

# Animation Editor

This page provides information about Chaos Vantage's Animation Editor.

## Overview

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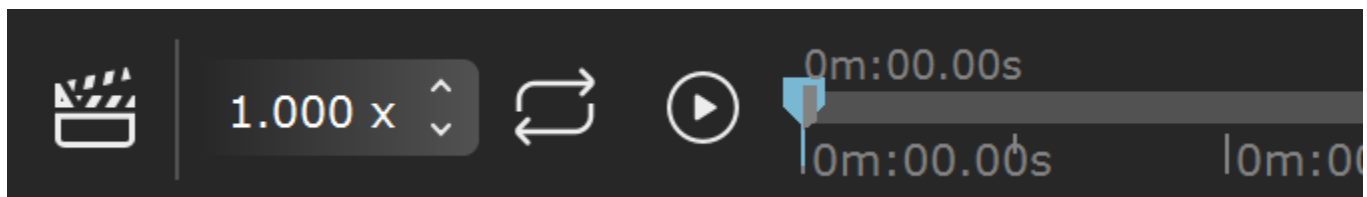
The Animation Editor allows for an easy way to create animations inside Chaos Vantage. It enables you to do the following:

- Place imported or stored cameras in the animation track timeline (cameras are interpreted as single frame objects)
- Two modes of the editor: **Time** mode and **Shot** mode.
- Set the time display unit to seconds, frames or combined.
- Control FPS of the animation.
- Manipulate animation clips:
  - Reorder and delete clips.
  - Add transition items between clips with different interpolation curves.
  - Add pause items between clips.
  - Auto add transition element with length set in **Edit > Preferences > Interaction > Cam transition time**.
  - Set duration of transitions and pause elements.
  - Add before/after and split transition elements to create a new or insert an existing camera (**Time** mode only).
- View imported animation from `.vrscene` in scene animation track.
- View imported animation from `.vrscene` from chosen camera.
- Trim start/end of animation timeline with trim markers.
- Toggle animation and scene tracks on/off.
- Set a resolution for the animation using the **Force resolution** option to override added cameras' aspect ratios and resolutions.

