KeyShot Camera Animations

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Before we Begin…

- This will be recorded
- Slideshow will be available
- KSP will be available
- Computer: 3 GHz 8 Core (16-thread)
  2013 Mac Pro, 16 Gb RAM
- If you have questions…
- KeyShot Animation is a Pro feature

Camera Animation Topics

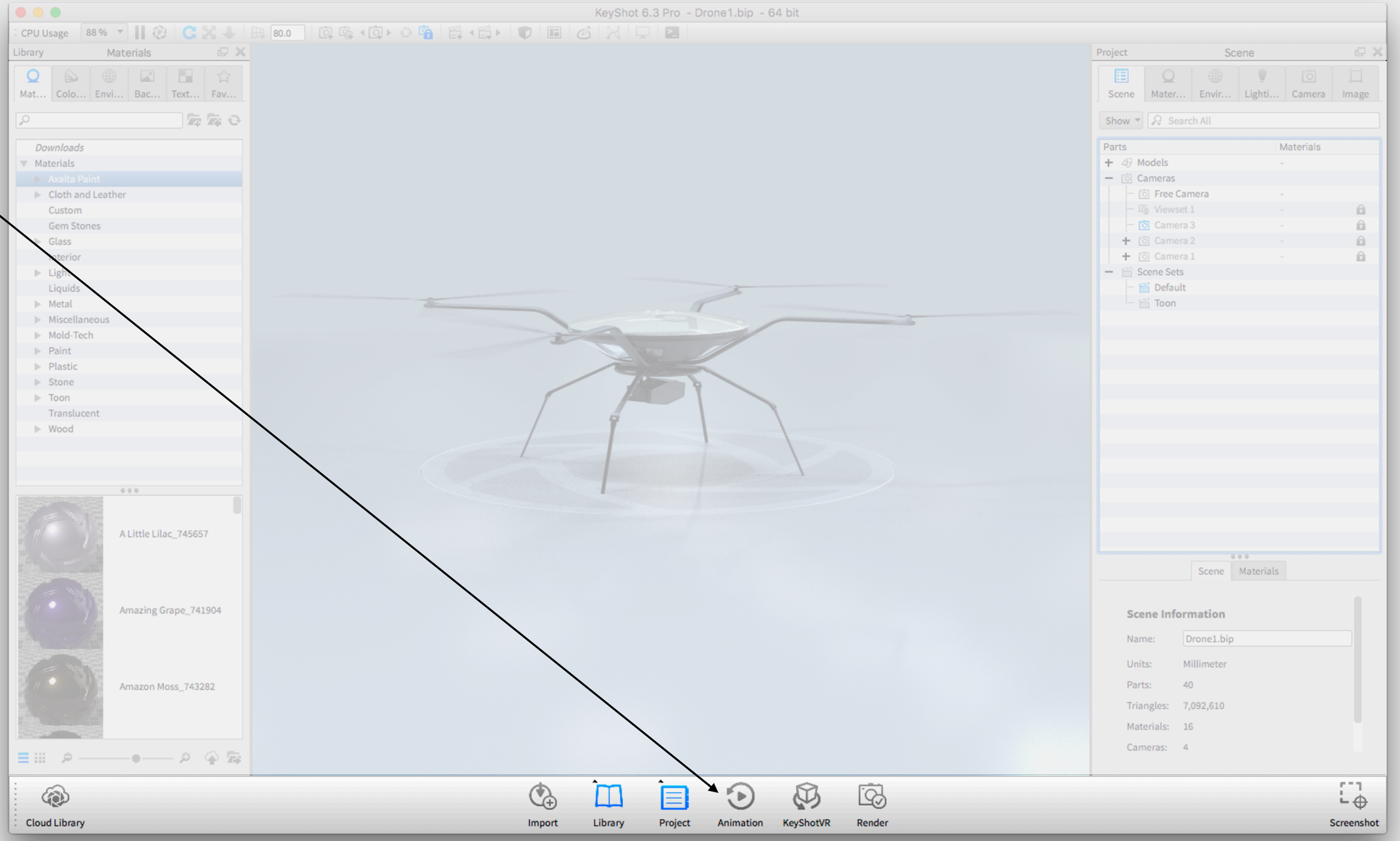
- Animation Examples
- KeyShot Camera Animation Principles
- What’s in a Camera?
- Camera Animation Types
- Hands On:
    - Creating Camera Animations
    - Managing Multiple Cameras
    - Animation Workflow & Organization
- Q & A

Examples of Camera Animations

Access the Animation Workspace

To Open:

Click the Animation icon at located in the Toolbar along the bottom of the KeyShot interface



