

ΛPR 2011

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MULTILANGUAGE BROADCASTING: PART II

Continued from last month. March edition.

Technology

Tape-based systems were naturally inefficient as every stage required dubbing to new tapes. Not only does this take time and human resource, but also it adds extra QC stages as well as the inevitable quality losses with each generation of copying.

Consider a stereo SD program. The master tape carries four audio tracks L & R full mix, and L & R music and effects (M&E). Language versions require a tape for one of two stereo language final mixes. In a multilingual playout center, that adds up to a lot of tape movements.

Using files in the workflow, it is possible to add extra languages and subtitles without the need to transcode or modify the video track in any way. The advantages are much simpler QC, as well as the elimination of all the physical handling stages needs for tape dubbing.

A popular file format for playout is the QuickTime movie. The video and audio components are stored in the OuickTime container as separate files. When additional audio tracks become available from the dubbing process, they can be added into the container.

More recently, the MXF format has become a favored format. The family of SMPTE standards has been created to meet the needs of the film and television sector. Although the format provides great flexibility, the most used formats are the OP Atom (SMPTE) 390M) and OP1a(SMPTE 378).

These formats find application in acquisition, and the OP1a as a general replacement for the videotape, but in the file domain. However, neither of these fits the needs of reversioning.

OP1a interleaves the content, so adding extra audio tracks for new languages means the files must be rebuilt. OP Atom defines only a single essence track, and needs some external means to synchronize video and audio tracks.

A new application specification of MXF is being developed specifically as a wrapper in multiversion applications, AMWA's AS-02 for MXF Versioning. This will be suited not only to multilingual use cases, but also wherever different version of an asset are needed.

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Examples include airline edits, family versions or versions tailored to a consumer device like a mobile phone.

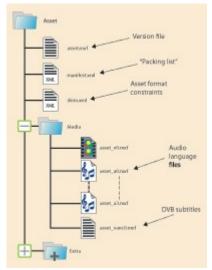


Figure 2. AS-02 bundles media assets as separate tracks.

AS-02 caries several metadata files. specifically the asset and the manifest file. (See Figure 2.) It can optionally carry a shim. The asset or version file is an MXF file with external essence in OP1b, OP2b or OP3b format. It references the separate OP1a essence tracks in the media folder and provides sync information. Additional language tracks can be added to the media folder without any need to process the existing video and audio tracks. The only operation needed is to update the asset file. The manifest file is like a packing list or directory, and it lists all the files in the asset bundle.

The specification is not prescriptive, so broadcasters can adapt the use of the asset bundle to fit their workflow. It is designed to be flexible, but broadcasters can define a "shim" that constrains the specification to meet their needs.

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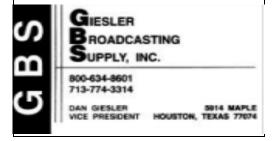
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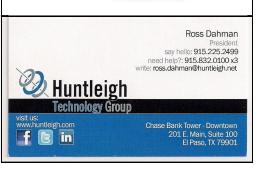




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EL PASO,TX CHAPTER 38 MEETING MINUTE DATE 03/08/2011 LOCATION: GRAND CHINA

MEETING CALLED TO ORDER: 12:47 PM, BY ANTONIO CASTRO, THERE WERE 8 MEMBERS IN ATTENDANCE.

REPORT OF THE SECRETARY: MINUTES ACCEPTED AS POSTED IN THE NEWSLETER BY DAVID HALPERING

REPORT OF THE TREASURER: CURRENT BALANCE OF \$ 6,994.02, AFTER DEPOSITING OF \$ 749.00 FROM MEMBERSHIPS FEES. ACCEPTED BY DAVID ECHANIZ

REPORT OF THE CERTIFICATION COMMITTEE: MARIO JIMENEZ FROM KLAQ WILL BECOME SBE (NATIONAL) MEMBER AND THEN APPLY FOR CERTIFICATION

REPORT OF THE MEMBERSHIP COMMITTEE: HUNTLEIGH TECHNOLOGIES GROUP, OUR NEW SUSTAINING MEMBER.

REPORT OF THE FREQUENCY COORDINATOR COMMITTEE: NO REPORT.

REPORT OF THE SCHOLARSHIP COMMITTEE: ONE APPLICATION: ALEX BARON FROM HANKS HIGH SCHOOL, WAIITING FOR MORE...

