

QuickTime Animation Tutorial

Using Cobalt[™], Xenon[™], Argon[™]

Creating a Fly-by Quicktime Animation

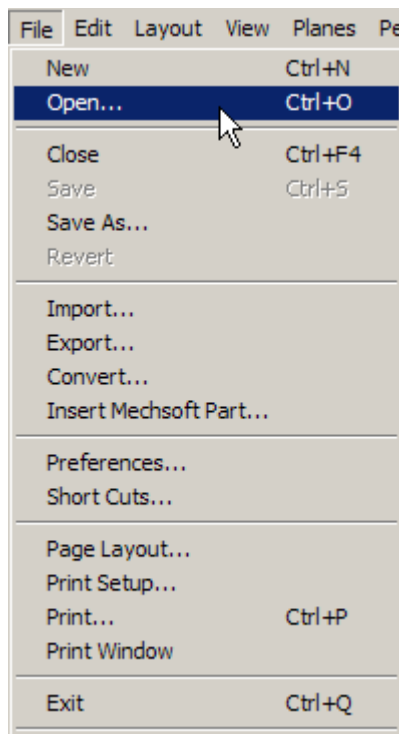
To perform this tutorial in Argon, Xenon, or Cobalt, download the sample vase_model.co file from the internet version of this tutorial.

Producing product animations can be a very valuable tool for marketing, sales, and assessing the design. They can be used by designers to study the form of an object in motion. They are also useful to the marketing department to use on websites, multimedia CD's, and presentations. Creating animations is simple in Ashlar-Vellum's Designer Elements 3D Modeling Products.

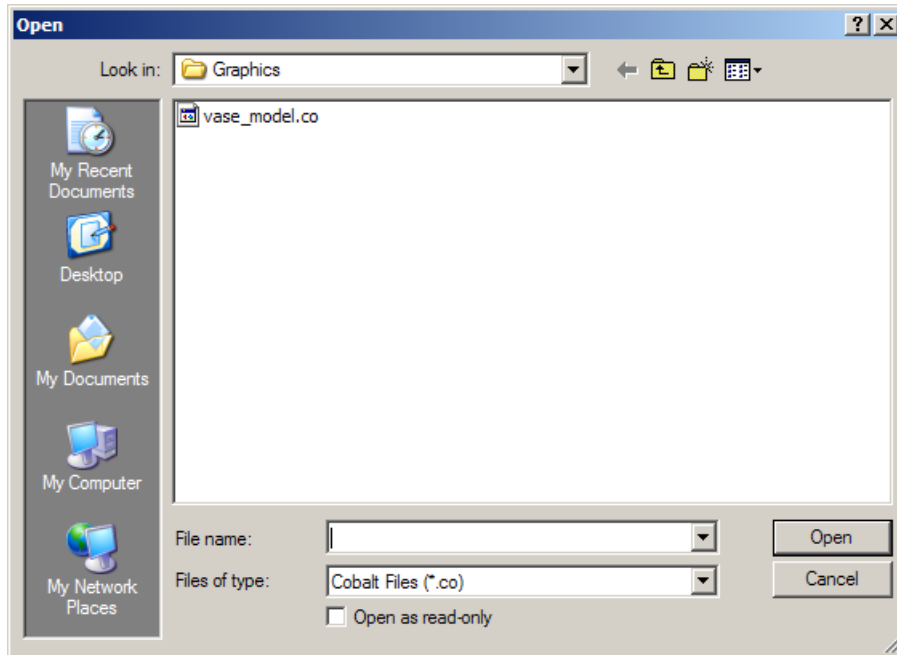
To show this, create an animation using one of the sample files included with the program.

Start the program by double clicking on the icon for the program.

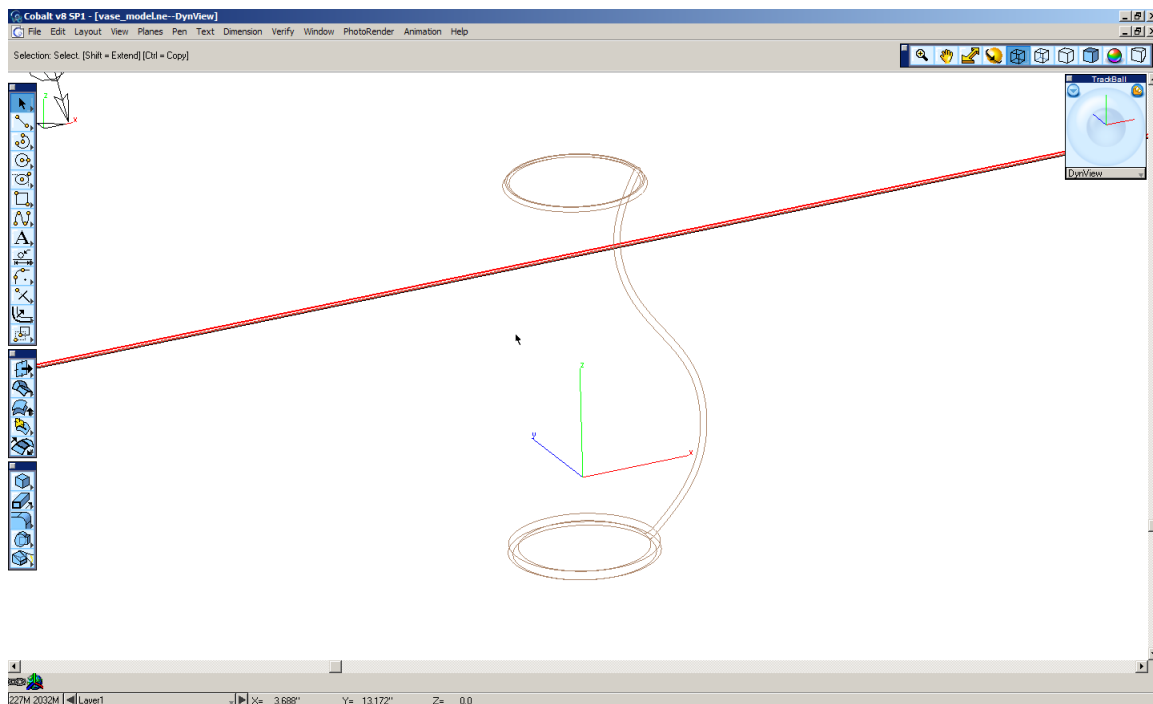
Go to **File>Open**



Find the folder where the file is saved and open it.