Animation Workspace

Animation Properties

Make edits to individual transforms

Timeline

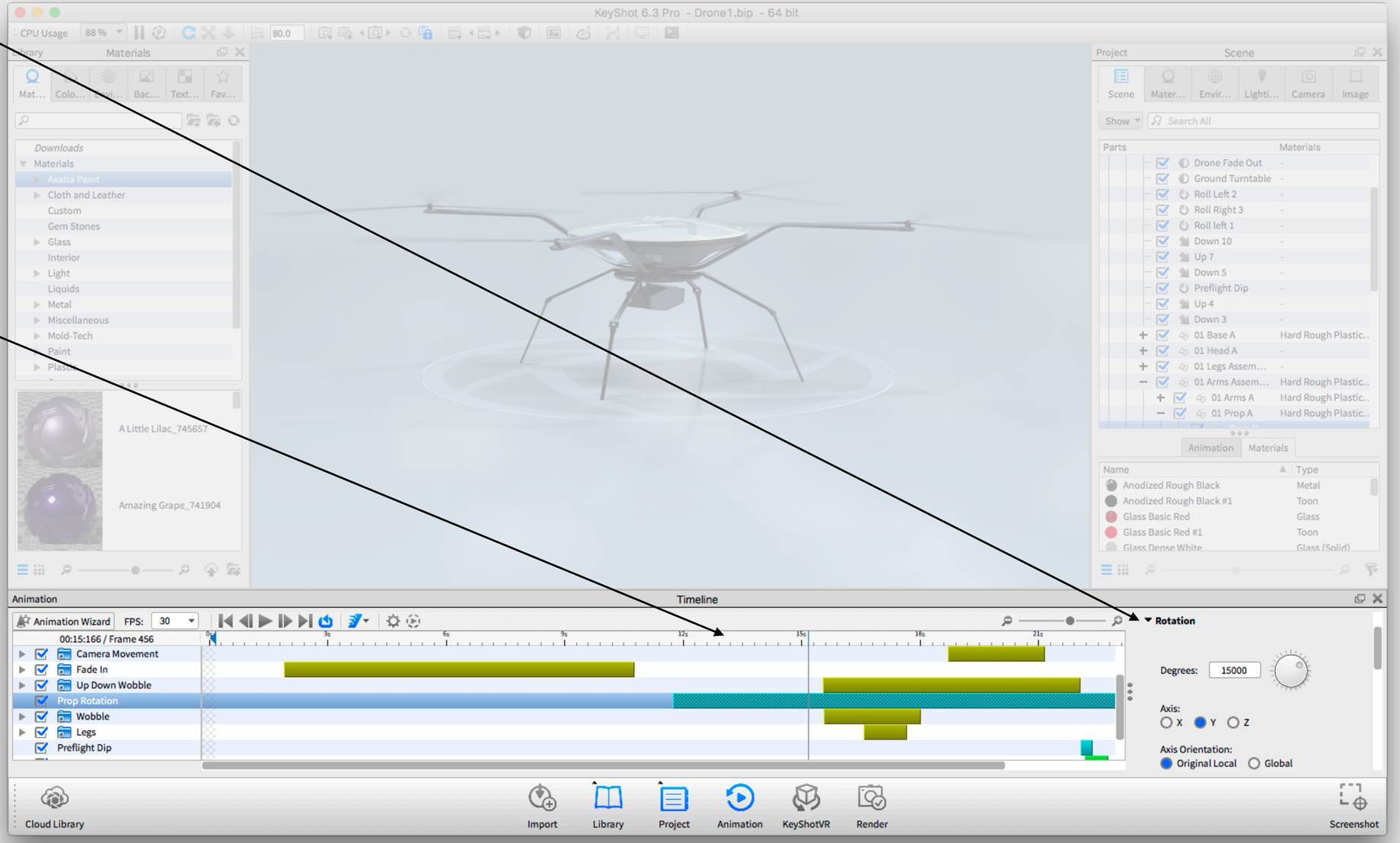
Chronological time-based workspace

Animation Toolbar

Create transforms and interact with the animation

Animation List

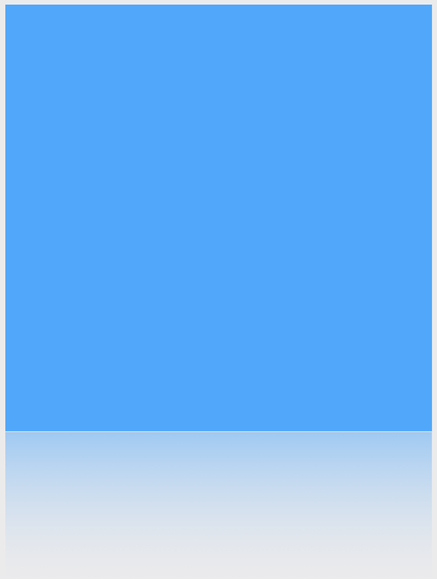
All animations in the current Scene Set




Camera Animation Principles
CPU Usage
50 %
80.0
Library
Materials
Downloads
Materials
Axalta Paint
Cloth and Leather
Custom
Gem Stones
Glass
Interior
Light
Area Light
Emissive
IES Light
Point Light
Liquids
Metal
Miscellaneous
Mold-Tech
Paint
Plastic
Stone
Toon
Translucent
Wood
Point Light 6000 Lumen Cool
Point Light 6000 Lumen Neutral
Point Light 6000 Lumen Warm
Point Light 6000 Lumen White
Animation Wizard
Animation Type
Choose which type of animation you want to add to your project
Model/part animation:
Turntable
Translation
Rotation
Fade
Inclination
Translation
Path
DOF
Camera Switch Event
Cancel
Next
Project
Camera
Free Camera
V.5 Studio (unsaved)
v.4 Studio
V.3.3 Bright Studio DoF
V.3.2 Bright Studio DoF
V.3 Bright Studio DoF
V.2 Dark Warehouse
V.1 Dark Warehouse DoF
Name
V.5 Studio
Position and Orientation
Lens Settings
Lens Effects
Animation
Timeline
Animation Wizard
FPS:
30
00:27:366 / Frame 822
Sequence 2
V.3.2 Bright Studio DoF camer...
V.3 Bright Studio DoF camera ...
V.2 Dark Warehouse camera s...
V.1 Dark Warehouse DoF cam...
Sequence 1
V.1 Dark Warehouse DoF dof 21
V.3.3 Bright Studio DoF dof 23

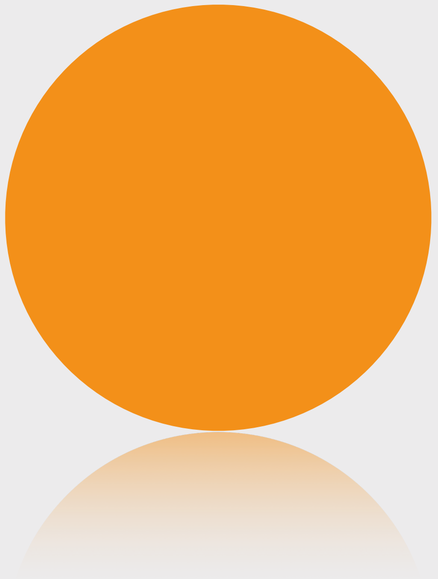
P1: Animation Types

Part Animations



Camera Animations

Material Animations



P1: Animation Types

Part Animations

Camera Animations

Material Animations

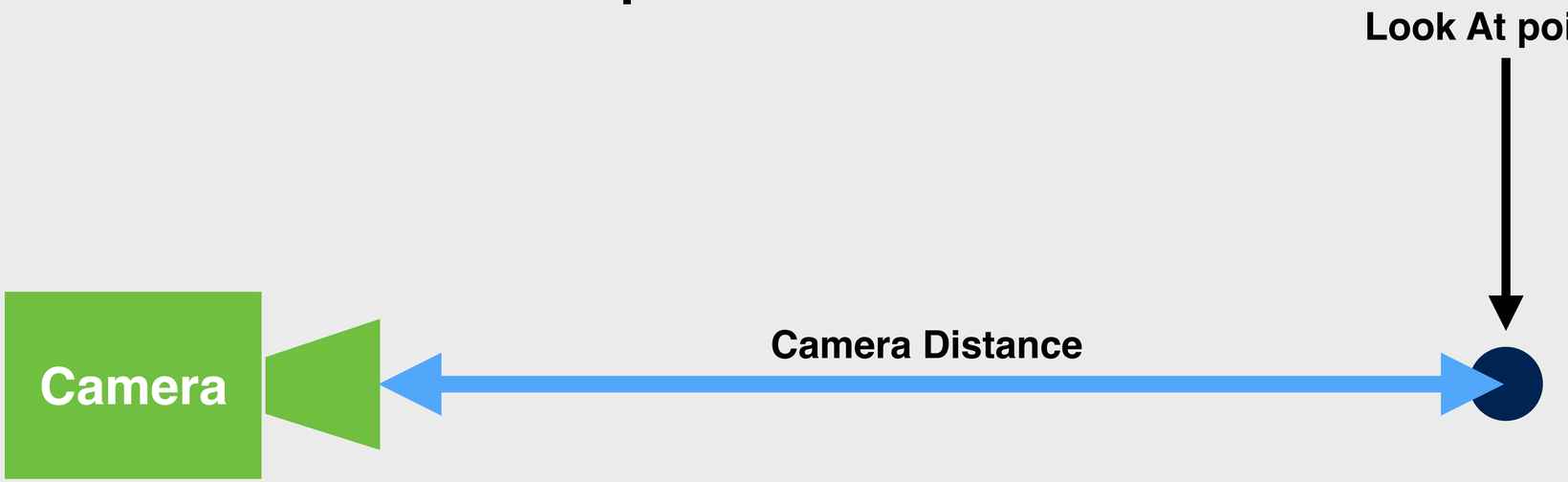
KeyShot Camera Properties

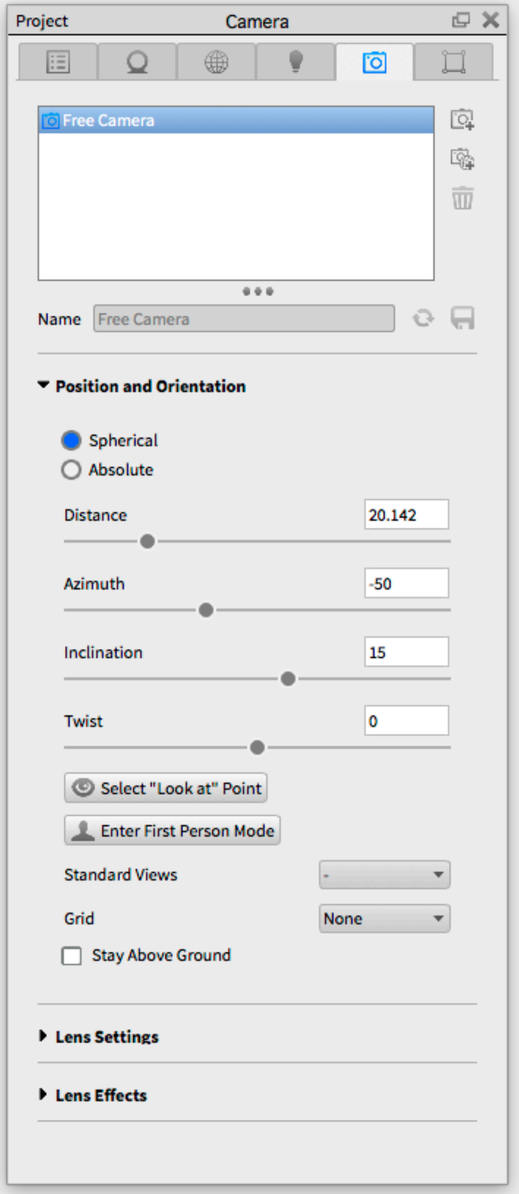
1. Position & Orientation
2. Lens Settings
3. Lens Effects

Position and Orientation

1. **Position**
   - **Distance from “Look At” point**
   Sliders control how camera is pointed at subject

