1.6-3 document to Karl Ruling, the Technical Standards Manager and recording secretary, and then moved that the draft document (Rig/2008-2019) be offer for public review. The motion was seconded. The motion will be decided by letter ballot, since this is the first public review of the document.

There was discussion of the intention of this public review vote. Weiner explained that he is mainly interested in serious comments from the working group, and is not attached to the document being offered for public review right now. That is, if the document is ready for public review in the collective opinion of the working group, that's fine, but if the working group finds deficiencies that suggest the document is not ready for public review, that will be okay, too. The reasons for the no votes will be used by the task group to improve the document.

It was suggested that editorial deficiencies might merit a "Yes with comments," while substantive deficiencies might trigger a "No with reasons" vote by working group members.

7.7 BSR E1.6-4, Control of Serially Manufactured Electric Chain Hoists in the Entertainment Industry

Knut Skjonberg reported that the task group had taken variable speed drives out of the draft document and limited the scope to hoists rated for not more than two tons. He said he hopes to have something to circulate to the working group two weeks before next the meeting.

7.8 ANSI E1.8-2005, speaker enclosures for rigging standard

Charlie Weiner reported that Meyer Sound wants to change it and will work on the revision. There was discussion of the standard's uptake in the market. No motion was offered.

7.9 ANSI E1.15-2006, boom & base assemblies

(See proposal from Reuben Goldberg of Technic Services to revise ANSI E1.15, E1-15Proposal.pdf.) Richard Nix moved that we reject Goldberg's proposal to revise the standard. The motion was seconded. There was discussion. Nix offered as a reason for rejecting the proposal that the standard already allows the use of outriggers with a base, so there is no need to add clauses saying this. If the support device is not using a base, the device is outside the scope of the standard.

The motion carried with a show of hands, with three voting to abstain, two voting against the motion, and the rest voting in favor of the motion to reject the proposal.

7.10 ANSI E1.21-2006, portable roof systems

No news or action.

7.11 BSR E1.22, fire safety curtain systems

(Report on acceptance vote, see E1-22_WGAcceptTotal.pdf.) Ruling reported that the motion to accept BSR E1.22, Entertainment Technology — Fire Safety Curtain Systems (doc. number Rig/2002-2032r9.1), as an American National Standard had been accepted, with 41 out of a voting body of 44 voting Yes. There were no abstentions and no negative votes. Three ballots were not returned; no ballots were received from:

Donald A. Hoffend, Jr.; Avista Designs, LLC: G
Michael J. Carnaby; Mikan Theatricals; DR
Ted Jones; Chicago Spotlight, Inc.; U

7.12 Arup fire modeling project progress report

Jim Niesel showed and narrated some short videos showing computer-generated simulations of fires in a theatre with and without fire sprinklers.

8 New business

8.1 A project for a standard for dead-hung systems (e.g. static battens and pipe grids)

The possibility of a developing a standard for dead-hung battens and pipe grid systems was discussed. Some people felt it was a good project, but there was not a burning desire to undertake the work at this time. No formal motion was offered.

A tension grid standard was proposed by Harvey Sweet, who had provided a scope statement. The consensus of the group was that this was a worthy project, but not something to undertake right now. No formal motion was offered, and no vote taken.

8.2 A project for certification for those who erect self-climbing rigs

The informal proposal to develop certification for ground-support tower erectors was mentioned. The consensus was that it's a personnel certification issue, so it should go to the ETCP council rather than to the Rigging Working Group.

8.3 Possible revival of BSR E1.7 project in response to the recent death of an aerial artist

There was a brief discussion of the aerialist's death in Ohio and the need for a standard. No motion was offered to restart the project at this time.

8.4 Temporary structures and wind loads

Keith Bohn suggested that a standard is needed for temporary structures other than roofs, such as delay towers. These structures are particularly susceptible to failures due to wind-loading. He offered to write a draft scope and to fill out the standards proposal form so the project can be considered more thoroughly at the next working group meeting.

8.5 Recommended connectors for chain hoists

Knut Skjonberg suggested that we might need a fact-finding on recommended power and control connectors for chain hoists—not to set an absolute requirement for any particular connector but to offer recommendations. There was a discussion of whether a standardized recommended connector was a good idea.

Chris Kaiser moved that the BSR E1.6-4 task group include recommended connectors and pin-outs in the draft standard. The motion was seconded by discussion, and then approved with a show of hands.

9 Other business and announcements

10 Schedule for future meetings

It was announced that the next meeting will be on Wednesday, 18 March 2009, from 18:00 to 22:00 at the Hilton Cincinnati Netherland Plaza in Cincinnati, OH. The early start and stop time will allow working group members to attend the reception being hosted by The Entertainment Structures Group of Steven Schaefer Associates.