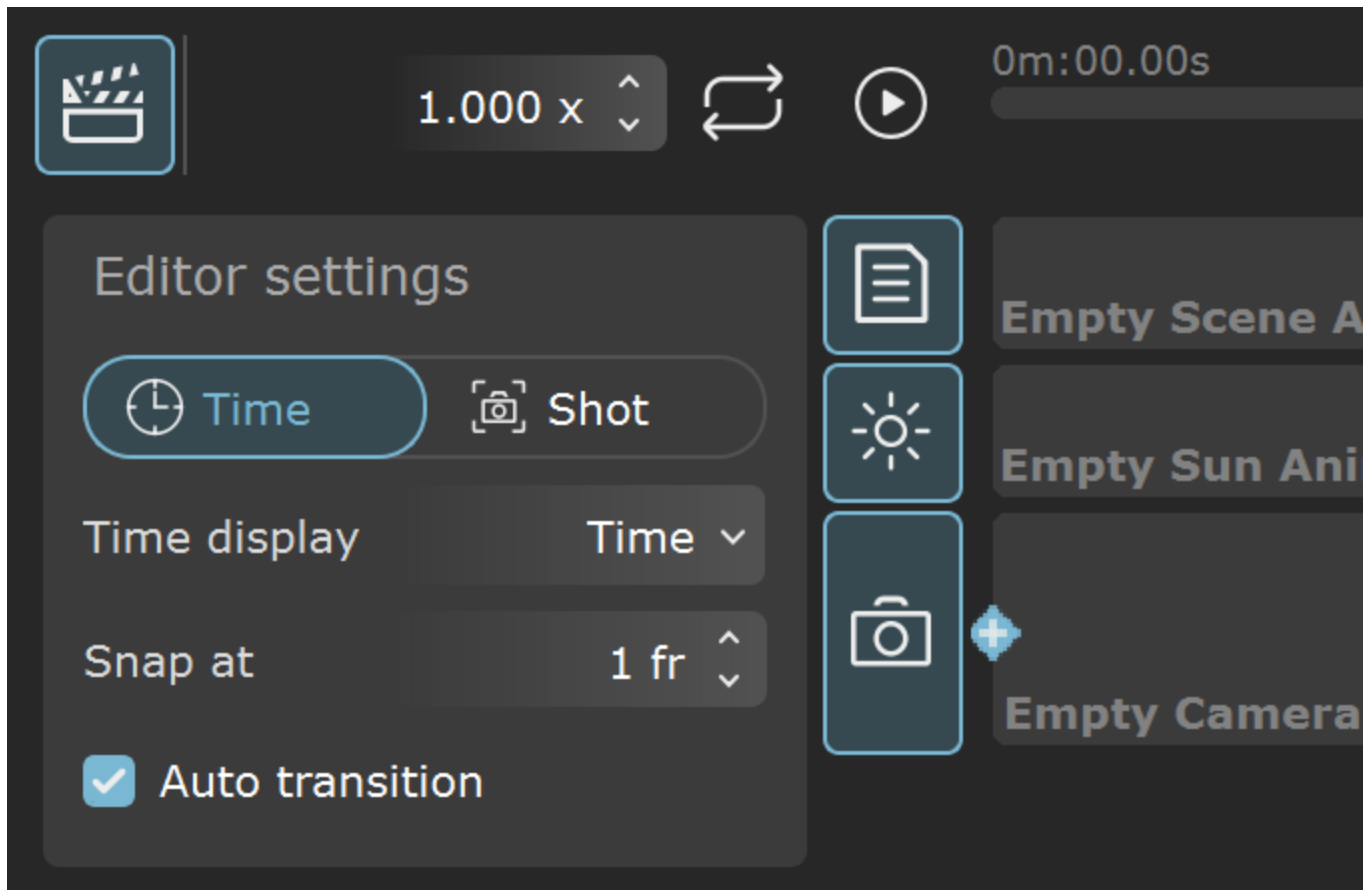
## UI

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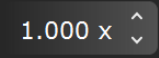


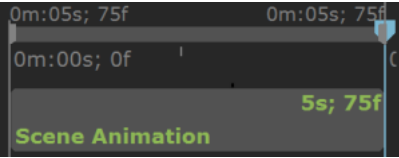
The Animation editor can be accessed by clicking on the **Animation Editor** button() in the bottom toolbar:

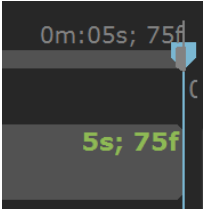





*Compressed*



Expanded

Button	Description
	Expands the Animation Editor.
	Sets the playback speed.
	When enabled, loops the animation.
	Plays the animation. (Shortcut: <i>Space</i> )
	Sets start of animation sequence

	Sets end of animation sequence
	When enabled, automatically updates image sequences and animated meshes for the current frame of the timeline or when scrubbing the timeline. Does not update when playing the animation from the Play button. Not available in Live Link. (Shortcut: <i>U</i> )
	Opens Render setup dialog. <a href="#">Details</a> (Shortcut: <i>Ctrl+R</i> )
	Saves a high quality snapshot of the current view in the project folder from where the scene file has been imported.

You can crop your animation sequence using the **Set Start** and **Set End** markers

## Animation Editor Parameters

### Left Side Parameters

**Time** – Sets the animation editor in Time mode. For more details see below.

**Shot** – Sets the animation editor in Shot mode. For more details see below.

**Time display** – Sets the time display for the animation.

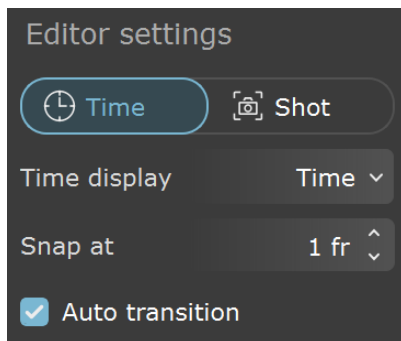
**Time** – Sets the timeline to minutes, seconds [0m:00.00s].

