

Minutes
Rigging Working Group
Wednesday, 14 November 2007
Rosen Plaza Hotel
Orlando, Florida

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

Recording secretary: Karl G. Ruling; ESTA

Members attending:

William Bradburn; Aerial Arts, Inc.; P; U
William Conner; Bill Conner Associates LLC, representing the Amer. Society of Theatre Consultants; P; U
Jon Lenard; Applied Electronics; P; MP
James Niesel; ARUP; P; G (new company at this meeting)
Charlie Weiner; P; U
Ted Jones; Chicago Spotlight, Inc.; P; U
Don Dimitroff; Columbus McKinnon Corp.; P; MP
Pat Grenfell; Vortek (Daktronics Inc.); P; CP
M. Brad Dittmer; Downhome Productions; P; U
Noga Eilon-Bahar; Eilon Engineering Industrial Weighing Systems; P; MP
Rocky Paulson; Stage Rigging, Inc. (the Freeman Companies); P; DR
John Ringelman; Stage Rigging, Inc. (the Freeman Companies); A; DR
Dana Bartholomew; Fisher Technical Services (FTSI); A; CP
Reid Neslage; H & H Specialties Inc.; P; MP
Kent H. Jorgensen; IATSE Local 80; P; G
Peter V. Svitavsky; J.R. Clancy Inc.; P; CP
Rodney F. Kaiser; J.R. Clancy Inc.; A; CP
Thomas S. Young; J.R. Clancy Inc.; A; CP
Mike Garl; James Thomas Engineering, Inc.; P; MP
Steven Graham; R&M Materials Handling (KCI Konecranes); O; MP
Harvey Sweet; LA ProPoint, Inc.; P; DR
William Beautyman; Limelight Productions, Inc.; P; DR
Bob Medve; Limelight Productions, Inc.; A; DR
Michael J. Carnaby; Mikan Theatricals; P; DR
Vincent J. Cannavale; Motion Laboratories; P; CP
Peter Herrmann; Motion Laboratories; A; CP
Shawn Sack; Mountain Productions Inc.; P; DR
Ron Bonner; PLASA; P; G
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 (joined at this meeting)
Monica Skjonberg; Skjonberg Controls, Inc.; A; CP (joined at this meeting)
Olan Cottrill; Staging Productions, Inc. ; P; DR
Steve Walker; Steve A. Walker & Associates; P; G
Richard J. Nix; Entertainment Structures Group (Steven Schaefer Associates); P; G
Shawn Nolan; Entertainment Structures Group (Steven Schaefer Associates); A; G
Christine L. Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR
Stephen G. Surratt; Texas Scenic Company; P; DR (joined at this meeting)
Eugene Leitermann; Theatre Projects Consultants, Inc.; P; G (new company at this meeting)
Jerry Gorrell; Theatre Safety Programs; P; G
John C. Snook; Thermotex Industries Inc.; P; CP
Jeff Wilkowski; Thern, Inc.; P; MP

Adrian Forbes-Black; Total Structures Inc.; P; MP
Elmer Veith; Total Structures - Eastern US Sales Office (Total Structures, Inc.); A; MP
Pete Happe; Walt Disney Imagineering (Walt Disney Company); P; U

Visitors: Chris Schmidt; Stage Rigging, Inc.
Joe Ingle; R&M Materials Handling, Inc.
Jim Vandegrift; R&M Materials Handling, Inc.
Wendy Holt; Alliance of Motion Picture & Television Producers
Stephen Vanciel
Stephen Nelson; 3dx Scenic Studio

1 Opening remarks

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

Sapsis offered a few remarks about the TSP budget, and encouraged people to be frugal, to use what they need, but to need what they use. Meeting rooms in particular are a major expense. If a group will not meet, please let Frances Thompson know as quickly as possible. If a reserved meeting room can be cancelled early enough, we may be able to avoid having to pay for it.

2 Attendance and membership

2.1 Introduction of those present

Those present introduced themselves.

2.2 Circulation of attendance sign-in sheet

A yellow sign-in sheet was circulated and members and guests were instructed to indicate their presence on it.

