



'Tis the season to do wrap-ups

“ONE LAST GLANCE” read the headline on the December 13 “Arts & Leisure” section of the *New York Times*. Inside the reader was offered well over a hundred exhibitions, performances, audio recordings, and television shows that the *Times*’ critics decided to call “Best of 2015.” *Time Out New York*, a much thinner publication, was no more brief than the *New York Times* with its “Best of 2015” list, which included the ten best new bars and ten best new restaurants. While I am sure that those receiving this year-end recognition are happy for it, I wonder what it offers the rest of us other than a tally of things we missed. If we didn’t have time in 2015 to see all the best shows, art exhibits, concerts, et cetera, how are we ever going to find time to catch up at the end of the year with the few that are still accessible, before 2016 brings more “best of” events and entertainment? We are like thirsty Tantalus, standing in a pool of water that draws back, out of reach, whenever he bends down to take a drink.

‘Tis the season to do wrap-ups, but the standards developed in ESTA’s Technical Standards Program don’t recede out of reach when you need them. Everything we have published is available for download on the ESTA website, for free thanks to the sponsorship of ProSight Specialty Insurance. Even the old, superseded documents are there. While the old docs won’t make a “best of” list for 2015, they are invaluable if you must understand a specification that refers to them. The old is often still useful, but here is a wrap-up of what was new in the TSP this year.

Documents published in 2015

ESTA’s TSP published eight new, revised, or reaffirmed standards in 2015, and withdrew one. In numerical order, they are:

ANSI E1.17 – 2015, *Entertainment Technology – Architecture for Control Networks (ACN)*, is a suite of documents that specifies an architecture, including protocols and language, which may be configured and combined with other standard protocols to form flexible, networked audio, lighting, or other control systems. It can be implemented on networks that support UDP, IP, and related protocols. It is not bound to Ethernet as a transport medium, but Ethernet is an obvious choice. Only one part of the suite of documents was revised in the 2015 edition, EPI 19, ACN Discovery on IP Networks. EPI 19 specifies the Service Location Protocol implementation requirements for individual components within an *E1.17* system necessary to provide discovery on IP networks. It does not provide requirements or recommendations for system wide deployment of SLP such as Scoping or Directory Agent usage. All other content remains substantially unchanged from the 2010 version.

ANSI E1.19 – 2015, *Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry*, is intended to offer guidance, in accordance with existing applicable standards, on how to select,

install, use, and maintain ground-fault protection devices in the entertainment industry to protect persons from shock and persons and property from fire. This is a revision of the 2009 version which incorporates new information about avoiding nuisance tripping and offers new recommendations for ground-fault protection on higher ampacity circuits. *E1.19* recommends a slower response curve to help avoid nuisance tripping, which is one Guy Holt’s recommends in his portable generator article (see page 34) in this issue of *Protocol*.

ANSI E1.23 – 2010 (R2015), *Entertainment Technology – Design and Execution of Theatrical Fog Effects*, offers guidance on planning and carrying out fog effects so that recognized exposure levels are not exceeded, fire and egress hazards are not created, false alarms don’t summon the fire brigade, and fog effects are executed as they are designed, performance after performance. This is a reaffirmation of the 2010 version.

ANSI E1.30-4 – 2010 (R2015), *EPI 26. Device Description Language (DDL) Extensions for DMX512 and E1.31 Devices*, defines protocol specific extensions to Device Description Language for describing DMX512 devices. It is a reaffirmation of the 2010 version.

ANSI E1.37-2 – 2015, *Entertainment Technology – Additional Message Sets for ANSI E1.20 (RDM) – Part 2, IPv4 & DNS Configuration Messages*, is another part of the multi-part, open-ended *E1.37* standard. It provides additional Get/Set parameter

messages (PIDs) for use with the ANSI E1.20 Remote Device Management protocol. Messages in this document are intended for configuring network interfaces, routing information, and Domain Name System settings on devices with IPv4 addresses. This is a revision, so the 2014 edition is not the same.

ANSI E1.39 – 2015, Entertainment Technology – Selection and Use of Personal Fall Arrest Systems on Portable Structures Used in the Entertainment Industry, is a new standard stating the minimum requirements for the selection and use of personal fall arrest systems (PFAS) on portable structures in the entertainment industry. In addition, the standard establishes minimum requirements for products and portable structures used in the service of PFAS. The standard was developed to address the peculiar problems of providing fall arrest on portable structures where there is no permanent structure overhead for a fall arrest anchorage, or where there is a permanent structure, but using it is impractical or impossible. The standard does not preclude the use of other standards to promote fall protection safety.