**Frames** – Sets the timeline to frames [0fr].

**Combined** – Sets the timeline to minutes, seconds and frames[0m:00s;0fr].

**Snap at** – Specifies the number of frames the camera clip automatically snaps to when moved or extended/shortened.

**Auto transition** – When enabled, automatically creates transition between the last and previously added camera. The default duration for the transition is set in **Edit > Preferences > Interaction > Cam transition time**.



### Right Side Parameters

**FPS** – Specifies the frames per second for the animation. Animation length in [0m:00.00s] is preserved, only frames count is changed.

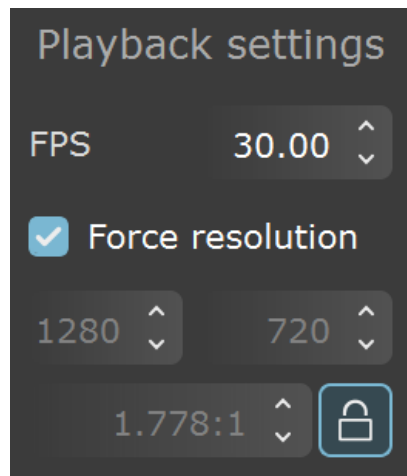
**Force resolution** – When enabled, sets the resolution for the animation and overrides added cameras' aspect ratios and resolutions.

**Width** – Sets the width of the animation sequence in pixels.

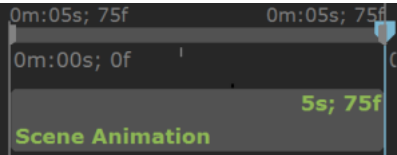
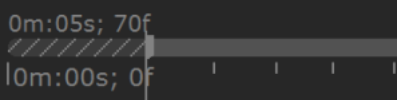



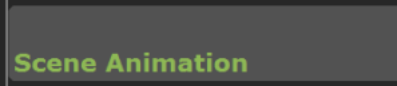
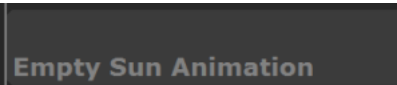
**Height** – Sets the height of the animation sequence in pixels.

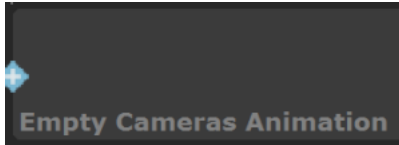

**Aspect** – Sets the aspect of the render resolution.

**Lock aspect** – Locks the proportional relationship between the **Width** and **Height**, so when changing one of them, the other adjusts itself keeping the **Aspect** unchanged.



## Timeline

Button	Description
	Displays the length of the animation. On the left side is displayed the current time/length of the animation. On the right side is displayed the entire length of the animation. Length and current take into account the trim markers' position.
	Trims the animation length. On each marker is displayed how much of the animation is trimmed.
	Enables/disables the <b>Scene Animation</b> track.
	Enables/disables the <b>Sun Animation</b> track.
	Enables/disables the <b>Cameras Animation</b> track.
	A track where imported animation from <i>.vrscene</i> is placed. It is automatically populated when a <i>.vrscene</i> animation is present.
	A track where Sun animation is set when the <b>Sun position mode</b> of a V-Ray Sun is set to <b>Animated Geolocation</b> . <a href="#">Details</a>

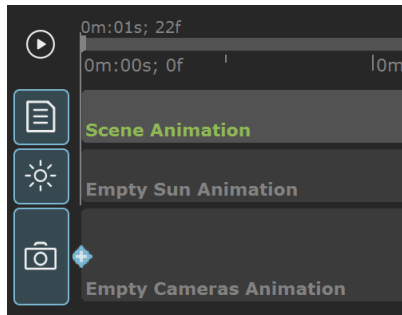
	A track where you can place your saved cameras from the Camera tab.
	Helps navigating through the animation when zoomed in.