2.3 Call for quorum

Sapsis asked for a show of hands of voting members. He counted the raised hands and then announced that a quorum was present and working group business could be conducted.

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. Any principal member and voting alternate who both miss three consecutive meetings 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

The following applications had been received:

Jim Niesel; ARUP; principal; general interest (New company. Formerly with Theatre Projects Consultants.)

Stephen G. Surratt; Texas Scenic Co.; principal; dealer or rental company

Gene Leiternann; Theatre Projects Consultants, principal; general interest (New representation. Formerly ASTC.)

Knut Skjonberg; Skjonberg Controls; principal; custom market producer

Monica Skjonberg; Skjonberg Controls; alternate; custom market producer

Harvey Sweet moved that the applications be accepted. The motion was seconded, and then approved with a unanimous show of hands.

The full consensus body, including those not present, during this meeting was:

Name	Company	Representing	Voting status	Int. cat.
William Bradburn	Aerial Arts, Inc.	Aerial Arts, Inc.	P	U
William Conner	Bill Conner Associates LLC	Amer. Society of Theatre Consultants	P	U
Jon Lenard	Applied Electronics	Applied Electronics	P	MP
James Niesel	ARUP	ARUP	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
Robert Voss	Vortek	Daktronics Inc.	A	CP
Jake Winkelman	Vortek	Daktronics Inc.	A	CP
M. Brad Dittmer	Downhome Productions	Downhome Productions	P	U
Noga Eilon-Bahar	Eilon Engineering Industrial Weighing Systems	Eilon Engineering Industrial Weighing Systems	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
Travis Palmer	H & H Specialties Inc.	H & H Specialties Inc.	A	MP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	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
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
Harvey Sweet	LA ProPoint, Inc.	LA ProPoint, Inc.	P	DR
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
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
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
Olan Cottrill	Staging Productions, Inc.	Staging Productions, Inc.	P	DR

Name	Company	Representing	Voting status	Int. cat.
Steve Walker	Steve A. Walker & Associates	Steve A. Walker & Associates	P	G
Richard J. Nix	Entertainment Structures Group	Steven Schaefer Associates	P	G
Shawn Nolan	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
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	G
John C. Snook	Thermotex Industries Inc.	Thermotex Industries Inc.	P	CP
Jeff Wilkowski	Thern, Inc.	Thern, Inc.	P	MP
Adrian Forbes-Black	Total Structures Inc.	Total Structures Inc.	P	MP
Elmer Veith	Total Structures - Eastern US Sales Office	Total Structures, Inc.	A	MP
Keith Bohn	Tomcat USA, Inc.	Vitec Group plc	P	MP
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U
		Possible votes total	42	
		Votes by interest category	8	CP
			8	MP
			9	DR
			8	U
			9	G

4 Approval of minutes from the previous meeting

See Rig/2007-2013, file name RIGmin07-2007.pdf.

Dan Culhane moved that the draft minutes be accepted as written. The motion was seconded and then approved with a show of hands.

5 ESTA declarations

5.1 Anti-trust statement

Bill Sapsis read the following statement aloud to the assembly:

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

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

Karl Ruling, the Technical Standards Manager, held up some of the easy-to-read pamphlets to show that they were available.

No anti-trust issues were brought to the attention of the assembly.

5.2 Call for patents

Bill Sapsis read the following statement aloud to the assembly:

"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 protected intellectual property was brought to the attention of the assembly.

6 Approval of the agenda

Richard Nix moved that the draft agenda be approved as written. The motion was seconded.

There was discussion. Gene Leitermann argued that the E1.4 task group report is not representative of the task group, and asked that the task group report not be considered at this meeting at this time. He said that inadequate discussion within the task group will probably generate more public review comments from the task group.

Bill Conner said that the task group document had not been reviewed and approved by the task group.

Jim Niesel argued that we should leave it on the agenda, and discuss what to do when the item comes up.

The agenda was approved by a majority vote with a show of hands.

Kent Jorgensen moved that the E1.4 report and any action be moved to the end of the agenda. The motion was seconded. The motion was approved with a unanimous show of hands.

