A Tale from the Decameron (1916) by John William Waterhouse.

Gathering during a plague

IN RICHARD NELSON'S MOST RECENT Apple Family play, *What Do We Need to Talk About?*—written for Zoom, rehearsed and performed on Zoom, and premiered by the Public Theatre April 29 on YouTube—the Apple family gathers on screen. Barbara, the school teacher, suggests they each tell a story, an exercise inspired by *The Decameron*, Boccaccio's 14th-century account of refugees from the Black Death, sheltering in a villa above Florence and telling stories to amuse each other. I'm writing now about the recent Technical Standards Program meetings, but Nelson's Zoom play and *The Decameron* have a particular resonance for me as I remember how the meetings went.

Decades ago I worked on a production of *Boccaccio*, the musical based on *The Decameron*. The audience entering the theatre beheld a hellish scene: sal ammoniac haze, flickering flames, and death stalking the stage. Then the characters retire to the villa, the air clears, they tell stories—and they listen to each other. Listen.

Our TSP meetings didn't have entertaining stories, but we listened to each other. Collectively, they were the smoothest, most respectful meetings I can remember. With everyone on WebEx, no one in a hotel meeting room, there was no division between those in the room and those outside, a split that complicates running our usual meetings. I also think that it was a relief to be doing something constructive with other people, even though we couldn't be together, but, like the Apple family members, saw each other only in boxes on a screen. Plus, for the brief time of each meeting, we were in a WebEx villa, above the hellish news of unemployment, infections, deaths, and closed borders. We worked with each other while keeping safe, and got a lot done.

Control Protocols Working Group

Forty-five people participated in the online meeting April 2, connecting from various places across Europe and North America. The working group heard reports from task groups on nine active projects—new standards or revisions that are moving along—but probably the most interesting and longest discussion was about California law embodied in *Title 1.81.26 – Security Of Connected Devices*. (Robert Bell covered this new law and the security challenges in the Winter 2020 issue of *Protocol*.) Kevin Loewen (Pathway Connectivity) said that any device running a TCP/IP stack could be considered a "connected device." Pathway has created a secured version of sACN (*ANSI E1.31*) they are using with their devices. The security is provided by a message postamble to allow authentication and authorization. It doesn't break the *E1.31* standard, but it's not part of the standard.

There was discussion about security methodologies, and which ones might or might not work for our industry. There was more discussion about which of our protocols would need modification to allow a standardized security implementation. A study group was set up to investigate these two issues and to make recommendations to the larger Control Protocols Working Group at the next meeting.

There were reports of note. One is that ANSI had approved the reaffirmation of ACN, *ANSI E1.17*, and the document has been published on the ESTA website. There was a report on the PLASA Plugfest held recently in Lille, France, just before travel bans made such an event impossible. Catch it next year in the UK at a venue near Gatwick. ESTA plans to hold a Plugfest in October at the Marriott Solana in Westlake, TX.

Electrical Power Working Group

Thirty people from across North America connected to participate in the EPWG meeting on April 1. The ESTA project on the agenda was a revision of *ANSI E1.19, Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry*. A motion had been made at the October 2019 meeting to reaffirm the existing standard. A letter ballot was held with a concurrent public review. No one commented during the public review, but there was one No vote in the working group, suggesting we should revise the standard rather than reaffirming it. The argument was persuasive, so the working group has started a project to revise it.

Most of the lively discussion at the meeting was about possible changes to suggest for the 2023 edition of the NFPA's *National Electrical Code*. It's not our standard, but it affects our industry. For a long time people have used multi-pin circular connectors on multi-conductor cables, which eventually branch out into six circuits. It's convenient, and tales of cables burning are about as scarce as Sasquatch sightings, but this practice is not *Code*-sanctioned. Something could be suggested for the *Code*, but it's

unlikely to be accepted by the NFPA unless it required the use of Listed equipment. There is no procedure for a Nationally Recognized Testing Laboratory to test and list these kinds of assemblies, so the immediate task is to figure out what a NRTL might want to consider in a Listing. None of this *NEC* discussion was or is likely to result in an ESTA standard, but the EPWG is a place where people with expertise, a material interest, and standing in UL technical panels and NFPA technical committees can talk to each other—even if only via WebEx.

Event Safety Working Group

The Event Safety Working Group had 33 participants from across Europe and North and Central America at its meeting on April 4. Many of the members are deeply involved in the pandemic crisis responses in their communities, so the meeting had a short agenda, stripped of all but the most critical action items. A set of comment resolutions for the last public review of BSR ES1.9, the draft standard for crowd management, was approved and a motion made to accept the document as an American National Standard. Final approval motions have to be decided by letter ballot. As I write this, the working group's letter ballot voting period is still open, but the motion has enough Yes votes to carry. No one has voted against it.

Floors Working Group

Twelve members of the Floors Working Group in North America (USA and Canada) met on April 1 to resolve the one No vote on accepting BSR E1.62, Minimum Specifications for Mass-Produced Portable Platforms, Ramps, Stairs, and Choral Risers for Live Performance Events, as an American National Standard. The objection was resolved, but ANSI requires a final recirculation of the vote and the resolution to the objection among the voting body. That was done by letter ballot, and netted a new No vote. Enough people agreed with the reasoning that they change their votes to No, and the motion failed. The working group will have changing the draft standard to resolve the objections in the working group and from the one commenter in the last public review on the next agenda.

The working group and public review objections are interrelated. The public review commenter had pointed to the special testing requirements chapter in the *International Building Code* as something this standard should reference. That's difficult, since the *IBC* requirements assign testing decisions to the local building code officials. If a manufacturer makes a product for a world market—or even a national market—who is the local building code official the manufacturer should expect to approve the manufacturer's testing procedure? This is why third-party testing labs and generic equipment standards exist; if a wall switch has a Nationally Recognized Testing Lab label on it, the local electrical inspector

doesn't have to test it. The objection in the working group is that the testing procedure in the draft is too lax; we should bring it up to something close to what is required in the *IBC*. If we do this, a building code official might still insist on his own special test per the *IBC*, but is less likely to do so.