The following shortcut keys are available in the Animation editor:

**Mouse wheel up/down** – Scrolls through the timeline if it does not fit the screen

**Alt+Mouse wheel up/down** – Zooms in and out of the timeline.

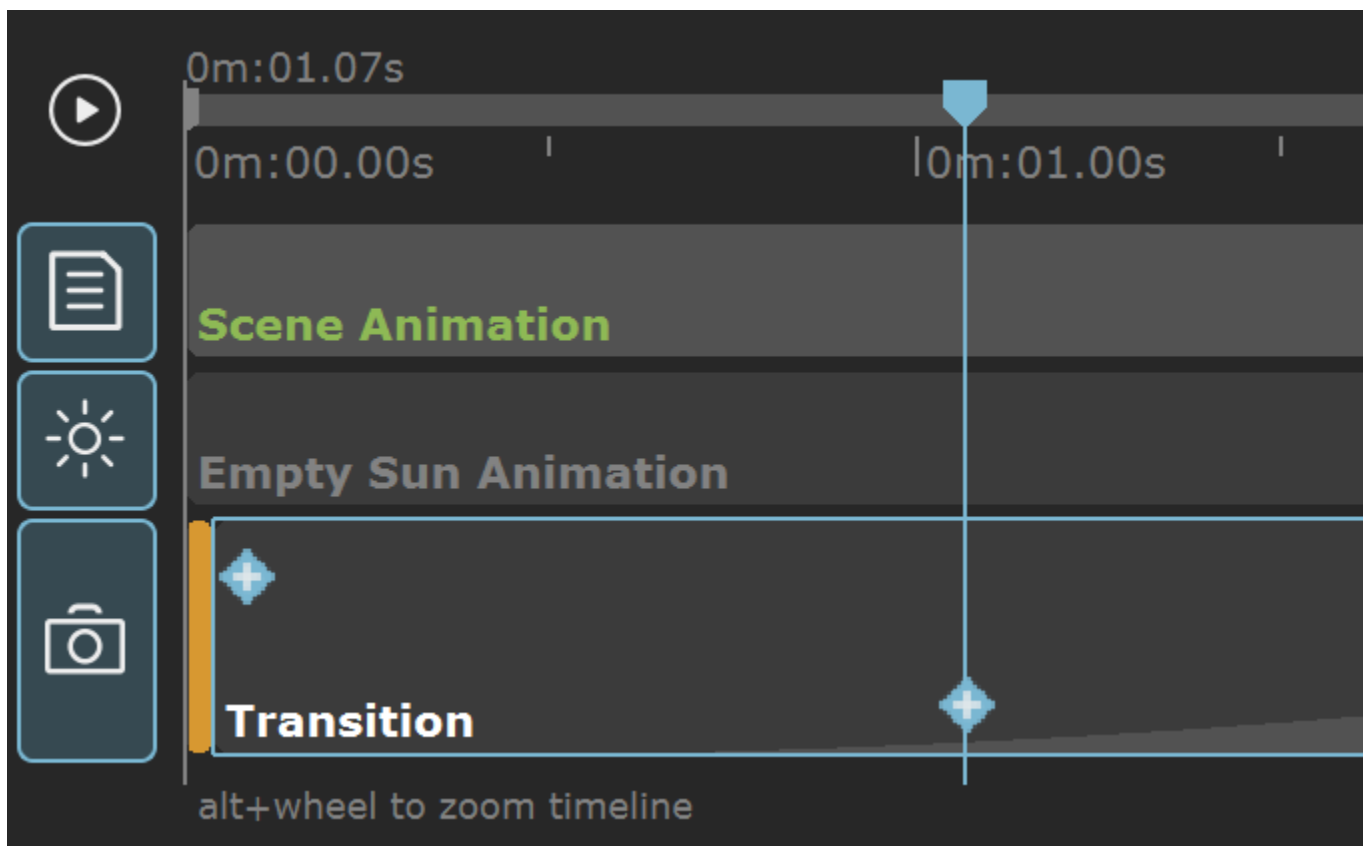
**Ctrl+LMB drag** – Pans the timeline.



