Process Complex Audio Workflows in the Cloud

Identify and Adapt Multichannel Content for Broadcast and VOD Output

Commonly, video assets from multiple sources arrive for assembly and final processing with very little consistency when it comes to audio data. Camera formats, editing software and satellite feeds can have between two and 16 actual audio tracks, each of which may contain anywhere from one to 16 audio channels, resulting in a huge range of possible combinations. Inaccurate or missing metadata is also common. Not surprisingly, many broadcasters and streaming media companies run into conformance violations that fall upon editors to fix. Their corrective steps generally include the reprocessing of assets with a custom workflow preset for adding metadata, moving channels, and combining and separating the assets into different tracks, as well as discarding or adding silent tracks to match the specifications of the next asset in the workflow pipeline.

What's more, once assembly is completed, bringing the composite asset into conformance across all audio tracks, languages and channel layouts requires a significant person-hour investment.

Encoding.com, the industry's most trusted cloud media processing platform, now offers a set of features for complex audio workflows that allows broadcasters and streaming media companies to process audio assets and bring them into conformance in the cloud. Our B2B processing capabilities simplify your ability to distribute multitrack audio to millions of users, avoid the complexity and cost of building out and maintaining on-prem infrastructure, and extract maximum value from your library.

Complex audio processing with the API-based Encoding.com platform is matched with a range of microservices focused on the output of broadcast- and VOD-ready content. With just a few lines of JSON or XML code, you can request a transport stream from nearly any source material with the confidence that it will pass the most stringent of audio conformance checks and be free of errors during playout on any device.

Encoding.com supports complex audio processing in two ways. The first provides insight into the contents of a media container through GetMediaInfo and GetMediaInfoEx API commands, which return all relevant metadata and explicit/implicit track and layout information for the contents of any asset, regardless of where its stored. Once

Automated processing of multichannel audio in the cloud via the Encoding.com API

Assured conformance of all audio tracks, languages and channel layouts

Complete set of broadcast- and VOD-focused processing microservices

Lowers the complexity and cost of maintaining on-prem infrastructure

discovered, you can then craft a ProcessMedia request that will perform lossless advanced manipulations on audio tracks and layouts in the same pass as the primary mux or transcode. For each request, you simply define the output streams, the order in which they should appear, and the corresponding tracks and/or channels from which the material should be sourced. Support is provided for both explicitly named audio tracks and channels, as well as the natural order of the source material. You can add metadata, such as language of the audio track, and apply transformations such as normalization or gain to each track individually or as a whole. Over 25 layouts can be specified for the resulting mix; silence and padding can be added; and channels may be arbitrarily included, duplicated or excluded from the output altogether.

The result of these powerful tools is an automated workflow for identifying known and unknown variants of all provided audio assets. Rules can be created to reliably create conforming output, and the transforms will run in the public cloud prior to being scheduled or further processed for B2B and D2C workflows. Video editors are thus freed for more substantive work, and time is saved by not having to migrate massive files for testing and processing.

Once audio remapping is complete, Encoding.com offers robust filtering and output tools to provide industry-leading support of both lossless and lossy codecs through commercial and open source audio engines. Codec support includes PCM, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Dolby Atmos, AAC LC/HE/HEv2, MPEG-2 and MP3, among others. Loudness normalization is also available for these outputs, and Nielsen watermarking can be applied wherever needed. Outputs can be down-mixed or layouts inferred from other fixed surround information, as well.

Encoding.com's audio processing workflow features exceed those of many on-premise media pipelines, permitting a single system to often replace several discrete, sequentially run steps for moving content from ingest to the consumer. When combined with our API, orchestration system and suite of other tools, you gain the opportunity to simplify your media pipeline and reduce the time needed to prepare content for playout.

A cloud-based Encoding.com workflow also lets you scale outside of your data center. With over 100 million assets a month processed on our platform, you can be assured that a highly available, resilient solution with no upper limits on scalability is backing your workflow. Because we run in 15 data centers around the world, we provide a level of efficiency that helps you minimize costs, latency and bandwidth.

Additional features of a complex audio processing workflow on Encoding.com include:

- Support for CableLabs-compliant broadcast content
- Comprehensive capabilities for addressing caption extraction, modification and insertion across a broad range of closed caption standards, including A/53 captioning of 608 and 708 content
- Cloud-based conformance and assembly

SIMPLE INTEGRATION

Integration to the Encoding.com cloud service can be through our API, Watch Folders or GUI. Our API is the most mature, well-documented and feature-rich cloud encoding API on the market, simplifying the ability to move your ABR processing to the cloud. We can integrate with your CMS, MAM or post-production application, and offer XML templates for all popular devices. To further simplify the integration process, our API Builder helps generate properly formatted XML files to test your JSON or XML requests before writing a single line of code.

Contact Encoding.com today at **+1 800-513-1740** to see how we can help optimize the revenue-generating potential of your library.

Encoding.com is the world's largest and most trusted cloud-based video processing service provider. As the pioneer and market leader for enabling multiscreen video delivery, Encoding.com powers advanced video transcoding and packaging workflows for Fortune 1000 media and entertainment, cable, broadcast and technology brands. Encoding.com empowers its customers to monetize and successfully deliver video to all mobile, desktop, IPTV and OTT devices. Headquartered in San Francisco with offices in Aspen, Colorado, and St. Petersburg, Russia, Encoding.com operates in public and private cloud data centers around the globe.