



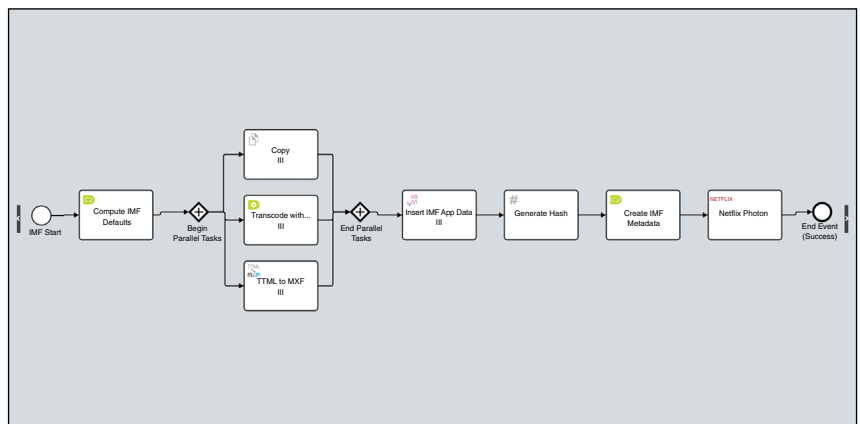
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Standards for Media Workflows

This year’s HPA Tech Retreat in Palm Desert opened with a supersession entitled “Really, we’re still in the era of snowflake workflows?” The word workflow is much overloaded nowadays and is often just a substitute for subjects around automation, process, connectivity, and interoperability.

The word “workflow” on its own will mean different things to different people in our industry. If I am talking to people working on a feature film production, then the workflow is often associated with color or video effects (VFX) or put simply, “Getting the data from one piece of kit into a different pieces of kit without losing anything.” The Academy Color Encoding Specification (ACES—SMPTE ST 2065) is a great example of an SMPTE specification that enables new and efficient workflows in production. ACES precisely represents the light in your original scene in a color space that is bigger than that of the human visual system. This means that whether your production is for film, TV, over-the-top, or some funky new color spaces for presentation or distribution, then you will be able to make a workflow to correctly show the content.

This is because the Interoperable Mastering Format (SMPTE ST 2067) is also associated with the word “workflow.” This is because SMPTE ST 2067 is aimed at mastering versions of a title. This complex



Graphical interface to a typical workflow controller performing an IMF workflow.

task often involves technical metadata about the video and audio, descriptive metadata aimed at humans, identification metadata for media asset management systems, legal rules for different countries and territories, as well as extra assets such as subtitles, quality control reports, and proxies. There is no single recipe for making a version of a title, because the reason for making it is associated with some business driver, and those vary enormously. Workflow for versioning and distribution is with us for a long time yet.

Looking into the future and the developments in systems based around professional media over IP (based on many standards including SMPTE ST 2110 and SMPTE ST 2022), I predict that we will see the word “workflow” start to appear in the live and as-live TV space. Introducing new devices into the Internet Protocol (IP) network, running health checks on an active network, running security checks on an active network, and

creating easy to understand packet monitoring reports will all involve a sequence of automated events that will need to be orchestrated by some controllers. Watching these workflows mature over the coming years is going to be fascinating for those involved as well as those of us shepherding the component parts through the standards process.

Mark Harrison, SMPTE Governor for the U.K. region and the managing director of the Digital Production Partnership, has led a group of media industry experts in an exercise to predict what will be important for the next 12 months. For two consecutive years, the prediction “where there are humans, there will be automation” has been in the top ten. It follows that, where there is automation, there will be a workflow. And finally, where there is a workflow, there needs to be interoperability. This means that standards and specifications will continue to be vital for the media industry. This bodes well for SMPTE.

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