E1.45 – 2013, Unidirectional Transport of IEEE 802 data frames over ANSI E1.11 (DMX512-A), has been withdrawn and is no longer an American National Standard. Essential parts of the method are protected by Korean and US patents, and the patent holder has not given assurance that the intellectual property can be licensed under reasonable terms and conditions that are demonstrably free of any unfair discrimination. It's still on the ESTA website, so anyone can download it and see the method described, although it is no longer a standard. If you actually want to use the method, you might have to negotiate with someone over patent rights, and it might not be worth the effort—but you have been warned.

ANSI E1.54 – 2015, PLASA Standard for Color Communication in Entertainment Lighting, specifies a standardized color



USITT Executive Director, David Grindle (second from left) and President, Mark Shanda (third from left), presented a check for the TSP to Lori Rubinstein (far left) and Eddie Raymond, President of ESTA (far right). USITT has been a Visionary level donor to the TSP almost since its inception but their support goes far beyond writing a check. From providing meeting rooms at their conference to advertising space in their publications to representatives on the Technical Standards Council and the working groups, USITT has played a critical role in the success of the TSP.

space and defines the locations of the RGB primaries and the White Point for the purpose of facilitating the communications between lighting controllers and color changing luminaires. It offers a standardized way of specifying color. The method is generic and is neither manufacturer specific nor color technology specific.

ANSI E1.55 – 2015, Standard for Theatrical Makeup Mirror Lighting, is a standard for the lighting systems used with makeup mirrors and makeup stations in theatres and other performance venues. It describes the topology of the makeup mirror lighting system, the quantity of light, the distribution of light from those sources, apparent source size, brightness, color rendering, and correlated color temperature. The standard was developed at the request of Actors' Equity Association to help their members, and it has already proven to be useful, significantly shortening discussions and ending arguments with producers about what should be in dressing rooms.

Two more, almost

The Technical Standards Council, the oversight committee for ESTA's Technical Standards Program, is in the process of voting by letter ballot to approve two draft documents as American National Standards. The ballots close on January 5 and 11, so these will not be published in 2015, but they should be soon, if all is in order.

The first of these draft standards, numerically and by ballot end-date is **BSR E1.43, Entertainment Technology – Performer Flying Systems**. The document establishes a minimum level of performance parameters for the design, manufacture, use, and maintenance of performer flying systems used in the production of entertainment events. The project was started after *Spider-Man: Turn Off the Dark* made the news with performer injuries, and did so with a frequency that had New York politicians holding press conferences about flying effects. People in our industry know how to do performer flying effects safely, but we didn't have the documentation to show what the minimum



Columbus McKinnon Corporation, a longtime supporter of the TSP, has raised that commitment to a new level by becoming a Visionary level "Investor in Innovation" with a five-year pledge of \$10,000 per year. Pictured are Ken Tilson, Vertical Market Specialist - Entertainment CMCO; Lori Rubinstein, ESTA Executive Director; Mike Garl, Co-Chair Technical Standards Council; and Kurt Wozniak, Vice President - Americas CMCO.

requirements in this body of knowledge are. E1.43 will provide that.

The second is **BSR E1.46, Standard for the Prevention of Falls from Theatrical Stages and Raised Performance Platforms**. Falling off a stage or raised performance platform can ruin your whole day—even if you are not the person falling but simply have something—anything—to do with a show or venue where a fall happens. Health and safety regulations offer little guidance that is suitable for theatrical environments. This document reminds people that fall protection is not optional, and provides guidance for protecting all people at risk. The last public review netted some heated arguments about how to improve the writing, but none saying that the requirements or advice were wrong.

In public review now

Eight ESTA Standards are in public review as I write this. Chances are that none of them will be in review by the time you read this, but this listing will give you an idea of what members of ESTA's TSP have been working on.

**ANSI E1.3 – 2001 (R201x),
Entertainment Technology – Lighting**

Control Systems – 0 to 10V Analog Control Specification, is up for public review for reaffirmation. This is a mature standard; nothing is changing much in the 0 to 10 V world but there are still a few products—some new—that use this protocol. The only discussion about it at the November Control Protocol Working Group meeting was making sure that people understand that this protocol is not the current-sink analog protocol developed for fluorescent ballasts and now often being used with LED drivers in architectural applications. However, the standard already makes this clear, and so does the description on the ESTA website.

**ANSI E1.27-1 – 2006 (R201x),
Entertainment Technology – Standard for Portable Control Cables for Use with ANSI E1.11 (DMX512-A) and USITT DMX512/1990 Products**, is in public review for reaffirmation. It's about portable DMX512 cable, and there is no news in that field that would suggest that the standard needs to be changed—that we know of. Public review is the public's chance to say, "But wait!"