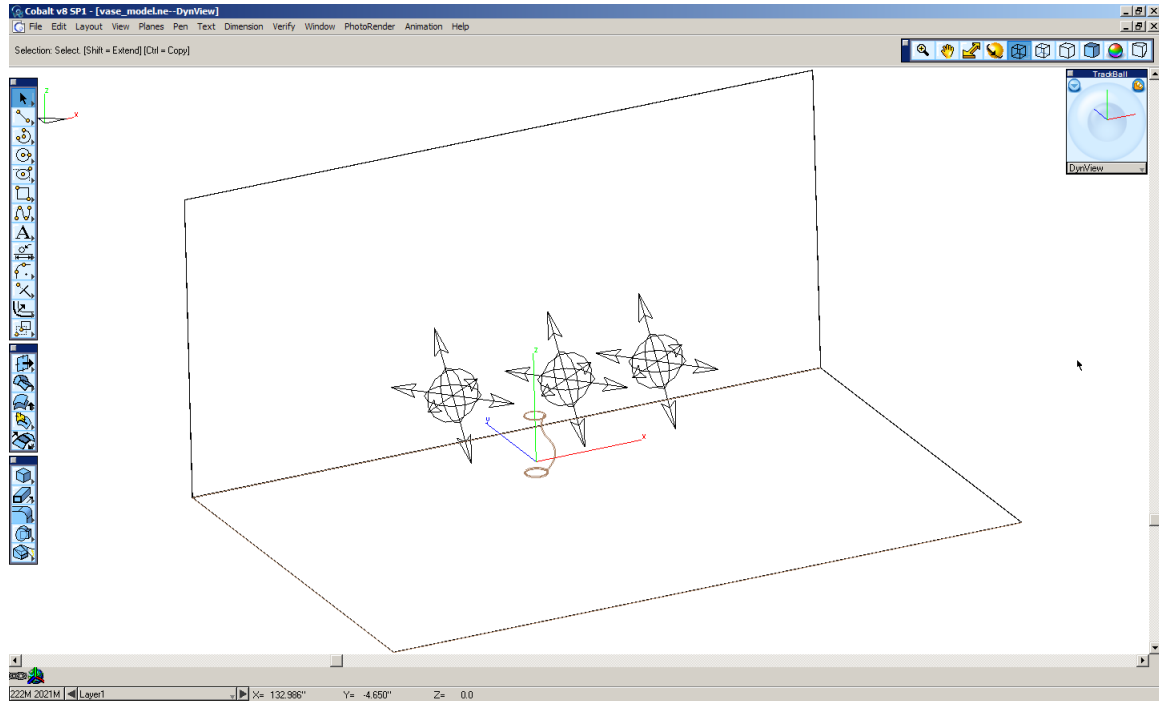
This is what your screen should look like.



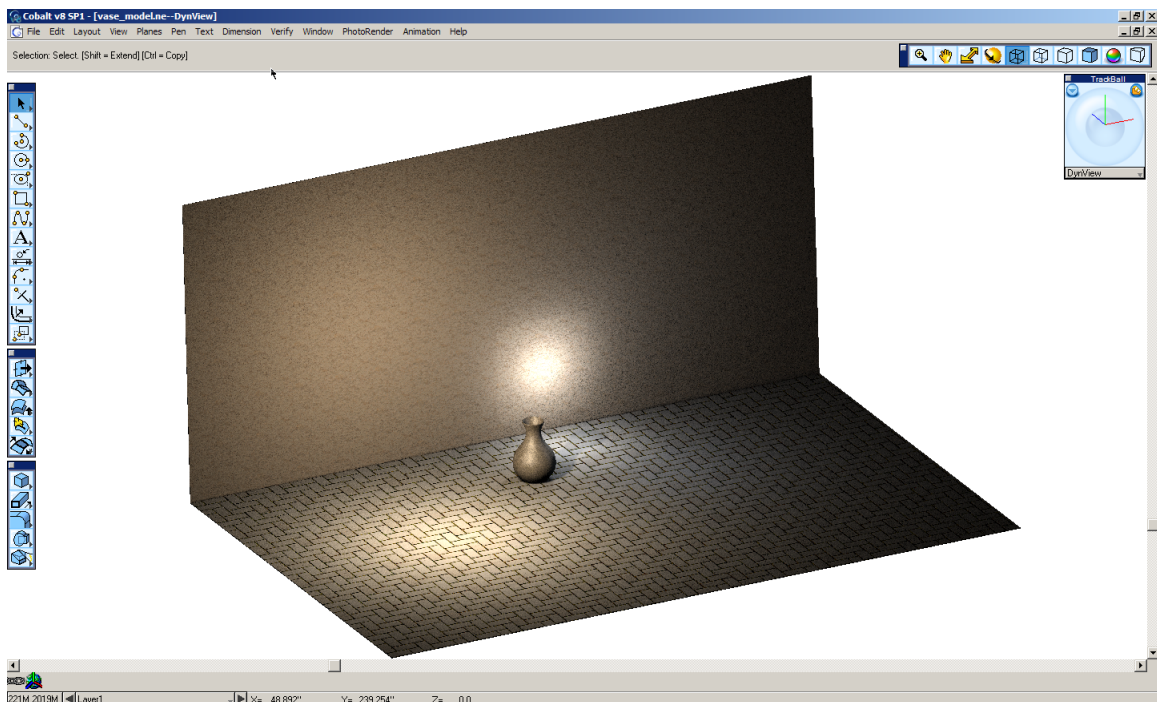
It may not look like much now, so let's take a closer look at.

Zoom all. The shortcut for this is CTRL+F (Windows) and COMMAND+F (Macintosh).

This zooms out to see all of the objects that are in the file.



It still looks a little ambiguous, so render the image very quickly to see what is there. Go to **PhotoRender>Raytrace Preview Render [Shadows Off]**.



There is a floor, a back wall, and a vase. There are also a few lights placed in the model.

Now that we have seen what it is we are going to make an animation of, let's start making it.

Setting up the Animation

In order to set up the animation it is necessary to create two pieces of geometry.

1. The path on which the camera will move.
2. The spot on the vase on which the camera will point.

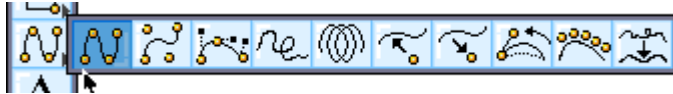
The Path

That path will just be a spline drawn.

