

**Minutes**  
**Rigging Working Group**  
Saturday, 18 January 2014  
D/FW Marriott Solana  
Westlake, TX

**Presiding Chairperson:** Bill Sapsis; Sapsis Rigging, Inc.; A; U

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

**Attending members:**

Woody Pyeatt; A V Pro, Inc.; P; DR  
R. Duane Wilson; George C. Izenour Associates; Amer. Society of Theatre Consultants; P; DE  
Herb Hart; Columbus McKinnon Corp.; P; MP  
David Carmack; Columbus McKinnon Corp.; A; MP  
Jennifer O'Leary; Columbus McKinnon Corp.; A; MP  
Matthew Antonucci; Contract Services Administration Trust Fund; P; U  
Edward A. (Ted) Paget; Daktronics Automated Rigging Solutions; Daktronics Inc. ; P; CP  
Steven Ricks; Electronic Theatre Controls, Inc.; P; MP  
Joseph McGeough; Flying by Foy; Foy Invention Enterprises, Inc.; P; CP  
John Ringelman; Stage Rigging, Inc.; Freeman Companies; A; DR  
Scott M. Blair; Full Throttle Films/ VER; O; DR  
Jeremy Hochman; Full Throttle Films/ VER; P; DR  
Miriam Paschetto; Geiger Engineers; P; G  
Reid Neslage; H & H Specialties Inc.; P; MP  
Tracy Nunnally; Hall Associates Flying Effects; P; CP  
John P. Moore; Hall Associates Flying Effects; A; CP  
Ed Garstkiewicz; Harting Inc., North America; Harting KGAA; P; G  
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U  
Roger Lattin; I.A.T.S.E. Local 728; P; U  
Keith Bohn; I; G  
William Beautyman; Limelight Productions, Inc.; P; DR  
William B. Gorlin; McLaren Engineering Group; M.G. McLaren, P.C.; P; G  
Will Todd; Tomcat USA, Inc.; Milos Group; P; MP  
Tim Hansen; Oasis Stage Werks; P; DR  
Carlos Ortega; PSAV Presentation Services; A; U  
Rick Montgomery; R&M Materials Handling; P; MP  
Bruce Darden; Rigging Innovators, Inc.; P; CP  
Jesse Adams; Rose Brand; P; DR  
Peter A. Scheu; Scheu Consulting Services, Inc.; P; DE  
Kimberly Corbett Oates; Schuler Shook; P; DE  
Dan Culhane; SECOA; P; 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  
Dana Bartholomew; Fisher Technical Services; Tait Towers Manufacturing LLC; P; CP  
Jyle Nogee; Theatre Design Services, LLC.; I; DE  
Jerry Gorrell; Theatre Safety Programs; P; G  
Dan Lisowski; Dept. Of Theatre and Drama; University of Wisconsin - Madison; P; U  
Peter V. Svitavsky; J.R. Clancy, Inc.; Wenger Corp.; P; CP  
Gregory Orth; WNP Services, Inc.; WNP Services, Inc.; P; DR  
Joseph Champelli; ZFX Flying Inc.; ZFX Flying Inc.; P; CP

**Visitors:**

Sanford G. Lzow; SHUR-RIG LLC

## 1 Opening remarks

Bill Sapsis welcomed everyone and called the meeting to order at 7:06pm.

## 2 Attendance and membership

### 2.1 Introduction of those present

### 2.2 Circulation of attendance sign-in sheet

The bright green sign-in sheet was circulated clockwise while self-introductions took place counter-clockwise.

### 2.3 Call for quorum

Voting members were counted by a show hands and a quorum was announced present by Bill Sapsis.

### 2.4 Requirements for membership

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

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

### 2.5 Changes of membership status

The following voters have missed the last two consecutive meetings. In accordance with the Policies and Procedures they will be moved to observer status if they miss this one:

No members were in jeopardy of losing status. Warned members were either present or, in the case of William Bradburn, Principal voting member for Aerial Arts, had requested a change in status to Observer.

### 2.6 Processing of new membership requests:

As of 2 January 2014 the following applications have been received and logged:

Q. Brian Sickels; O; G  
John P. Moore; Hall Associates Flying Effects; A; CP  
Keith Bohn; I; G  
Jennifer O'Leary; Columbus McKinnon; A; MP

Eddie Kramer moved to approve the new membership requests. The motion was seconded and approved by a show of hands.

Jeremy Hochman and Scott Blair, VER , requested Principal and Alternate status respectively, from Observer.

Ted Paget moved to approve the status request. The motion was seconded and passed by a show of hands.

