grass valley

Rio 4K/8K

High performance online editing, color and finishing
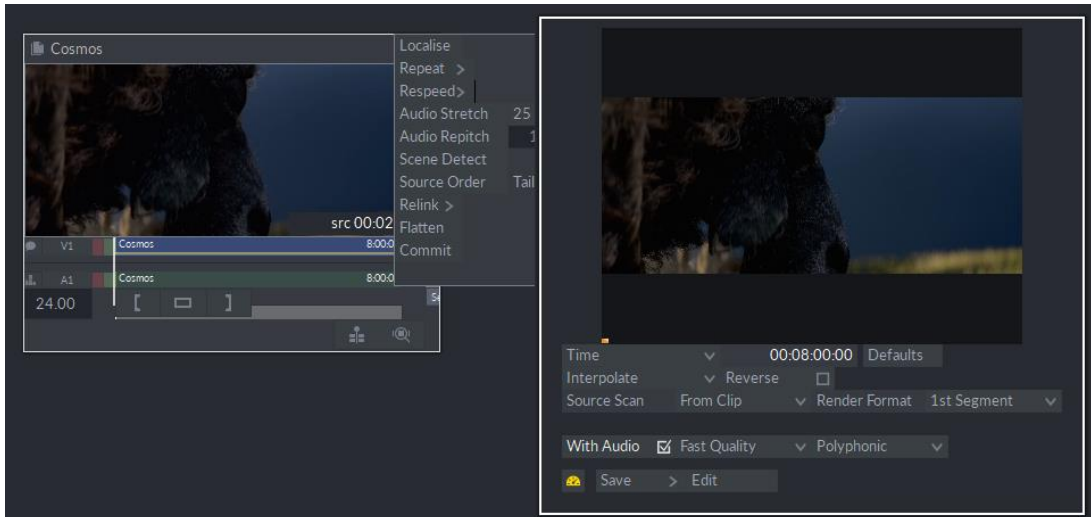
Application Note
MLT FX Stretch Process

June, 2020

Overview

From v4.5.8, Rio supports unrendered stretch function and stretch process in MLT FX.

Unrendered stretch function

Respeed/Stretch functionality can now render on-the-fly. From the right-click menu you can select Respeed to pop up the Respeed window

The settings are the same as previous version. To render the stretch, click render button and then save the clip. However, you can also click Save or drag the Save button to create an unrendered Stretch clip.

MLT FX Stretch process

You can now add stretch process to segments in MLT FX. If a clip already has a stretch effect from the Respeed popup window it will also be visible in MLT FX.
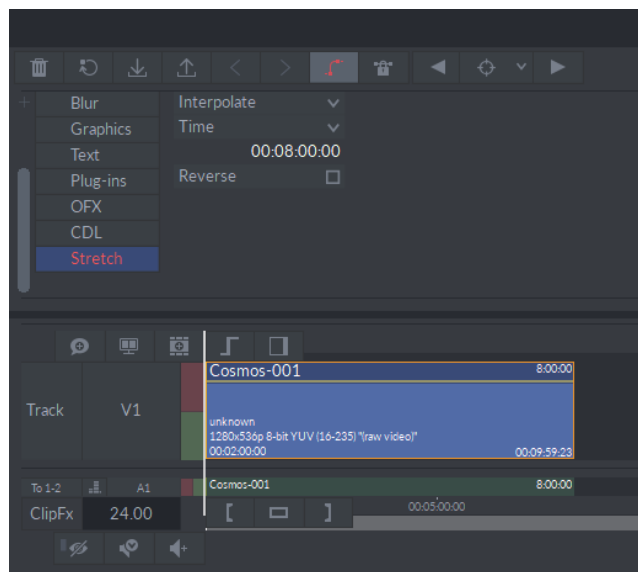
Selecting stretch method / algorithm

The top-most dropdown box selects which method/algorithm to use for stretching:

- Interpolate – linear mix between frames
- Nearest – rounds destination frame offsets to the nearest source offset
- Replicate – repeats sources frames to match destination length
- Alchemist – uses Grass Valley Alchemist algorithm
- Flow Motion – uses Grass Valley Flow Motion algorithm
- OFX – use 3rd party OFX plugins
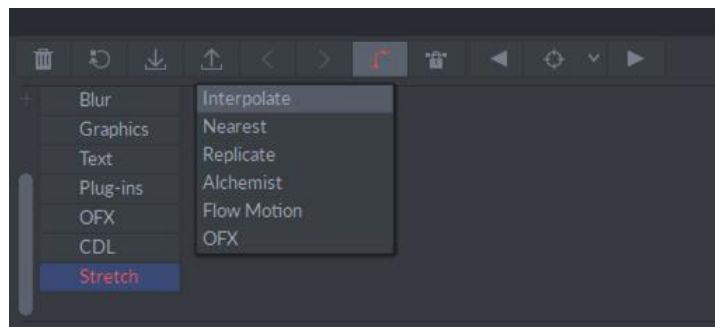

Selecting stretch mode

The second dropdown box selects the mode for controlling the segment's stretched length:

- Time – set the segment's length to a specific timecode
- Speed – set a constant speed percentage: for example, 50% speed will double the segment length
- Multiple – multiplies the segment length by a given value: for example, 2x multiple will double the segment length
- Profile – sets a variable speed profile that can be controlled with keyframes
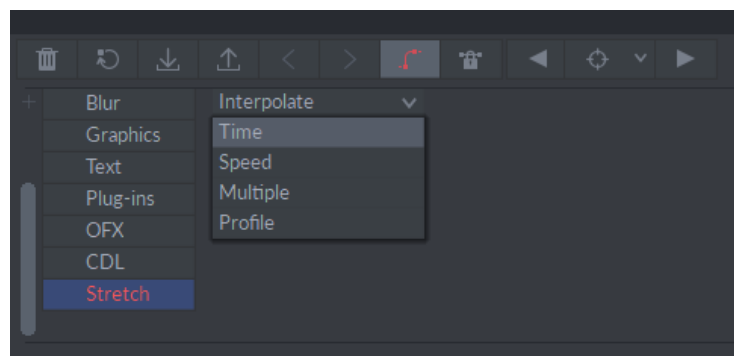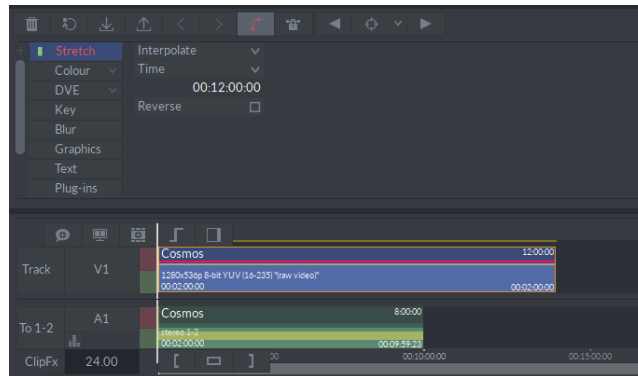
Reverse option

The Reverse checkbox will reverse the order of frames in the segment
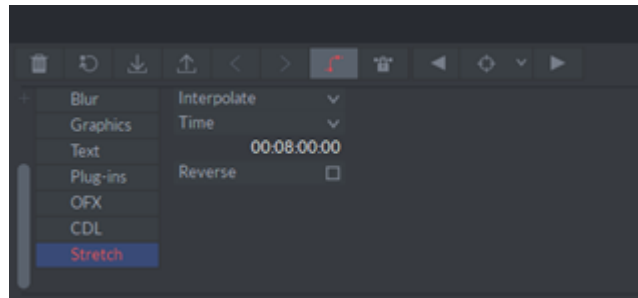
Sample stretched segment

Here the segment has been stretched from 00:08:00:00 to 00:12:00:00 using 'Time' mode. Note that only the video is stretched from within MLT. To also stretch the audio you must use the Respeed or Audio stretch features by right-clicking the clip on the desktop.

Using Profile stretch mode

The Profile mode allows you to vary the speed along the length of the segment. In Profile mode a box "Use All Src Frames" is available. If this is enabled then the length of the segment will change as you change speed values so that all frames of the source are available in the stretched segment.
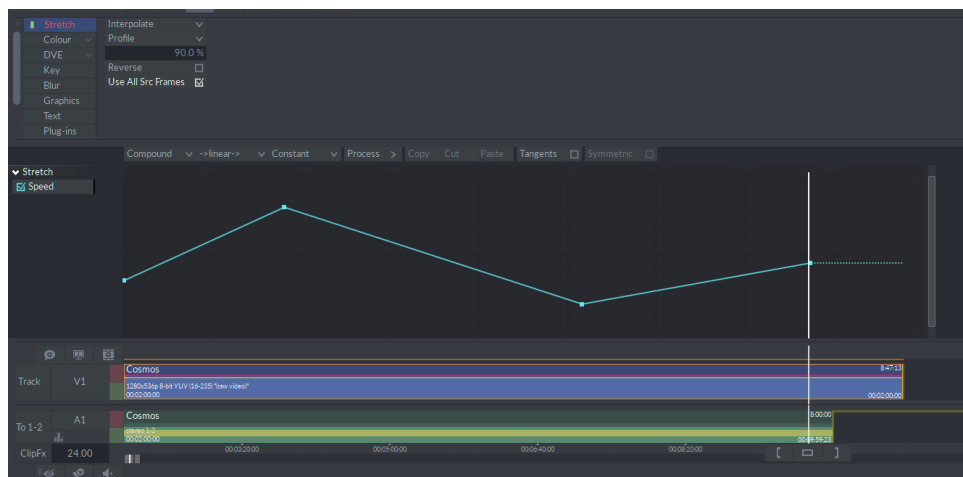
Using OFX method

If the Stretch method is set to OFX, a separate OFX menu is visible where you can select a third-party plugin to handle the stretch. In this mode the Time/Speed/Multiple box on the left only controls the length of the segment, and the OFX plugin's keyframes control the stretch effect.