

MINUTES
FLOORS WORKING GROUP
Saturday, July 26, 2003
DFW Airport Marriott South Hotel
Dallas/Ft Worth Texas

Chair: Tim Hansen, Oasis Stage Werks, principal, producer

Recording Secretary: William L. Maiman

1 Opening Remarks

Tim Hansen welcomed everyone to the meeting and the meeting started at 08:15.

2 Attendance and Membership

Members attending:

Ron Bonner, PLASA; Principal; General interest
Tracy Cosgrove, Rosco Laboratories; Principal; Producer – via telephone
Jerry Gorrell; Theatre Safety Programs; Principal; User
Tim Hansen; Oasis Stage Werks; Principal; Producer
Pete Happe, WDI (Disney); Principal; User
Keith Sklar; Actors' Equity Assoc.; Observer; General interest – via telephone
Richard D. Thompson; Thompson Associates; Principal; General interest

Visitors:

No visitors were present.

2.1 Introduction of those present

A sign-in sheet was passed around the room. While it was circulating, those present introduced themselves. It was noted that some members are participating via Speakerphone and that Bob Dagger was unable to attend and had sent regrets.

2.2 Call for quorum

Tim Hansen announced that a quorum was present.

3 Requirements for membership

Tim Hansen reviewed the membership requirements. Membership is open to all who are affected by the work of the group, but every principal member of the working group is required to attend meetings. Any principal member and voting alternate that 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.

There were no membership applications to consider.

The full list of Floors Working Group voters during the period of the meeting was thus:

Name	Company	Representing	Voting Status	Int. Cat.
Ron Bonner	PLASA	PLASA	P	G
Tracy Cosgrove	Rosco Laboratories	Rosco Laboratories	P	MP
Bob Dagger	American Harlequin	American Harlequin	P	MP
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Tim Hansen	Oasis Stage Werks	Oasis Stage Werks	P	MP
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U
Ted Paget	Jones & Philips Associates, Inc.	Jones & Philips Associates, Inc.	A	G
Chris Purpura	Jones & Philips Associates, Inc.	Jones & Phillips Associates, Inc.	P	G
Dick Thompson	Thompson Associates	Thompson Associates	P	G
			8 votes	3 MP 3 G 2 U

4 Approval of minutes from the previous meeting

Richard Thompson moved that the minutes from the previous meeting be accepted as written. Ron Bonner seconded the motion. The motion was accepted unanimously on a voice vote.

5 ESTA Declarations

5.1 Anti-trust statement

Tim Hansen read aloud the following anti-trust statement:

"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 action in restraint of trade have been taken and not properly annulled is requested to notify the TSC (chairs), or the ESTA President immediately.

"ESTA legal counsel has informed us that violations of the antitrust 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 \$100,000 and imprisoned for up to three years. An easy to read pamphlet describing restraint of trade issues is available from the Technical Standards Manager."

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

5.2 Call for Patents:

Tim Hansen read aloud the following call for patents:

"ESTA intends not to publish any standard that contains protected intellectual property, unless that property 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 programs contain no protected intellectual property."

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

No protected intellectual property issues were brought to the attention of the chair.

6 Approval of Agenda

Jerry Gorrell announced that he would discuss a new flooring product during item #9, Other Business.

Jerry Gorrell moved that the agenda so amended be approved. Dick Thompson seconded the motion. It was accepted unanimously on a voice vote.

7 Old Business

7.1 Report on Terminology, Alternative Words, British Terms

7.1, 7.1.2, and 7.1.3 Bob Dagger was not able to attend the meeting, and asked Ron Bonner to deliver the report, and to conduct additional research into terminology. Ron Bonner reviewed progress since the March 2003 meeting, concentrating on locating definitions for Resilience, Bounce, Rake, and Shock Absorption. He noted that there was mention of resilience in the British Standards, but most of the other terms were not listed, not even under UK construction terminology. Originally, Bob Dagger did locate some terms with definitions, within information published by an association of manufacturers. However, the terms have since been withdrawn. Jerry Gorrell suggested that definitions from a good dictionary, possibly—Webster's, be used. He stated that now might be a good time to consider defining our own terminology. Tim Hansen agreed, noting that there is a critical need for terminology, as evidenced by discussions at the Dance Workshop seminar that many of the Working Group members attended during USITT 2003. There was a general consensus that this was a good idea, and the WG will review it further at a later date.