### 2.7 Consensus body

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

Name	Representing	Voting Status	Int. Category
Woody Pyeatt	A V Pro, Inc.	P	DR
Ethan William Gilson	Advanced Lighting and Production Services	P	U
R. Duane Wilson	Amer. Society of Theatre Consultants	P	DE
Robert Young	Arup	P	DE
James Niesel	Arup	A	DE
S. Lars Klein	Arup	A	DE
Donald A. Hoffend_Jr.	Avista Designs, LLC	P	G
Donald Hoffend_III	Avista Designs, LLC	A	G
Ted Jones	Chicago Spotlight, Inc.	P	U

Name	Representing	Voting Status	Int. Category
Daniel J. Clark	Clark-Reder Engineering, Inc.	P	G
Herb Hart	Columbus McKinnon Corp.	P	MP
Art Zabal	Columbus McKinnon Corp.	A	MP
David Carmack	Columbus McKinnon Corp.	A	MP
Jennifer O'Leary	Columbus McKinnon Corp.	A	MP
Matthew Antonucci	Contract Services Administration Trust Fund	P	U
Edward A. (Ted) Paget	Daktronics Inc.	P	CP
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP
Michael Lichter	Electronic Theatre Controls, Inc.	A	MP
Nils Becker	Electronic Theatre Controls, Inc.	A	MP
Joseph McGeough	Foy Inventerprises, Inc.	P	CP
Rocky Paulson	Freeman Companies	P	DR
John Ringelman	Freeman Companies	A	DR
Jeremy Hochman	Full Throttle Films/ VER	P	DR
Miriam Paschetto	Geiger Engineers	P	G
Reid Neslage	H & H Specialties Inc.	P	MP
Tracy Nunnally	Hall Associates Flying Effects	P	CP
John P. Moore	Hall Associates Flying Effects	A	CP
Ed Garstkiewicz	Harting KGAA	P	G
Howard Forryan	Harting KGAA	A	G
Pat Grenfell	Hoist Sales & Service	P	DR
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Roger Lattin	I.A.T.S.E. Local 728	P	U
Rod Haney	I.A.T.S.E. Local 891	P	U
Tray Allen	James Thomas Engineering, Inc.	P	MP
Jonathan Deull	JSD Projects LLC	I	U
Jerald Kraft	JTH Lighting Alliance	P	CP
Keith Bohn	Keith Bohn	I	G
William Beautyman	Limelight Productions, Inc.	P	DR
Charlie Weiner	LMG Inc.	P	DR
Steve (BOZ) Bodzioch	LMG Inc.	A	DR
Douglas M. Eldredge	LMG Inc.	A	DR
William B. Gorlin	M.G. McLaren, P.C.	P	G
Mike Adamovich	M.G. McLaren, P.C.	A	G
Mike Garl	Mike Garl Consulting LLC	P	DE
Will Todd	Milos Group	P	MP
Scott Johnson	Milos Group	A	MP
Vincent J. Cannavale	Motion Laboratories	P	CP
Peter Herrmann	Motion Laboratories	A	CP
David Herrmann	Motion Laboratories	A	CP

Name	Representing	Voting Status	Int. Category
Gregory Quinkert	Motion Laboratories	A	CP
Marty Wesstrom	Mountain Productions Inc.	P	DR
Joseph Jeremy	Niscon Inc.	P	CP
Tim Hansen	Oasis Stage Werks	P	DR
Eric Rouse	Pennsylvania State University	P	U
Orestes Mihaly	Production Resource Group	P	DR
Shawn Nolan	Production Resource Group	A	DR
Todd Spencer	PSAV Presentation Services	P	U
Carlos Ortega	PSAV Presentation Services	A	U
Rick Montgomery	R&M Materials Handling	P	MP
Troy Post	R&M Materials Handling	A	MP
Bruce Darden	Rigging Innovators, Inc.	P	CP
Jesse Adams	Rose Brand	P	DR
Patrick J. Finn	Sapsis Rigging, Inc.	P	U
Bill Sapsis	Sapsis Rigging, Inc.	A	U
Peter A. Scheu	Scheu Consulting Services, Inc.	P	DE
Kimberly Corbett Oates	Schuler Shook	P	DE
Joshua Grossman	Schuler Shook	A	DE
Bob McVay	Schuler Shook	A	DE
Dan Culhane	SECOA	P	CP
Brad Dittmer	Stage Labor of the Ozarks	P	U
Steve Walker	Steve A. Walker & Associates	P	G
Richard J. Nix	Steven Schaefer Associates	P	G
Kyle Kusmer	Steven Schaefer Associates	A	G
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Dana Bartholomew	Tait Towers Manufacturing LLC	P	CP
Mark Ager	Tait Towers Manufacturing LLC	A	CP
Patrick Leigh Bettington	Tait Towers Manufacturing LLC	A	CP
Stephen G. Surratt	Texas Scenic Company	P	DR
Rick Rosas	Texas Scenic Company	A	DR
Joel A Guerra	Texas Scenic Company	A	DR
Jyle Nogee	Theatre Design Services, LLC.	I	DE
Jerry Gorrell	Theatre Safety Programs	P	G
Jeff Wilkowski	Thern, Inc.	P	MP
Adrian Forbes-Black	Total Structures Inc.	P	MP
Elmer Veith	Total Structures, Inc.	A	MP
Theresa Kelley	Total Structures Inc.	A	MP
Don Halchak	Total Structures Inc.	A	MP
Dan Lisowski	University of Wisconsin - Madison	P	U
Christopher Jacobs	Virginia Beach City Public Schools	P	U