7 Old business

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

No news.

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

No news.

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

Harvey Sweet reported that the task group is making "conceptual progress" on drafting suggested public review comment resolutions. He predicted that the task group will not be finished until 2008—perhaps January, but more likely by the USITT meeting in March. The comments have caused a rethinking of the purpose of the standard for the intended audience.

7.4 BSR E1.6-2, electric chain hoists, public review comment resolution

The public review comments were distributed on 5 September 2007. Please see SummaryE1-6-2ThrdRevwCommnts.pdf.

Dan Culhane announced that the task group will meet on Thursday, November 15, to work on drafting possible comment resolutions.

7.5 BSR E1.6-3, Safe Use of Serially Manufactured Electric Chain Hoists in the Entertainment Industry

Charlie Weiner reported that they are making progress, but they need practicing riggers in the task group. He issued a call to working group members to recruit practicing riggers to join the working group so they can then join the task group.

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

Peter Herrmann reported that they had their first meeting today. It was a productive one, and the group has started work on a scope statement.

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

It's published. No news.

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

It's published. No news.

7.9 ANSI E1.21-2006, portable roof systems

Adrian Forbes-Black said that the seismic issue needs to be addressed. Keith Bohn said he would reconvene the task group to address the issue, but he hasn't done it.

7.10 BSR E1.22, fire safety curtain systems public review comment resolutions

See the draft comment resolutions E1-22_4thCmmntResols.pdf and the revised BSR E1.22 draft fire safety curtain system standard, E1-22_2002-2032r8.pdf.

Harvey Sweet moved that the comment resolution document be approved and that the revised draft document be offered for public review. The motion was seconded, and then approved with a roll call ballot.

Name	Company	Representing	Voting status	Int. cat	Yes	Yes with comments	No with reasons	Abstain
William Bradburn	Aerial Arts, Inc.	Aerial Arts, Inc.	P	U	Y			
William Conner	Bill Conner Associates LLC	Amer. Society of Theatre Consultants	P	U				Y
Jon Lenard	Applied Electronics	Applied Electronics	P	MP	Y			
James Niesel	ARUP	ARUP	P	G	Y			
Charlie Weiner	Charlie Weiner	Charlie Weiner	P	U	Y			
Ted Jones	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	P	U	Y			
Don Dimitroff	Columbus McKinnon Corp.	Columbus McKinnon Corp.	P	MP	Y			
Herb Hart	Columbus McKinnon Corp.	Columbus McKinnon Corp.	A	MP				
Pat Grenfell	Vortek	Daktronics Inc.	P	CP	Y			
Robert Voss	Vortek	Daktronics Inc.	A	CP				
Jake Winkelman	Vortek	Daktronics Inc.	A	CP				
M. Brad Dittmer	Downhome Productions	Downhome Productions	P	U	Y			
Noga Eilon-Bahar	Eilon Engineering Industrial Weighing Systems	Eilon Engineering Industrial Weighing Systems	P	MP	Y			
Rocky Paulson	Stage Rigging, Inc.	Freeman Companies	P	DR	Y			
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	Y			
Reid Neslage	H & H Specialties Inc.	H & H Specialties Inc.	P	MP	Y			
Travis Palmer	H & H Specialties Inc.	H & H Specialties Inc.	A	MP				
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U				