## Animation Editor Modes

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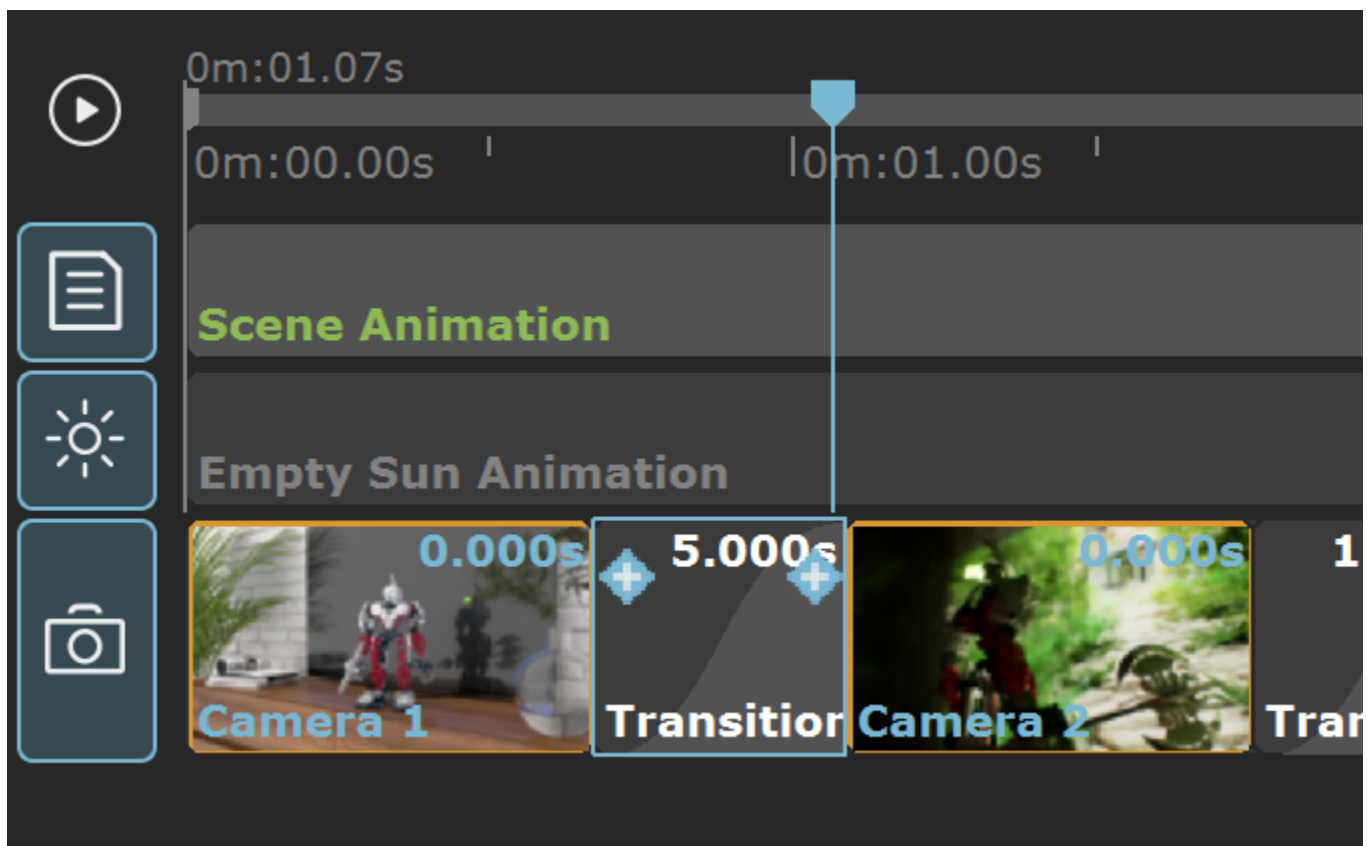
### Time Mode



Time mode of the animation editor enables the following workflow:

- Drag-n-drop cameras in the camera track.
- Add a transition element between added cameras. When **Auto transition** is enabled, a transition element is automatically added between the last and previously added camera. The default duration for the transition is set in **Edit > Preferences > Interaction > Cam transition time**. The transition element has 4 interpolation types: **Linear**, **In/Out Quad**, **In Quad**, **Out Quad**.
- Add a pause element to lengthen the duration of a static camera or to make the last frame of a recorded camera.
- Element's length is visible both visually on the timeline and the exact duration is marked in the upper right corner. Duration can be set with **right-click > Set Duration**. Time units are dependent on **Time Display** option.
- Elements can be added with the (+) button at the start or end of a selected element, or from a context menu with a right-click
- While on a transition element, a new camera with the current view in the viewport can be created with the (+) button on the playhead. The new camera is added in the camera list and the transition is split into two which summed duration equal the original.
- Playhead and trim markers go over the scene and camera tracks. Trim markers hatch the part of an element that will not be rendered in the final sequence.
- Elements have the following visuals:
  - Single Camera is represented as a frame with orange fill and a 1frame length.
  - Recorded camera has length, shaded with a red label, and camera thumbnail preview if the width allows it.
  - Transition element has length, shaded with two tones of grey fill that represents the set type of interpolation.
  - Pause element has length, shed with a grey fill.

