Recommended Practice for Ingest Behavior

The Digital Cinema community is about ready to embrace SMPTE-DCP as the primary format for the release of digital cinema movies. The ISDCF plugfest was as an opportunity to test one of the key aspects of the transition–ingesting unknown content via hard drive.

Deluxe provided a standard CRU distribution hard drive with many different kinds of content, some of which was expected to be unrecognizable and/or unplayable to some playback server systems. This drive was formatted as the industry accepted standard EXT2, and included SMPTE and Interop DCP's, SMPTE content that was nonstandard including Barco escape, DTS, and Atmos, all in separate folders as defined in the ISDCF Hard Disk format recommendation.

Most systems tested performed very well with ingesting this content. This is a vast improvement over the last round of testing. ISDCF is concerned with those NOT participating in the Plugfest since the transition appears to begin in earnest starting mid 2016.

While ISDCF cannot mandate performance for either a server or TMS it was apparent that there could be some guidelines.

1. TMS and Server Ingest Behavior

- It is recommended that a TMS should ingest all content in either a Packing List or has a CPL reference based on a CPL reference as a minimum and and ignore all other content that is not in either a Packing List or has a CPL reference. This is true for content that the TMS recognizes or does not recognize, regardless of downstream systems that are connected. It is not up to the TMS to decide if downstream systems have the ability to play or utilize said content, and as such should treat every CPL the same for ingest.
- Do not re-ingest content that already exists in the system.
- It is recommended that a server should ingest recognized content based on the CPL reference and provide feedback to the user of content that it does not recognize or refuses to ingest. This will allow the user to "see" content on the drive that is not recognized by the server and decide accordingly what to do (i.e. a Dolby Vision file that should not be played on a non-Dolby vision projector).
- It is recommend that a transfer from a TMS to a server should have the same user feedback and behave the same as a local server ingest, as the TMS is agnostic to the playability of the content being moved. It is up to the server to decide if the content being ingested/moved is playable on that system and provide the feedback to the user. There should never be an instance where the content is not "visible" to any system.

2. Initial Content Ingest

- A corrupt file should be skipped and not ingested but the rest of the content should be ingested.
- It is recommended to ingest as much content provided as possible to prevent a "load failure" of content at a later date. Some distributors are beginning to experiment with early distribution of track file content that is not immediately used in the provided CPL at that site. An example of this is providing one OV drive that contains all image and audio for the

main feature and international inserts, and later providing a CPL for theatrical playback and "unlocking" the appropriate previously supplied content as needed. This would streamline the delivery of supplemental material - to the point of downloadable delivery of VF files. [An issue of garbage collection was discussed and will be continued to be discussed in future meetings.]

3. Metadata and Naming Convention

- As the transition to SMPTE-DCP occurs we anticipate more authoring support for CPL Metadata which will contain more detailed and machine readable content for CPLs. Servers and TMS should explore the use of the CPL metadata for user displays and automation assistance (i.e. the selection of a 5.1 or 7.1 theater configuration or the automation of the lights up credit roll based on metadata). It is understood that some systems currently utilize parsing of the ContentTitleText for some of these purposes, however when present, CPL Metadata content attributes should take precedent over ContentTitleText parsing.