Name	Company	Representing	Voting status	Int. cat.	Yes	Yes with comments	No with reasons	Abstain
Kent H. Jorgensen	IATSE Local 80	IATSE Local 80	P	G	Y			
Peter V. Svitavsky	J.R. Clancy Inc.	J. R. Clancy Inc.	P	CP	Y			
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	Y			
Tray Allen	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	A	MP				
Harvey Sweet	LA ProPoint, Inc.	LA ProPoint, Inc.	P	DR	Y			
William Beautyman	Limelight Productions, Inc.	Limelight Productions, Inc.	P	DR				
Bob Medve	Limelight Productions, Inc.	Limelight Productions, Inc.	A	DR	Y			
Michael J. Carnaby	Mikan Theatricals	Mikan Theatricals	P	DR	Y			
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	P	CP	Y			
Peter Herrmann	Motion Laboratories	Motion Laboratories	A	CP				
Shawn Sack	Mountain Productions Inc.	Mountain Productions Inc.	P	DR	Y			
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	Y			
Bruce Darden	Rigging Innovators, Inc.	Rigging Innovators, Inc.	P	CP				
Bill Sapsis	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	P	U	Y			
Peter A. Scheu	Scheu Consulting Services	Scheu Consulting Services	P	G	Y			
Kimberly Corbett	Schuler Shook	Schuler Shook	P	G	Y			
Joshua Grossman	Schuler Shook	Schuler Shook	A	G				
Dan Culhane	SECOA	SECOA	P	CP	Y			
Jerald Kraft	SECOA	SECOA	A	CP				
Knut Skjonberg	Skjonberg Controls	Skjonberg Controls	P	CP	Y			
Monica Skjonberg	Skjonberg Controls	Skjonberg Controls	A	CP				
Olan Cottrill	Staging Productions, Inc.	Staging Productions, Inc.	P	DR	Y			
Steve Walker	Steve A. Walker & Associates	Steve A. Walker & Associates	P	G	Y			
Richard J. Nix	Entertainment Structures Group	Steven Schaefer Associates	P	G	Y			
Shawn Nolan	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	Y			
Frank Willard	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR				
Stephen O. Surratt	Texas Scenic Company	Texas Scenic Company	P	DR	Y			
Eugene Leitermann	Theatre Projects Consultants, Inc.	Theatre Projects Consultants	P	G	Y			
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	G	Y			
John C. Snook	Thermotex Industries Inc.	Thermotex Industries Inc.	P	CP	Y			
Jeff Wilkowski	Thern, Inc.	Thern, Inc.	P	MP	Y			
Adrian Forbes-Black	Total Structures Inc.	Total Structures Inc.	P	MP	Y			
Elmer Veith	Total Structures - Eastern US Sales Office	Total Structures, Inc.	A	MP				
Keith Bohn	Tomcat USA, Inc.	Vitec Group plc	P	MP				
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U	Y			
		Total votes	42 possible		37	0	0	1
		Votes by interest category	8	MP	7	0	0	0
			8	CP	7	0	0	0
			9	DR	8	0	0	0
			8	U	6	0	0	1
			9	G	9	0	0	0

7.11 BSR E1.4, manual rigging systems [Nix et alia]

7.11.1 Resolutions to James L. Read Jr. letter.

See E1-4JimReadLetterResponseDraft.pdf

7.11.1.1 Peter Scheu moved that the draft be amended by removing "By ANSI's own definition, an ANSI standard is a 'voluntary consensus standard.'" The motion was seconded and then approved by a show of hands.

7.11.1.2 Bill Conner moved that the following clause in the letter be amended as shown:

"We appreciate ASTC taking the time to formally address concerns with BSR E1.4. Jim Read's letter of December 30, 2006 clearly identifies Bill Conner as the official representative and spokesman, and indicates that his vote and position ~~represent the~~ ~~are directed by the~~ ~~majority, or a consensus,~~ of ASTC members. Any confusion surrounding ASTC official representation has been put to rest."

The motion was seconded and then approved with a show of hands.

7.11.1.3 Jim Niesel moved that the Bill Sapsis letter of January 8, 2007 to James Read Jr. be attached and sent on as part of this letter. The motion was seconded, and then approved with a show of hands.

7.11.1.4 Brad Dittmer moved that we accept the response to the Jim Read letter as amended. The motion was seconded. The motion was approved by a majority with a show of hands. All voted in favor, except for four who abstained. There was no opposition.

7.11.1.5 Further changes were made to the response to the Jim Read letter, bringing it further in line with the changes made to the draft E1.4 manual rigging system standard.

7.11.1.5.1 Jim Niesel moved that the following language be stricken from the Jim Read letter and an alternate statement added.