Name	Representing	Voting Status	Int. Category
Pete Happe	Walt Disney Company	P	U
Jeff T. Miller	Walt Disney Company	A	U
Earle T. Greene	Walt Disney Company	A	U
Peter V. Svitavsky	Wenger Corp.	P	CP
Gregory Orth	WNP Services, Inc.	P	DR
Robert Ramsey	WNP Services, Inc.	A	DR
Michael Wells	Xtreme Structures and Fabrication	P	MP
Mark Newlin	Xtreme Structures and Fabrication	A	MP
Joseph Champelli	ZFX Flying Inc.	P	CP
Stu Cox	ZFX Flying Inc.	A	CP

Votes by Interest Category	Total
CP (Custom-market Producer)	11
DE (Designer)	6
DR (Dealer or Rental company)	13
G (General interest)	9
MP (Mass-market Producer)	9
U (User)	14
<b>Total votes possible</b>	<b>62</b>

### 3 Approval of minutes from the previous meeting

See the draft minutes of the November meeting, *RIGmin11-2013.pdf*.

Dan Culhane moved to approve the minutes. The motion was seconded and passed by a show of hands.

### 4 PLASA declarations

#### 4.1 Anti-trust statement

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

The PLASA Board of Directors, the Technical Standards Council, 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 PLASA chair immediately.

PLASA 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.

Nothing was reported.

#### 4.2 Call for patents

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

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

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

Nothing was reported.

## **5 Approval of the agenda**

Bill Sapsis added one item; the Above and Beyond Award.

Eddie Kramer moved to approve the revised agenda. The motion was seconded and passed by show of hands.

## **6 Above and Beyond awards**

Bill Sapsis announced that the first RWG recipients of the Above and Beyond volunteer recognition awards are Christine Kaiser and Dan Culhane. This is the first year for this award, which recognizes exemplary work by TSP volunteers. Recipients are nominated by their peers, and submission for recipients may be made at any time at [tsp.plasa.org/AboveandBeyond](http://tsp.plasa.org/AboveandBeyond).

This year's Above and Beyond Award recipients, Christine Kaiser and Dan Culhane, received an enthusiastic round of applause and a certificate.

## **7 Old business**

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

No news or action at this time.

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

No news or action at this time.

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

*From the draft November minutes:*

*Bill Sapsis appointed a task group for the new revision. That group consists of Richard Nix, Pat Grenfeld, Bruce Darden, Ted Jones, Jim Neisel, Dan Culhane, Reid Neslage. The addition of Peter Scheu was mentioned but not confirmed.*

Peter Scheu was confirmed as a member of the task group.

Richard Nix reported on the task group. Moved that the group expand the scope of the E1.4 to make it be BSR E1.4 suite -- 201x, Entertainment Technology--Manually Powered and Static Rigging Systems -- Design, Installation, and Operation. The motion was seconded by discussion and approved by a unanimous show of hands.

Christine Kaiser asked where training comes into the suite. There was brief discussion.

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

No news or action at this time.

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

No news or action at this time.

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

No news or action at this time.

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

No news or action at this time.

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

No news or action at this time.

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

No news or action at this time.

**7.10 ANSI E1.21 - 2013, Temporary Ground-Supported Overhead Structures Used To Cover Stage Areas and Support Equipment in the Production of Outdoor Entertainment Events**

Officially approved by ANSI. Final version to be published shortly. No further news or action at this time.

**7.11 BSR E1.22 - 20xx, Entertainment Technology - Fire Safety Curtain Systems (revision, reaffirmation, or withdrawal by 2014)**

Dan Culhane reported that the task group is working on a document for consideration at the March meeting. The consensus of the group was for revision.

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

Will Todd addressed the group on the progress of the task group. Karl Ruling addressed the group and presented the voting summary.

