Timed Text Flip
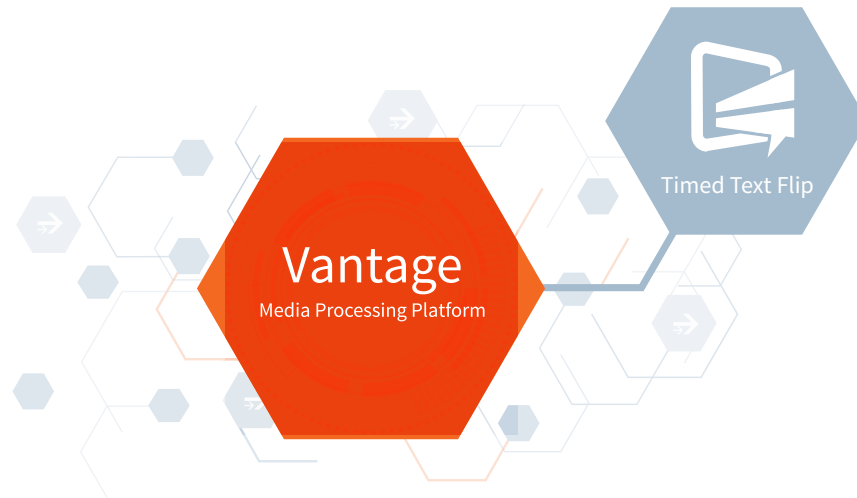
Vantage
Media Processing Platform

Timed Text Flip for Vantage

Automated Subtitle and Captioning Conversion
Integrated into the Vantage Media Processing Platform

Timed Text Flip is a sophisticated subtitle and captioning service that runs on the Vantage Media Processing Platform, providing a unique interface to read, write, and adjust subtitle and caption data.

Vantage Cloud Port
Capable

**The Power of Vantage.
The Simplicity of SaaS.**
As your workflows evolve and move into the Cloud, this software is ready to make the journey with you and follow your content wherever it goes!
Learn More

Introduction
As video professionals are faced with increased accessibility requirements, a complete transcoding and delivery solution should include caption and subtitle delivery capabilities. Timed Text Flip integrates seamlessly into Vantage and is easy to use, with an intuitive interface that brings professional subtitling and captioning tools into existing Vantage workflows. Unlike simple caption filters, The Timed Text Flip service allows users to manipulate the timecode of caption data to match media files that are being processed in the same workflow.

API to submit files for processing
As part of Vantage, the Timed Text Flip caption and subtitle engine can be driven via REST API. Users can submit caption and subtitle files, monitor job progress, select custom workflows, and receive metrics via the Vantage API.

Subtitling and Captioning Done Right
Timed Text Flip allows Vantage users to add high quality subtitles and captions to their content to meet accessibility requirements. Timed Text Flip is designed specifically to meet strict internet and TV broadcast mandates that require captioning and subtitle delivery. The service recognizes and automatically processes subtitle and captioning input files from service companies and customers. Automation within Vantage means content is processed faster and seamlessly integrated into your existing Vantage workflow.

Assured Compliance with Accessibility Mandates
Government legislation in a growing number of countries requires broadcasters to deliver closed captioning to TV and internet outlets. However, compliance can sometimes introduce manual processes and time-consuming workarounds into workflows that were otherwise automated. Timed Text Flip allows Vantage users to work with caption data within the same automated workflow that they rely on every day.

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Convert Caption Data to Subtitle Overlay

Automatically burning-in Captions and Subtitles from typical caption and subtitle files normally requires conversion to an intermediate subtitle format that can be used during a transcode. This is a labor intensive manual process, often requiring multiple departments to get the correct formats needed. Timed Text Flip can create these graphics from standard caption and subtitle files, as well as extract caption data from incoming media and convert it to subtitle overlay graphics. Unicode and Asian character sets are also supported for subtitle overlay.

Migrate to the new IMSC 1.0 Timed Text standard

Many broadcasters are looking for the next generation captioning and subtitling file format. IMSC 1.0 is at the top of the list for IMF and OTT delivery. Timed Text Flip will migrate your existing caption files to IMSC 1.0 in one simple workflow.

DVB Subtitle Support

Timed Text Flip can generate DVB Subtitles with a custom font style from a variety of subtitle and caption text formats. Up to 16 languages per transport stream is possible with Timed Text Flip in VOD workflows. DVB Subtitles can be inserted without transcoding to existing .TS files very quickly. Media that contains closed captioning data can be converted to DVB Subtitling.