2. **“Look At” Point**
   - **Where camera’s lens is pointed and anchored**

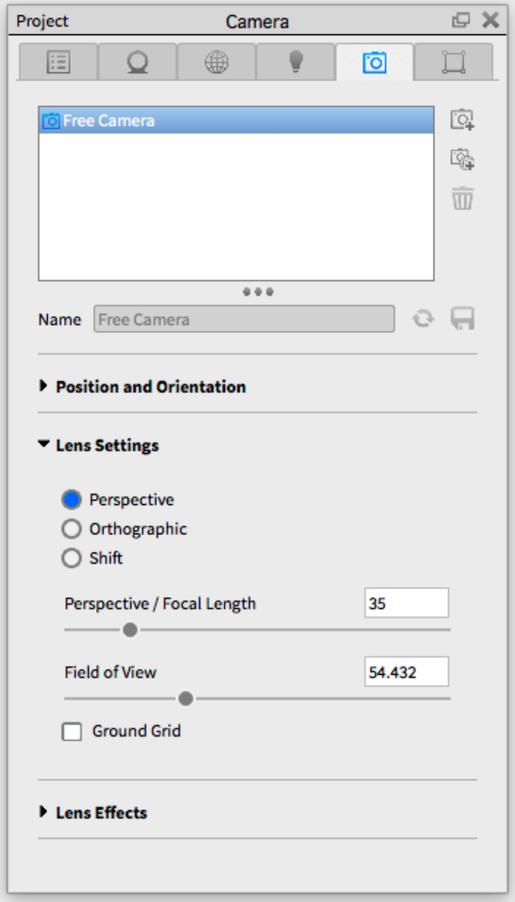


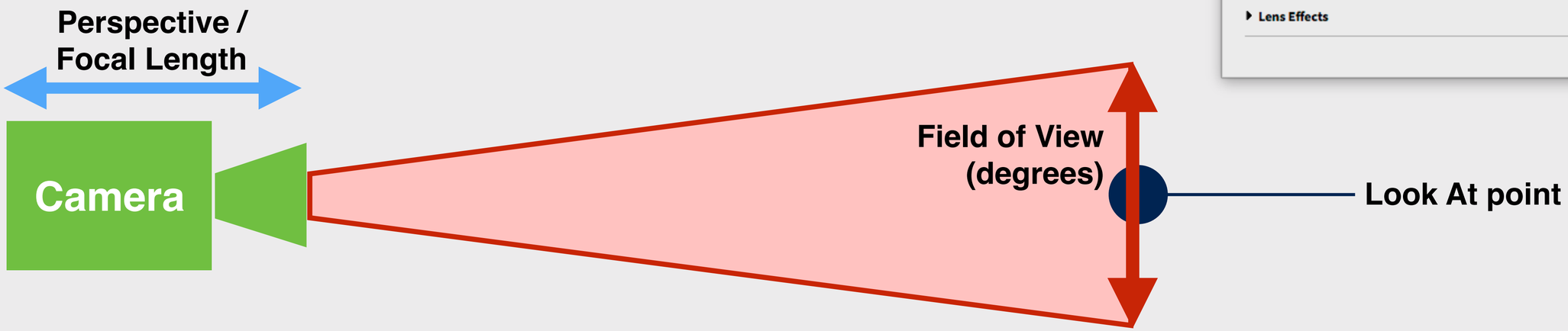


Lens Settings

1. Perspective/Focal Length
   - Adjusts amount of vertical convergence
   - Focal length and FoV dependent on Perspective

2. Field of View
   - Adjusts how much of the scene is visible in the frame
   (measured in degrees based upon top view)



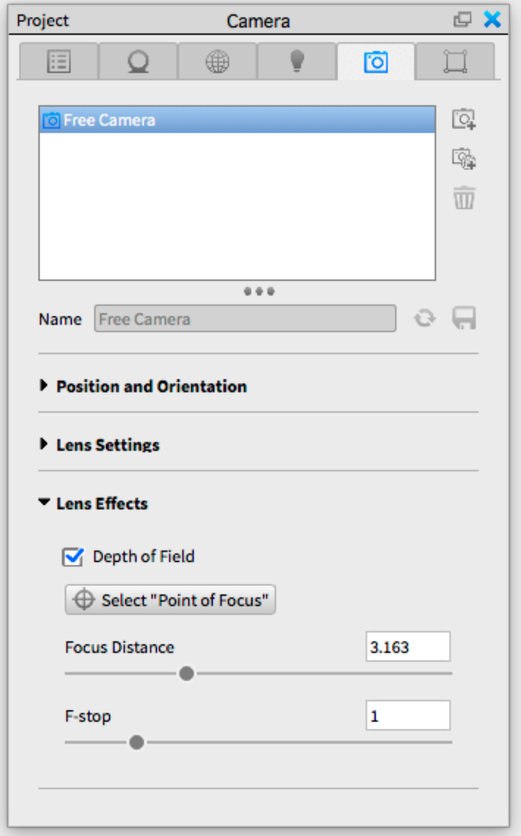


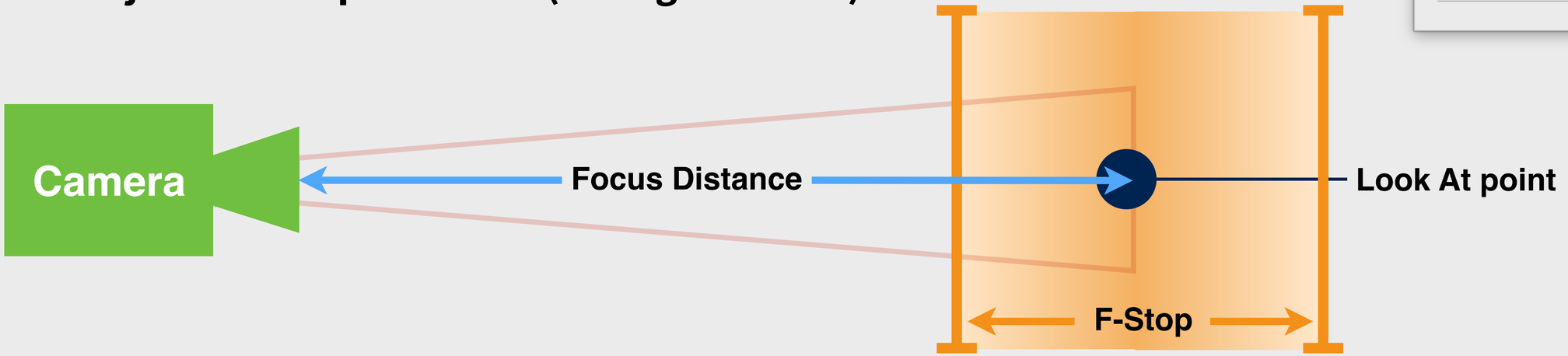
Lens Effects

1. **Depth of Field**
   - **Enables only part of the image to be in-focus**

2. **Focus Distance**
   - **Distance from camera that will be in focus**

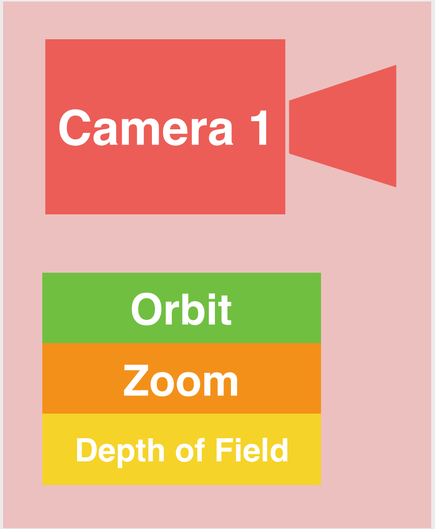
3. **F-Stop**
   - **Adjusts the depth of field (strength of blur)**





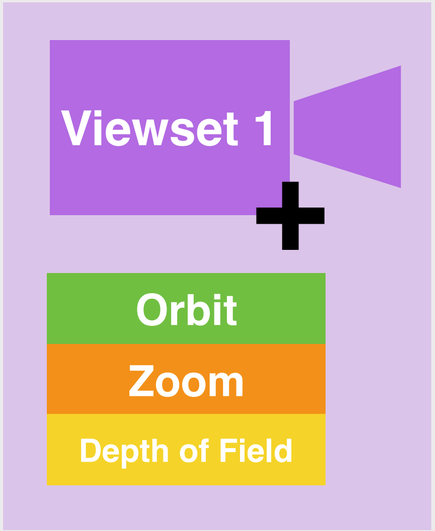
Cameras are Objects to Animate

- Camera animations are transforms that change the camera properties over time



What About Viewsets?

