



# Sample Workflows – Timed Text Flip

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## Overview

Timed Text Flip is a sophisticated subtitle and captioning component that runs on the Telestream Media Framework in Vantage, providing an easy-to-use interface to read, write, and adjust subtitle and caption data; automating common captioning and subtitling conversion processes.

Caption data can be extracted from video files that have embedded caption data as well as from common caption and subtitle file formats such as SRT and EBU-STL, in addition to SCC which was already supported in other Vantage actions. Outputs include Internet caption files, such as TTML, as well as SCC, MCC, and “Same as Source” caption insertion into media files such as MXF and MOV.

Timed Text Flip also gives users the ability to create subtitle overlay graphic files for Vantage workflows that require burn-in subtitles. These graphic files can be customized in Timed Text Flip and are able to be used with Vantage actions that support graphic overlay burn-in filters. You can change the subtitle font, set text and background colors, and customize other settings.

Timing adjustments are also a feature of the Timed Text Flip action. Users can quickly adjust timecode parameters of source files such as drop frame to non-drop frame changes, frame rate conversions, and speed timing adjustments to fix drifting synchronicity of caption and subtitles within media files. This is critical for media transcoding workflows that require a frame rate conversion of a video file that is not in the proper format for delivery.

SCC files and subtitle overlay graphic files that Timed Text Flip generates are able to be used with other Vantage actions such as IPTV VOD and Multiscreen. All other generated files, including TTML and WebVTT, can be attached to media in a Vantage workflow that require a side-car captioning file for delivery.

## Requirements – Licenses, Media, Metadata

### Minimum Requirements

- Vantage v6.3 UP5 (or later) licensed with:
  - Vantage Transcode (**V-XCODE-SW**)
  - Vantage Social Media option (**V-TTFLIP-SW**)

### Timed Text Flip Sample Workflows

The Timed Text Flip sample workflow package includes six (6) workflows that demonstrate how Vantage can be used in Timed Text workflows involving Closed Caption and Subtitles. All workflow use a Watch as its origin action. Other origin actions can be substituted where appropriate.

### Creating MCC, SCC and Subtitle overlay files from an EBU STL

Timed Text Flip can be used to convert from one type of caption or subtitle format into a different format that is required for specific closed caption of subtitle workflows. The first two example workflows demonstrate how this can be done.



- The first workflow example converts an EBU-STL subtitle file into both an MCC and SCC TV caption files.
- The second workflow example uses an EBU-STL subtitle file as an input and creates a subtitle overlay file as an output.

### Workflow #1 – EBU STL to MCC and SCC

Creates MCC and SCC closed caption files from an EBU STL

Although an EBU-STL file does not contain CEA-608 or CEA-708 caption data, it can contain timing and text information that can be used by the Timed Text Flip action to create CEA-608 and CEA-708 output. In this example, the Timed Text Flip action is configured to read an EBU-STL file and create an SCC (CEA-608 only) and an MCC (both CEA-608 and 708) file for delivery.

**Watch Action** – The Watch action will submit media files matching specific parameters upon arrival in the monitored folder. In this case the Watch Action accepts only file that have an STL file extension.

**Timed Text Flip Action** – The Time Text Flip action is configured to process an EBU-STL as an input and create CEA-608 and CEA-708 outputs converting the frame rate from 23.976fps to 29.97fps.

**Copy Action** – The Copy actions simple copies the SCC and SCC file into an available Vantage Store.

### Workflow #2 – EBU STL to Subtitle Overlay

Create a QuickTime Subtitle overlay file from an EBU STL file

This workflow uses the same EBU-STL input file as workflow #1. Here the Timed Text Flip Action reads the EBU-STL file and creates a QuickTime subtitle overlay that contains Timed Text data extracted from the input.

**Watch Action** – The Watch action will submit media files matching specific parameters upon arrival in the monitored folder. In this case the Watch Action accepts only file that have an STL file extension.

**Timed Text Flip Action** – The Time Text Flip action is configured to process an EBU-STL as an input and create a QuickTime subtitle overlay file as its output.