11 Changes of membership status resulting from lack of attendance.

The following voters and their alternates have missed the last two consecutive meetings, and will be moved to observer status if they miss this one:

Ted Jones; Chicago Spotlight

Kimberly Corbett and Joshua Grossman; Schuler Shook

Kimberly Corbett was present, so there was no change to the voting status of the Schuler Shook representatives.

Ted Jones was not present. Bill Sapsis announced that he was now moved to observer status.

Ted Jones and Michael Carnaby also had failed to return ballots on the last three letter ballots. Voting ballots is another requirement besides meeting attendance for maintaining voting status. Jones and Carnaby had failed to meet this requirement; Carnaby was also moved to observer status.

12 Adjournment

Peter Scheu that the meeting adjourn. The motion was seconded and then approved by acclamation. Bill Sapsis declared the meeting adjourned at 22:39.

Working Group Membership and Contact Information as of 17 February 2009

Name	Company	Representation (This is the sort field.)	Voting status	Int. cat.
Baer Long	Ninja Rigging	Act 1 Rigging Inc.	O	G
Andre Broucke	ADB - TTV Technologies	ADB-TTV Group	O	MP
Ethan William Gilson	ALPS	Advanced Lighting and Production Services	O	U
William Bradburn	Aerial Arts, Inc.	Aerial Arts, Inc.	P	U
Michael G. Wiener	Aerial Rigging & Leasing, Inc.	Aerial Rigging & Leasing, Inc.	O	U
Andy Sutton	AFX UK Ltd.	AFX UK Ltd.	O	U
Wendy Holt	AMPTP	Alliance of Motion Picture and Television Producers	P	G
William Conner	Bill Conner Associates LLC	Amer. Society of Theatre Consultants	P	U
R. Duane Wilson	George C. Izenour Associates	Amer. Society of Theatre Consultants	A	U
Jim Fletcher	American Sling Company, Inc.	American Sling Company, Inc.	O	MP
Jon Lenard	Applied Electronics	Applied Electronics	P	MP
James Niesel	Arup	Arup	P	G
Dennis J. Lopez	Automatic Devices Co.	Automatic Devices Co.	O	MP
Donald A. Hoffend, Jr.	Avista Designs, LLC	Avista Designs, LLC	P	G
Jiantong Wu	Beijing Special Engineering Design & Research Institute	Beijing Special Engineering Design & Research Institute	O	G
Buddy Braille	Bestek Lighting & Staging	Bestek Lighting & Staging	O	U
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Joachim Stoecker	CAMCO GmbH	CAMCO GmbH	O	MP
Charles E. Gorgen	Charles E. Gorgen	Charles E. Gorgen	O	G
Charlie Weiner	Charlie Weiner	Charlie Weiner	P	U
Ted Jones	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	O	U
Julie Rogers	City of Phoenix Civic Plaza	City of Phoenix	O	G
Don Dimitroff	Columbus McKinnon Corp.	Columbus McKinnon Corp.	P	MP
Herb Hart	Columbus McKinnon Corp.	Columbus McKinnon Corp.	A	MP
Mylan Lester	Creation Logics Ltd.	Creation Logics Ltd.	O	U
Howard R. Ott	D.E.O. Associates, Inc.	D.E.O. Associates, Inc.	O	G
Pat Grenfell	Vortek	Daktronics Inc.	P	CP
Edward A. (Ted) Paget	Vortek Rigging Division	Daktronics Inc.	A	CP
Harry Donovan	Donovan Rigging, Inc.	Donovan Rigging, Inc.	O	G
Wes Jenkins	Down Stage Right Industries	Down Stage Right Industries	O	CP
M. Brad Dittmer	Downhome Productions	Downhome Productions	P	U
Noga Eilon-Bahar	Eilon Engineering Industrial Weighing Systems	Eilon Engineering Industrial Weighing Systems	O	MP
Harvey Sweet	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	MP
Michael Lichter	Electronic Theatre Controls GmbH	Electronic Theatre Controls Inc.	O	MP
F. Robert Bauer	F.R. Bauer & Associates, LLC	F.R. Bauer & Associates, LLC	O	G
Cristina Delboni	Feeling Structures	Feeling Structures	O	MP
Ben Hayes	Freedom Flying	Freedom Flying	O	G
Rocky Paulson	Stage Rigging, Inc.	Freeman Companies	P	DR
Dean Hart	Stage Rigging, Inc.	Freeman Companies	O	U
John Ringelman	Stage Rigging, Inc.	Freeman Companies	A	DR
Joseph Champelli	Fisher Technical Services, Inc.	FTSI	P	CP
Dana Bartholomew	Fisher Technical Services	FTSI	A	CP
David M. Campbell	Geiger Engineers	Geiger Engineers	O	G
Timothy Mills	Geiger Engineers	Geiger Engineers	O	G

