

Simplify Caption and Subtitle Processing with Softel Swift vTX and Omneon Systems

- Automate the addition of subtitle and caption data
- Reduce cost and complexity of broadcast chain by inserting captions as data
- Archive video and multi-language caption data in a single asset



SOLUTION OVERVIEW

Broadcast and video production facilities are shifting to file-based operations, turning what used to be lengthy real-time processes into file manipulations or data insertion. Captioning and subtitling (collectively referred to as captioning) gain tremendous efficiencies from this transition. The ability to extract, manipulate and add caption content to and from existing media assets in a fully file-based workflow can eliminate hours of production time. By joining forces with Softel, Omneon is able to offer a comprehensive solution for the management of file-based captioning.

Enhancing the File-Based Playout Workflow

Historically, captions have been played as a separate, synchronized signal and combined with the video and audio by downstream equipment. This approach adds tremendous complexity to the broadcast chain in terms of extra hardware and software. Every edited version required that the caption track be edited to match. Every alternate language required yet another version of the captions that match the video. A single video source asset might end up driving dozens of versions of final product.

By storing captions as data along with the video and audio in a single file container, automation and archive complexity can be greatly reduced and a number of potential points of failure and human error in the broadcast chain can be eliminated. By integrating Swift vTX from Softel—a well-established leader in captioning and ancillary data management—with the Omneon platform, broadcasters can streamline caption creation, addition and editing to take full advantage of the efficiencies of a file-based workflow.

Integrating File-Based Captioning with Media Servers and Storage Systems

Softel Swift vTX leverages a combination of its own application programming interfaces (APIs) and those provided by Omneon to manage the manual or automatic encoding, transcoding or extraction of multi-format ancillary data for material residing on the Omneon platform. With seamless interconnectivity and a broad range of formats supported, the Omneon/Softel solution flexibly supports a variety of file-based captioning and subtitling workflows, whether for broadcast or offline post production. Users can interact manually with Swift vTX, browsing and associating caption data with media server video assets, setting output format and standards preferences and initiating jobs. In some cases, workflows can be completely automated where the system is setup with rules that drive the extraction and integration of caption data with the appropriate files based on-file naming conventions or file system hierarchy. External agents, such as playout automation or media asset management (MAM) systems can initiate caption operations, while Softel and Omneon keep content in sync and operators informed.

Omneon provides 3rd-party developers with the ability to work with a variety of video essence and wrapper formats without having to write content-specific code. The Softel Swift vTX captioning solution takes full advantage of this capability to support file-based caption operations for both Quicktime and MXF wrappers, and a wide variety of essence formats. This flexibility is absolutely critical when enabling seamless communication with traffic management systems or repurposing broadcast content for Web or mobile transport streams.

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SOLUTION BRIEF

Captioning and the location of caption information varies by format and by geography. Omneon and Softel are fully compliant with regional and format idiosyncrasies. Not only does this mean that formats for local distribution are supported, but also that repurposing content for other regions is just as easy. This includes support for direct creation of VBI tracks, embedding information in MPEG tracks, and manipulating data adhering to the SMPTE 436M specification.

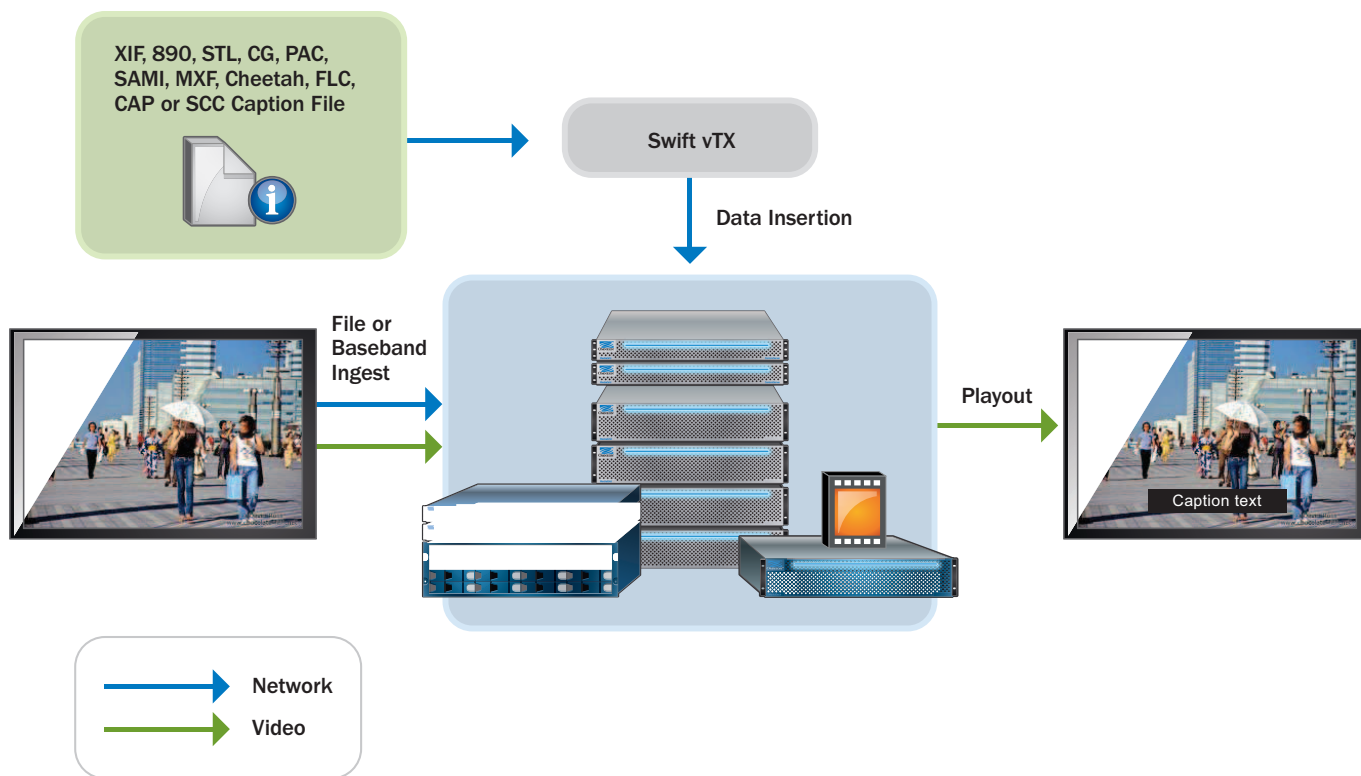
Supporting Multi-language Workflows with MultiText

Swift vTX enables pre-encoding of hidden caption or subtitle data in the ancillary data space that is a part of all Omneon assets. This ensures “clean” video and creates a self-contained, portable asset that can incorporate multi-language, multi-format captions or subtitles. When media is played out from the Omneon server system, the embedded data can be decoded by Softel’s Swift TX transmission unit, which can transcode the asset to multiple formats at the time of broadcast. Data may, for example, be transcoded with DVB closed captions or rendered via the character generator as Open subtitles. This decoding process can be switched off under manual or automated control.

Caption File	
XIF	890
STL	CG
PAC	SAMI
MXF	Cheetah
FLC CAP	SCC

Employing Effective, Efficient End-to-End Captioning

Efficient file-based workflows take advantage of the flexibility of manipulating data faster than real time and the ability to manage data types separately without losing their relationship to one another. Whether it is creating multiple languages with matching captions, offering a range of caption options to the viewer, repurposing content for other venues or devices, or handling last-second changes to content without having to give up captions, Omneon and Softel are dedicated to creating the most efficient file-based captioning workflows available.



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