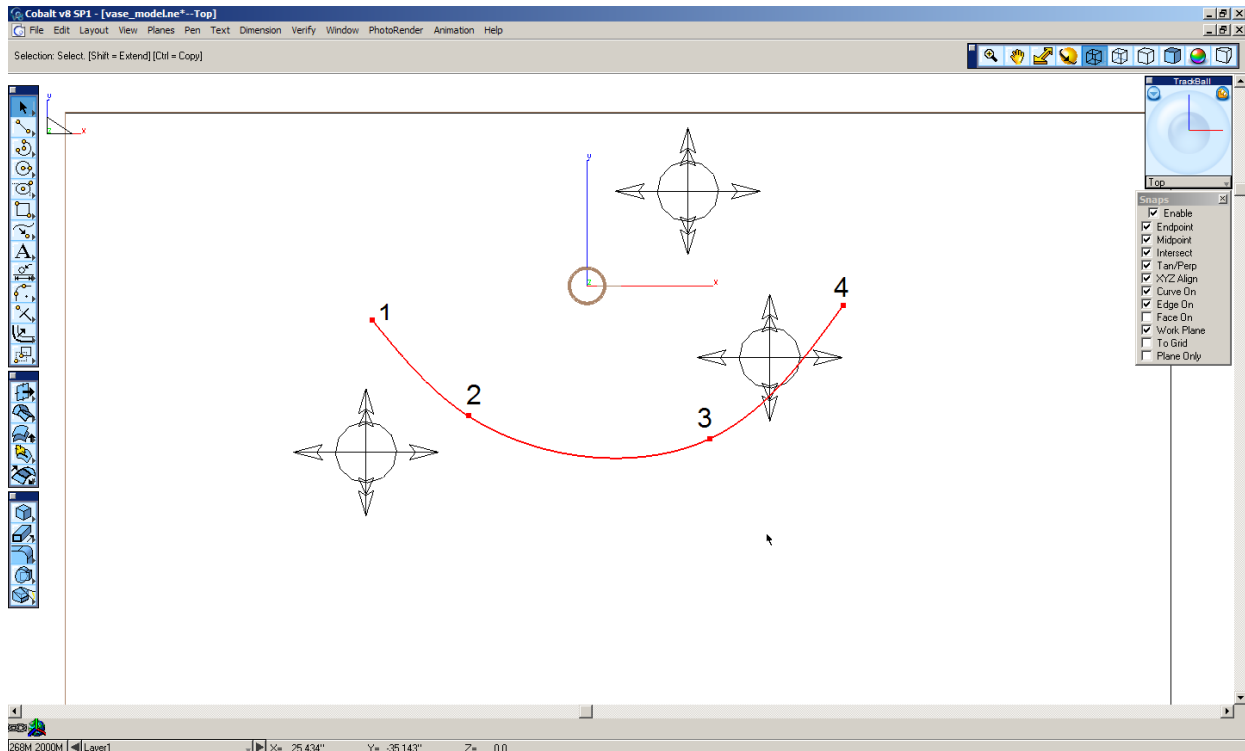
Go to the top view of the model. The shortcut for this is the letter d on the keyboard. Zoom All to see the whole model. Use the shortcut CTRL+F (Window) and COMMAND+F (Macintosh).

Turn on the Work Plane snap in the Snap Options window. (If the Snap Options window is not open, select **Windows>Snaps** from the Menu Bar.)

Select the **Through-point B-spline** tool from the tool palettes.



Select the four points like those in the image below. The points do not have to be exactly where they are in the picture, but try to get them close.

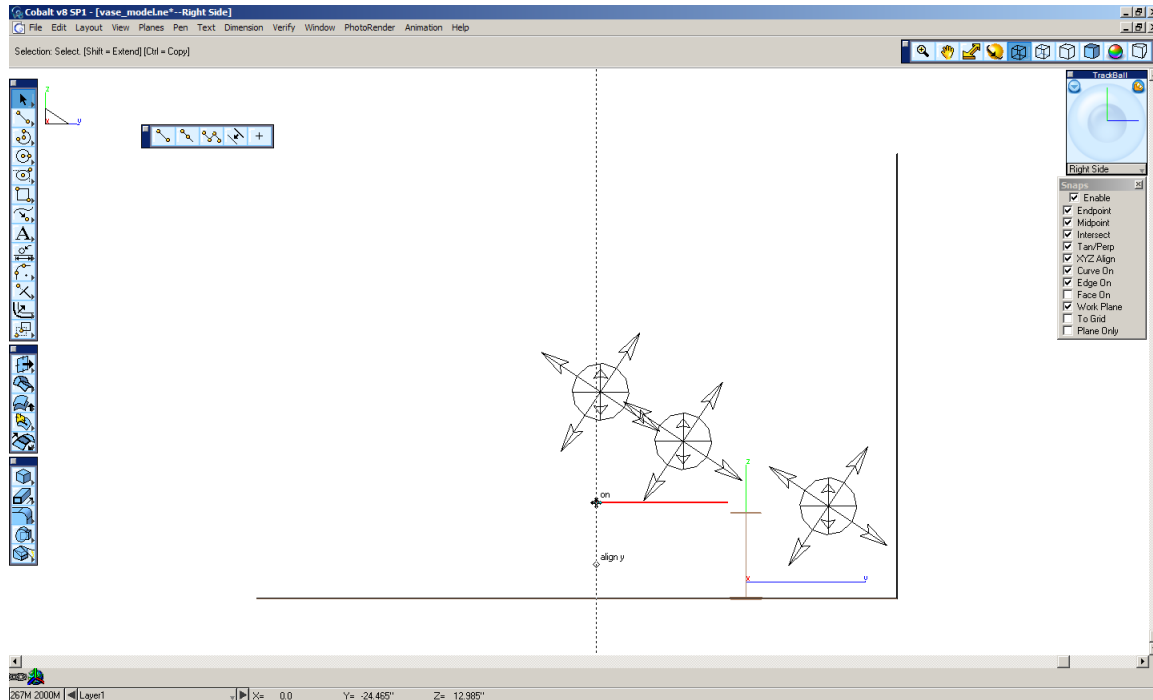


Since the Work Plane snap is ON to create this, the spline just created was drawn level to the bottom of the vase. This could work if we wanted to make a movie that went around the bottom of the vase, but we want to see the whole thing. Therefore, move it up a little bit.

To do this change the view to the Right Side. (The shortcut for this is to press a on the keyboard.)

Zoom all.