Name	Company	Representation (This is the sort field.)	Voting status	Int. cat.
Reid Neslage	H & H Specialties Inc.	H & H Specialties Inc.	P	MP
Delbert Hall	Hall Associates Inc.	Hall Associates Inc.	O	U
Howard Forryan	Harting Ltd.	HARTING KGAA	O	MP
Peter "Punch" Christian Schmidtke	Hollywood Lighting Services, Inc.	Hollywood Lighting, Inc.	P	DR
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
G. Anthony Phillips	I.A.T.S.E. Local 16	I.A.T.S.E. Local 16	O	U
Gregory C. Collis	I.A.T.S.E. Local 16	I.A.T.S.E. Local 16	O	G
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Michael Dileso	IATSE Local 481	IATSE Local 481	O	U
Kent H. Jorgensen	IATSE Local 80	IATSE Local 80	P	G
Peter V. Svitavsky	J.R. Clancy Inc.	J. R. Clancy Inc.	P	CP
Rodney F. Kaiser	J.R. Clancy Inc.	J.R. Clancy, Inc.	A	CP
Thomas S. Young	J.R. Clancy Inc.	J.R. Clancy, Inc.	A	CP
Mike Garl	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	P	MP
Tray Allen	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	A	MP
Jay O. Glerum	Jay O. Glerum & Associates, Inc.	Jay O. Glerum & Associates, Inc.	O	U
Chuck McClelland	Jeamar Winches Inc.	Jeamar Winches Inc.	O	MP
John Kaes	John Kaes	John Kaes	O	U
John R. Burgess	John R. Burgess	John R. Burgess	O	U
Christopher Purpura	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	O	G
Nevin Kleege	Kleege Industries	Kleege Industries	O	U
William Beautyman	Limelight Productions, Inc.	Limelight Productions, Inc.	P	DR
Bob Medve	Limelight Productions, Inc.	Limelight Productions, Inc.	A	DR
Louis Bradfield	Louis Bradfield	Louis Bradfield	O	U
Michael L. Savage, Sr.	Middle Dept. Inspection Agency, Inc.	Middle Dept. Inspection Agency, Inc.	O	G
Michael J. Carnaby	Mikan Theatricals	Mikan Theatricals	O	DR
Todd Petersen	Mixed Productions	Mixed Productions	O	U
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	P	CP
Peter Herrmann	Motion Laboratories	Motion Laboratories	A	CP
David Herrmann	Motion Laboratories	Motion Laboratories	A	CP
Shawn Sack	Mountain Productions Inc.	Mountain Productions Inc.	P	DR
James B. Evans	Mountain Productions Inc.	Mountain Productions Inc.	O	DR
Bradford A. Kegel	National Production Services Inc.	National Production Services Inc.	O	U
François Deffarges	Nexo	Nexo	O	MP
Shawn Nolan	Nolan Entertainment Services, LLC	Nolan Entertainment Services, LLC	pndng	G
Tracy Nunnally	Northern Illinois University	Northern Illinois University	O	U
Ted Hickey	OAP Audio Products	OAP Audio Products	O	MP
Tim Hansen	Oasis Stage Werks	Oasis Stage Werks	P	DR
Gary Justesen	Oasis Stage Werks	Oasis Stage Werks	O	DR
Spencer Brown	Oasis Stage Werks	Oasis Stage Werks	A	DR
Robert A. Grenier Jr.	Ocean State Rigging Systems Inc.	Ocean State Rigging Systems Inc.	O	DR
Joseph Rapier	Parkhill, Smith & Cooper, Inc.	Parkhill, Smith & Cooper, Inc.	O	CP