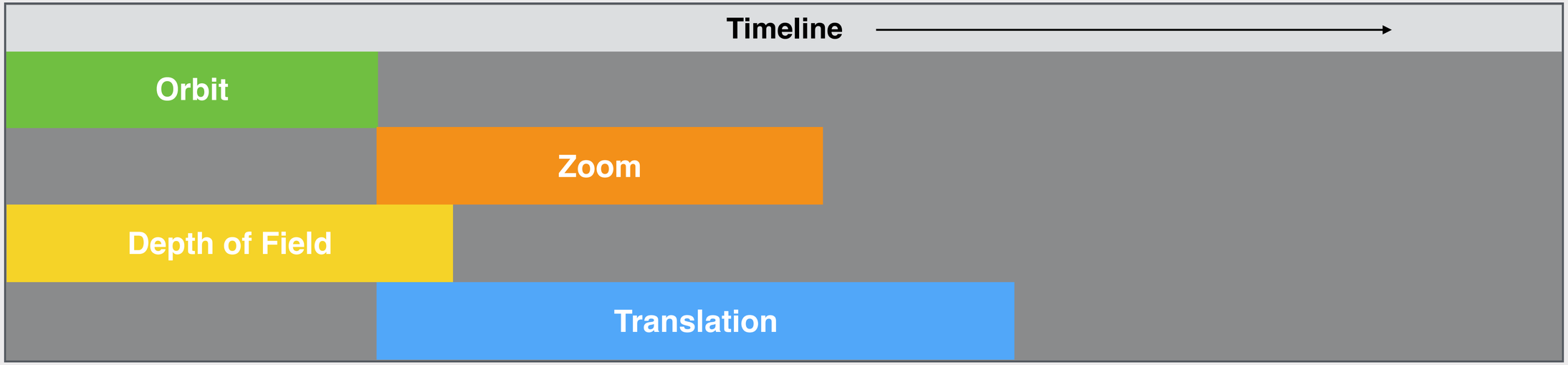
- The same goes for Viewsets, which allow for different lighting settings as well



P2: Individual Transforms

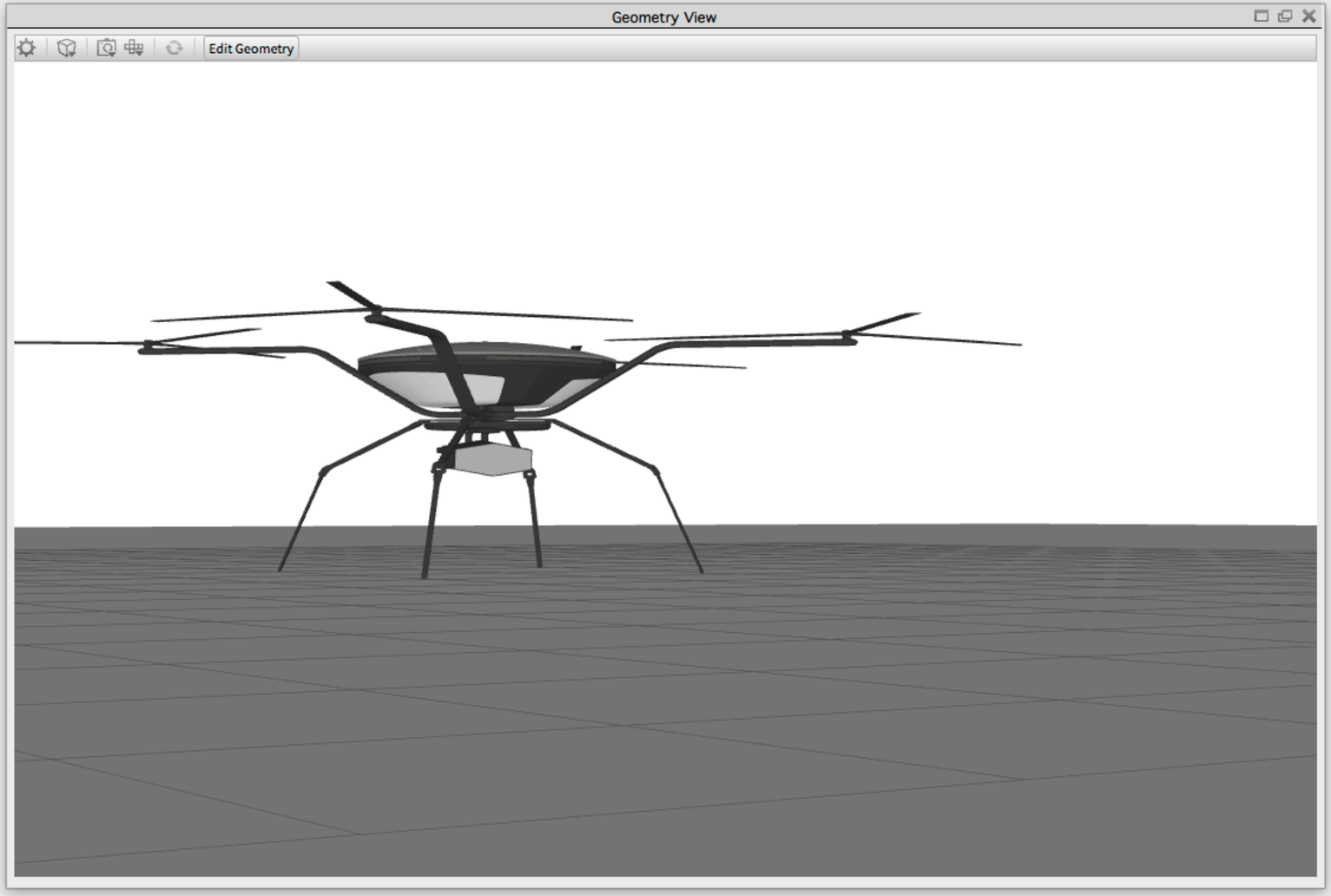
Can be:

- Moved
- Scaled
- Mirrored
- Grouped



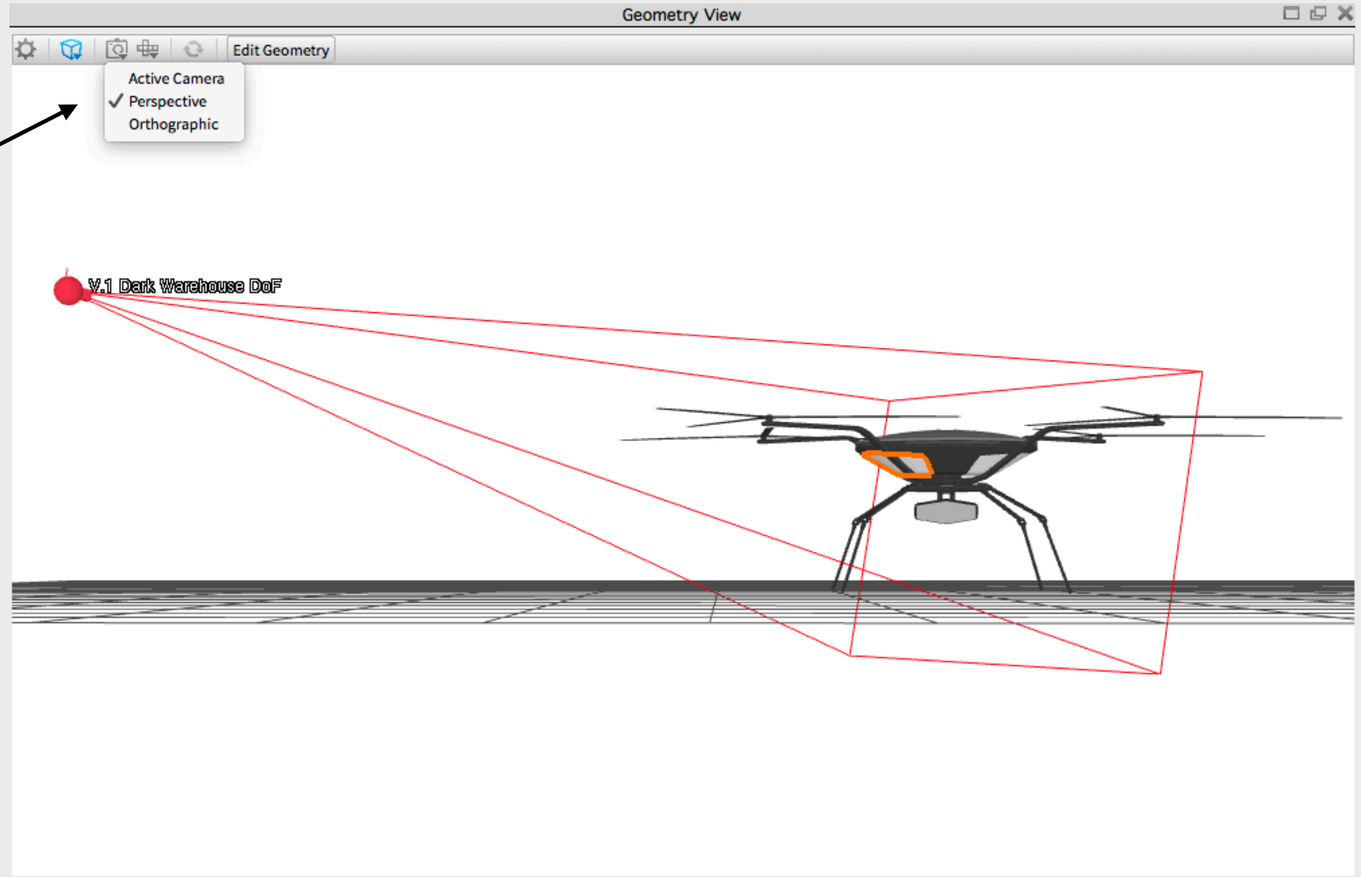
P3: Geometry View

- Provides smoother playback
- Helpful when adjusting animation timing
- Can be accessed through: Window>Show Geometry View
- Hotkey: O