**Copy Action** – The Copy actions simple copies the SCC and SCC file into an available Vantage Store.

### Workflow #3 – Input TTML to Various

Create a multiple Timed Text outputs from a TTML input file

The input for this sample workflow is a TTML (Timed Text Markup Language) and the outputs are 5 different caption/subtle files (MCC, SCC, Subtitle Overlay, WebTT and SRT).

**Watch Action** – The Watch action will submit media files matching specific parameters upon arrival in the monitored folder. In this case the Watch Action accepts only file that has a VTT file extension.



**Timed Text Flip Action** – The Time Text Flip action is configured to process a TTML as an input and 5 outputs (MCC, SCC, Subtitle Overlay, WebTT and SRT).

**Copy Action** – The Copy actions simple copies the output files into an available Vantage Store.

## **Workflow #4 – Timed Text overlay with MP4**

[Read CC data from an input file and output an MP4 with burned-in \(Open\) Subtitles](#)

This workflow's input is a QuickTime containing closed captions and the output is an MP4 with burned in (OPEN) subtitles.

**Watch Action** – The Watch action will submit a media files matching specific parameters upon arrival in the monitored folder. In this case the Watch Action accepts only file with an MOV extension.

**Timed Text Flip Action** – The Time Text Flip action is configured to process the MOV file, extract the CAE-608/708 closed caption data and creates a QuickTime subtitle overlay file

**Identify Action** – Identifies the file path of the QuickTime overlay file.

**Flip action** – The Flip Action use the original MOV file and the QuickTime overlay file together to create an MP4 OPEN subtitles.

## **Workflow #5 – CC to Overlay Multiple Frame Rates**

[Read CC data from an input file and create multiple Subtitle overlays with differing Frame Rates](#)

This workflow's input is a QuickTime containing closed captions and the outputs are multiple SCC closed caption files of varying frame rates.

**Watch Action** – The Watch action will submit media files matching specific parameters upon arrival in the monitored folder. In this case the Watch Action accepts only a QuickTime demo file.

**Timed Text Flip Action** – The Time Text Flip action is configured to accept a QuickTime file as an input and create multiple SCC files of varying frame rates.

**Copy Action** – The Copy actions simple copies the SCC files into an available Vantage Store.

## **Workflow #6 – Speed Change Increase Decrease**

[Read CC data from an input file and create multiple re-timed Subtitle overlays](#)

This workflow's input is a QuickTime containing closed captions and the outputs are multiple re-timed SCC closed caption files.

**Watch Action** – The Watch action will submit media files matching specific parameters upon arrival in the monitored folder. In this case the Watch Action accepts only a QuickTime demo file.



**Timed Text Flip Action** – The Time Text Flip action is configured to the QuickTime file as an input and create multiple SCC files, one re-timed at 99.95, another at 100.1% and the final with no retiming applied.

**Copy Action** – The Copy actions simple copies the SCC files into an available Vantage Store.

## Installing and Using the Timed Text Flip Sample Workflows

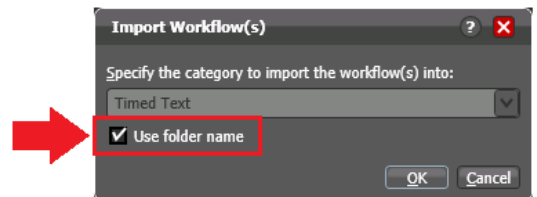
Before installing the sample workflows you will need a Vantage server with an active Vantage license (see minimum requirements above). If you do not currently have a Vantage server with an active license, download the appropriate version of Vantage (and any required Update Packs) from Telestream's Vantage download page, and request an evaluation license from Telestream.

### Installation process:

To load all the required Vantage items, media files and metadata carefully follow these steps.