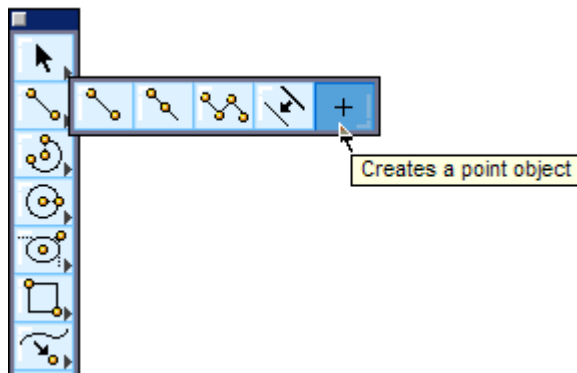
With the **Select** tool, click and drag the spline created up a little bit as shown in the image below.



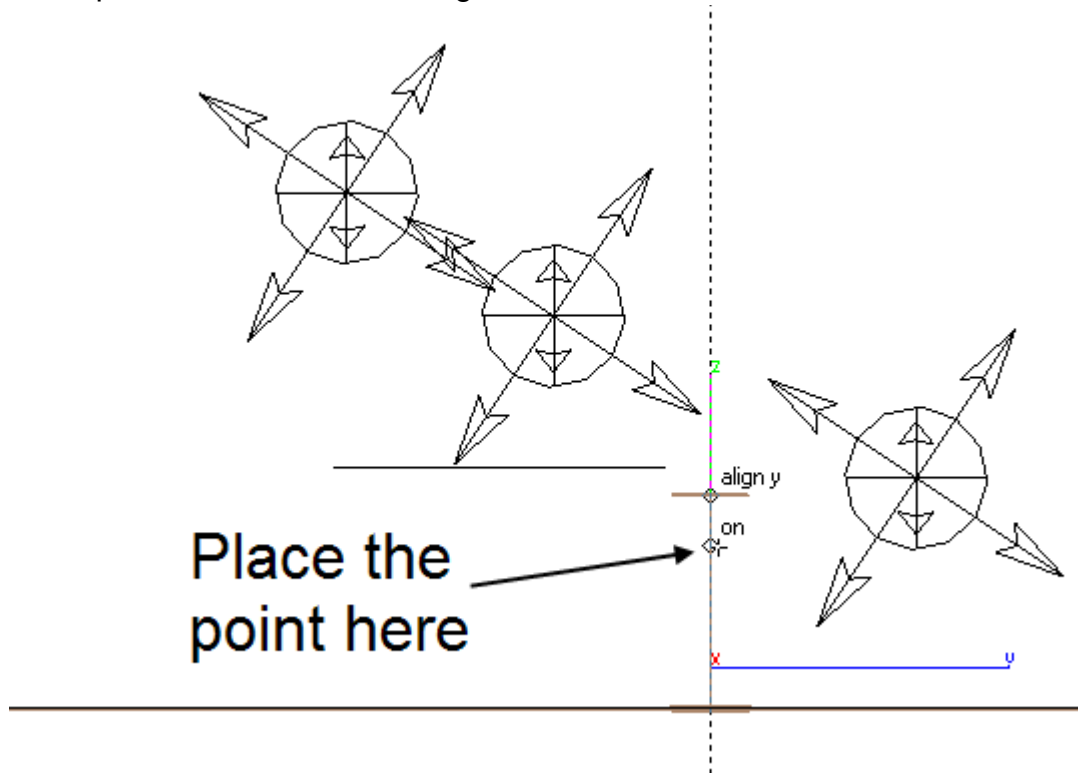
The next part is to place a point in the model for the camera to look at.

The Target

To do this select the **Point** tool from the tool palette.



Place the point as shown in the image below.



Now that we have everything that the animation needs, we can go on to Creating the Animation.

In order to set up the animation properly we need to turn the Work Plane Snap OFF.

Creating the Animation

Rarely is the desired animation achieved the first time. In order to avoid waiting for hours on end to end up with the wrong animation, animators will create test animations to ensure that it is what they want before creating the final. This is what we will do here. We will create a small animation with the quickest rendering setting. To create the Fly By animation go to **Animation>Fly By**.

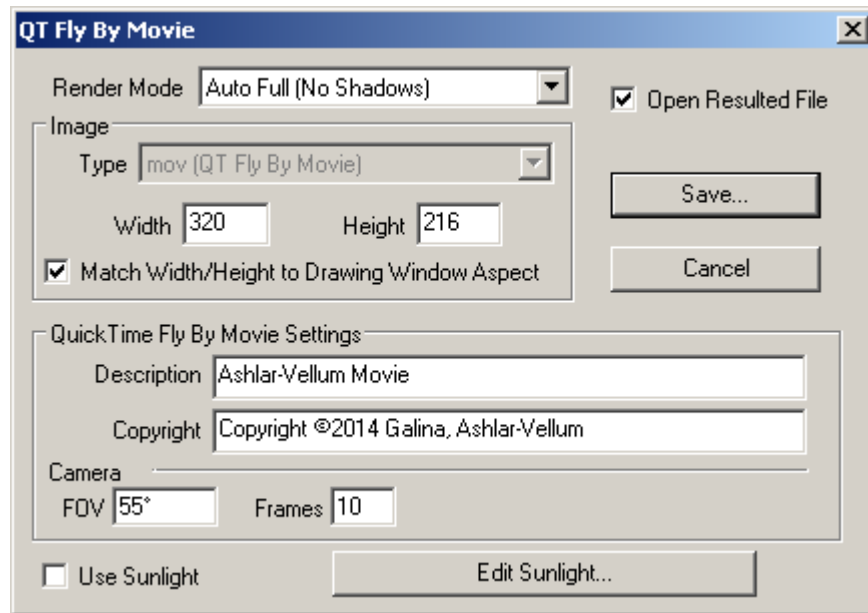
The Message Line prompts you to pick a curve for the camera eye path. This is the path that the camera will move along. In this case, the curve is the spline created. Select the spline.