## Shot Mode



Shot mode of the animation editor enables the following workflow:

- Drag-n-drop cameras in the camera track.
- Add a transition element between added cameras. When **Auto transition** is enabled, a transition element is automatically added between the last and previously added camera. The default duration for the transition is set in **Edit > Preferences > Interaction > Cam transition time**. The transition element has 4 interpolation types: **Linear**, **In/Out Quad**, **In Quad**, **Out Quad**.
- Add a pause element to lengthen the duration of a static camera or to make the last frame of a recorded camera.
- Element's length is visible and is marked in the upper right corner. Elements' width is constant and do not represent the exact length of the element. Duration can be set with **right-click > Set Duration**. Time units are dependent on **Time Display** option.
- Elements can be added with the (+) button at the start or end of a selected element, or from a context menu with a right-click.
- Cannot create a new camera with the current view in the viewport with the (+) button on the playhead like in Time mode.
- Playhead and trim markers go over the scene track and **not** the camera track. Trim markers only hatch the part of an element in the scene track that will not be rendered in the final sequence.
- Elements have the following visuals:
  - Single Camera is represented as a thumbnail preview of the camera with an orange outline with 1 frame length. Width is constant and doesn't actually represent length of element.
  - Recorded camera is represented as a thumbnail preview of the first frame of the camera with a red outline and label. Width is constant and doesn't actually represent length of element.
  - Transition element is represented as a rectangle shaded with two tones of grey fill that represents the set type of interpolation. Width is constant and doesn't actually represent length of element.
  - Pause element is represented as a rectangle shaded with a grey fill. Width is constant and doesn't actually represent length of element.

## Context Menus

Additional parameters of the clips can be accessed by right-clicking on an item to display a context menu. In the camera animation track, you can have the following items with context menu options:

### Right-click on camera clip

**Add Transition Before** – Adds a transition item before the selected camera clip.

**Add Transition After** – Adds a transition item after the selected camera clip.

**Add Pause Before** – Adds a pause item before the selected camera clip.

**Add Pause After** – Adds a pause item after the selected camera clip.

**Set Range** – Sets a key frame range on the timeline for the cameras. The following options are available:

**Start time** – Sets the beginning time for the camera.

**Start frame** – Sets the beginning frame for the camera.

**End time** – Sets the end time for the camera.

**End frame** – Sets the end frame for the camera.

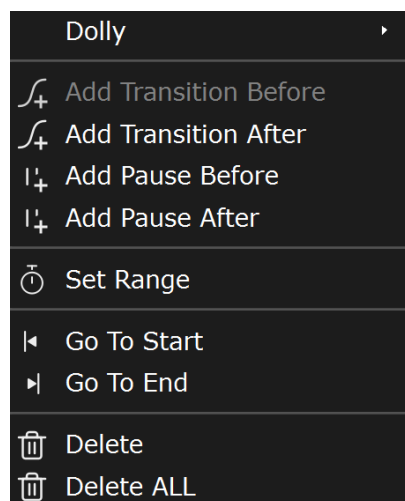
**Framerate** – Shows the frames per second for the camera. Cannot be edited.

**Go To Start** – Moves the slider to the start of the selected camera clip.

**Go To End** – Moves the slider to the end of the selected camera clip.

**Delete** – Deletes the selected camera clip.

**Delete ALL** – Deletes all elements in the track.



## Right-click on Scene animation

**Camera** – Enables transform animation for the imported camera specified in **Active Camera**.

**Lights** – Enables transform animation for the imported lights.

**Objects** – Enables transform animation for the imported geometry.

**Materials and Textures** – Enables transform animation for the imported materials and textures.

**Frame interpolation** – When enabled, interpolates values between imported frame times. When disabled, animation preview matches the *.vrscene* frames.