## Teletext OP-47 and OP-42 Support

Timed Text Flip can read and write Teletext subtitle data–including MXF files. Users can extract both OP-47 and OP-42 Teletext from input media and convert to subtitle overlay or OTT caption files. Easily add Teletext to your existing MXF workflow. Convert CEA-608 and CEA-708 caption data to Teletext.

Frame Rate Timing Adjustment to Match Media Files

Caption and subtitle files are normally made for TV broadcast at a frame rate of 29.97 fps or 25 fps. For internet delivery, many outlets require the media to be delivered in the original 23.976 fps. If the captions are not adjusted to the final delivery frame rate of 23.976 fps, then a sync issue will occur since the input caption data is at a different frame rate. The Timed Text service can be set to convert the frame rate and timing of the caption and subtitle file to match the output media.

Timecode Offset for Sync Fixes

A sidecar file such as SCC or EBU-STL is typically available for caption data insertion into a media file. However, occasionally the starting timecode of the media does not match the starting timecode of the caption file. This causes the caption insertion to fail. With Timed Text Flip, the starting timecode of the caption file can be offset to match the media. For workflows that require internet captioning delivery, users may adjust the TV captioning timecode to a desired start time.
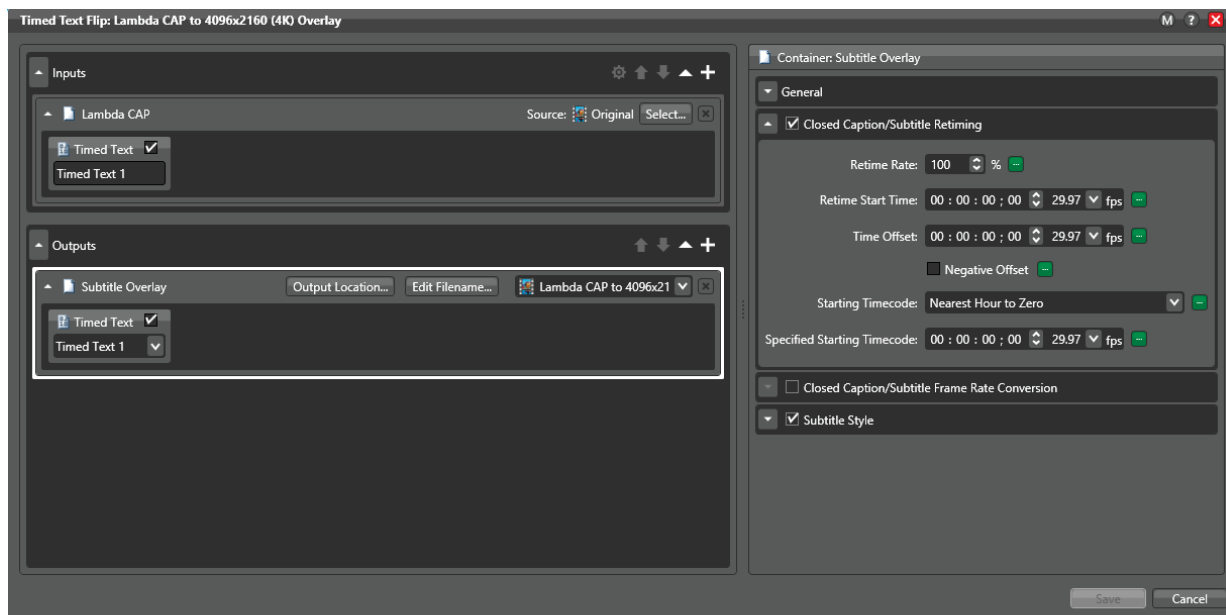
Input/Output User Interface (Timed Text Flip)

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Caption File Legalizer

Timed Text Flip can correct many problems with caption files like embedded CEA-608/CEA-708 captions and sidecar caption files like SCC, prior to embedding and transcoding into video files. Running caption files through Timed Text Flip can fix syntax issues that could result in missing text and timing issues in down stream processes.

## Caption Data Insertion without Transcoding

Both CEA-608 and CEA-708 caption data can be embedded into media files without an additional video transcoding step. This eliminates the generation losses that can lower video quality and increase processing time when inserting caption data. Timed Text Flip can detect the input video file type and insert caption data from secondary input caption files such as SCC and MCC. In addition, caption data can be extracted from one media file and added to a secondary media file using the Same as Source output option.

