

The longest days

I'M WRITING THIS AS WE APPROACH the Summer Solstice, the longest day of the year. If you are a farmer, by this time the crops are planted, and the job is to tend them, nurture them, until harvest in the autumn. The Technical Standards Program is a bit like a farm, too. When I wrote the last installment of TSP News in April, we had just finished a series of meetings at the USITT Conference and Stage Expo. Those meetings planted seeds. Now, we're tending the little plants.

New old projects now in public review

Three existing ESTA standards were opened for revision at the TSP meetings at the USITT Conference in Salt Lake City. Now they are out in the sunlight for public review. They probably won't be in public review by the time you read this, but this listing will give you an idea of the crops ESTA's TSP has been tending.

BSR E1.40, Recommendations for the Planning of Theatrical Dust Effects

June 27, 2015, colorful powder blasted from air cannons shot a wave of flame across a dancing crowd at a recreational water park in Taiwan, injuring 508 people, killing over a dozen. The existing *ANSI E1.40* dust standard warns against explosions with flammable dusts, but



doesn't mention deflagration—the technical name for a fast-moving wave of flame—so warnings about that will be included in the revision. Other changes include a regrouping of types of dusts, editorial changes, and changes to references to Material Safety Data Sheets, which have been replaced by Safety Data Sheets. This is a project of the Fog & Smoke Working Group. As I write this, the public review has 12 more days to run, but so far no one has commented.

BSR E1.41, Recommendations for the Measurement of Entertainment Luminaires Utilizing Solid State Light Sources

This standard is being opened for revision to specify that the Fidelity Index (R_f) rating, as defined in *IES TM-30-15, IES Method for Evaluating Light Source Color Rendition*, is used for reporting the production of white light of a reported CCT. The existing ANSI standard requires reporting the CQS score, which is adequate, but CQS has no hold in the lighting market, so specifying it is a bit like offering special fertilizer for vegetables nobody eats. With a little push from ESTA and other materially affected parties, *TM-30* might become as ubiquitous in lighting as ladybugs are in an organic garden. This is a project of the Photometrics Working Group. This public review also has 12 more days to run, but so far no one has commented.

BSR E1.55, Standard for Theatrical Makeup Mirror Lighting

This standard is being opened for revision to add the Fidelity Index (R_f) rating per *IES TM-30-15, IES Method for Evaluating Light Source Color Rendition*, for the same reasons that it's being added to E1.41. CRI will probably be an adequate measure for most broad-band makeup mirror sources, but it would be better in the long run to help move the lighting industry away from that flawed metric. This too is a project of the Photometrics Working Group. Twelve more days, but so far no comments.



Old new projects in public review

BSR E1.51 – 201x, The Selection, Installation, and Use of Single-Conductor Portable Power Feeder Cable Systems for

Use at 600 Volts Nominal or Less for the Distribution of Electrical Energy in the Television, Film, Live Performance, and Event Industries in Canada

I've listed this as an "old new project" because the draft standard is in its fifth public review, and the document is built on another draft standard for the USA that was abandoned after three reviews. The seeds for this project are 16 years old, but it's in public review now, so there's still life in it. It probably took humans decades, if not centuries, to turn teosinte into corn; 16 years isn't so long in comparison, but it does show how hard it is to get things right. This

waste heat generated, the amount of space likely to be needed, and the fall protection and egress issues to be considered for the followspot operator's safety. The existing standard, published in 2011, was offered for public review, and no one commented. The Followspot Position Working Group and Technical Standards Council have approved its reaffirmation. We are waiting for one more ballot to be returned from the ESTA

Executive Committee. If it's a Yes, we can submit this reaffirmation to ANSI.

BSR E1.53, Overhead Mounting of Luminaires, Lighting Accessories, and Other Portable Devices: Specification and Practice

The document covers specifications for the primary and secondary mounting devices for portable stage and studio



draft is in public review until the beginning of August, so it might be in review when you read this. So far only the Association of British Theatre Technicians has offered comments.

To be approved soon—we hope

ANSI E1.28 – 2011 (r201X), Guidance on Planning Followspot Positions in Places of Public Assembly

ANSI E1.28 offers guidance on the planning of permanent followspot positions, including recommendations on the locations of the followspot positions within the venue, the power likely to be needed, the

Call for members

ESTA's TSP works to maintain a balance of interest on the working groups to help ensure that the standards developed are for the benefit of everyone: the people who make equipment, the people who sell or rent it, the people who specify it, and the people who use it. To do this, periodically the TSP issues a call for new members in particular interest categories. At this time, the following working groups are looking for voting members in the noted interest categories to help balance the interests in the working group.

- **Control Protocols:** Custom-market producers, general interest
- **Electrical Power:** Designers in particular but also any other categories except users
- **Floors:** Custom-market producers, dealer/rental companies
- **Fog and Smoke:** Custom-market producers, dealer/rental companies, and designers
- **Followspot Position:** Designers, dealer/rental companies
- **Photometrics:** Custom-market producers, dealer/rental companies, users
- **Rigging:** Custom-market producers, designers
- **Stage Lifts:** Users, mass-market producers

The Floors Working Group's first projects dealt with performance floors such as those used for dance. However, its projects now address safety concerns with a variety of walking, standing, and working surfaces used in events by performers and technicians. Accordingly, "custom-market producers" could include manufacturers of stage platforms, scenery, and large props that support actors or technicians performing or working as part of a show or event.