Fly By Animation: Pick curve for camera eye path. [Shift = Extend]

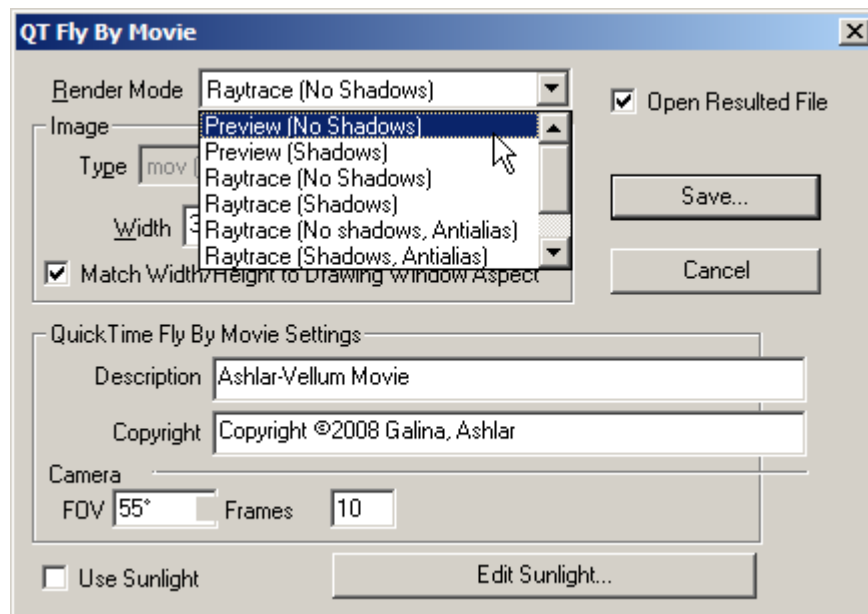
Next the Message Line prompts to pick the location for the camera reference point. This is the point that you want the camera to look at while it is flying by. In our case, it is the point that we created. Select that point.

Fly By Animation: Pick location for camera reference point.

After fulfilling these prompts, the QT (QuickTime) Fly By dialog will appear.

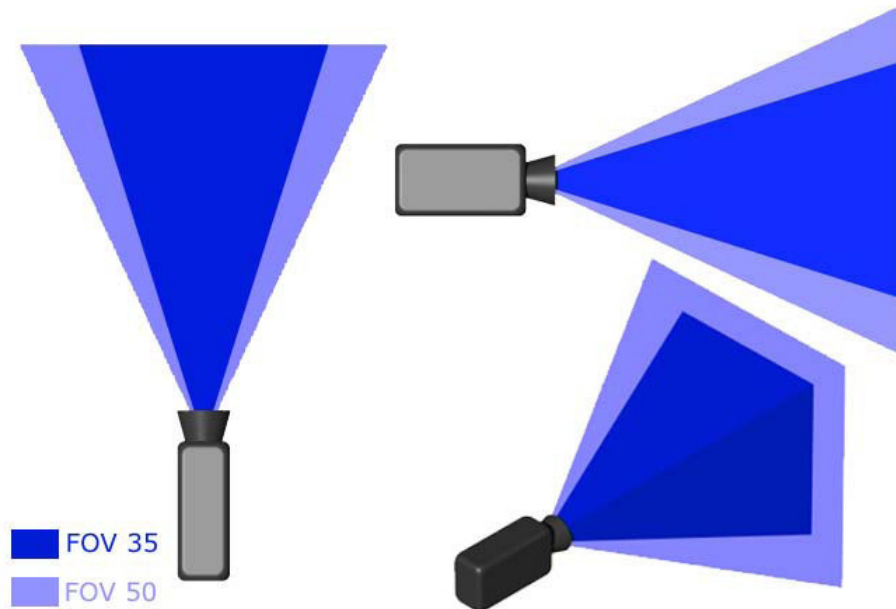


The first option available is the Render Mode. The list that it contains is the same as the PhotoRender list. For creating a small test movie, set it to the lowest setting, Raytrace Preview (No Shadows).



Next, adjust the Field of View and the number of frames in the movie.

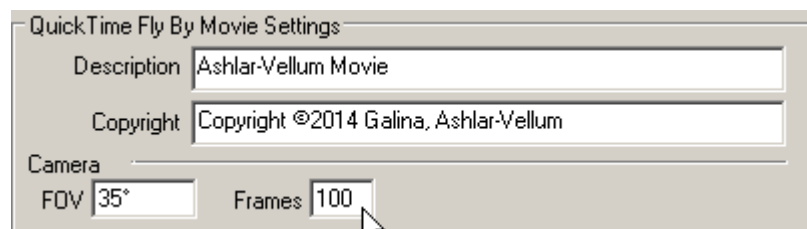
The Field of View (FOV) is the angle that the lens is able to see. Its range is from 1 to 179 degrees. Having a high FOV would be similar to having a wide angle lens, a low FOV would be similar to having a telephoto lens. See the image below.



The higher the FOV, the more that the camera is able to see.

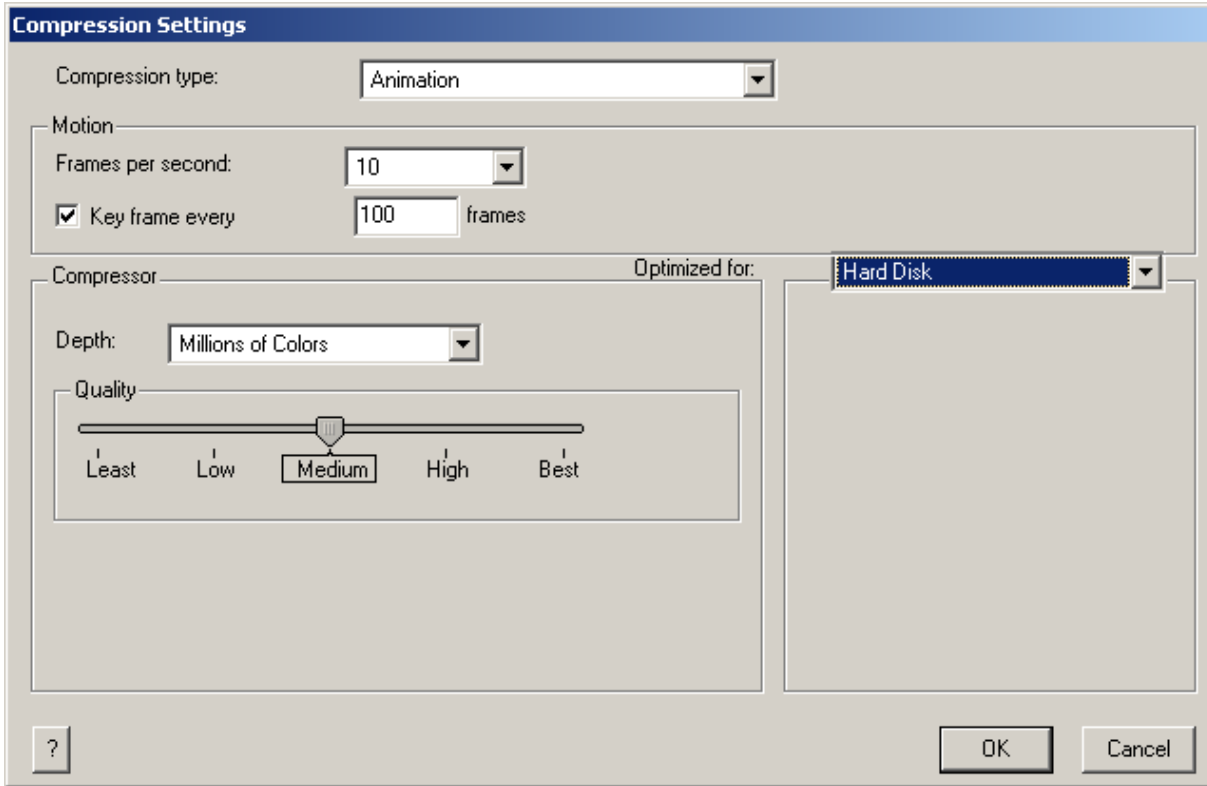
Change the FOV to 35 degrees.

