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Standards for Streaming Media

Every day my inbox is filled with industry newsletters and press releases talking about the next wave of streaming media delivery. There are traditional broadcasters who have added a streaming service to their offering, dedicated "Over the Top" content distributors, and traditional cable and satellite providers, to mention just a few. Streaming delivery of media direct to the viewer at home on large screen TVs and computer screens, as well as on mobile devices of all types has become commonplace in our media-hungry world.

Although this on-demand viewing of content provides many benefits to the viewer, it created an increasing burden on the content provider, not only dealing with the exploding bandwidth requirements for this individualized delivery, but also in dealing with a multitude of formats based on screen size, and proprietary wrappers for the content delivery.

In order to manage this explosion in formats, many content providers have leveraged the SMPTE Interoperable Mastering Format (IMF), a file-based framework that allows the content owner to create one high-quality source master, and then generate multiple high-quality versions, called Compositions, efficiently as required. For example, it facilitates the generation of multiple outputs of the same Composition (through instructions contained in an Output Profile List defined in other documents) to accommodate the specific needs of distribution channels. The IMF suite of standards has been authored by the Technology Committee 35PM. To ensure a high level of interoperability (as the name suggests), 35PM has ongoing "plugfests" testing IMF implementations from a variety of implementers, sharing files, etc., to ensure there is a common understanding of the standards. To this end, the plugfests have indicated several areas where the standards were lacking clarity, and this has resulted in revisions to several of the core documents in 2016.

In the live production of media content, there is also a move to streaming video, audio, and the related metadata over IP interfaces, as an alternate to the ubiquitous Serial Digital Interfaces that have been the workhorse of our industry for several decades. SMPTE is currently undertaking a massive effort to standardize media IP interfaces for live production. This work is being done in Technology Committee 32NF and will create the suite of standards known as ST 2110.

SMPTE, as one of the founding members of the Joint Task Force on Networked Media (JT-NM), is working with the other JT-NM sponsors to coordinate the work being done to develop these new interfaces. One of the recent outputs from the JT-NM is a revised roadmap for the development and deployment of these interfaces. This roadmap can be downloaded from the SMPTE website at https://www.smpte.org/standards/reports/

UPCOMING STANDARDS MEETINGS

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

12–16 June 2017
Shanghai, China
Hosted by Shanghai Media Group

18–22 September, (following IBC) UK–exact location TBD

4–8 December, Santa Clara, CA, USA

The meeting outcome report from each of these meetings will be posted on the SMPTE website in order to report publicly on SMPTE standards activities. Reports are available for download at https://www.smpte.org/standards/engineering-committees

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