7.1.4 Jerry Gorrell reviewed the lack of progress in holding discussions with athletic industry contacts and shoe representatives. His original objectives were to see about their use of definitions and testing of properties of shoes (floors). Jerry Gorrell discovered that anyone connected with athletics is very reluctant to say anything due to the competitive nature of the business. So, after the Phoenix Suns return, he will try again.

7.1.5 Dick Thompson reported on research and discussions with sports medicine, and foot/ankle experts about properties and correlation to medical issues that affect the foot/ankle. During April 2003, Dick Thompson sent letters to the American College of Sports Medicine in Indianapolis and the American Sports Medicine Institute in Birmingham, Alabama. He also made follow-up calls. There has been little or no response. Dick Thompson noted one book that may have useful information – "Health and Fitness Facility Guidelines," a Human Kinetics publication, published by the American College of Sports Medicine, in 1997. Jerry and Jennie Gorrell will purchase the book and ESTA will pay for it. There is also an International Sports Medical Institute handbook that needs to be researched and possibly purchased. Tim Hansen noted that these books in conjunction with the DIN standards would provide the Working Group with enough information to conclude this aspect of the research.

A small handbook published by Martin Moore, and possibly supported by funding from the USITT was also brought to the attention of the Working Group. The research concerned dropping a ball and this was a precursor to the selection of a Dance Floor for Lincoln Center. Due to repeatability problems, the test process was discontinued. Dick Thompson was directed to contact Joel Rubin for assistance in locating the research, the book, or the engineer. Another suggestion was that Dick should consider placing announcements in "Sightlines" and "TD&T" (USITT publications)

7.1.6 Dick Thompson was not able to contact principal investigators or experts associated with the Sleep Deprivation study. He will report on this at the November meeting.

7.2 ANSI Standard on Floors – Refine and approve the scope, status reports – English machine, arrangements within Walt Disney Company

7.2.1 Pete Happe reported on his discussions with safety officials within the Walt Disney Company, including officials connected with park operations in Florida, regarding testing of floors and

measurement devices/terms used. (This is a follow-up to a process already undertaken with the City of Phoenix safety department regarding testing.) According to the officials, three different tests are done on floors. Test #1 and 2 are slip tests, using a device that clamps to a surface and slams a gadget into the surface. The test is performed on dry and wet surfaces and with a minimum coefficient of 0.50. Pete Happe explained that test #3, consists of a special drop test that uses an instrument that is supported on 3 axles. He also noted that locating information has been very difficult, and he was expecting a detailed e-mail, but it did not arrive. However, he did learn that the tests are mandated as part of the requirements with an Equity contract. Pete Happe thought that these clauses might have been based on 1970 discussions between AGMA and Lincoln Center.

Keith Sklar commented that there have been some correspondence between Equity and various producers, but no empirical criteria exist for specifying a performance floor. He stated that there are clauses inserted into contracts for instance, to prohibit the use of sand on painted floor surfaces, etc. However, Sklar felt that Equity does not mandate the use of a Slip test and possibly other entities require it to be used. Keith Sklar offered to research the history of the clause in the Disney contract and will report back to the WG at the November meeting. Pete Happe confirmed that he would continue his research and locate the clause and determine how Disney officials in Florida are implementing it.

7.2.2 and 7.2.3 Tim Hansen reported on communication with Bill English and George Sotter regarding their different testing methods and their common conclusion, that measurements regarding pressure at heel rather than the toe would be useful for the WG to consider. Tim Hansen reported on both discussions together, since both individuals are noted and respected floor – slip resistance experts. The Bill English measurement device is known as the Variable Incidence Tribometer and from the previous discussion, it appears that the Disney device is the Bill English testing device. Tim Hansen noted that the conventional .5 coefficient is the rate at which a normal person, under normal conditions will not slip. However, Tim felt that the issue is not heel contact with the floor, but toes, since dancers use their toes. However, Tim noted that English and Sotter disagree, and argue that "slip" is "slip" and it doesn't matter if the person strikes the surface with their heel or their toe. So, the Working Group members agreed that we were right back where we started. Tim Hansen summarized, noting, there is a method to test slip, it appears to not make any difference to the testing device--what part of the foot strikes the floor. He continued, that under wet conditions water would be forced out differently, so for Disney and outdoor stages, this may be an issue. So, maybe there is a need for a different slip index for dry floors, wet floors, and for waxed floors as well.