~~The definition of a trim chain assembly in the standard does not preclude the use of rated chain; it simply does not dictate the NACM recommendation of only grade 80 or alloy chain for overhead lifting. The annex note is clear on the difference and the assembly described is not only a double load path, but is also required by the standard to be of greater breaking strength than the wire rope. By definition then, as well as proven in testing, if the connection fails, it will be the wire rope that fails, not the chain. In order to resolve the apparent contradiction with the NACM chain standard, we have revised the requirements for the trim chain assembly in 3.17.3.3 (c).~~

The motion was seconded, and then approved with a show of hands.

7.11.1.5.2 Jim Niesel moved that the following passage be changed as indicated.

The email from Jones and Phillips also expresses concern with the perceived prescriptive nature and takes specific exception to Section 5 Inspection Procedures, yet makes no specific recommendations for changes or gives examples of why the way it is written could be interpreted as overly prescriptive. While we have difficulty entertaining or rejecting changes without specific suggestions or recommendations, section 5 has been reorganized to clarify the inspection requirements.

The motion was seconded, and then approved with a show of hands.

7.11.2 Next step with BSR E1.4

See E1-4_1997-2002r14.pdf

Richard Nix moved that the E1.4 document, as amended by the Jim Read letter, be accepted and forwarded to the TSC for public review. The motion was seconded.

There was discussion, in which the following additional amendments were made to the draft E1.4 standard.

7.11.2 (A) Bill Conner moved that 3.14 be amended by removing the last sentence. ("The batten should run the full length of the locking rail." The motion was seconded. There was discussion. The motion was approved by a show of hands.

7.11.2 (B) Bill Conner moved that 3.17.3.3 (c) be changed as follows:

Trim chain assemblies shall be fabricated of chain approved by the manufacturer for the application. ~~NACM Grade 30 proof coil chain or better.~~

The motion was seconded. There was discussion. The motion was accepted by a show of hands.

7.11.2 (C) Bill Conner moved that in 5 the following sentence be changed as indicated:

Qualified persons, ~~other than the installer,~~ shall oversee the inspection and testing process, and shall certify that all inspection requirements have been met.

The motion was seconded. There was discussion. The motion was approved with a show of hands.

7.11.2 (D) Gene Leitermann moved that 5 be changed to read as follows:

5 Inspections

5.1 Prerequisites: Minimum inspection and testing requirements of this section are established by the following prerequisites:

- A. Lineset components are manufactured under controlled process environments, and to engineered designs;
- B. Lineset components are installed under conditions where professional engineers evaluate system design;
- C. Lineset component manufacturers provide detailed recommendations for the application and installation of their respective products;

5.2 General requirements: All installations shall be visually inspected, and shall be tested for operation in a non-destructive manner.

5.2.1 All systems shall be inspected after installation, and prior to user operation. Inspections shall meet the requirements of this section, but additional requirements shall be permitted.*

5.2.2 Qualified persons shall oversee the inspection and testing process, and shall certify that all inspection requirements have been met.

5.2.3 Inspection procedures and results shall be fully documented. The testing supervisor, the installer and the system owner shall retain complete copies of the test documentation.

5.3 Proof testing: Any lineset not meeting the prerequisite requirements of 5.1 above shall be tested by applying a controlled test load at no less than 150% of the design load.

The motion was seconded. There was discussion. The motion was approved by a show of hands.

7.11.2 (E) Dan Culhane moved that in 5.1 B. "professional engineers" be changed to "a qualified person."

The motion was seconded. There was discussion. The motion was approved by a show of hands.

7.11.2 (F) Dan Culhane moved that "6.2 Design factors: A professional engineer shall determine or approve design factors for all equipment not included in the tension load path," shall be changed to read, "6.2 Design factors: A qualified person shall determine or approve design factors for all equipment not included in the tension load path." (This changed "professional engineer" to "qualified person.")

The motion was seconded. The motion was approved by a show of hands.

7.11.2 (G) Gene Leitermann moved that in 6.2 the phrase "minimum performance guideline for tension load path equipment, unless a professional engineer determines that lower values are permitted," be changed to "minimum performance guideline for tension load path equipment, unless a licensed design professional determines that lower values are permitted." The motion was seconded. There was discussion. The motion failed on a show of hands.