Change the number of frames to 100. This is how many individual renderings the computer will have to do to complete the animation. The number of frames we choose, will vary how long the animation lasts.



Select Save and give the movie a name and choose where to store it.

The next window deals with the compression, quality, and the frames per second (fps).

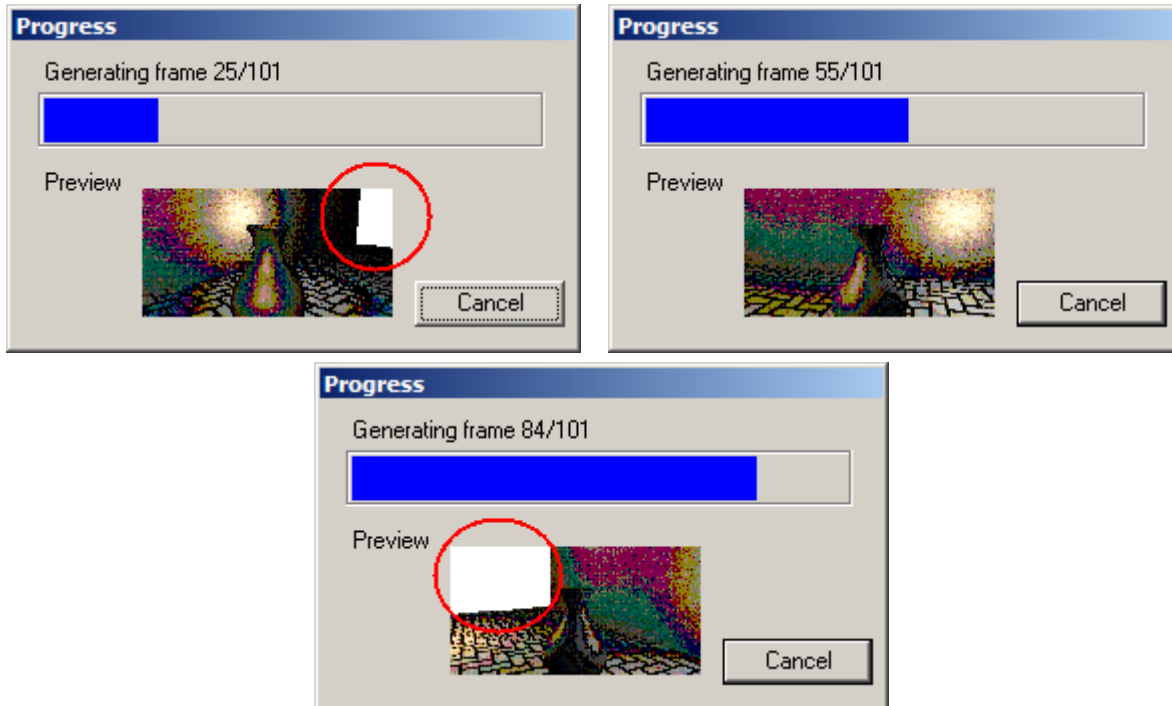


For now leave the settings to the default. Since the movie is 100 frames long and the fps is set to 10, our movie will be ten seconds long.

Select OK and the program will begin generating the movie.

Cobalt, Xenon and Argon offer a preview window to observe the frames as they are being rendered. The preview is not meant to show the exact image quality of what is being created, but it does give you an idea of if everything is being generated correctly.

As my rendering was being created I noticed that there were some spots at the beginning and the end of the animation that the wall did not cover. The white spaces in the Preview window below show areas where the walls do not exist.



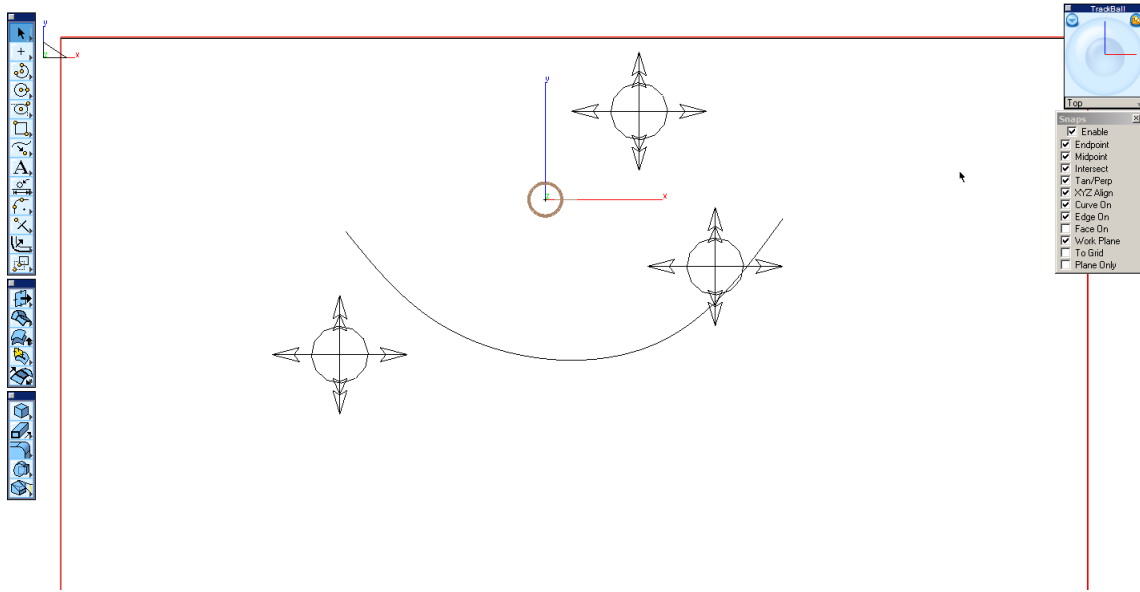
Now it is possible to either adjust the camera and its setting so that it does not see that area, or to put walls there. The second is easier to do, so lets do that.