Voters in the Technical Standards Program are required to attend meetings and to vote on letter ballots. Membership in ESTA or any other organization is not a requirement for participation in ESTA's Technical Standards Program, but there is a \$100 a year per person participation fee—a flat rate, regardless of voting status or the number of working groups a person joins, but it is prorated if you join part-way through the year. The fee is levied to help defray the costs of running the TSP, which has always run a deficit. More information about becoming involved in the Technical Standards Program and a link to an application form is available at http://tsp.esta.org/tsp/working_groups/index.html.

luminaires and accessories. It's being written because some Actors' Equity members complained of lighting equipment hitting the deck near them on stage. A standard will make it clear what should be done and what wasn't done when it rains barndoors. No comments were received during its last public review. The Electrical Power Working Group is now in the process of voting to accept it as an

American National Standard. So far all of the votes are Yes, but a few people have not voted.

Published since the last TSP News

Last year ESTA's TSP published eight new, revised, or reaffirmed standards and withdrew one. We're less than half way through 2016, and we've already published six. Two were published since the last edition of TSP News:

ANSI E1.27-1 – 2006 (R2016), Entertainment Technology – Standard for Portable Control Cables for Use with ANSI E1.11 (DMX512-A) and USITT DMX512/1990 Products

ANSI's Board of Standards Review approved the reaffirmation of *ANSI E1.27-1* on April 8. It's now published and available for free download at <http://tsp.esta.org/freestandards>. It was originally written in 2006, reaffirmed in 2011, and now reaffirmed again in 2016. Not much has changed in the world of DMX cables, and we seem to have gotten the document right the first time, so the standard has been reaffirmed without any substantive changes—or even little tweaks other than asserting a current-date copyright and changing the name and logo to ESTA.

ANSI E1.57 – 2016, Recommendations to Prevent Falls On or Off Movable Parade Floats, Movable Stages, and Similar Moving Platforms

ANSI's Board of Standards Review approved the document as an American National Standard on May 6. It was published the same day—in plenty of time for innumerable Independence Day parades, not to mention the 68th Annual Barnum Festival Great Street Parade.

American National Standards abroad

BSR E1.51 is a project to write an American National Standard for entertainment industry electrical work that has to be done in the context of the Canadian Electrical Code. It seems odd to some people to have an *American* standard for Canada, but that unease is largely because standards are associated with regulations in their minds. Certainly no group based in the USA can write Canadian regulations, but American National Standards are not regulations. They are simply consensus documents, developed through a rigorous and painstaking process that is overseen by the American National Standards Institute. Some standards might be adopted by governmental bodies as regulations, but that is a separate process and is simply their taking advantage of the work already done by the standards developer. Why start with a blank piece of paper or screen if someone has already done the work? The effort of starting from zero might be notable, but would be a waste of time, and probably

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the results wouldn't be as good.

The international column "Standards without Borders" of the May-June issue of the *NFPA Journal* addresses this issue of the usefulness of American National Standards outside the United States. (You can find it at <http://estalink.us/327k9>.) The National Fire Protection Association writes *American National Standards*, but their standards are in use in more than 50 nations and have been translated into at least 14 different languages. Why? Because the people in those nations find them useful. As the article points out, the process by which NFPA standards are developed helps strengthen their technical content and helps keep them current with changing technology and societal needs. ESTA follows essentially the same process. Its fundamental elements are mandated by ANSI, and they are different from the processes used by many other standards developers to create international or non-American national standards. Other standards developers often have only one public review. The process is faster if you have only one review, but then post-review substantive changes never have a public review. ESTA usually has many public reviews—sometimes the process seems interminable—but they help keep us from creating a problem while fixing another problem, and then leaving that new problem in place because no one caught it in another public review.

Standards are fundamentally good advice, and good advice often transcends national boundaries. This past week I received an email from Vancouver and a phone call from Winnipeg about some of our American National Standards. "I'm interested in learning how I can determine if some of our more 'atmospheric' productions are maintaining a safe level of fog during filming," wrote the person in British Columbia. I wrote back, "Monitoring exposure is covered in section 3.5.3 of *ANSI E1.23 - 2011 (R2015)*. The standard doesn't offer a step-by-step how-to, but what you need to know is there." We had a follow up phone conversation about adjusting TWA limits for a longer than eight-hour work day, but, indeed, the industry-accepted methods are there in the standard. The person in Manitoba

was trying to evaluate the minimum design factors for a powered rigging system. What he needed to know is in the *ANSI E1.6* suite. The biggest difficulty was establishing which parts of the suite applied to the equipment he was evaluating. That became much easier when he discovered that he could get all of the parts of *ANSI E1.6* from our website for free. Losing that back-of-the-mind, "Oh, I sure hope this document has what I want because it will cost me another \$40 USD to buy another," really helps clarify a person's thinking.

Finding ESTA docs

All our published standards are listed at <http://tsp.esta.org/freestandards>, and, as the URL says, they are free, thanks to the sponsorship of ProSight Specialty Insurance. They also are for sale on the ANSI and IHS websites at <http://webstore.ansi.org/> and <https://global.ihs.com/> respectively. The draft standards that are in public review are listed at <http://estalink.us/pr>. If you want to propose a project for a new standard, read in detail how ESTA's TSP works, or to find a working group application visit the "Procedural Documents" page at <http://estalink.us/evt6b>. All of the meeting minutes for our working groups going back 19 years are available on the working group pages linked from http://tsp.esta.org/tsp/working_groups/index.html. The minutes are terse, but what do you expect from a standards version of the morning farm report? ■



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