7.11.2 (H) Gene Leitermann moved that a new 3.9.1 be inserted and that the existing 3.9.1 and following sections be renumbered. The new 3.9.1 shall read: "Counterweight arbors shall be guided in accordance with 3.11 or 3.12."

The motion was seconded, and then approved with a show of hands.

The main motion, to forward the revised E1.4 to the TSC for another public review, was approved by a supermajority on a roll call ballot. This created E1.4 document Rig/1997-2002r15.

Name	Company	Representing	Voting status	Int. cat	Yes	Yes with comments	No with reasons	Abstain
William Bradburn	Aerial Arts, Inc.	Aerial Arts, Inc.	P	U	Y			
William Conner	Bill Conner Associates LLC	Amer. Society of Theatre Consultants	P	U	Y			
Jon Lenard	Applied Electronics	Applied Electronics	P	MP	Y			
James Niesel	ARUP	ARUP	P	G	Y			
Charlie Weiner	Charlie Weiner	Charlie Weiner	P	U	Y			
Ted Jones	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	P	U	Y			
Don Dimitroff	Columbus McKinnon Corp.	Columbus McKinnon Corp.	P	MP	Y			
Herb Hart	Columbus McKinnon Corp.	Columbus McKinnon Corp.	A	MP				
Pat Grenfell	Vortek	Daktronics Inc.	P	CP	Y			
Robert Voss	Vortek	Daktronics Inc.	A	CP				

Name	Company	Representing	Voting status	Int. cat.	Yes	Yes with comments	No with reasons	Abstain
Jake Winkelman	Vortek	Daktronics Inc.	A	CP				
M. Brad Dittmer	Downhome Productions	Downhome Productions	P	U	Y			
Noga Eilon-Bahar	Eilon Engineering Industrial Weighing Systems	Eilon Engineering Industrial Weighing Systems	P	MP	Y			
Rocky Paulson	Stage Rigging, Inc.	Freeman Companies	P	DR	Y			
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	Y			
Reid Neslage	H & H Specialties Inc.	H & H Specialties Inc.	P	MP	Y			
Travis Palmer	H & H Specialties Inc.	H & H Specialties Inc.	A	MP				
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U				
Kent H. Jorgensen	IATSE Local 80	IATSE Local 80	P	G	Y			
Peter V. Svitavsky	J.R. Clancy Inc.	J. R. Clancy Inc.	P	CP	Y			
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	Y			
Tray Allen	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	A	MP				
Harvey Sweet	LA ProPoint, Inc.	LA ProPoint, Inc.	P	DR	Y			
William Beautyman	Limelight Productions, Inc.	Limelight Productions, Inc.	P	DR				
Bob Medve	Limelight Productions, Inc.	Limelight Productions, Inc.	A	DR	Y			
Michael J. Carnaby	Mikan Theatricals	Mikan Theatricals	P	DR	Y			
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	P	CP	Y			
Peter Herrmann	Motion Laboratories	Motion Laboratories	A	CP				
Shawn Sack	Mountain Productions Inc.	Mountain Productions Inc.	P	DR	Y			
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	Y			
Bruce Darden	Rigging Innovators, Inc.	Rigging Innovators, Inc.	P	CP				
Bill Sapsis	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	P	U	Y			
Peter A. Scheu	Scheu Consulting Services	Scheu Consulting Services	P	G	Y			
Kimberly Corbett	Schuler Shook	Schuler Shook	P	G	Y			
Joshua Grossman	Schuler Shook	Schuler Shook	A	G				
Dan Culhane	SECOA	SECOA	P	CP	Y			
Jerald Kraft	SECOA	SECOA	A	CP				
Knut Skjonberg	Skjonberg Controls	Skjonberg Controls	P	CP	Y			
Monica Skjonberg	Skjonberg Controls	Skjonberg Controls	A	CP				
Olan Cottrill	Staging Productions, Inc.	Staging Productions, Inc.	P	DR	Y			
Steve Walker	Steve A. Walker & Associates	Steve A. Walker & Associates	P	G	Y			
Richard J. Nix	Entertainment Structures Group	Steven Schaefer Associates	P	G	Y			
Shawn Nolan	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	Y			
Frank Willard	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR				
Stephen O. Surratt	Texas Scenic Company	Texas Scenic Company	P	DR	Y			
Eugene Leitermann	Theatre Projects Consultants, Inc.	Theatre Projects Consultants	A	G	Y			
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	G	Y			
John C. Snook	Thermotex Industries Inc.	Thermotex Industries Inc.	P	CP	Y			