Features

- Timed Text Flip is an optional module that can be accessed through the Vantage Workflow Designer. The UI is designed to be user-friendly and will be familiar to Vantage users.
- Convert to and from popular OTT caption and subtitle files including IMSC 1.0 and iTunes .iTT.
- Legalize problematic caption input files such as .SCC and .MCC to eliminate transcoding errors.
- Set a font style and color for subtitle overlay burn-in outputs*.
- Set a caption file to a new starting timecode to match input or output media files.
- Time stretch caption data to correct sync issues. Select "Nearest Hour to Zero" to automatically set starting time of all incoming input caption and subtitle files to match source media or OTT standard.
- Convert caption data frame rate to match video frame rate conversions.
- Caption data insertion without transcoding
- Subtitle overlay support for Japanese Ruby and vertical text formatting from input Lambda .CAP files.
- DVB Subtitles and Teletext can be created from standard broadcast and OTT subtitle and caption documents including EBU-STL, TTML, and WebVTT.
- V-chip, XDS, AFD data pass-through from input source media.
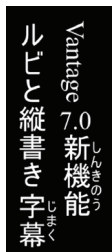
*Subtitle font selector requires the selected font to be installed on the Vantage server processing the job. If the font is not installed, Timed Text Flip alerts the user to the missing font.
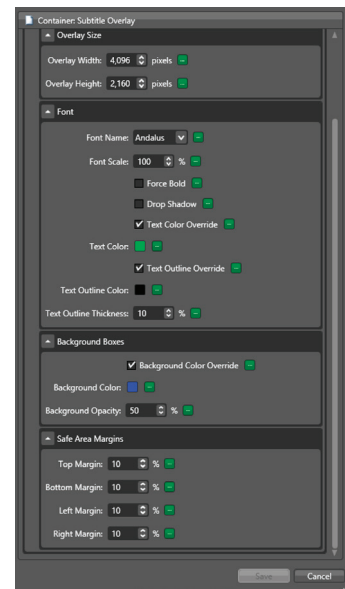
Subtitle Overlay User Interface (Timed Text Flip)

Technical Information

Reading media files – Timed Text Flip can extract caption data from a variety of captioned media that has embedded CEA-608 and CEA-708 caption data. These include MPEG-2 A/53 user data, SMPTE-436M, VBI, VAUX, QuickTime closed caption track, H.264 SEI, as well as OP-42, OP-47, and WST Teletext.

Reading caption and subtitle files – Timed Text Flip can read text, timing, and formatting from standard caption and subtitle files including STL-EBU, SRT, MCC, SCC, Lambda CAP, WebVTT, IMSC 1.0, iTunes .iTT. PAC, and TTML.

DVB Subtitle Export – This export creates a .TS file that contains custom subtitle graphics rendered by Timed Text Flip. Parameters include language tagging, PID assignments, and color settings. DVB workflows for broadcast require IPTV to multiplex up to 16 languages per transport stream.

Teletext Subtitle Export – This export will embed OP-47 Teletext into MXF HD file formats. In addition, it will create OP-42 VBI subtitles for transcoding with MXF SD media files.

Subtitle overlay graphic export – Timed Text Flip will create a self-contained MOV file and alpha channel around each subtitle graphic. This MOV file can be used to burn in subtitles using a transcoder or an editing system. Includes support for ProRes 4444 and both UHD and 4K video resolutions.

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Timing manipulation of caption and subtitle data – Based on the SMPTE time code specifications, Timed Text Flip can perform conversions between 23.976 fps, 25 fps, 29.97 fps, and 59.94 fps of caption and subtitle data. In addition, the service can perform drop frame and non-drop frame conversions with a timecode starting time offset.

Time stretch of caption and subtitle data – Based on speed percentage parameters, Timed Text Flip can adjust the total running time of the caption or subtitle input file. This is also known as stretch or shrink caption timing. Automatically set starting time with "Nearest Hour to Zero" – this option is useful when source caption and subtitle files have inconsistent starting time codes. These settings can automatically generate outputs with captions/ subtitles starting at a consistent starting time such as 00:00:00:00 or 01:00:00:00.

Formats

Video file support with captions – DV25, DVCPRO HD, XDCAM HD, MXF, ProRes MOV, MPEG-2 TS, GXF, MPEG-2 PS, H.264 SEI in TS and MP4.

Internet files – TTML, WebVTT, IMSC 1.0, SMPTE 2052, and iTunes .iTT.

Caption and subtitles data files - MCC, SCC, EBU- STL, SRT, PAC, 890, DCP subtitles (MXF or XML) and Lambda CAP Japanese subtitle formats.