Modifying the Scene

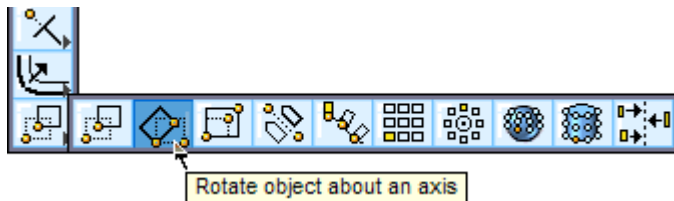
To get rid of the white spaces in the animation, copy the wall that we have and rotate it to each side to cover the space.

Go to the top view of the model by selecting Top from the drop down list at the bottom of the Trackball.

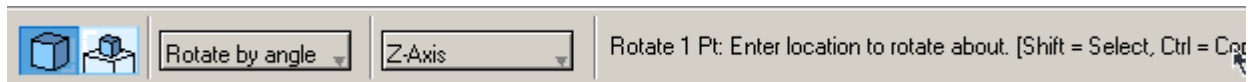
Zoom All.



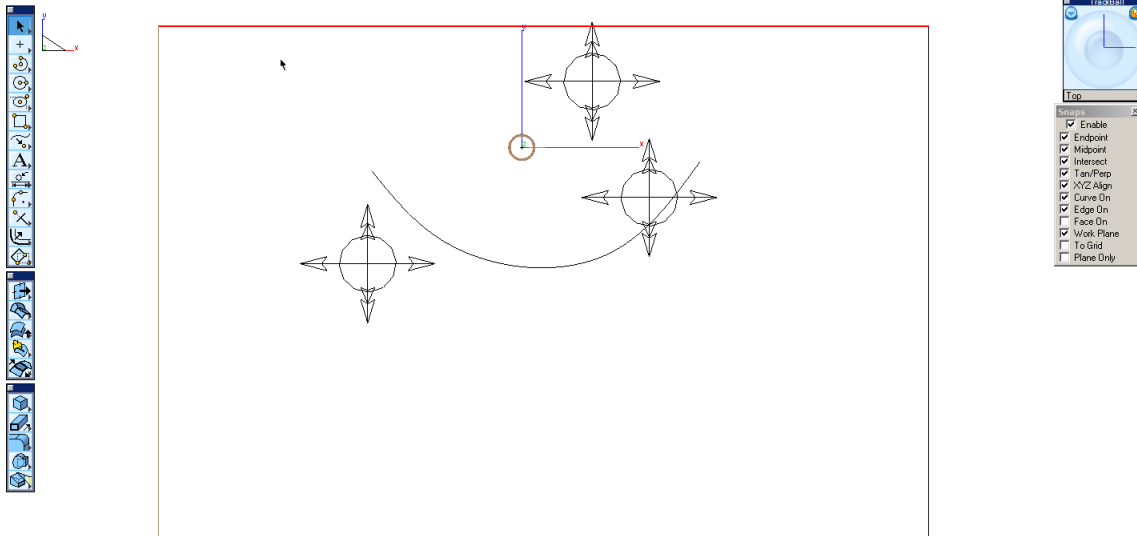
Next, select the **Rotate** tool from the tool palette.



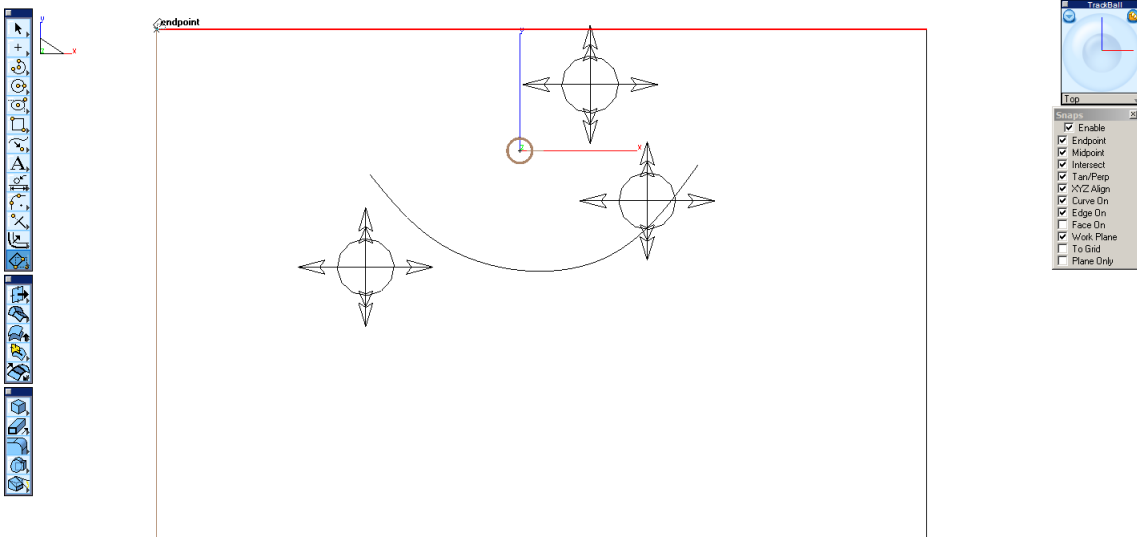
In the Message Line choose the **Entity** option and set the rotation type to **Rotate by Angle** by selecting the rotation method button on the left side. Set the option to the right to **Z-Axis**.



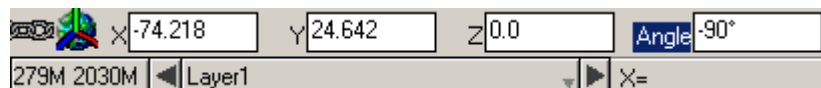
Select the back wall to rotate.



The Message Line now asks for a point to rotate about. While holding the CTRL key (Windows) or the OPTION key (Macintosh), select the corner of the wall in the upper left hand corner. (Holding the CTRL key (Windows) or the OPTION key (Macintosh) will rotate a copy instead of the original.)