Bill Gorlin then pointed out an error in 6.5.3 with minimum/maximum load rating. Karl Ruling issued a roll-call ballot to address the flaw in the document and close the letter ballot. Karl Ruling announced that the letter ballot has been rejected by roll call.

The following objections to the document that were expressed on the roll call ballot were discussed:

*Voter suggested changing "should" to "shall" in 3.4.1 to be inline with OSHA regulations.*

Rejected. Fall protection is required by OSHA, not Personal Fall Arrest, and other methods of fall protection other than Personal Fall Arrest are used in the entertainment industry.

*Sections 4.1 and 6.1 - Specify year of referenced standard. Referenced standard may be subject to changes that would make new requirements onerous for the entertainment industry.*

6.1.1 Jerry Gorrell suggested "... at the time of manufacture of each component" so it reads: "6.1.1 All components of a PFAS from the anchorage connector through the full body harness shall meet the requirements of existing ANSI fall protection standards at the time of manufacture of each component."

The voter's suggestion would have required all the equipment to be replaced whenever the relevant standards were updated or a re-evaluation would be needed to see if they comply with the new standard. This could be a compliance nightmare on the job site.

*There was the suggestion that documentation should be provided in a nation's official language.*

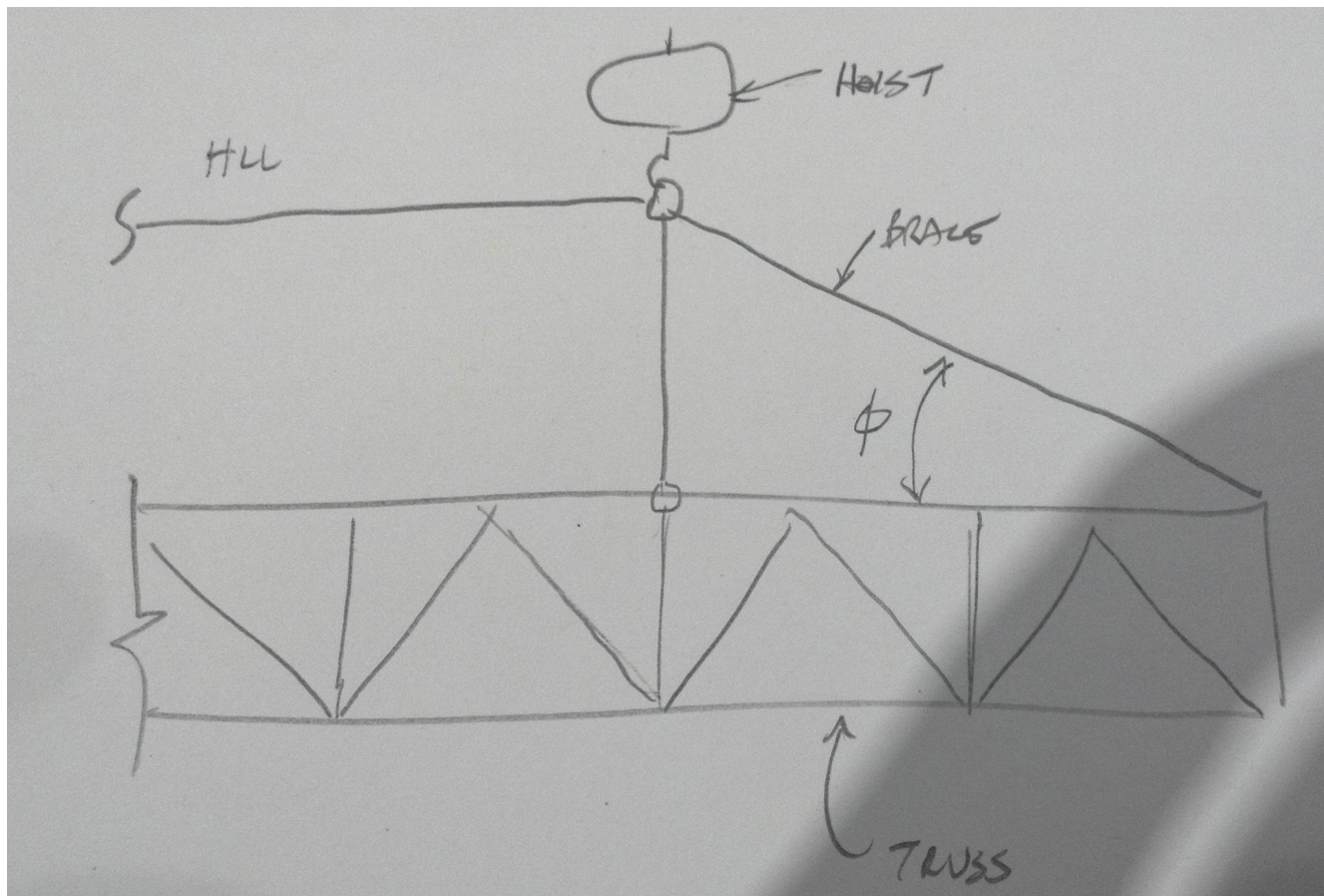
The United States has no official language, and the legally required language for notices depends on local regulations in some places. Public safety information in San Francisco, for example, must be in English, Spanish, and Chinese. The resolution was:

5.1 Remove the word English and add in its place “writing”. “All documentation shall be provided in writing and shall be available at the work site. “

There was a comment that “authorized person” is not defined. However, it is defined in 2.12. This was acceptable the voter.

A comment on 6.2.2 suggested that a competent person is acceptable. The group group consensus is that this person should be qualified, not competent.

The Annex drawing is referenced in 6.2.4 and 6.5.4.1. The group consensus is that the existing drawing is confusing. A 2D drawing should be used. The sketch shown below was circulated and accepted as a good rough idea of what is needed.



The changes to 6.1.5 and 6.1.6 address Teuber's comment part 4. Ruling said that he would communicate this to Chris Teuber, and also point out that, contrary to what Teuber asserted, CM will allow their products to be used in a PFAS.

The resolutions made by the working group at this meeting were all made by consensus with no dissent.

Tim Hansen moved to accept all comments addressed. The motion was seconded and passed with a unanimous show of hands. The task group was charged with modifying the draft standard so the working group can consider it and another public review at the March meeting.

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

See *E1-43 Performer Flying Progress x-x-20xx.pdf*.



Bill Gorlin reported on the draft and described the changes planned in the next week, particularly the proposed reduction of the design factors.

Eddie Kramer offered extensive comments. Bill Gorlin took notes and will submit a revised draft to the working group.

Bill Gorlin moved that the modified document be approved for public review by a letter ballot. The motion was seconded and approved by a show of hands, with one abstention. The letter ballot will be issued when the revised document is available.

#### **7.14 BSR E1.44 – 201x, Common Show File Exchange Format for Entertainment Industry Automation Control Systems -- Stage Machinery**

Karl Ruling reported that the final vote to approve this as an ANS is on the TSC 's agenda.

#### **7.15 Rigging Glossary**

*From the draft November minutes:*

*Chris Kaiser ...reported that the task group is still behind in their work, but that they hope to have something for the working group to review by the next meeting.*

Christine Kaiser reported to the group that there will be progress on this document for this body to consider at the next meeting.

#### **7.16 BSR E1.47 - 201x Recommended Guidelines for Entertainment Rigging System Inspections**

*From the draft November minutes:*

*Pete Svitavsky reported that the next milestone will be at the March meeting, not in January. Chris Kaiser will drive the project between meetings, while Pete Svitavsky will run the scheduled meetings.*

Christine Kaiser said that they are interested in comments on the draft, even though it has already been revised a bit. In asking for comments there was some discussion, but the task group asked for comments to be submitted via email to either Christine Kaiser or Pete Svitavsky after the meeting.

#### **7.17 BSR E1.50—Video wall project**

Report on project initiation progress

Karl Ruling said that the PINS form for the project had been filed with ANSI. There was no further news or action.

### **8 New business**

#### **8.1 Manual winches and dead-hung rigging**

*See BSR E1-4-2-201x Request.pdf.*

This was handled in the approval of the expanded E1.4 suite.

#### **8.2 Other new business**

None.

### **9 Other business and announcements**

Richard Brett's passing was noted, and after a long battle with lung cancer. Respect for family privacy was requested. Cards of condolence may be sent to the ABTT office in London.

### **10 Schedule for future meetings**

As of 23 January 2014, the RWG meeting is scheduled for 27 March from 9am-12pm (not the 28<sup>th</sup> as reported during the meeting). Check <http://tsp.plasa.org/tsp/meetings/index.php> for the latest, most accurate schedule.

### **11 Adjournment**

Ted Paget moved the meeting adjourn. Hearing no objections, Bill Sapsis declared the meeting adjourned at 22:13.