**Active Camera** – Specifies which camera imported from the *.vrscene* to use in animation. Only imported cameras from *.vrscene* file are available for selection. The option is ignored if the **Camera Animation** track is not empty. The **Camera Animation** track is used instead in this case.

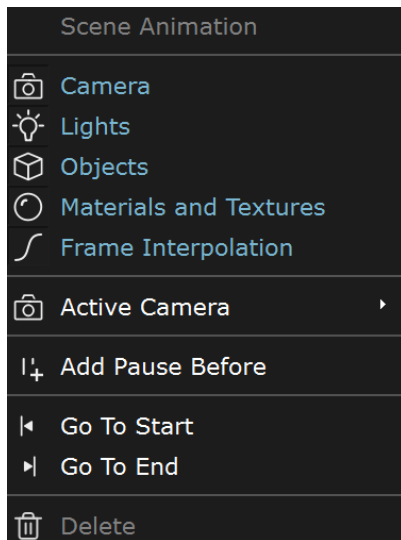
**Add Pause Before** – Adds a pause item before the scene animation track.

**Go To Start** – Moves the slider to the start of the scene animation track.

**Go To End** – Moves the slider to the end of the scene animation track.

**Delete** – Deletes the scene animation track.





## Right-click on transition item

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Different interpolations between camera clips:

**Linear** – Creates a uniform transition between camera clips.

**In/Out Quad** – Creates a smooth transition between camera clips. Creates a transition rate that is slow at the beginning and end, but fast in the middle.

**In Quad** – Creates a transition rate that is slow at the beginning and accelerates in the end.

**Out Quad** – Creates an accelerated transition rate at the beginning that gradually slows down.

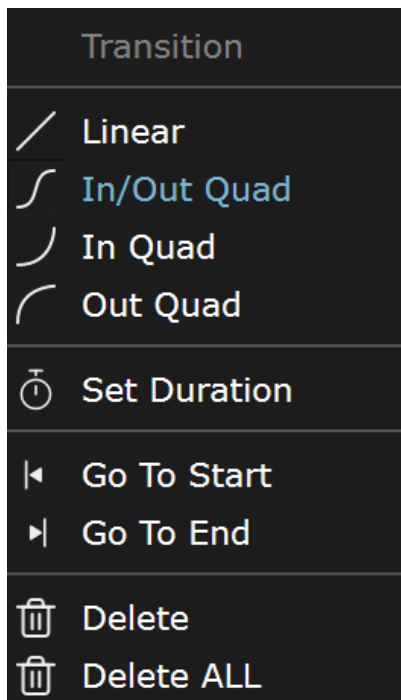
**Set Duration** – Determines how long the transition item should be.

**Go To Start** – Moves the slider to the starting point of the transition item.

**Go To End** – Moves the slider at the end of the transition item.

**Delete** – Deletes the transition item.

**Delete ALL** – Deletes all elements in the track.



## Right-click on pause item

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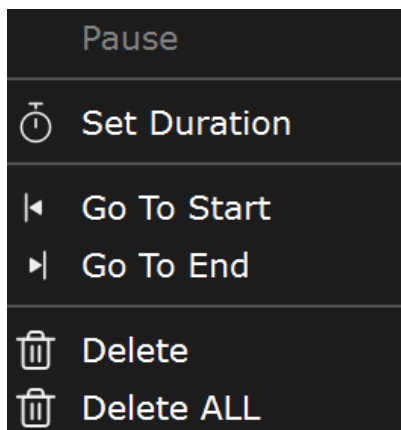
**Set Duration** – Determines how long the pause item should be.

**Go To Start** – Moves the slider at the start of the pause item.

**Go To End** – Moves the slider at the end of the pause item.

**Delete** – Deletes the pause item.

**Delete ALL** – Deletes all elements in the track.






## Right-click on blue transition/camera marker

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**Insert Camera** – Adds a frame with a new camera shot, selected from a dropdown list with available camera shots.

**Add Transition** – Adds a transition item.

**Add Pause** – Adds a pause item.

-  Insert Camera ▶
-  Add Transition
-  Add Pause