



Bruce Devlin

Audio

Don't forget about the audio!" was the mantra embedded in my brain since I was a young graduate trying to figure out how lip-sync was even possible, let alone reliable. The mantra is still true. Great audio makes pictures look better. Great audio improves the overall experience of the media. Creating great audio involves being able to control all the devices in the chain. This is where SMPTE's long cooperation with the Audio Engineering Society (AES) is helping to bring some coordination and interoperability to this chaotic world.

As you can see from the graphic below that I presented in the September 2019 Standards Update webcast, we feel that today's suite of standards is great for building professional media Internet Protocol (IP) networks on top of the existing IP technologies. The SMPTE ST 2110 suite from SMPTE, AES67 from the AES, and the networked media open specifications (NMOSs) from the Advanced Media Workflow Association (AMWA) have all been shown to work well, and real programs are being developed with this technology around the world.

To investigate ways of making these systems operationally simpler, SMPTE is launching a study that will focus on the requirements for the layer-marked production engineering shown in the diagram. This is the layer that converts instructions from the user-facing controls and interfaces, down to generic commands that change the behavior of processes

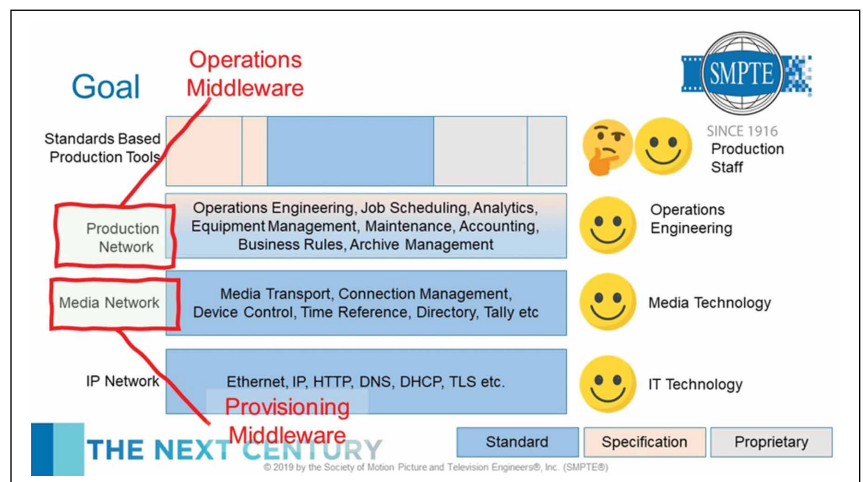
and devices. The messaging at this layer might connect to a generic audio gain control that, in turn, connects to a standardized interface for controlling an audio device like AES70. The study group might also decide that defining extensible models for those interfaces might enable existing proprietary interfaces to be mapped to the same network. I am personally in favor of encouraging a software ecosystem in this layer that supports standards-based interfacing, while enabling a simple way for existing vendors and device/protocol owners to connect to standardized messages.

The key advantage of IP working is flexibility. Good operational middleware at the production network level will be key to delivering that flexibility. We have a unique opportunity at the moment, while the world transitions from physical working to a more virtual ecosystem, to define models of how idealized devices and processes should work. If done properly, the top-layer user-software would not need to know

(or be able to know) whether it was controlling a real device or a virtual process.

The study group is being conducted within the SMPTE Technology Committee (TC) TC 34CS, which works on control systems, and should be seeking participants by the time you read this. Most importantly, this effort will involve cooperation and collaboration with organizations and vendors that already have technological expertise in this area. Pushing audio control to the top of the priority list seems to be a natural way of making progress, given the real-world experience already gathered by the AES in this area. At least on this occasion, I did not forget the audio!

If you're interested in this work, please become a standards member of SMPTE and take part, or encourage your trade association/body to start some liaison activities with SMPTE in this area. Take care, stay safe, and I hope the world's current COVID-19 situation is not causing you distress.



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