Name	Company	Representing	Voting Status	Int Cat.
Woody Pyeatt	A V Pro, Inc.	A V Pro, Inc.	P	DR
Baer Long	Ninja Rigging	Act 1 Rigging Inc.	O	G
Ethan William Gilson	ALPS	Advanced Lighting and Production Services	P	U
William Bradburn	Aerial Arts, Inc.	Aerial Arts, Inc.	O	U
Andy Sutton	AFX UK Ltd.	AFX UK Ltd.	O	U
Timo Risku	Akumek	Akumek	O	DE
Luca Galante	Alfa System Sas	Alfa System Sas	O	CP
R. Duane Wilson	George C. Izenour Associates	Amer. Society of Theatre Consultants	P	DE
André Broucke	André Broucke	André Broucke	O	G
John "Andrew" Munro	animaenagerie	animaenagerie	O	U
Jon Lenard	Applied Electronics	Applied Electronics	O	MP
Robert Young	Arup	Arup	P	DE
James Niesel	Arup	Arup	A	DE
S. Lars Klein	Arup	Arup	A	DE
William Ian Auld	Auld Entertainment	Auld Entertainment	O	U
Dennis J. Lopez	Automatic Devices Co.	Automatic Devices Co.	O	MP
Donald A. Hoffend_Jr.	Avista Designs, LLC	Avista Designs, LLC	P	G
Donald Hoffend_III	Avista Designs, LLC	Avista Designs, LLC	A	G
Barry Brazell	Barry Brazell	Barry Brazell	O	U
Jiantong Wu	Beijing Special Engineering Design & Research Institute	Beijing Special Engineering Design & Research Institute	O	G
Buddy Braile	Bestek Lighting & Staging	Bestek Lighting & Staging	O	U
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Brent Armstong	Brent Armstong	Brent Armstong	O	U
Joachim Stoecker	CAMCO GmbH	CAMCO GmbH	O	MP
Ted Jones	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	P	U
Jeff Lucas	Cirque Du Soleil, Inc.	Cirque Du Soleil, Inc.	O	G
Daniel J. Clark	Clark-Reder Engineering, Inc.	Clark-Reder Engineering, Inc.	P	G
Herb Hart	Columbus McKinnon Corp.	Columbus McKinnon Corp.	P	MP
Art Zobal	Columbus McKinnon Corp.	Columbus McKinnon Corp.	A	MP

Name	Company	Representing	Voting Status	Int Cat.
David Carmack	Columbus McKinnon Corp.	Columbus McKinnon Corp.	A	MP
Jennifer O'Leary	Columbus McKinnon Corp.	Columbus McKinnon Corp.	A	MP
Matthew Antonucci	Contract Services Administration Trust Fund	Contract Services Administration Trust Fund	P	U
Mylan Lester	Creation Logics Ltd.	Creation Logics Ltd.	O	U
Edward A. (Ted) Paget	Daktronics Automated Rigging Solutions	Daktronics Inc.	P	CP
Wes Jenkins	Down Stage Right Industries	Down Stage Right Industries	O	CP
Noga Eilon-Bahar	Eilon Engineering Industrial Weighing Systems	Eilon Engineering Industrial Weighing Systems	O	MP
Steven Ricks	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	P	MP
Michael Lichter	Electronic Theatre Controls, Inc. (DE)	Electronic Theatre Controls, Inc.	A	MP
Nils Becker	Electronic Theatre Controls, Inc.	Electronic Theatre Controls, Inc.	A	MP
F. Robert Bauer	F.R. Bauer & Associates, LLC	F.R. Bauer & Associates, LLC	O	G
Chris Geisler	Fluid Design Inc.	Fluid Design Inc.	O	DE
Joseph McGeough	Flying by Foy	Foy Invenerprises, Inc.	P	CP
Frank Allison	Frank Allison	Frank Allison	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
Scott M. Blair	Full Throttle Films/ VER	Full Throttle Films/ VER	O	DR
Jeremy Hochman	Full Throttle Films/ VER	Full Throttle Films/ VER	O	DR
Miriam Paschetto	Geiger Engineers	Geiger Engineers	P	G
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
Tracy Nunnally	Hall Associates Flying Effects	Hall Associates Flying Effects	P	CP
John P. Moore	Hall Associates Flying Effects	Hall Associates Flying Effects	A	CP
Ed Garstkiewicz	Harting Inc., North America	Harting KGAA	P	G
Howard Forryan	Harting Ltd.	Harting KGAA	A	G
Sean Harding	High Output, Inc.	High Output, Inc.	O	G
Pat Grenfell	Hoist Sales & Service	Hoist Sales & Service	P	DR