Dick Thompson asked if the Working Group should consider discussing this with some theatre architects. He noted that we already have theatre consultants involved with Working Group business. Tim Hansen noted that it is not the intention of the Working Group to specify materials, and the original concept was to develop a performance standard and to develop a measurement criteria. The Working Group members agreed that Dick Thompson should discuss identifying experienced architects working on dance floors to the discussion with Joel Rubin.

7.3 Vote on Scope of Proposed Standard

Tim Hansen read the revised proposed scope statement:

"This document shall define acceptable shock absorption testing methods for floors used by performers in live performance venues. It shall also provide recommendations for the proper criteria for such floors."

Tim Hansen explained that the idea is to split the work of developing an overall and comprehensive performance standard into different areas. The first area to be worked on would be shock absorption. The second one would be slip resistance.

After a brief discussion, the new version of the scope document read:

"This document shall define acceptable shock absorption testing methods for floors used by performers in live performance venues and rehearsal spaces. It shall also provide recommendations for the proper criteria for such floors."

Dick Thompson moved that the Floors Working Group adopt the following scope statement for the creation of an American National Standard:

"This document shall define acceptable shock absorption testing methods for floors used by performers in live performance venues and rehearsal spaces. It shall also provide recommendations for the proper criteria for such floors."

Jerry Gorrell seconded the motion. The motion was approved by a supermajority of the working group on a roll call ballot:

Name	Company	Representing	Voting Status	Int. Cat.	Yes	No	Abstain
Ron Bonner	PLASA	PLASA	P	G	1		
Tracy Cosgrove	Rosco Laboratories	Rosco Laboratories	P	MP	1		
Bob Dagger	American Harlequin	American Harlequin	P	MP			
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U	1		
Tim Hansen	Oasis Stage Werks	Oasis Stage Werks	P	MP	1		
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U	1		
Ted Paget	Jones & Philips Associates, Inc.	Jones & Philips Associates, Inc.	A	G			
Chris Purpura	Jones & Philips Associates, Inc.	Jones & Phillips Associates, Inc.	P	G			
Dick Thompson	Thompson Associates	Thompson Associates	P	G	1		
			8 total possible	3 MP 3 G 2 U	6	0	0

By interest category, 2 of 3 mass-market producers, 2 of 3 general interest, and 2 of 2 users voted yes. None voted No or abstained.

Tim Hansen summarized the vote and noted that the Floors Working Group will need to implement the scope statement by defining the application of this standard, a list of definitions of floor related terminology, a list of testing methods, adopted from the DIN standard, and then a list of recommended testing values. Tim Hansen noted that adding test values appropriate for the performance area is new and totally unique. Pete Happe added that examining and making recommendations regarding the time a performer is on the floor needs to also be considered.

7.4 Raked Stages, Definition and other Criteria, Progress on Study

Keith Sklar reported that the Actors Equity Study, "Investigation of Risk Factors for Work-Related Injuries Causing Missed Performances Among Broadway Actors and Dancers." has been put on hold indefinitely. However, Actors Equity is working on having new contract language that would include a clause specifying, "that if rake is at 3/4 inch per foot or greater, a Physical Therapist or other qualified instructor must be hired to give instruction to the cast."

7.5 Floor Terminology booklet, status and a report

Pete Happe attempted to locate a copy of a special booklet on floors, authored by Roger Morgan, with AIA and AGMA that was discussed at the special Dance Workshop seminar that was held at USITT 2003. According to Pete Happe, the booklet is really an information sheet form Actors' Equity, titled, "Specifications for Dance Floor Placed Over Structural Slab or Framing." Keith Sklar offered to locate the document and send to the ESTA office for distribution prior to the November meetings. Pete Happe will continue to research in this area and seek to determine if anything else is available. He will report on this at the November meeting of the Floors Working Group.

