Don't "Drop the mic"

I'M WRITING THIS SENTENCE the day after Google had to remove its April Fools' Day joke button on Gmail. The button was a variation of Gmail's "mute" button, which sends whatever message you have drafted and then prevents replies to that thread from appearing in your inbox. For April Fools' Day, the button also sent a short animation of the *Despicable Me* Minions Queen dropping a microphone and walking away from the podium, thus indicating she had spoken the last word, didn't care what anyone else had to say, and had better things to do elsewhere.

Rude, dismissive animated Minions are funny, but people like that are not. Many people using Gmail for business found that the Mic Drop Button had serious consequences. One person posted on the Gmail help forum, "Thanks to Mic Drop I just lost my job." The person had submitted editorial copy using the Mic Drop send button. It cut off replies, so the writer received none of the corrections from the editor, and thus never replied to in turn. The lack of response and the mic drop animation were taken by the editor as a snub. Result: a very angry voicemail and no more job.

ESTA's Technical Standards Program doesn't play April Fools' Day jokes, and it doesn't drop the mic and walk away, ending a conversation. People looking for quick results complain that developing standards takes too long, that we spend too much time listening and responding to people they would prefer we ignore. However, standards, if they are to American National Standards, have to be developed

Mike Garl, Co-Chair of the Technical Standards Council, accepts a check for $10,000 for ESTA's Technical Standards Program from ETC's Steve Terry and Fred Foster. ETC, a longtime donor to the TSP, has made a five year pledge to support the program at that level, earning the company recognition as a *Visionary* Investor in Innovation. Upon presenting the check, Steve commented, "From ETC's point of view, the TSP is an industry 'crown jewel.' There is no other industry forum that allows so many diverse interests to come together to solve equipment interoperability and safety standards issues in an ANSI-approved environment—along with *tangible* commercial benefits for all of us. We are very proud to lend our support to this critical program, and we respectfully challenge other entertainment industry companies to join us in this effort with their checkbooks."

with ways for all materially affected parties (even people we might secretly wish would go away) to offer comment and for that comment to be considered seriously. Thus, ESTA's draft standards go through at least one but usually many public reviews.

Each time a comment is considered and gets a response that makes a substantive change to a document (a change that adds a requirement, deletes a requirement, or changes how a requirement would be interpreted), the document is different, and

needs another public review. That might generate more comments. Those comments, if they elicit more substantive changes, will trigger another public review. At each step, those who offered comments are informed as to how their comments have been addressed, and given a chance to respond to the response. (A meta-response!) Eventually the comments stop, or they don't raise any issues that need to be fixed by making substantive changes. Then we're finished for the time being, and if the working group authoring it thinks it is ready, we can provide documentation to ANSI showing that we have followed the approved process, and then publish it if ANSI's Board of Standards Review agrees that indeed we have.

However, the dialog with the industry still really isn't over. We have to consider each of our standards for reaffirmation, revision, or withdrawal at least every five years, but we can do it sooner if we see a need. The slow iterative public review and revision process very rarely yields documents that are simply wrong on anything, but sometimes there are errors. I received a phone call a few years back from a person inspecting a high school counterweight rigging system who asked if the system had to have a lock rail. "Well, of course!" was my response. "It's right there in *ANSI E1.4* . . . ," but it wasn't. The standard told the reader everything important about the components in a manual system, but didn't say they actually had to be there. So we revised the standard, and now we're breaking it into parts and revising it so that it covers manual systems that do not use counterweights and also dead-hung batten systems. On will go BSR E1.4-x, through public reviews and revisions, along with many other ESTA standards projects; news of a few of them is listed below.

New old projects

Three existing ESTA standards were opened for revision at the TSP meetings at the USITT Conference in Salt Lake City. ANSI requires us to announce revision projects so that materially affected parties can become involved in the work by joining one of the working groups involved or by offering comments in a future public review. The revision projects are:

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

Last June, 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.

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 calling for Whitworth spanners for automechanics. With a little push from ESTA and other materially affected parties, *TM-30* might become as ubiquitous in lighting as SI wrenches in a Fiat garage. This is a project of the Photometrics Working Group.

BSR E1.55, Standard for Theatrical Makeup Mirror Lighting

This standard is being opened for revision to add the Fidelity Index (Rf) 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.

In public review as I write this now

Several draft ESTA Standards are in public review as I write these words, but chances are that none of them will be in review by the time you read this. Nevertheless, here is a listing to give you an idea of what members of ESTA's TSP have been working on. It might inspire you to visit http://estalink.us/pr to see what's in review at that moment, even as you read this. In order by designation, they are:

BSR E1.4-1, Entertainment Technology – Manual Counterweight Rigging Systems

The existing E1.4 standard is being expanded to include all manually powered systems, and those rigging systems in which scenery, stage lighting, or other theatrical equipment is hung from static battens. The first part of the E1.4 suite, E1.4-1, Manual Counterweight Rigging Systems, applies to permanently installed, manually operated systems of stage rigging hardware for the raising, lowering, and suspension of scenery, lighting, and similar loads.