Name	Company	Representing	Voting Status	Int Cat.
Peter "Punch" Christian Schmidtke	Hollywood Lighting Services, Inc.	Hollywood Lighting, Inc.	O	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
Rod Haney	I.A.T.S.E. Local 891	I.A.T.S.E. Local 891	P	U
Kent H. Jorgensen	IATSE Local 80	IATSE Local 80	O	G
Tray Allen	James Thomas Engineering, Inc.	James Thomas Engineering, Inc.	P	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
Jonathan Deull	JSD Projects LLC	JSD Projects LLC	I	U
Jerald Kraft	JTH Lighting Alliance	JTH Lighting Alliance	P	CP
Keith Bohn	Keith Bohn	Keith Bohn	I	G
Gary Mardling	Kish Rigging	Kish Rigging	O	DR
Nevin Kleege	Kleege Industries	Kleege Industries	O	U
Greg Hareld	Kleege Industries	Kleege Industries	O	U
Mark Riddlesperger	LA ProPoint, Inc.	LA ProPoint, Inc.	O	CP
William Beautyman	Limelight Productions, Inc.	Limelight Productions, Inc.	P	DR
Jim Digby	The Collaborative Endeavor Group	Linkin Park Touring/The Collective	O	U
Charlie Weiner	LMG Inc.	LMG Inc.	P	DR
Steve (BOZ) Bodzioch	LMG Inc.	LMG Inc.	A	G
Douglas M. Eldredge	LMG Inc.	LMG Inc.	A	DR
Louis Bradfield	Louis Bradfield	Louis Bradfield	O	U
William B. Gorlin	McLaren Engineering Group	M.G. McLaren, P.C.	P	G
Mike Adamovich	McLaren Engineering Group	M.G. McLaren, P.C.	A	G
Maria Bement	MGM Grand	MGM Grand	O	U
Sam Lunetta	Michael Andrews	Michael Andrews	O	DR
Michael L. Savage, Sr.	Middle Dept. Inspection Agency, Inc.	Middle Dept. Inspection Agency, Inc.	O	G

Name	Company	Representing	Voting Status	Int Cat.
Michael J. Carnaby	Mikan Theatricals	Mikan Theatricals	O	DR
Mike Garl	Mike Garl Consulting LLC	Mike Garl Consulting LLC	P	DE
Will Todd	Tomcat USA, Inc.	Milos Group	P	MP
Scott Johnson	Tomcat USA, Inc.	Milos Group	A	MP
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
Gregory Quinkert	Motion Laboratories	Motion Laboratories	A	CP
Marty Wesstrom	Mountain Productions Inc.	Mountain Productions Inc.	P	DR
James B. Evans	Mountain Productions Inc.	Mountain Productions Inc.	O	DR
François Deffarges	Nexo	Nexo	O	MP
Joseph Jeremy	Niscon Inc.	Niscon Inc.	P	CP
Darren Lucier	North Guard Fall protection Inc.	North Guard Fall protection Inc.	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
Bob Murphy	Occams Razor Technical Services	Occams Razor Technical Services	O	G
Eric Rouse	Pennsylvania State University	Pennsylvania State University	P	U
Ben Peoples	Pittsburgh Hoist & Sandbag Company	Pittsburgh Hoist & Sandbag Company	O	CP
Ron Bonner	PLASA Technical Resources Office	PLASA EU	O	G
Erin Grabe	PLASA NA	PLASA NA	exf	G
Karl G. Ruling	PLASA NA	PLASA NA	exf	G
Michael Patterson	Pook Diemont & Ohl, Inc.	Pook Diemont & Ohl, Inc.	O	CP
Ken Lager	Pook, Diemont & Ohl, Inc.	Pook, Diemont & Ohl, Inc.	O	DR
Kurt Pragman	Pragman Associates, LLC	Pragman Associates, LLC	O	G
Orestes Mihaly	Production Resource Group	Production Resource Group	P	DR
Shawn Nolan	Production Resource Group	Production Resource Group	A	DR
Marc Hendriks	Prolyte	Prolyte	O	MP
Todd Spencer	PSAV Presentation Services	PSAV Presentation Services	P	U