Geometry View Settings

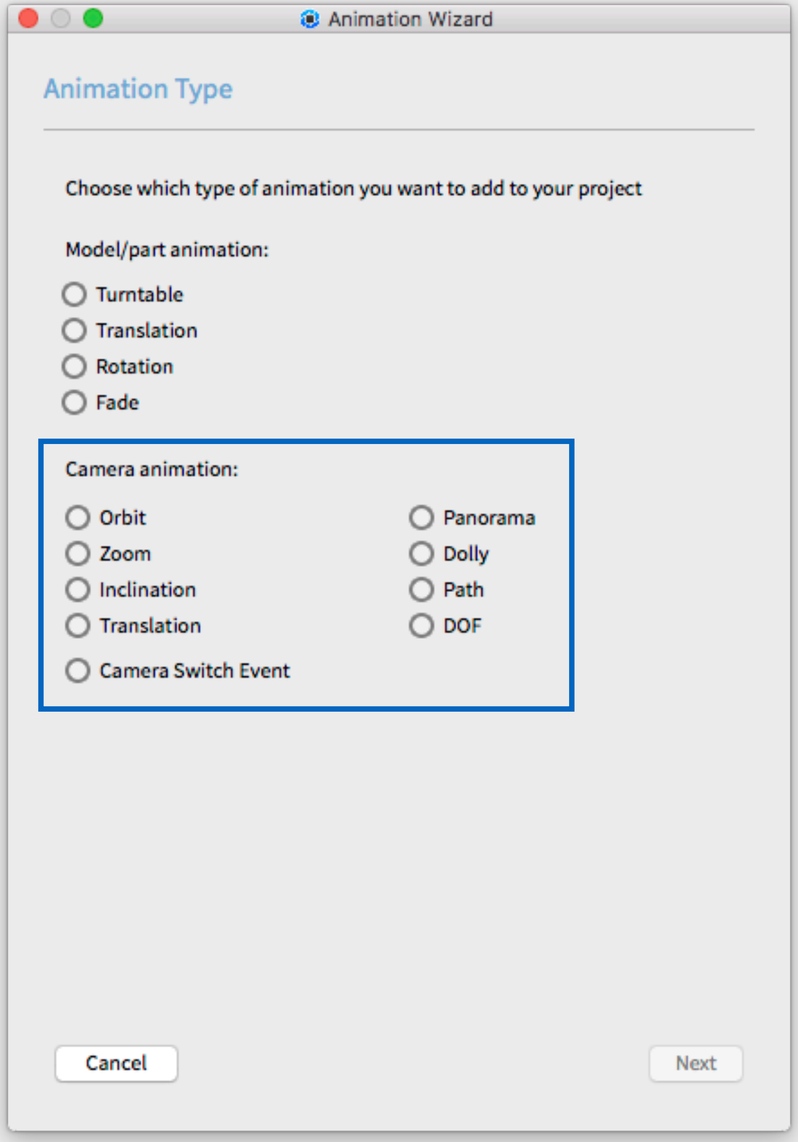
- Settings
  - Show/hide different elements
- Display Style
  - Shaded, Wireframe etc.
- Active Camera
  - Which camera we view the Geometry View through
- Standard Views
  - Quickly adjust the Active Camera view



Camera Animation Types

Camera Animations

- Orbit
- Zoom
- Inclination
- Translation
- Panorama
- Dolly
- Path
- Depth of Field
- Camera Switch Event



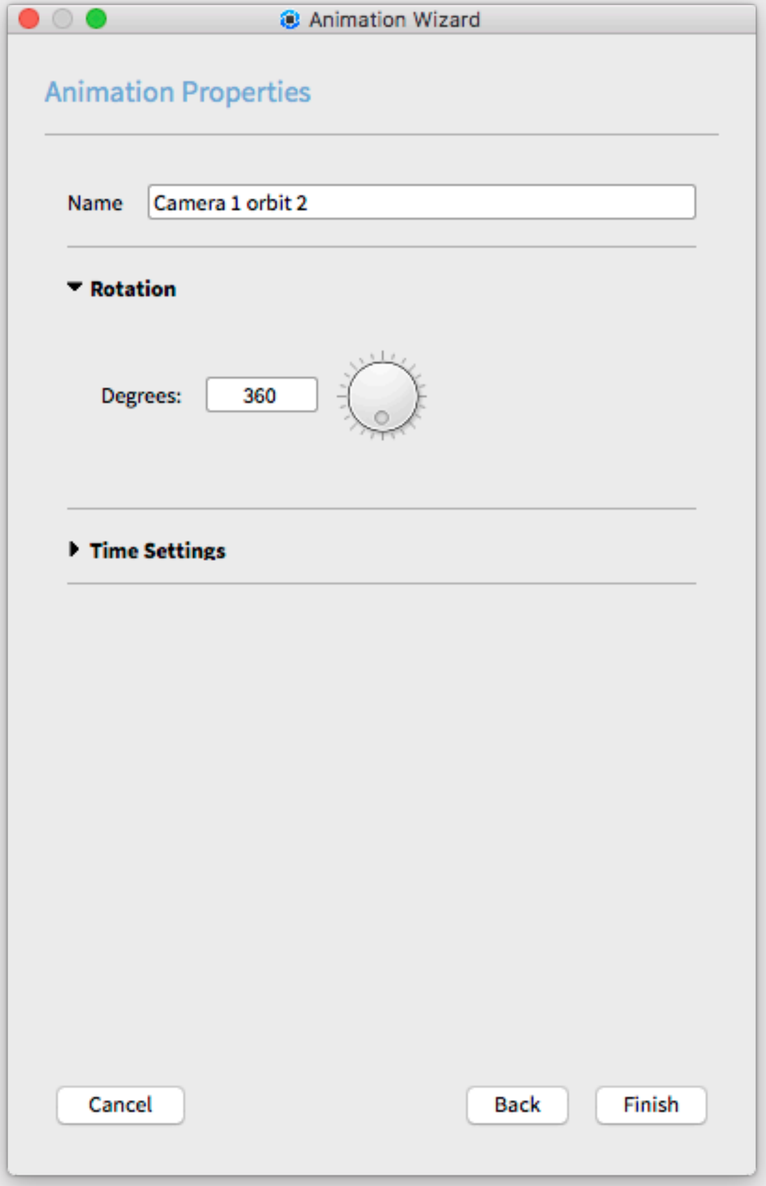
Orbit

- *Rotate the camera around active Camera's "Look At" point*

Properties

Degrees: Total number of degrees the camera will move

(Use negative values to change direction of orbit)



Orbit

Zoom

- *Make the field of view larger or smaller (camera stays put)*

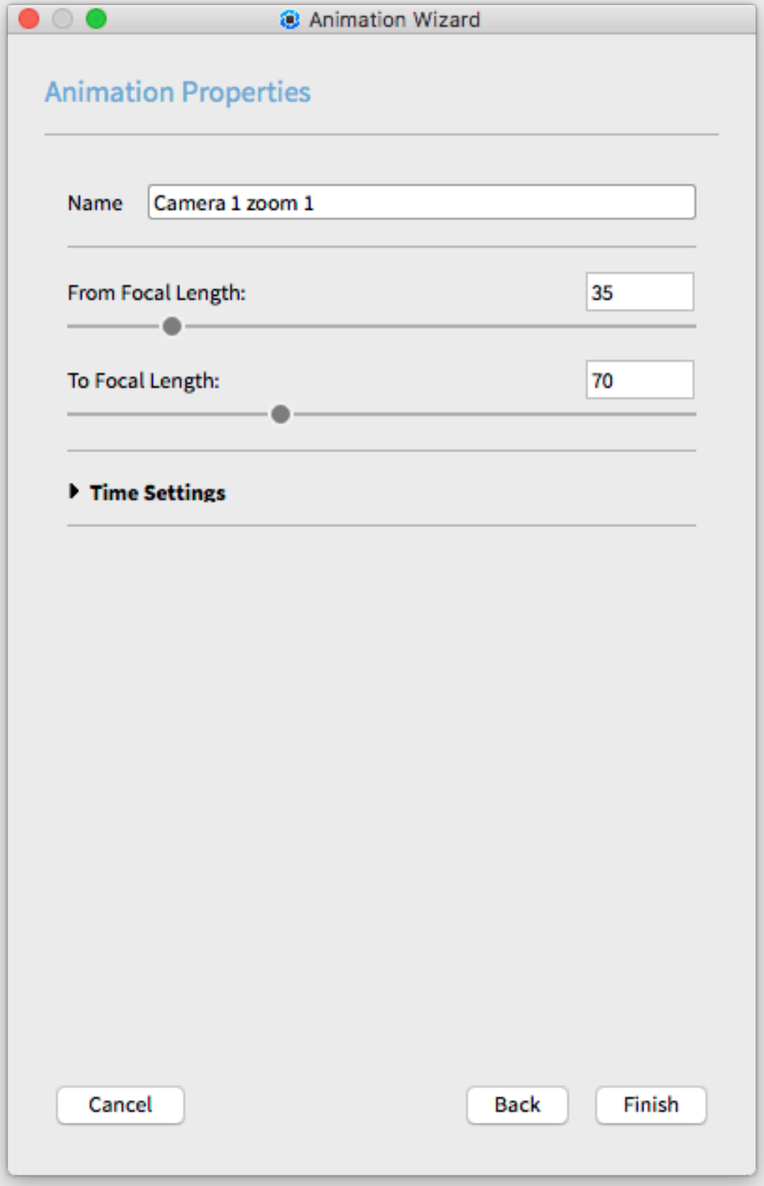
Properties

From Focal Length: Beginning Focal Length

To Focal Length: Ending Focal Length

(Larger number ‘Zooms In’, smaller number ‘Zooms Out’)

