

DIVAnalyze

Automated Content Quality Assurance

The Challenge

As broadcasters continue the transition to file-based infrastructures, there are fewer eyes available to monitor quality of content as it propagates from acquisition through editing and out to transmission, especially considering most are data streams rather than video/audio signals.

In a quest for higher compression rates to optimize storage and transmission costs, most broadcasters are not willing to sacrifice quality but also cannot justify the human workflow component of analyzing all content flowing throughout their facility.

Today the only way to perform quality assurance checks on video/audio content is in realtime, or by performing "spot checks" on content minimizing the effectiveness of the overall process.

Of course, tired eyes and ears are also prone to missing subtle issues with content which can lead to on-air problems days or even years after the fact, perhaps when the source material is no longer available for re-encoding.

There is an obvious need for a comprehensive and automated analysis tool which can effectively, repeatedly and quickly examine compressed video/audio content.

DIVAnalyze – Automated Quality Assurance

DIVAnalyze adds another invaluable content aware feature to the already rich set available in DIVArchive, the advanced content storage management solution (CSM) from Front Porch Digital.

DIVAnalyze is a hardware/software based automated quality assessment tool which integrates directly into the DIVArchive Actor (data mover) platform to provide automated in-path quality analysis functionality. The analysis step in the content lifecycle can be dynamically defined in DIVArchive leveraging our proven Storage Plan Manager functionality. This allows control systems such as MAM, newsroom systems or automation to define which content should be analyzed as part of the content storage management process.

Paired with advanced features of DIVArchive such as in-path transcoding and timecode based partial restore, DIVAnalyze helps to take humans out of the content handling process leading to predictability. The skilled video professionals can now be used for other more valuable and productive tasks within the facility.

Once content has been examined by DIVAnalyze, the detailed results of the analysis along with an overall PASS or FAIL rating is made available via our flexible DIVAdirector web based interface. Authorized users can examine these high level analysis results, or drill down into the details for triage right from their desktop.

Each of the DIVAnalyze engines can be configured with specific content analysis profiles along with measurement thresholds which will trigger the generation of an alarm condition logged by the system. Each alarm is timecode referenced along with a description of the issue and a value for the measurement if applicable.

If proxy transcoding is included as part of the overall DIVArchive CSM solution, alarms generated by the analysis engine can be selected within the DIVAdirector web interface and the user will be automatically indexed to that point in the proxy file where the alarm occurred. This allows a first pass quality check review from the desktop. If this proxy version fails to sufficiently expose the issue detected in the content, authorized users can simply restore the high resolution content to an appropriate broadcast device for further examination. Content deemed as unacceptable can be immediately removed from the DIVArchive system eliminating the possibility for questionable content reaching air.

Scalability and Load Balancing

Built on the solid DIVArchive distributed foundation, any number of DIVAnalyze engines can be added to existing or new infrastructures to provide automated analysis functionality. DIVArchive automatically load balances all transfer, transcode and analysis requests across available DIVArchive Actor platforms to ensure the effective use of resources within the system.

All DIVAnalyze operations are post-acquisition, batch processes which do not affect the overall availability of the content for immediate transcoding, repurposing or reuse necessary in demanding environments.

Analysis Engine Performance

Any number of DIVAnalyze engines can be added to DIVArchive resulting in near infinite performance scalability. Each DIVAnalyze engine can perform analysis on SD and HD content many times faster than realtime, leveraging a proprietary hardware based accelerator board to assist in the process.

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