Name	Company	Representation (This is the sort field.)	Voting status	Int. cat.
Ron Bonner	PLASA	PLASA	P	G
Michael Patterson	Pook Diemont & Ohl, Inc.	Pook Diemont & Ohl, Inc.	O	CP
Marc Hendriks	Prolyte	Prolyte	O	MP
Douglas Franz	QVC Network	QVC Network	O	U
Steven Graham	R&M Materials Handling	R&M Materials Handling	P	MP
Joe Ingle	R&M Materials Handling	R&M Materials Handling	A	MP
Scott Mohr	R&R Cases and Cabinets	R&R Cases and Cabinets	O	G
Michael Reed	Reed Rigging, Inc.	Reed Rigging, Inc.	O	U
Rinus Bakker	Rhino Rigs B.V.	Rhino Rigs B.V.	O	G
Bruce Darden	Rigging Innovators, Inc.	Rigging Innovators, Inc.	P	CP
Rikki Newman	Rikki Newman	Rikki Newman	O	U
Randall W. A. Davidson	Risk International & Associates, Inc.	Risk International & Associates, Inc.	O	U
Thomas M. Granucci	Associated Students, Cox Arena	San Diego State University	O	U
Bill Sapsis	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	P	U
Peter A. Scheu	Scheu Consulting Services	Scheu Consulting Services	P	G
Kimberly Corbett	Schuler Shook	Schuler Shook	P	G
Joshua Grossman	Schuler Shook	Schuler Shook	A	G
Dan Culhane	SECOA	SECOA	P	CP
Jerald Kraft	SECOA	SECOA	A	CP
Shaun Millington	SEW-Eurodrive, Inc.	SEW-Eurodrive, Inc.	O	MP
Rob Stevenson	SEW-Eurodrive, Inc.	SEW-Eurodrive, Inc.	O	MP
Knut Skjonberg	Skjonberg Controls, Inc.	Skjonberg Controls, Inc.	P	CP
Monica Skjonberg	Skjonberg Controls, Inc.	Skjonberg Controls, Inc.	A	CP
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Jon Lagerquist	South Coast Repertory	South Coast Repertory	O	U
Nathan Wells	Stage Technologies	Stage Technologies	P	MP
Olan Cottrill	Staging Productions, Inc.	Staging Productions, Inc.	O	DR
Roger Barrett	Star Events Group Ltd.	Star Events Group Ltd.	O	DR
Steve Walker	Steve A. Walker & Associates	Steve A. Walker & Associates	P	G
Richard J. Nix	Entertainment Structures Group	Steven Schaefer Associates	P	G
Kyle Kusmer	Entertainment Structures Group	Steven Schaefer Associates	A	G
Daniel J. Clark	Entertainment Structures Group	Steven Schaefer Associates	A	G
Jeff Reder	Entertainment Structures Group	Steven Schaefer Associates	A	G
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Frank Willard	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Reuben Goldberg	Technic Services	Technic Services	O	U
Stephen G. Surratt	Texas Scenic Company	Texas Scenic Company	P	DR
Richard C. Mecke	Texas Scenic Company	Texas Scenic Company	O	DR
Mark Newlin	Texas Scenic Company	Texas Scenic Company	O	DR
Eugene Leiternann	Theatre Projects Consultants, Inc.	Theatre Projects Consultants, Inc.	P	G
Steve Sweet	Theatre Projects Consultants, Inc.	Theatre Projects Consultants, Inc.	A	G
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	G
Ed Nicholas	Theatrical Lighting Systems, Inc.	Theatrical Lighting Systems, Inc.	O	DR
John Van Lennep	Theatrix Inc.	Theatrix Inc.	O	DR

Name	Company	Representation (This is the sort field.)	Voting status	Int. cat.
John C. Snook	Thermotex Industries Inc.	Thermotex Industries Inc.	O	CP
Jeff Wilkowski	Thern, Inc.	Thern, Inc.	P	MP
Tim Franklin	Theta-Consulting	Theta-Consulting	O	G
Chris Higgs	Total Solutions Group	Total Solutions Group	O	G
Adrian Forbes-Black	Total Structures Inc.	Total Structures Inc.	P	MP
Ian Coles	Total Structures, Inc.	Total Structures, Inc.	O	MP
Peter Johns	Total Structures, Inc.	Total Structures, Inc.	O	MP
Elmer Veith	Total Structures - Eastern US Sales Office	Total Structures, Inc.	A	MP
Theresa Kelley	Total Structures Inc.	Total Structures Inc.	A	MP
JoAnna Kamorin-Lloyd	Vincent Lighting Systems	Vincent Lighting Systems	O	U
Michael Keppler	Bogen	Vitec Group	O	MP
Keith Bohn	Tomcat USA, Inc.	Vitec Group plc	P	MP
Will Todd	Tomcat USA, Inc.	Vitec Group plc	A	MP
Hank Miller	W.E. Palmer Co.	W.E. Palmer Co.	O	CP
Rand Goddard	W.E. Palmer Co.	W.E. Palmer Co.	O	CP
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U
Warren A. Bacon	Warren A. Bacon	Warren A. Bacon	O	U
Robert Dean	ZFX Inc.	ZFX Inc.	O	CP

Key to codes:

P	principal voting member	MP	mass-market producer interest category	G	general-interest interest category
A	alternate voting member	CP	custom-market producer interest category		
I	individual voting member	DR	dealer or rental company interest category		
O	observer, non-voting	U	user interest category		