*Smaller number results in more extreme vertical convergence



Zoom

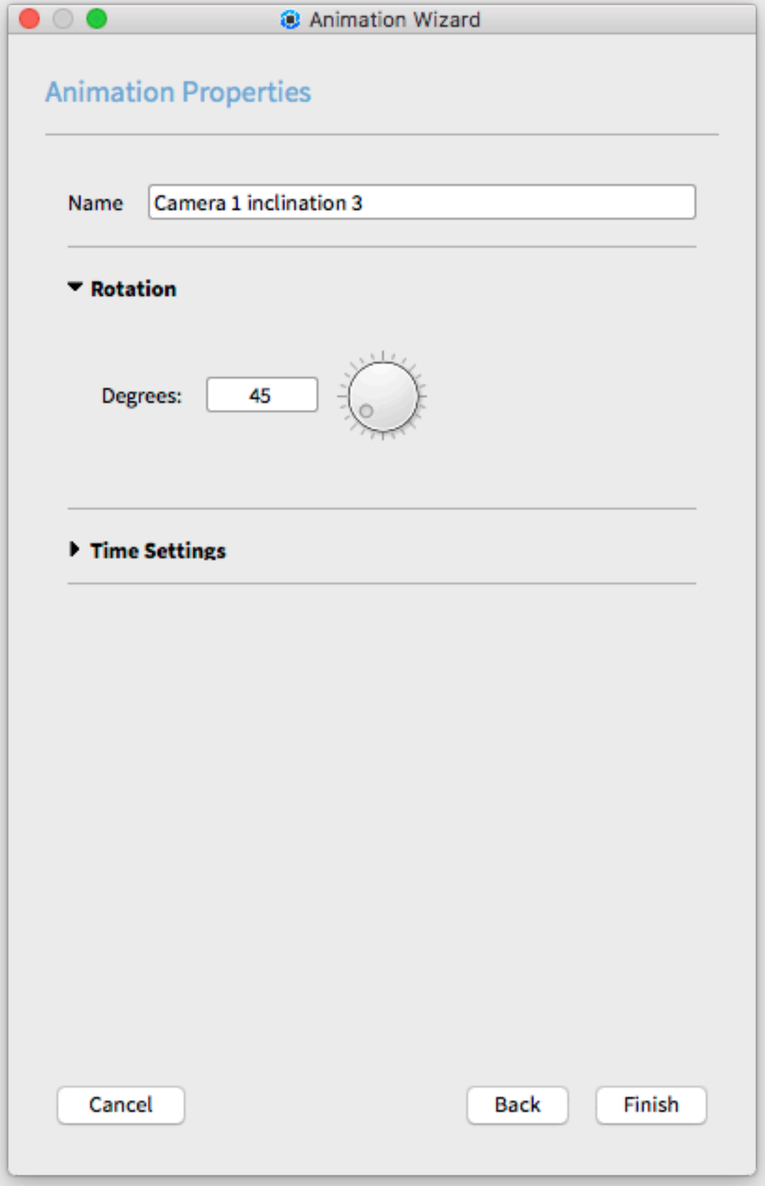
Inclination

- *Vertical tilt around the camera's "Look At" point*

Properties

Degrees: Total number of degrees the camera will tilt

(Enter negative values to change direction of inclination)



Inclination

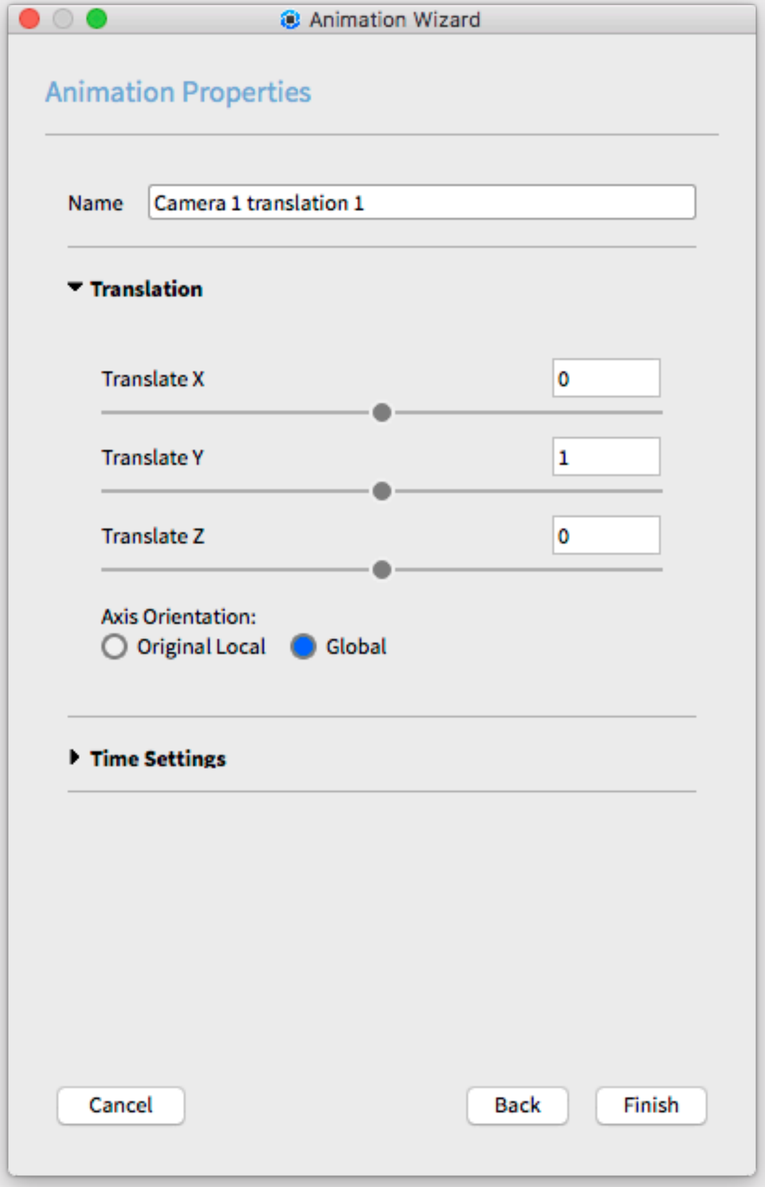
Translation

- *Move the camera in a linear path from one place to another*

Properties

Translate X,Y,Z: Distance the camera will be moved along each axis. (Uses scene units)

Axis Orientation: Move along camera's axis or KeyShot world axis (helpful if camera was previously moved)