**ANSI E1.30-1 – 2010 (R201x), EPI 23.
Device Identification Subdevice**, also is posted for public review for reaffirmation. It is part of BSR E1.30, Application level

equipment interoperability for control of commonly encountered entertainment technology devices using *ANSI E1.17*. It specifies a templated device for device identification as typically used for remote hardware and software devices.

**ANSI E1.30-7 – 2009 (W201x), EPI 29,
Allocation of Internet Protocol Version 4 Addresses to ACN Hosts**, is proposed to be withdrawn, and the current public review is so that people can have their say about the proposal. *E1.30-7* is a recipe that changes some of the rules for ACN (*ANSI E1.17*) so that devices with IP addresses not set by DHCP can be used on a network. The standard is being proposed for withdrawal because the document is based on a protocol that didn't succeed in the market. It is now felt that IP addressing is better dealt with by system designers, not through the standardization of any particular method.

BSR E1.37-5, General Purpose Messages for ANSI E1.20, RDM. This document provides additional Get/Set parameter

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:** dealer/rental companies, designers
- Electrical Power:** dealer/rental companies, designers
- Floors:** dealer/rental companies, designers
- Fog and Smoke:** dealer/rental companies, designers, general interest, manufacturers
- Photometrics:** dealer/rental companies, designers, users
- Rigging:** designers
- Stage Lifts:** users, general interest

Voters in ESTA's Technical Standards Program are required to attend meetings and to vote on letter ballots. Membership in ESTA is not a requirement for participation in the ESTA Technical Standards Program. More information about becoming involved in the Technical Standards Program is available at http://tsp.esta.org/tsp/working_groups/index.html.

messages (PIDs) for use with the *ANSI E1.20 Remote Device Management* protocol. This is a proposal for a new standard.

BSR E1.51, 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, is intended to offer guidance in accordance with existing standards and regulations in Canada on how to select, install, use, and maintain single-conductor portable feeder cables used to supply power for television, film, live performance, and special events in Canada.

BSR E1.53 – 20xx, Overhead Mounting of Luminaires, Lighting Accessories, and Other Portable Devices: Specification and Practice, covers specifications for the primary and secondary mounting devices (usually called C-clamps and safety cables) for portable stage and studio luminaires and accessories. It also covers these mounting devices for special effects equipment (e.g. fog machines and bubble machines) that are often mounted along with lighting equipment on trusses and rigging system battens. The standard would give guidance on how to properly affix these mounting devices. This is another standard being developed to address concerns of Actors' Equity members. A few have narrowly missed being clobbered by falling equipment, and so their business representatives have asked what standards should be followed to prevent this. None in the US right now, so we're working on one.

BSR E1.57, Recommendations to Prevent Falls On or Off Movable Parade Floats, Movable Stages, and Similar Moving Platforms, is a new draft standard offering recommendations to prevent falls by anyone (e.g., performers, technicians, politicians) on parade floats, movable stages, and similar moving platforms. Fall protection is needed, but this protection needs to be provided in a way that preserves the artistic intent of the moving float or platform. This document is being written to provide guidance on how to accomplish this.

ANSI audit success—for now

As it was reported in the last TSP News update, the program was recently audited by ANSI, and only a few discrepancies were found. We needed to make minor changes to our procedures. The close of our audit was pending the outcome of the public review of the revised procedures. No one has commented, our revised P&P was accepted by ANSI, and our audit closed. We were reaccredited as a Standards Developing Organization.

Done! But now we need to make changes and seek ANSI approval again. The end of the agreement between PLASA North America and the Professional Lighting and Sound Association has us returning to our old name, the Entertainment Services and Technology Association. We need to do the name change in the

procedures and resubmit them to ANSI. No substantive changes are planned, so the approval should be almost instantaneous. That will be done early next year.

New website

Check out our new website, <http://www.esta.org>. The Technical Standards Program and all of ESTA's services for our industry are clearly shown, with big buttons that take you to more information. All the old TSP pages are there, but slightly redesigned for a clean look. Many of the links lead to documents that are still badged PLASA. The forms will be changed over the next few months, and the standards will be changed as they are reaffirmed or revised. There are RSS feed links on the public review and published documents pages. You can set yourself to receive news without having to wait for my next "best of the TSP" wrap-up. ■



Karl G. Ruling is ESTA's Technical Standards Manager. He also serves as *Protocol's* Senior Technical Editor. He can be reached at karl.ruling@esta.org.

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