### Preparing your Vantage Server to run Timed Text workflows

1. Create a default input origin folder
  - o The preferred folder is D:\TimedTextDemo. This will be the root folder that is monitored for new incoming media files by the workflow's *Watch origin actions*.
  - o Create subfolders to D:\TimedTextDemo named: TTML, DEMO608 and EBU-STL
  - o Sample workflows have been set to monitor the D:\TimedTextDemo folders respectively. If you choose to create a different folder location you must modify each workflow's origin action to point to your desired folder location. See Using the Sample Workflows below.
2. Copy the Timed Text Sample Workflow ZIP file onto a Vantage Server
  - o Unzip the Timed Text Sample Workflow ZIP into a local folder; preferable on a Media drive such as a Lightspeed's D:\ drive.
3. Open the Vantage Management Console (VMC) on the Vantage server
  - o **Import all Workflows:** From *VMC->Workflow Design Items->Vantage Workflows*, import all workflows by selecting the arrow next to the *Import* icon, select *Import Workflow(s)*. Select all workflow files contained in the \TTFlipSampleWorkflow\Workflows folder extracted from *Timed Text Flip Workflow ZIP* file. From the Import Workflow(s) dialog, check the *Use folder name box*, and then click *OK*. The Timed Text category is automatically added.





## Using the Time Text Flip Sample Workflows

After installing all of the Sample Workflow items as described above there are just a few small details to perform before you're ready to start using Vantage's Social Media Connector sample workflows.

### Preparing the Watch action

- If your default origin folder is not at D:\TimedTextDemo as described above, you must modify the Watch action to monitor a folder of your choice.

### Workflow #1 - EBU STL to MCC and SCC

- If your default origin folder is not at D:\TimedTextDemo\EBU-STL as described above, you must modify the Watch actions to monitor a folder of your choice.
- To submit to this workflow copy the STL test media file (*TearsofSteel25fps.stl*) located in the **..\Media\TearsofSteel** folder after unzipping the sample workflow package, into the folder being watched by this workflow. Alternatively you can submit this file directly by the manually submitting it through the Workflow Designer or other submit clients.

### Workflow #2 - EBU STL to Subtitle Overlay

- If your default origin folder is not at D:\TimedTextDemo\EBU-STL as described above, you must modify the Watch actions to monitor a folder of your choice.
- To submit to this workflow copy the STL test media file (*TearsofSteel25fps.stl*) located in the **..\Media\TearsofSteel** folder after unzipping the sample workflow package, into the folder being watched by this workflow. Alternatively you can submit this file directly by the manually submitting it through the Workflow Designer or other submit clients.

### Workflow #3 - Input TTML to Various

- If your default origin folder is not at D:\TimedTextDemo\TTML as described above, you must modify the Watch actions to monitor a folder of your choice.
- To submit to this workflow copy the TTML test media file (*demo608.xml*) located in the **..\Media\demoVideo608** folder after unzipping the sample workflow package, into the folder being watched by this workflow. Alternatively you can submit this file directly by the manually submitting it through the Workflow Designer or other submit clients.

### Workflow #4 - Timed Text overlay with MP4

- If your default origin folder is not at D:\TimedTextDemo\Demo608 as described above, you must modify the Watch actions to monitor a folder of your choice.
- To submit to this workflow copy the QuickTime test media file (*demo608.mov*) located in the **..\Media\demoVideo608** folder after unzipping the sample workflow package, into the folder being watched by this workflow. Alternatively you can submit this file directly by the manually submitting it through the Workflow Designer or other submit clients.



### Workflow #5 - CC to Overlay Multiple Frame Rates

- If your default origin folder is not at D:\TimedTextDemo\Demo608 as described above, you must modify the Watch actions to monitor a folder of your choice.
- To submit to this workflow copy the QuickTime test media file (*demo608.mov*) located in the **..\Media\demoVideo608** folder after unzipping the sample workflow package, into the folder being watched by this workflow. Alternatively you can submit this file directly by the manually submitting it through the Workflow Designer or other submit clients.

### Workflow #6 - Speed Change Increase Decrease

- If your default origin folder is not at D:\TimedTextDemo\Demo608 as described above, you must modify the Watch actions to monitor a folder of your choice.
- To submit to this workflow copy the QuickTime test media file (*demo608.mov*) located in the **..\Media\demoVideo608** folder after unzipping the sample workflow package, into the folder being watched by this workflow. Alternatively you can submit this file directly by the manually submitting it through the Workflow Designer or other submit clients.