

BEACON Newsletter - October 2024

Creating Interactive Animations with SOLIDWORKS Visualize

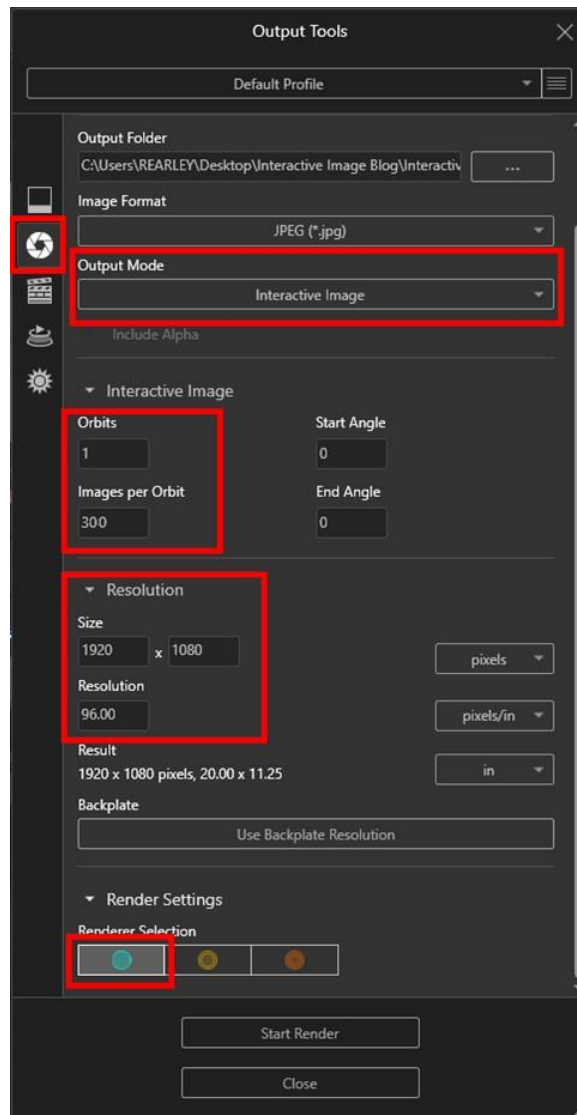
Interactive Images are a great export option within Visualize Professional, allowing you to view the model in a series of 360 orbital spins within a web browser.

Interactive Image:

An interactive image is a collection of rendered images that are viewed and controlled within a HTML file.

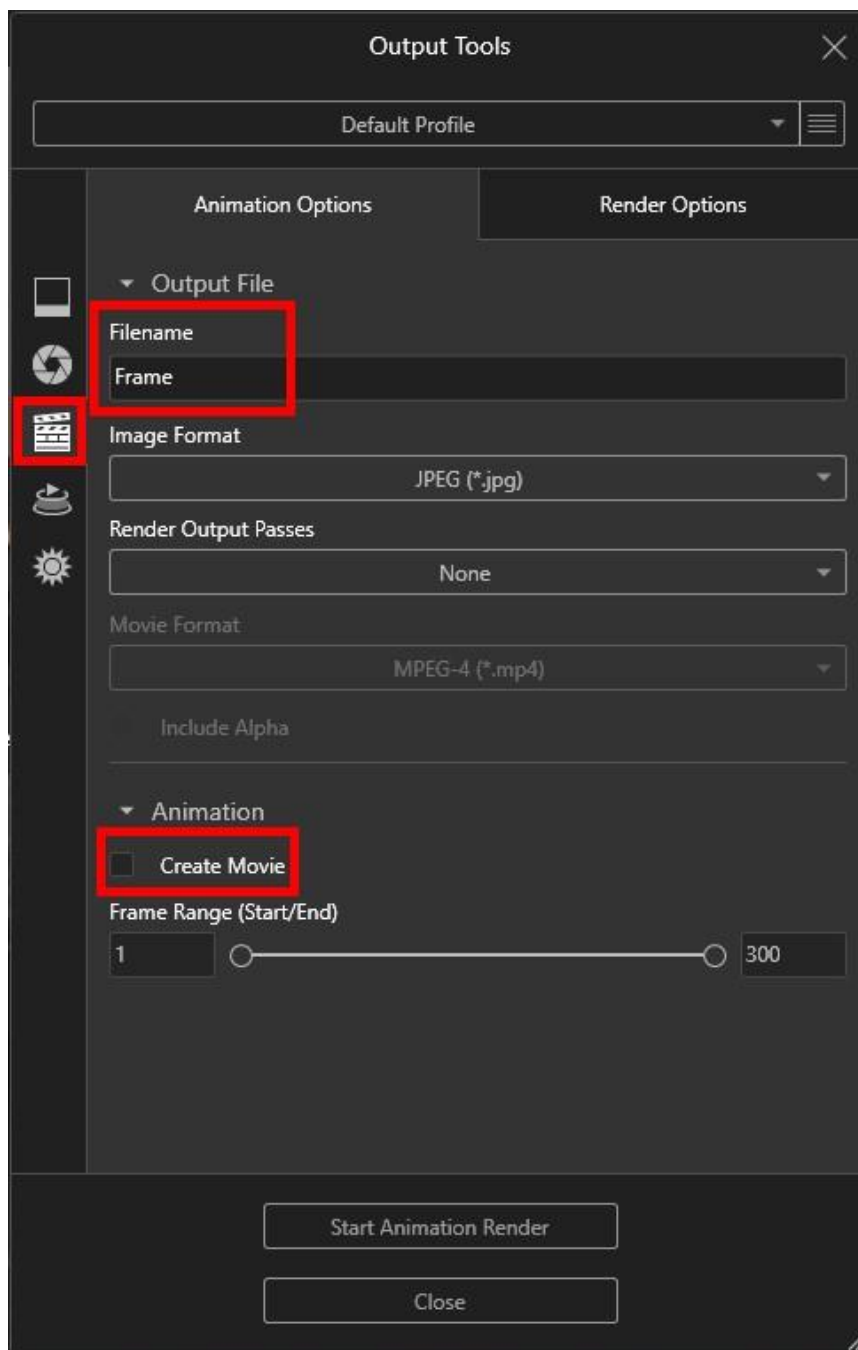
Choose Interactive Image under the Output Mode and select a single orbit. This will create only a single spin around the model, however the number of images will be the number of stills created in our animation.