Translation

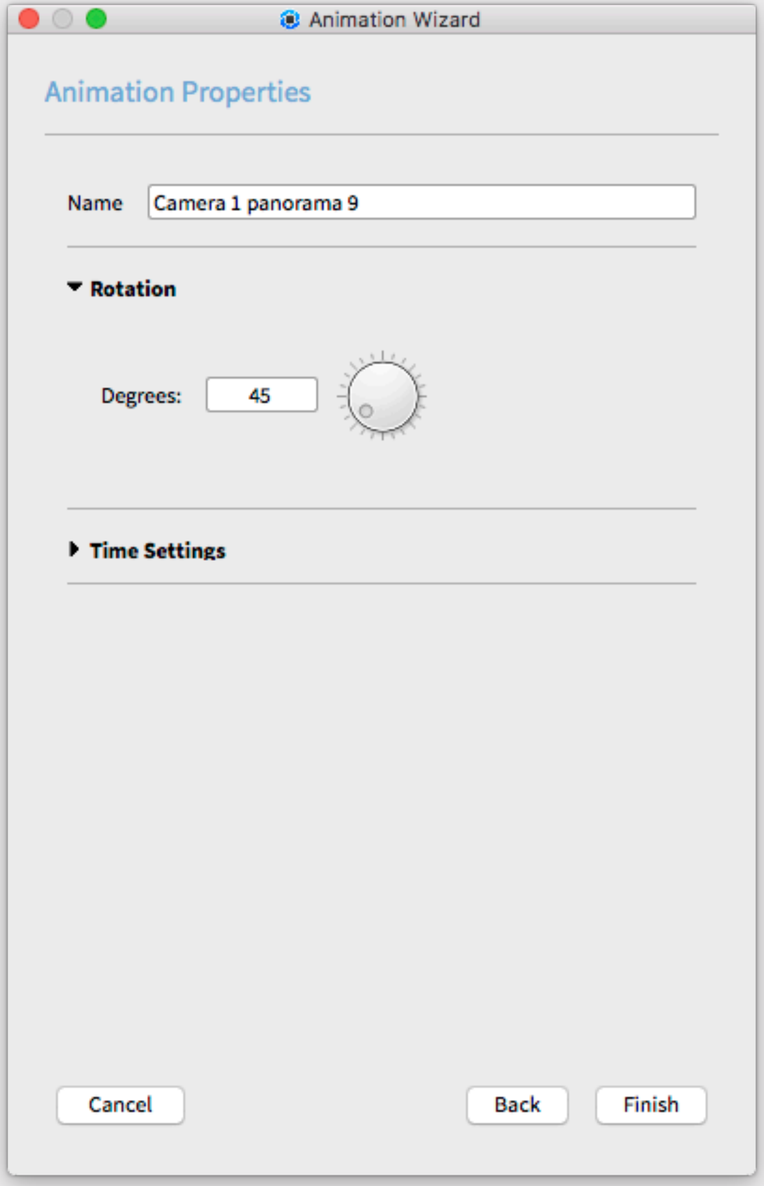
Panorama

- *Pivot around the camera's center from side to side*

Properties

Degrees: Total number of degrees the camera will pivot

(Use negative values to change direction of pivot)



