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Creating Standards for the Next Century

On the past two weeks, my inbox has been flooded with e-mail about all the amazing (and not so amazing) things that were showcased at the 2017 Consumer Electronics Show. The wide range of topics addressed in this issue of the *Journal* is indicative of the fact that our industry is pushing the boundaries of technology to support higher resolution (4KUHD and 8KUHD), high dynamic range, brighter display technologies (for better color reproduction), and even virtual reality and its cousin augmented reality.

Along with these technological pushes comes the necessity for standards—standards not only for the image and audio essence, but also for signaling modes of operation, as well as metadata. SMPTE has been working very hard over the past year to improve the efficiency of producing quality standards. In 2016, our centennial year, SMPTE published 70 Standards, Recommended Practices, Engineering Guidelines, and Registered Disclosure Documents to the SMPTE digital Library. I believe that is a record in the history of the Society.

As part of SMPTE's Education pillar, SMPTE holds regular webcasts on various standards issues. Following each of our quarterly Standards meetings, we schedule a webcast to highlight the significant progress from the meetings.

Over the past year or more, there have been two plug-fest initiatives undertaken to improve the interoperability of implementations based on our standards. These plug-fests are conducted under strict confidentiality rules. In doing this testing, SMPTE is not certifying any equipment, but rather providing the opportunity for vendors to test their implementations to see if they interoperate with others. This helps to gather implementation experience and identify areas of improvement in the specifications and standards.

The first plug-fest was organized by 35PM for testing for the ST 2067 IMF Standards. Participating vendors authored actual content into IMF packages per the various agreed test vectors using software tools developed specifically for that purpose. Afterward the validated packages were exchanged among the participating vendors to see if interoperability was achieved.

The second plug-fest was organized by 32NF for testing for the ST 2059 Network Time and Synchronization standards. In this case, participants actually interconnected PTP masters using the SMPTE PTP profile and slaves, through typical network hardware, and then introduced network impairments (such as jitter and heavy loading) to see the effect on the slaves. Compatibility with networks using the AES 67 PTP profile, as well as different types of network switches was tested, to see the effect on synchronization accuracy and lock time.

SMPTE has also provided software development tools such as issue trackers and software repositories to those involved in developing the standards to improve their efficiency.

All of this effort, and more, is aimed at making the second century of SMPTE standards relevant, timely, and of high quality. SMPTE

UPCOMING STANDARDS MEETINGS

6–10 March 2017
San Jose, CA, USA
Hosted by Intel/Altera

13–16 June 2017
Shanghai, China
Hosted by Shanghai Media Group

20–23 September 2017 (following IBC)
Ipswich, England
Hosted by British Telecom

4–8 December 2017
Santa Clara, CA, USA
Hosted by Arista

These meetings will be posted on the SMPTE website to provide access to the public on SMPTE standards activities. The most recent meeting outcome report is available for download at https://www.smpte.org/standards/engineering-committees.

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