8 New Business

Tim Hansen will send the remaining copies of the special book on Dance Floors to the members that need them. He apologized for the delay in distributing the copies. The Floors Working Group noted their appreciation of PLASA for having purchased and providing copies of the new edition of the Mark Foley / Dance UK book titled, "Dance Floors: A Handbook for the Design of Floors for Dance." As noted in other meetings, this book is not distributed in the United States.

9 Other Business

- 9.1** Tim Hansen announced that Steve Wiese of Wenger Corporation would now be listed as an observer, since he had failed to meet the attendance requirement for a voting member.
- 9.2** Jerry Gorrell mentioned that a new flooring product for use on general-purpose stages has been developed. Renew Resources Ltd. Of Canada is manufacturing the product of recycled plastic and it has an integral color, and is easily repairable. According to the manufacturer, Ballet and Opera companies are using the product. Jerry Gorrell announced that he would purchase and install a few sheets and provide feedback to the Working Group over the next few meetings. "Stageboard" is the product name and the website is, <www.renewresources.com> or contact the company directly at (800) 439-5028. Tracy Cosgrove commented that the company has a good reputation, and added that 3M Company is offering a product also made from recycled materials.
- 9.3** Dick Thompson mentioned that University of Texas at Austin (Winship Building) has a new floor and active performance program. The contact for the department/building is Sandy Lomax. Dick Thompson volunteered to talk to them about their experiences.
- 9.4** During the meeting, it was also confirmed that AGMA and Equity are having preliminary merger discussions. It was stressed that these are preliminary and any merger would take years.

10 Schedule for Future Meetings

The LDI tradeshow and the ESTA meetings will be held in Orlando over the week of November 17, 2003. The actual dates for the LDI tradeshow are November 21-23. The Floors meeting is scheduled for Wednesday, November 19 at 0800 hours. The IAAPA tradeshow will also be held in Orlando during the same week. The January meetings for Technical Standards Working Groups will be held over the weekend of January 16 – 18, 2004 in Dallas/Ft. Worth, Texas.

11 Adjournment

Dick Thompson made a motion to adjourn and Jerry Gorrell seconded the motion. The motion was approved by acclamation. The meeting adjourned at 10:36.

Floors Working Group Membership and Contact Information as of 2003-10-03

Name	Company	Representing (This is the sort field.)	Voting status	Int. cat.
Keith Sklar	Actors' Equity Association	Actors' Equity Association	O	G
Ken Greenwood	Actors' Equity Association	Actors' Equity Association	O	G
Fred Allen	Fred Allen & Associates	Fred Allen & Associates	O	U
Bob Dagger	American Harlequin Corp.	Harlequin Corporation	P	MP
Edward Paget	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	A	G
Christopher Purpura	Jones & Phillips Associates, Inc.	Jones & Phillips Associates, Inc.	P	G
Nevin Kleege	Kleege Industries	Kleege Industries	O	G
Seth Popper	League of American Theatres and Producers, Inc.	League of American Theatres and Producers, Inc.	O	G
Gary Justesen	Oasis Stage Werks	Oasis Stage Werks	A	MP
Tim Hansen	Oasis Stage Werks	Oasis Stage Werks	P	MP
Ron Bonner	PLASA	PLASA	P	G
Tracey Cosgrove	Rosco Laboratories	Rosco Laboratories	P	MP
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Richard D. Thompson	Thompson Associates	Thompson Associates	P	G
Pete Happe	Walt Disney Imagineering	Walt Disney Company	P	U
Mark Elliott	Walt Disney Company	Walt Disney Company	O	U
Steven Wiese	Wenger Corp.	Wenger Corp.	O	MP

Voting Status

- O Observer, non-voting
- P Principal voting on behalf of an organization or company
- A Alternate voting member representing an organization or company
- I Individual voting member representing no entity other than him or herself

Interest Category

- G General interest
- U User of floors or flooring products
- MP Mass-market producer
- CP Custom-market producer
- DR Dealer or rental company