REPORT OF THE WEB SITE COMMITTEE: JUST UP-DATING. 422 HITS. 29 MORE FROM LAS REPORT

REPORT OF THE EAS CHAIRMAN: ONE ACTIVATION RECEIVED AND RELAYED FROM TEXAS PUBLIC SAFETY DEPT. RON HANEY WILL REVISE PROCEDURES.

REPORT OF THE PROGRAM COMMITTEE: NO REPORT THIS TIME, REP'S BUSSY WITH NAB

UNFINISHED BUSINESS: OWEN SMITH REPORTED THAT RANGER PEAK WILLER TRAM TO BE SHUT DOWN BY THE STATE. NO OFFICIAL REPORT.

NEW BUSINESS OR ANY ITEMS FOR THE CHAPTER INTEREST: JOHN LACKNESS FROM S.C.M.S. WILL CONTINUE THE LARRY BLOOM-FIELD "BROADCASTERS ROAD SHOW".

NEXT MEETING DATE AND LOCATION: APRIL 12, 2011, LOCATION: GRAND CHINA BUFFET, SUNLAND PARK AT NOON.

MEEETING ADJOURNED: 1:18 PM .ACCEPTED BY RICK VILLARDEL.

NOTES FROM THE EDITOR:

We have a new sustaining member: HUNTLEIGHT TECHNOLOGY GROUP, their President: ROSS DAHMAN. We welcome and appreciate his support

NOTES FROM THE SECRETARY:

The invoices for membership renewal for local members and Sustaining members were Mailed and e-mailed.

If you didn't mail your payment, it can be done on the next SBE meeting, either cash or check.



March is gone as well as the high winds, and we did not have any presentation, it was only a friendly and regular meeting with some very interesting topics

For April we will have another regular meeting, and this time, it will be kind of lonely because of our amigos going to Las Vegas to attend the NAB. I hope this time we can have a discussion about all the EAS issues if somebody spot our EAS Chairman Ron Haney. Is he available?

The invitation is for next Tuesday
April 12, 2011 at GRAND CHINA
BUFFET for lunch and it will start @
NOON.

PLEASE, plan to attend and get involved in our chapter decisions













Dan Sessler

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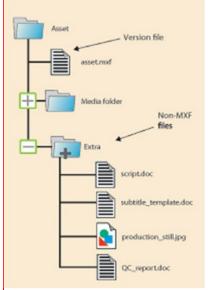


Figure 3. AS-02 can wrap human readable files.

AS-02 allows additional, non-MXF files to be wrapped as part of the asset. (See Figure 3.) These could be QC reports as caption files and scripts possibly as Microsoft Word files. These extra files are human readable, so back office staff can open and edit these supporting files without the need for an NLE, which would be needed to open media files.

An asset could represent all versions of an asset or could be used for version subsets. For example, a broadcaster could have a Los Angeles asset, a London asset and a Singapore asset. The Singapore asset would wrap all the languages used in transmission to the Pacific Rim, while the London asset would wrap all the European languages. Multiple asset files can access the same media essence files, which could lead to savings in storage requirements.

Management

The creation of foreign language versions is a complex operation that requires management of assets and resources. A DAM can manage the association of subtitles and language tracks with the original content on return from the subtitling and dubbing processes. The DAM gives transmission controllers a complete view of the status of the extra language components.

Formats like AS-02 can maintain association of all the resulting files as a bundle following subtitling and dubbing, hopefully avoided missing material incidents in transmission.

Resource and workflow management systems can ensure the allocation of tasks to internal staff or outworkers, and supervise the scheduling. As turnaround times for foreign language versions become ever shorter, slick management is key to controlling costs.

Summary

Aside from prime networks, the revenue for channels is being squeezed as audiences disperse across more and more outlets to view content. This is forcing content providers to become "media factories." This means adopting the methodology of mass production, much like the auto industry. Operating in multiple languages only adds to the need to control cost.

File-based operations contribute to cost-saving, but due regard must also be given to interoperability between systems. Subtitling, video servers, DAM, playout automation and management systems must all interoperate seamlessly to achieve the goal of lowering costs. Current operations often involve incompatible file formats, dictating rewrapping or conversions. Metadata must often be rekeyed — a process that can introduce errors. Unnecessary use of videotape to transport content adds QC stages.

To achieve efficient operations in multilingual content distribution, many broadcasters will have to redesign their process flows. The technology exists, and several major names in the United States are already operating digital end-to-end systems based on the latest implementations of the MXF standards. The result is cost savings and the flexibility to adapt the business to changing delivery formats.