ANSI E1.15 – 2006, Entertainment Technology – Recommended Practices and Guidelines for the Assembly and Use of Theatrical Boom & Base Assemblies

This standard was originally published in 2006 and reaffirmed in 2011. It is being considered for reaffirmation again. The standard sets minimum specifications for the assembly and use of variable and fixed-height luminaire support devices, commonly referred to as "boom and base assemblies."

ANSI E1.28 – 2011, 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 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, is being considered for reaffirmation.

BSR E1.31, Entertainment Technology – Lightweight Streaming Protocol for Transport of DMX512 using ACN

This draft standard describes a mechanism to transfer DMX512-A packets over a TCP/IP network using a subset of the ACN protocol suite. It covers data format, data protocol, data addressing, and network management. It also outlines a synchronization method to help ensure that multiple sinks can process this data concurrently when supervised by the same controller. This revision includes the addition of DMX universe synchronization.

BSR E1.33, Entertainment Technology – (RDMnet) – Message Transport and Device Management of ANSI E1.20 (RDM) over IP Networks

This standard describes a method of implementing *ANSI E1.20 Remote Device Management* messaging over an IPv4 network. Extensions to deal with IPv6 will be considered for adoption soon after this one is done; we need to go the first mile before we cover the next kilometer.

BSR E1.42 – 201x, Entertainment Technology – Design, Installation, and Use of Orchestra Pit Lifts

BSR E1.42 covers the design, construction, operation, testing, and so on of permanently installed orchestra pit lifts. Few places have building code requirements for these lifts, which forces an awkward dance between people who design and install such lifts and building inspectors who have to approve the designs and installations. An American National Standard might summon Terpsichore to the fete.

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

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

Published this year

Last year, ESTA's TSP published eight new, revised, or reaffirmed standards in 2015, and withdrew one. We're merely a third of the way through 2016, but we've already published four, and two more will be published soon, unless they run off the rails. Published this year:

ANSI E1.3 – 2001 (R2016), Entertainment Technology – Lighting Control Systems – 0 to 10 V Analog Control Specification

ANSI E1.3 describes a method of controlling equipment by means of an analog control voltage in the nominal range from 0 – 10 V positive, with the controller sourcing the signal current. This is old-school, but still a method that is used and is **not** the method used with nominally 0 – 10 V dimming LED drivers and fluorescent ballasts. This is a reaffirmation of the 2001 standard.

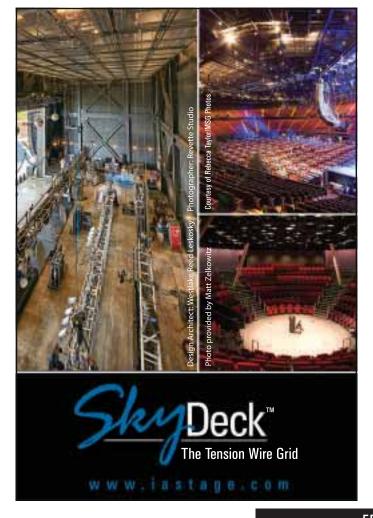*ANSI E1.30-1 – 2010 (R2016), EPI 23, Device Identification Subdevice*

This EPI specifies a collection of properties which may be exposed by a DMP device to provide detailed information on the manufacturer, model, serial number, hardware and software revisions, and other administrative details of the device. These properties are described in a standard

format as a templated DDL (sub)device. This document is a reaffirmation without substantive changes of the 2010 edition.

ANSI E1.43 – 2016, Entertainment Technology – Performer Flying Systems

See Stu Cox's article about this new standard on page 40 in this issue of *Protocol* for a detailed explication of the new standard. *E1.43* has been written to protect performers, whether they be Batman, the Green Goblin, Firefly Boy, Twin Sister, Peter Pan, or Wendy.

ANSI E1.46 – 2016, Standard for the Prevention of Falls from Theatrical Stages and Raised Performance Platforms

People falling off the stage during a performance is a show-stopper. People falling at any time is expensive. Health and safety regulations require action to prevent these falls by employees, but offer little guidance that is suitable for theatrical environments. This document provides that guidance to protect all people at risk.

Coming soon

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 has approved the reaffirmation of ANSI E1.27-1, which was originally written in 2006 and then reaffirmed last in 2011. It was offered for public review for reaffirmation and the only comment received was advising us to change the references from PLASA to ESTA—easy to accommodate, but it did generate queries from ANSI staff about how we resolved that public review comment and whether the commenter was satisfied with the resolution. It's approved, so now we just have to publish it with the current date and ESTA name, but if you want to know what it requires, read any of the previous editions. They are virtually identical.

Up next: **BSR E1.57 – 201x, Recommendations to Prevent Falls On or Off Movable Parade Floats, Movable Stages, and Similar Moving Platforms** It was offered for public review and nobody commented. People complain when something isn't right to them; they rarely praise when it is okay. Ergo, with no complaints, this is good to go, and the Floors Working Group, which created the document, has voted to accept it as an American National Standard. We still have a few more steps before it is submitted to ANSI, but no comments really cuts the paperwork!

Finding ESTA docs

All our published standards are listed at http://estalink.us/freestandards, and they can be downloaded for 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://estalink.us/prr9c. The minutes are terse and not very interesting as literature, but they make it clear that in ESTA's TSP, we don't drop the mic and walk away. ∎

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