Telestream Support for AS-11 and DPP Metadata

Standards Support

Intro

One of the hottest topics of discussion in the UK production market is the DPP standard for the technical requirements in the delivery of TV programmes to major broadcasters in the UK.

The aim of this standard is to provide clear definition of the file format and data structures to be used for interchange of video and audio content between media companies in the UK, and by doing so, create an ecosystem where all file-based media is interoperable across that ecosystem. In other words, to make file-based business-to-business workflows achievable and sustainable. This effort marks the first time that participants in an industry sector have mandated and defined such an interchange standard in the file-based media industry. Telestream is proud to have offered support for this important initiative since the early part of 2013.

The standard uses the AMWA AS-11 specification to define the format of the media and its container, and adds DPP metadata to that container in order to ensure that the information required to enable media business practices is also encapsulated in the file. In order to understand how support for the format is achieved, it is first necessary to understand these two components in a little more detail.

AS-11

AS-11 is an application specification (hence the term “AS”) that has been released by the Advanced Media Workflow Association (AMWA). AMWA is an international industry body, which seeks to accelerate/enable the adoption of Media Exchange Format (MXF) technol-ogies by constraining many of its parameters to those that are pertinent to a specific workflow. MXF is a complex standard, and its authors attempted to segment the standard into manageable chunks by describing clearly identifiable use cases into subsets called operational patterns (OPs). The most simple of these, OP1a, is intended as a file-based replacement for tape workflows. It defines a container which houses a single version of a single program, just like tape would. OP1a is, however, quite general –it allows for a vast array of possible video and audio formats, timecode locations and bit rates. This means that it is entirely possible that a valid OP1a file from one manufacturer is not compatible with another manufacturers equally valid OP1a product (one could be LongGOP, the other J2k, for example).

AS-11, like its siblings, AS-03 and AS-12, seeks to constrain OP1a in terms of supported codecs and bit rates–in this case, for contribution-quality file transfer between media companies. Specifically, AS-11 mandates that the codec used for HD material will be AVC-intra, at 100Mb/s, that the codec used for SD will be D-10, what the various audio options are, and details the partitioning strategies that may be used in the construction of the file. This, and several other constraints, minimizes the possibility for interchange issues when utilizing this format. There are still some variables allowed in the specification of AS-11, as the specification is designed to allow for the differences in workflow that individual cus-tomers may have.

The AS-11 specification can be additionally constrained through a set of very specific codec, partition and metadata requirements, collectively known as a “shim”, which can be defined by an individual company or industry group for its specific needs.

DPP

The Digital Production Partnership (DPP) is an industry group made up of all of the major players in the UK TV industry. Its technical group has worked steadfastly to produce a shim which can be applied to AS-11 to precisely define an interchange format that will guarantee interoperation of media assets across multiple media enterprises and processes. In addition to clearly detailing such structural items as the precise file partitioning strategy, the DPP metadata schema mandates all required metadata fields which are necessary for the successful transfer of media and business-oriented information from entity to entity. This metadata can be carried in the AS-11 asset itself (now the preferred method), or as a “sidecar” XML file. It should be noted, however, that the requirement for this sidecar methodology is depreciated in the latest version of the DPP specification.

In September 2013, it was announced that the BBC, ITV and Channel 4 will move to file-based programme delivery starting 1 October 2014. Several other broadcasters, including BSkyB, Channel 5 and BT Sport, are also well on their way to adopting file-based pro-gramme delivery. All will be using AS-11 and the DPP shim as the foundation to this initia-tive.

telestream

Telestream Support

A recognized leader in file-based workflows, Telestream supports AS-11 and the DPP shim in its flagship Vantage product line, offering users their choice of workflow. Support for the creation of AS-11 assets is offered as standard in Vantage Transcode Pro and Transcode Pro Connect product variants. Integration of the DPP metadata is achieved through two methodologies:

1. The Users can choose to use Transcode Pro or Transcode Pro Connect to create an AS-11 asset by transcoding from any of their house formats into AS-11, QC the file using Vantage's internal QC tools, and pass the resultant asset through the DPP metadata application for metadata injection. In this mode, the DPP application asks the user to select an MXF (AS-11) asset to add metadata to, enter required and optional metadata values and then instruct the DPP application to inject that metadata into the AS-11 file to create the final version, or validate existing metadata.

2. Users can use some other XML authoring tool to create the DPP-compliant XML file, and then use Transcode Pro or Transcode Pro Connect to create the AS-11 file from their house format as above, and simultaneously inject the XML metadata into the file header. In this case, the user takes on responsibility for validating the XML metadata against the DPP schema.

In both cases, Vantage's powerful workflow engine, decision-making and file manipulation tools can be used to automate the creation of the AS-11 asset. The Users are then free to choose the metadata injection methodology which best fits their needs.

To learn more about Telestream products, visit www.telestream.net

www.telestream.net | info@telestream.net | tel +1 530 470 1300