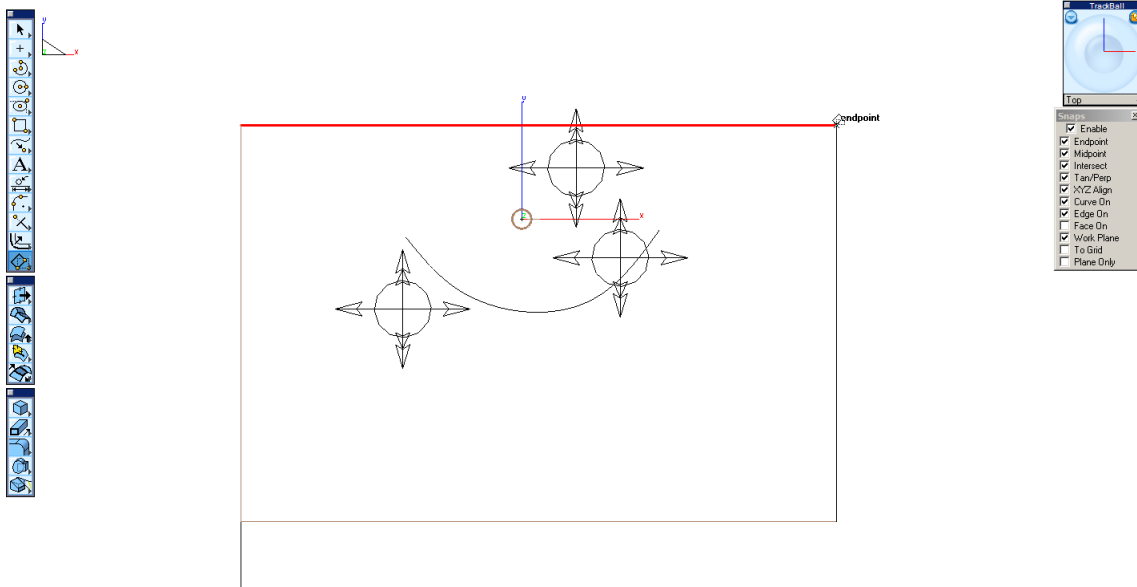
Change the Angle value in the Status Line to **90** degrees and press ENTER.



The copy that was just created is now the current one selected. Deselect that one and reselect the original to rotate it the other way.

While holding the SHIFT key, deselect the one that is selected and reselect the original.

To create the other wall, select the other corner of the back wall while holding the CTRL key (Windows) or the OPTION key (Macintosh).



Type in **-90** degrees into the Angle value field in the Status Line and press ENTER.

Go to the trimetric view by selecting Trimetric from the drop down list at the bottom of the Trackball.

Zoom all to see all of the model by selecting **View>Zoom All** from the Menu Bar.

You can see that if you render the image right now the new walls do not have the material that the back wall has, so let's copy the material from the back wall to the new walls. Cobalt, Xenon and Argon have a tool that makes copying the materials very simple.

Select the **Eyedropper** tool from the tool palette.



Select the back wall, this will be the material that is copied. Then, while holding SHIFT, select the two new walls that were created. The new walls now have the same material as the original.

Now the white spaces that were in the animation are filled, create the final animation.

Creating the Final Animation

To create the final animation, use the same method that was used before to create the test animation but increase certain parameters to produce a better quality movie.

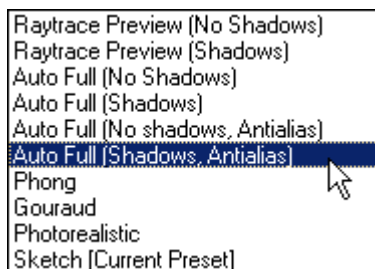
Make sure that you have the Work Plane snap turned OFF in the Snap options window.

Select **Animation>Fly By** from the Menu Bar.

Select the spline that was created for the camera path and the point created for the camera target.

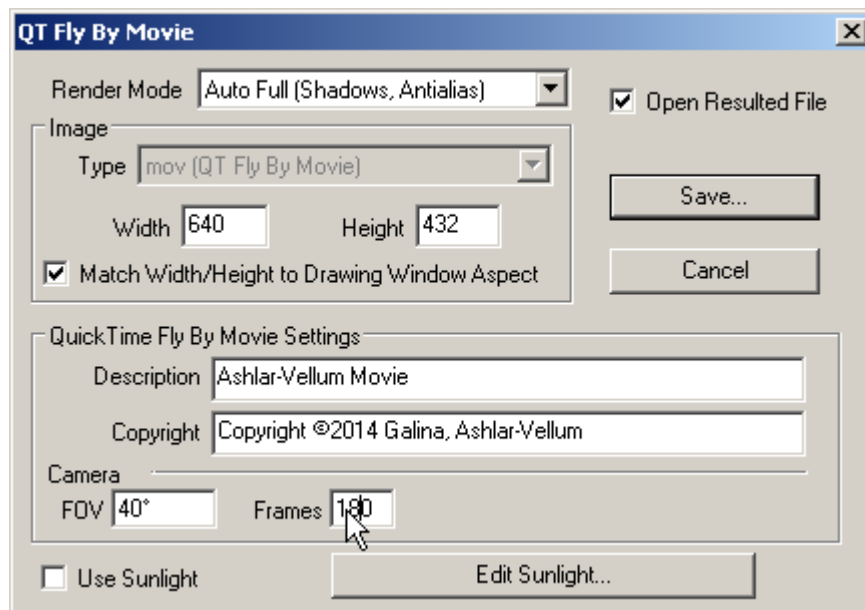
In the QT Fly By dialog increase the quality of our movie.

Set the Render Mode to Auto Full (Shadows, Antialias)



Set the size to 640 by 400 pixels.

In the first animation not all of the vase was seen during the animation so increase the FOV to 40 degrees. Also increase the number of frames to 180.



Select Save.

Choose a file name and a destination for the movie.

In the next dialog leave the compression at Motion JPEG A, but increase the quality to Best.

Also increase the number of fps to 15. This will give the animation a smoother motion.

Note: Your computer is about to generate 180 images at 640 by 400 pixels at the highest render setting. Needless to say, this is going to take a while. It could take anywhere from 2 to 12 hours depending on the speed of the computer. It is better to do this at the end of the day if this is your work machine or before going to bed if this is your home machine. At any point, if you need to cancel out of the animation press the ESC key.

After completing these settings, select OK.

That's everything to know about setting up, editing, and producing a high quality QuickTime animation. Congratulations!