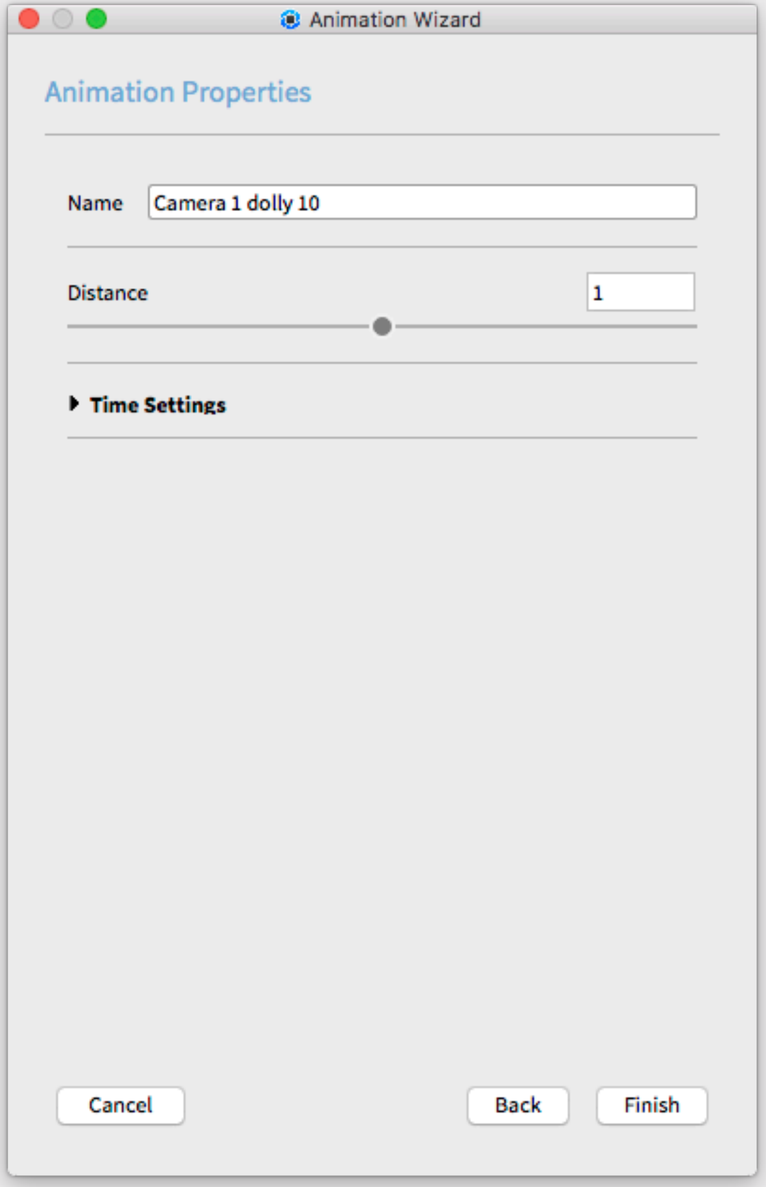
Panorama

Dolly

- *Move the camera closer or further from subject*

Properties

Distance: Number of units the camera will move



Dolly

Depth of Field

- *Change the focal point and how much of the frame is in focus*

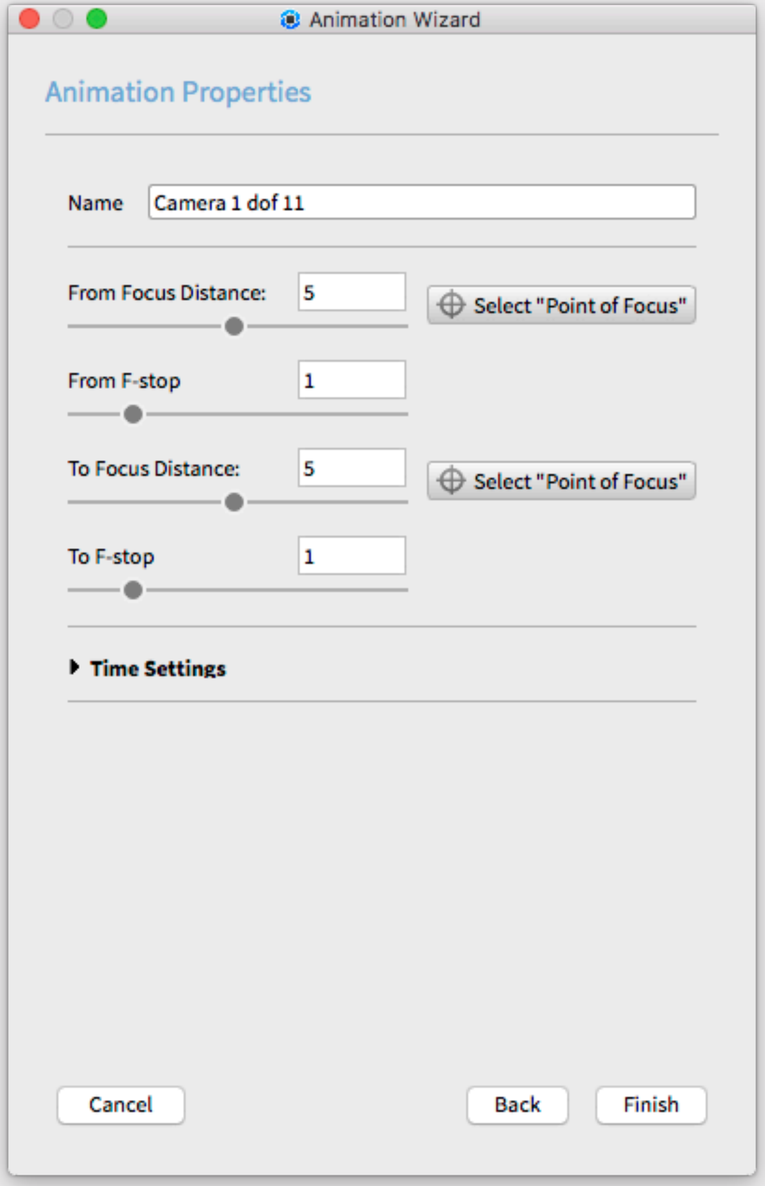
Properties

From Focus Distance: Starting focal point

From F-stop: Size of starting aperture

To Focus Distance: Ending focal point

To F-stop: Size of ending aperture



Depth of Field

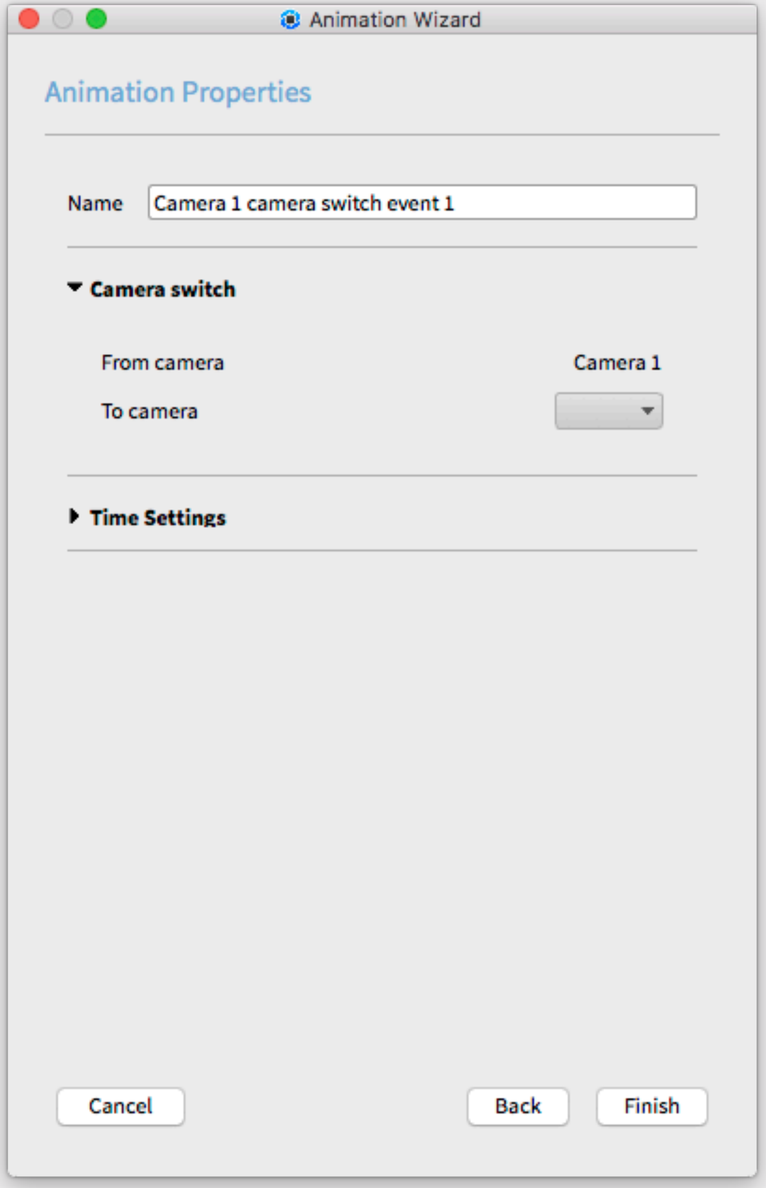
Camera Switch Event

- *Jump from one camera or Viewset to another*

Properties

From Camera: Starting camera or Viewset

To Camera: Ending camera or Viewset



Camera Switch Event

Time Settings

- *Control the timing or speed of animation*
- All animations share the Time Settings parameter

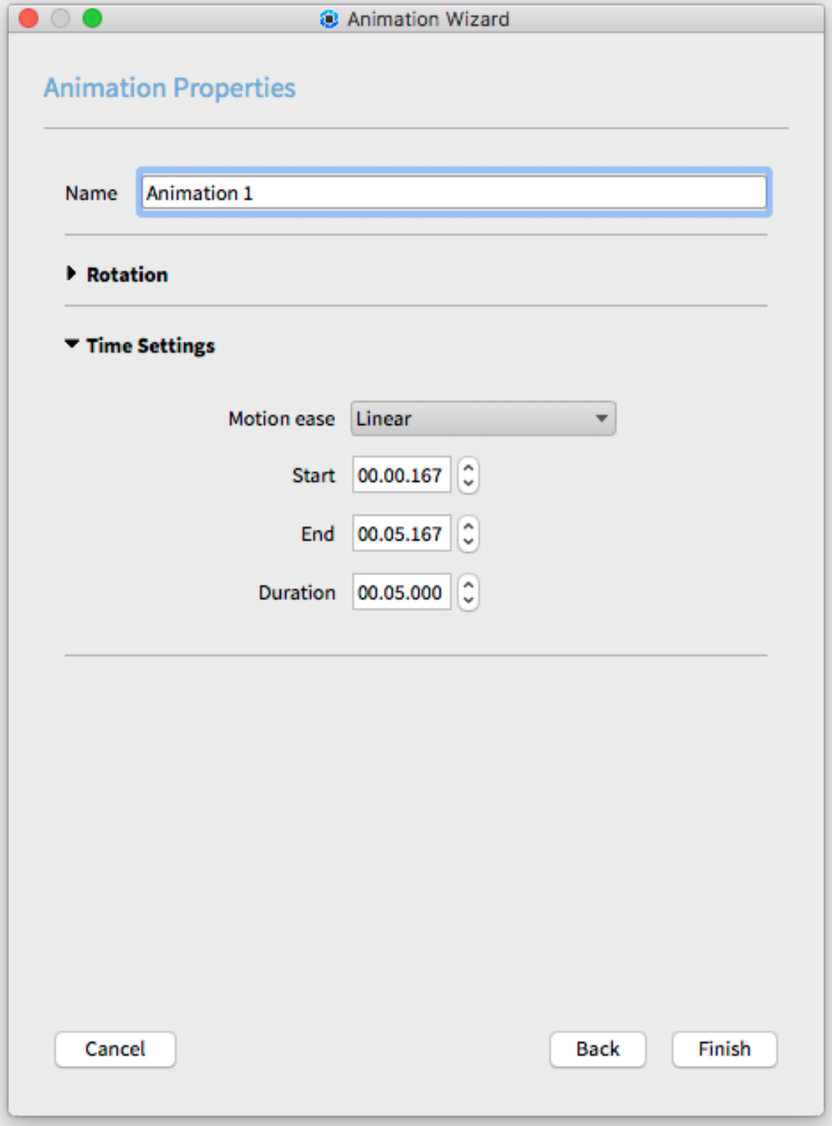
Properties

Motion Ease: Linear, Ease-in, Ease-out, Ease-in/out

Start: Beginning of transform in timeline

End: Conclusion of transform on timeline

Duration: Total length of transform



Linear Motion vs Easing

Linear

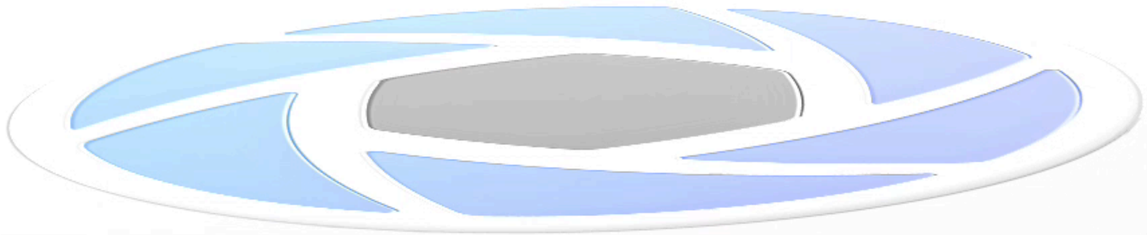
Ease In, Ease Out

Motion Blur (Part Animation)

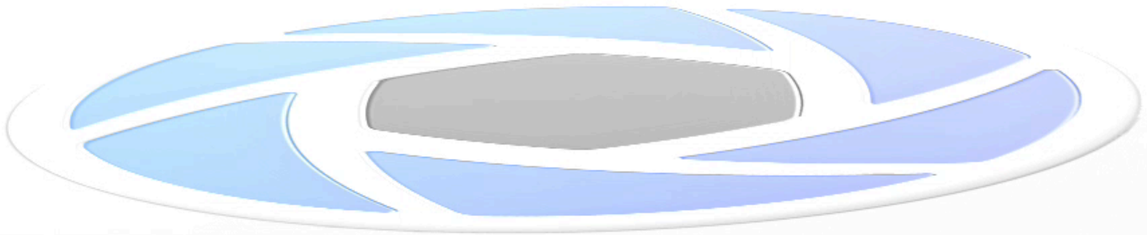
Disabled

Enabled

Motion Blur (Camera Animation) - Disabled



Motion Blur (Camera Animation) - Enabled



Best Practices

- Storyboard: Plan each sequence of your animation first
- Begin with a fresh scene
- Save your scene in stages
- Create a camera or Viewset before animating it
- Be aware of adjusting cameras after they’ve been animated
- Camera Switch Events with Depth of Field can cause Realtime-view to struggle
- Don’t make your animations too slow
- Motion Easing and Motion Blur make animations look more natural and realistic

Hands On

Q&A