Name	Company	Representing	Voting Status	Int Cat.
Carlos Ortega	PSAV Presentation Services	PSAV Presentation Services	A	U
Q. Brian Sickels	Q. Brian Sickels	Q. Brian Sickels	O	G
Rick Montgomery	R&M Materials Handling	R&M Materials Handling	P	MP
Troy Post	R&M Materials Handling	R&M Materials Handling	A	MP
Scott Mohr	R&R Cases and Cabinets	R&R Cases and Cabinets	O	G
Daniel Lynn Houser	Real Rigging Solutions, LLC	Real Rigging Solutions, LLC	O	U
Michael Reed	Reed Rigging, Inc.	Reed Rigging, Inc.	O	DR
Benjamin Cohen	Reed Rigging, Inc.	Reed Rigging, Inc.	O	DR
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
Jesse Adams	Rose Brand	Rose Brand	P	DR
Roy Bickel	Roy Bickel	Roy Bickel	O	G
Thomas M. Granucci	Associated Students, Cox Arena	San Diego State University	O	U
Patrick J. Finn	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	P	U
Bill Sapsis	Sapsis Rigging, Inc.	Sapsis Rigging, Inc.	A	U
Peter A. Scheu	Scheu Consulting Services, Inc.	Scheu Consulting Services, Inc.	P	DE
Kimberly Corbett Oates	Schuler Shook	Schuler Shook	P	DE
Joshua Grossman	Schuler Shook	Schuler Shook	A	DE
Bob McVay	Schuler Shook	Schuler Shook	A	DE
Dan Culhane	SECOA	SECOA	P	CP
Shaun Millington	SEW-Eurodrive, Inc.	SEW-Eurodrive, Inc.	O	MP
Rob Stevenson	SEW-Eurodrive, Inc.	SEW-Eurodrive, Inc.	O	MP
Monica Skjonberg	Skjonberg Controls, Inc.	Skjonberg Controls, Inc.	O	CP
Knut Skjonberg	Skjonberg Controls, Inc.	Skjonberg Controls, Inc.	O	CP
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Jon Lagerquist	South Coast Repertory	South Coast Repertory	O	U
Brad Dittmer	Stage Labor of the Ozarks	Stage Labor of the Ozarks	P	U

Name	Company	Representing	Voting Status	Int Cat.
Roger Barrett	Star Events Group Ltd.	Star Events Group Ltd.	O	DR
Stephen Vanciel	Stephen Vanciel	Stephen Vanciel	O	U
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
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Dana Bartholomew	Fisher Technical Services	Tait Towers Manufacturing LLC	P	CP
Mark Ager	Stage Technologies	Tait Towers Manufacturing LLC	A	CP
Patrick Leigh Bettington	Stage Technologies	Tait Towers Manufacturing LLC	A	CP
Ross Taylor	Taylor & Taylor Associates	Taylor & Taylor Associates	O	G
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
Rick Rosas	Texas Scenic Company	Texas Scenic Company	A	DR
Joel A Guerra	Texas Scenic Company	Texas Scenic Company	A	DR
Philip J. Pisczak	The National Telephone Supply Company	The National Telephone Supply Company	O	G
Jyle Nogee	Theatre Design Services, LLC.	Theatre Design Services, LLC.	I	DE
Eugene Leitermann	Theatre Projects Consultants, Inc.	Theatre Projects Consultants, Inc.	O	G
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	G
John Van Lennep	Theatrix Inc.	Theatrix Inc.	O	DR
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

Name	Company	Representing	Voting Status	Int Cat.
Don Halchak	Total Structures Inc.	Total Structures Inc.	A	MP
John Miller	University of North Carolina School of the Arts	University of North Carolina School of the Arts	O	U
Dan Lisowski	Dept. Of Theatre and Drama	University of Wisconsin - Madison	P	U
John Van Arsdale	University of Wisconsin - Madison	University of Wisconsin - Madison	O	U
JoAnna Kamorin-Lloyd	Vincent Lighting Systems	Vincent Lighting Systems	O	U
Christopher Jacobs	Virginia Beach City Public Schools	Virginia Beach City Public Schools	P	U
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
Jeff T. Miller	Worldwide Standards and Auditing	Walt Disney Company	A	U
Earle T. Greene	Walt Disney Parks and Creative Entertainment	Walt Disney Company	A	U
Warren A. Bacon	Warren A. Bacon	Warren A. Bacon	O	U
Peter V. Svitavsky	J.R. Clancy, Inc.	Wenger Corp.	P	CP
William Scott Sloan	William Scott Sloan	William Scott Sloan	O	U
Gregory Orth	WNP Services, Inc.	WNP Services, Inc.	P	DR
Robert Ramsey	WNP Services, Inc.	WNP Services, Inc.	A	DR
Michael Wells	Xtreme Structures and Fabrication	Xtreme Structures and Fabrication	P	MP
Mark Newlin	Xtreme Structures and Fabrication	Xtreme Structures and Fabrication	A	MP
Joseph Champelli	ZFX Flying Inc.	ZFX Flying Inc.	P	CP
Robert Dean	ZFX Flying Inc.	ZFX Flying Inc.	O	DR
Stu Cox	ZFX Flying Inc.	ZFX Flying Inc.	A	CP

**Voting Status and Interest Category Legend**

<b>P</b> principal voting member	<b>CP</b> custom-market producer
<b>A</b> alternate voting member	<b>MP</b> mass-market producer
<b>I</b> individual voting member	<b>DE</b> designer
<b>O</b> observer non-voting member	<b>DR</b> dealer/rental company
	<b>U</b> user
	<b>G</b> general interest