Fog and Smoke Working Group

Sixteen people from Canada and the United States attended the Fog and Smoke Working Group meeting on March 19. The major discussion items were new regulations in Georgia limiting the working hours and exposure time to atmospheric effects for minors on any production, including motion picture and stage productions (but "production" is defined to exclude events done by a state-approved school or a recognized church organization). The concern expressed by the Fog and Smoke members representing the motion picture industry was that these are the rules for the State of Georgia; they may be reasonable for elsewhere, but it would be good to have an industry standard or industry-wide work rule to avoid having different rules in each of the 50 states.

Followspot Position Working Group

The Followspot Position Working group did not meet in this meeting cycle, but their most recent standard was approved by ANSI in the middle of this meeting period, April 3. Their last meeting was at the NAMM trade show in January, at which they moved to accept BSR E1.66, Safety Standard for Followspot Positions Erected for Short-term Use in Entertainment Venues, as an American National Standard. The document is now *ANSI E1.66*, and you can download it from the ESTA website. The working group now has no active standards-drafting projects. Their work is keeping alert for problems in the field with followspot positions that might require a change to the working group's two standards or the creation of a new one.

Photometrics Working Group

Fourteen people connected on April 4 for the Photometrics Working Group meeting and pushed two documents forward into or toward public review. BSR E1.54, ESTA Standard for Color Communication in Entertainment Lighting, is in public review through July 13. It's a revision of the existing *ANSI E1.54*. It specifies a standardized way of specifying color to facilitate the communications between lighting controllers and color-changing luminaires. The method is generic and is neither manufacturer-specific nor color technology-specific.

The second document, BSR E1.69, Reporting the Low-End Dimming Performance of Entertainment Luminaires Using LED Sources, was pushed forward but is not in public review yet. The draft was discussed and modifications agreed to at the meeting, but the text was changed after the meeting. The working group's vote had to be by letter ballot, when working group members had the

A call for members

ESTA's TSP works to maintain a balance of the interests represented by the volunteers 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**: General interest, dealer/rental companies
- **Electrical Power**: Designers, but really anybody but users
- **Event Safety**: Performing artists, insurance companies—anybody but general interest
- **Floors**: Designers, dealer/rental companies
- **Fog and Smoke**: Dealer/rental companies (doesn't anyone sell or rent fog machines?)—anybody but users
- **Followspot Position**: Producers of any type, dealer/rental companies
- **Photometrics**: Dealer/rental companies, designers, general interest
- **Rigging**: General interest
- **Stage Machinery**: Dealer/rental companies, users

"Interest" means how the work of the group affects your livelihood or your health, and not that you find it interesting. The interest categories are relative to this material affect and to the subject matter of the working groups. Definitions for the interest categories can be found on the second page of the working group application forms, which are available at https://estalink.us/evt6b . Check them out—and see if any of the working groups fit your interests and expertise.

completed draft in hand. The motion carried and was passed on to the Technical Standards Council, which is voting to approve the public review. Every vote so far is Yes, but there is one ballot still out, probably forever. That ballot was sent to a voter who is "away from their role" due to the coronavirus pandemic. They're prohibited from representing their employer while away, and when they will be welcomed back to work is uncertain. Chances are excellent that when the ballot closes, the vote will stand at 14 Yes votes out of a possible 15. The draft standard probably will be in public review from mid-June to mid-August.

Rigging Working Group

Seventy-three people joined the WebEx meeting on April 2. The Rigging Working Group always draws a large crowd; no matter how many chairs we have in a hotel meeting room, we always have to call for more—but there's no problem with chairs on WebEx! Lots was done; the items I'm highlighting here are two documents being voted into public review.

ANSI E1.6-1 – 2019 has been opened for a limited revision, with the scope of revisions applying only to section 6.6 of the standard. The revisions are necessary to correct errors in that section only. No other revisions are being considered at this time or are part of the BSR E1.6-1 review. It's available for review through June 28.

BSR E1.39, Entertainment Technology – Selection and Use of Personal Fall Arrest Systems on Portable Structures Used in the Entertainment Industry, is a revision of the existing *ANSI E1.39-2015*. This standard was written to give guidance on what to do when there is no permanent structure that can be used as an anchor point, or using the permanent structure ("See that truss 100' overhead?") would be unacceptably hazardous or difficult with little or no safety benefit. It's available for review through June 28.

Stage Machinery Working Group

Thirty-one people joined the Stage Machinery Working Group meeting on April 2. The working group decided to take on two new standards-drafting projects. These were filed with ANSI after the meeting as BSR E1.71, Powered Curtain Machines, and BSR E1.72, Stage Floor Machinery. The first, E1.71, would establish requirements for the design, manufacture, installation, inspection, and maintenance of machines intended solely for the movement of curtains for performance, presentation, and theatrical production. The second, E1.72, covers the design, manufacture, installation, inspection, operation, and maintenance of powered machinery used for the movement of floors in performance, presentation, and theatrical productions—a broad range of sliding, rolling, and turning that could include wagons, turntables, sloats, and possibly star traps.

The E1.71 and E1.72 projects are starting. Any reader wanting to become involved can do so by either joining the Stage Machinery Working Group or by commenting in future public reviews of the draft standards. Information about joining a working group is available on the Working Groups page at https://tsp.esta.org/ . Documents in public review are posted at http://estalink.us/pr . There is almost always something there; you can download it and review it while staying safe. ■

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