Render this at Preview mode, at the same resolution as the Animation. We will be removing the still images and replacing them with the animation images instead.



Creating the Animation:

Export the animation as individual frames by unselecting the Create Movie checkbox. I would also recommend naming the file Frame, for ease of compiling both the animation and Interactive Image in the next step.



Combining the Animation and the Interactive Image:

This is where the magic happens, we are going to replace the images within the Interactive Image with our animation instead!

Find the Image sub-folder within the Interactive Image and you will see the individual still with a sequential naming sequence. Delete all of these images and instead paste in your rendered stills from your animation. You will notice that the files from the animation have a slightly different naming structure, Frame_0001 rather than Frame00001. We will need to change this behind the scenes.

Find the JS folder inside data, to reveal the hidden away JavaScript controlling the Interactive Image. Right click upon threesixty.js and choose to edit within Notepad. You will see the naming structure Frame#####.jpg listed.

```
threesixty.js - Notepad
File Edit Format View Help

threeSixty = {
  init: function () {
    this._vr = new AC.VR('viewer', 'images Frame_####.jpg', [300, 1], {
      invert: false
    });
  },
  didShow: function() {
    this.init();
  },
  willHide: function() {
    recycleObjectValueForKey(this, "_vr");
  },
  shouldCache: function() {
    return false;
  }
}
if (!window.isLoaded) {
  window.addEventListener("load", function() {
    threeSixty.init();
  }, false);
}
```

Fine Tuning:

Want to fine tune your interaction with the model?

Edit the vr.js file and edit the 'InfiniteAxis' to read false,false.

This will prevent the animation looping and going back to the start.

Change the 'Grabbable' values to alter how far you need to drag your mouse to play through the animation.

The 'ThrowDuration' allows you alter the inertia and how long the effect continues after you have released your mouse.

```

vr.js - Notepad
File Edit Format View Help

AC.VR.options = {
  imageIndexOffset: 1, // (number) maps the position [0,0] to image 001.jpg, etc.
  loaders: 3, // (number) how many concurrent image loaders
  initialLoad: 4, // (number) images to load initially per row (4 = every 90 degrees)
  noCache: false, // (boolean) append a random query string to the image URLs?
  initialPos: [0,0], // (mixed) initial VR position (number or array)
  invert: [false,false], //
  infiniteAxis: [false,false], // Prevents 'looping' of the animation pin infinitely

  autoPlay: false, // (boolean) begin auto spin right away?
  fps: 25, // (number) frames per second (used for the intro, auto spinning, and throwing)

  grabbable: true, // Distance required to drag the mouse
  grabRotateDistance: 4000, // in order to complete a full spin
  grabRotateDistance: 500, //

  throwable: true, // Inertia Effect upon the Spin
  minThrowDuration: 0.5, //
  maxThrowDuration: 1.5, //

  spinnable: true, // (boolean) add spinners to on axes marked as infinite?
  minSpinDuration: 3, // (number) minimum time in seconds the VR will take to rotate 360 degrees

  intro: AC.VR.SpinIntro, // (function) function that returns the intro sequence (array of position arrays)
  introSpins: 0.5, // (number) times the VR rotates 360 degrees in the intro
  introDuration: 1, // (number) intro duration in seconds

  mobileTotalFrames: null // (mixed) total frames to show on a mobile device (number or array)
};

```

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