

File-based Media Content – QC is Business Critical and Not an Option

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Introduction

As the media transitions from tape-based to file-based digital content, the existing workflows and operational methods of media companies will need to be updated. This impacts Broadcasters, Post-production houses as well as Studios. Tape-based workflows relied on dedicated devices to transform the content at each stage of content lifecycle and physical storage such as tapes as a common means of content transfer. Such controlled eco-system of tape-based content was augmented by visual quality inspection of content at every stage. However, file-based workflows disrupt the legacy tape-based equilibrium drastically. A file-based content can be stored on traditional IT infrastructure, modified & analyzed by software and transferred via high-speed networks. This increased flexibility to transform and transfer content introduces new challenges in ensuring content quality across file-based workflows.

File-based Content – Growing pains and Need for QC

As discussed in previous section, file-based workflows enable much more flexibility to transform and transfer media content. The flexibility grows in tandem with the emergence of many digital media standards, the ease of editing, the ease of content localization for diverse regions and the diversity of targets for media content that include cable, satellite, internet and mobile platforms. The growing flexibility of content transformation and transfer offers more global opportunities for content monetization. The flexibility also increases the potential for content quality issues. The content quality issues can be automatically verified by the new generation of software solutions for file-based QC (quality control) such as Interra's Baton™.

Why is file-based QC important? With the emergence of high-definition broadcast and high-speed networks, global consumers will pay directly or indirectly to view the content anytime-anywhere on TV, Internet and Mobile phone. In such widely monetized content world, any quality issues in media content could have direct financial impact on media companies – either as operational inefficiencies or as opportunity limitations.

Operational inefficiencies - The following scenarios are a brief sample of content quality issues that impact operational efficiency:

- Content does not conform to a required standard
- Content freezes
- Content has extended blurriness
- Content does not comply with regional regulations (loudness or epilepsy control)

The resolution of content quality issues could require significant resources to resolve in terms of time and personnel directly impacting a media company's operational efficiencies.

Opportunity limitations - If a media company wants to access content from external suppliers, it must be able to verify (QC) the content to ensure it meets the quality and regional regulatory requirements. Without the ability to verify or QC the external supplier content, the media company will be limited in leveraging the external content supply-chain. This could lead to delays and limitations in market expansion for the media company. Also, unverified content might not display properly on targeted platforms (Internet and Mobile), thus limiting the ability to monetize these new channels for content delivery.

File-based QC – Expanded scope

In the growing eco-system of file-based content, the traditional scope of Content Verification or QC has expanded to a broader scope. The single-point verification or QC has expanded to multi-point verification/QC spanning Ingest, editing, post-production, play-out and archive stages. At each stage, the Content verification ensures content quality and compatibility to the next stage of content lifecycle. The various aspects addressed by content verification or QC include:

- **Formats** – As the industry embraces various formats fine-tuned for various types of content and various target platforms, the content needs to be verified for 'formats conformance'.
- **Quality checks** – Content quality can be impacted either during transformation or during transfer. For example, content quality can get impacted during Transcoding, editing, file transfer and during tape-to-file transfer of legacy content.
- **Regulatory checks** – Content from one region may not be compliant with regulatory requirements in another region. Sample regulatory requirements include Epilepsy control, loudness control etc
- **Content size & volume** – As the content size and volume grow, the quality issues may creep in due to oversights from tighter schedules and faster processing of content
- **Content integration** – The content may be required to be compliant to the server & software infrastructure in a media company in order to minimize content duplication, transfers and transformations
- **External content suppliers** – The content formats can change based on the external content suppliers. In order to consider content from a supplier, a media company must be able to verify the content in its format. Without the ability to verify a given content, the media company cannot depend on contents from the respective supplier.

Interra's Baton

Baton is an Automated Content Verification or QC solution. Baton verifies file-based media content for formats conformance, Audio/Video quality, play-out specification compliance and more. As the file-based content evolves across various stages of workflow, the content is represented by various formats, metadata and requires relevant quality checks. In each workflow, Baton applies appropriate QC measures to check the format, quality & play-out specs compliance of the content.

Conclusion

File-based media content impacts the existing workflows and operational methods of media companies including Broadcasters, Post-production houses as well as Studios. File-based workflows offer opportunities to transform and transfer the content for broader monetization than ever. Content can be taken from creation to distribution faster, distributed to more regions and to more target platforms including traditional TV, IPTV and mobile TV. However, if the content has quality problems, it can have negative financial impact on media companies – either as operational inefficiencies or as opportunity limitations. Such problems can be minimized using the new generation of file-based QC software solutions. The QC solutions can ensure that a given content is ready for each stage of a content lifecycle and they can also expand the possibility of getting ready content from external suppliers.