Name	Company	Representing	Voting status	Int. cat.	Yes	Yes with comments	No with reasons	Abstain
Jeff Wilkowski	Thern, Inc.	Thern, Inc.	P	MP	Y			
Adrian Forbes-Black	Total Structures Inc.	Total Structures Inc.	P	MP	Y			
Elmer Veith	Total Structures - Eastern US Sales Office	Total Structures, Inc.	A	MP				
Keith Bohn	Tomcat USA, Inc.	Vitec Group plc	P	MP				
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U	Y			
		Total votes	42 possible		38	0	0	0
		Votes by interest category	8	MP	7	0	0	0
			8	CP	7	0	0	0
			9	DR	8	0	0	0
			8	U	7	0	0	0
			9	G	9	0	0	0

8 New business

None.

9 Other business and announcements

None.

10 Schedule for future meetings

Bill Sapsis announced that the next meeting is scheduled for Saturday, 26 January 2008, 19:00 to 23:00 at the Dallas/Ft. Worth Airport Marriott South in Ft. Worth, Texas. **NOTE THE NEW DAY, SATURDAY.**

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 have missed three if they miss this one:

No one

12 Adjournment

Kent Jorgensen moved that the meeting adjourn. The motion was seconded, and then approved by acclamation. Bill Sapsis declared the meeting adjourned at 22:15.

Working Group Membership and Contact Information as of 18 December 2007

Name	Company	Representing (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
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
William Conner	Bill Conner Associates LLC	Amer. Society of Theatre Consultants	P	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
Andrew T. Martin	ATM Group, Inc.	ATM Group, Inc.	O	MP
Dennis J. Lopez	Automatic Devices Co.	Automatic Devices Co.	O	MP
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.	P	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
Robert Voss	Vortek	Daktronics Inc.	A	CP
Jake Winkelman	Vortek	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	P	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
Reid Neslage	H & H Specialties Inc.	H & H Specialties Inc.	P	MP
Travis Palmer	H & H Specialties Inc.	H & H Specialties Inc.	A	MP
Delbert Hall	Hall Associates Inc.	Hall Associates Inc.	O	U
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
Michael Dileso	IATSE Local 481	IATSE Local 481	O	U
Kent H. Jorgensen	IATSE Local 80	IATSE Local 80	P	G
Gian Carlo C. Bartolotti	Ibeam SP / Banco de Eventos	Ibeam SP / Banco de Eventos	O	U
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
Hans van der Moolen	Stagemaker Division Europe	KCI Konecranes	O	MP
Steven Graham	R&M Materials Handling	KCI Konecranes	O	MP

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Nevin Kleege	Kleee Industries	Kleee Industries	O	U
Harvey Sweet	LA ProPoint, Inc.	LA ProPoint, Inc.	P	DR
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	P	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
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 Defarges	Nexo	Nexo	O	MP
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 Juslesen	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
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
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
Olan Cottrill	Staging Productions, Inc.	Staging Productions, Inc.	P	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
Shawn Nolan	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 Leitermann	Theatre Projects Consultants, Inc.	Theatre Projects Consultants, Inc.	P	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
John C. Snook	Thermotex Industries Inc.	Thermotex Industries Inc.	P	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

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
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
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
Mitch Clark	Tomcat USA, Inc.	Vitec Group plc	O	MP
John James	Tomcat USA, Inc.	Vitec Group plc	O	MP
Eckart Steffens	SOUNDLIGHT	VPLT	O	G
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		