

CREATING A FLY-BY QUICKTIME ANIMATION

****THIS TUTORIAL WAS CREATED IN NEON AND IS DESCRIBED AS IF THE USER WAS USING NEON. THE SAME FUNCTIONS CAN BE DONE IN ARGON, XENON, AND COBALT AS WELL. MOST OF THE INSTRUCTIONS WILL BE THE EXACT SAME EXCEPT FOR WHERE SOME OF THE DRAWING TOOLS ARE LOCATED.****

If you are performing this tutorial in Argon, Xenon, or Cobalt you will have to download the sample file from the internet version of this tutorial.

Producing animations of your products 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 your marketing department to use on websites, multimedia CD's, and presentations. Creating animations is simple in Ashlar-Vellum's Designer Elements Modeling Products.

To show this, we will 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.

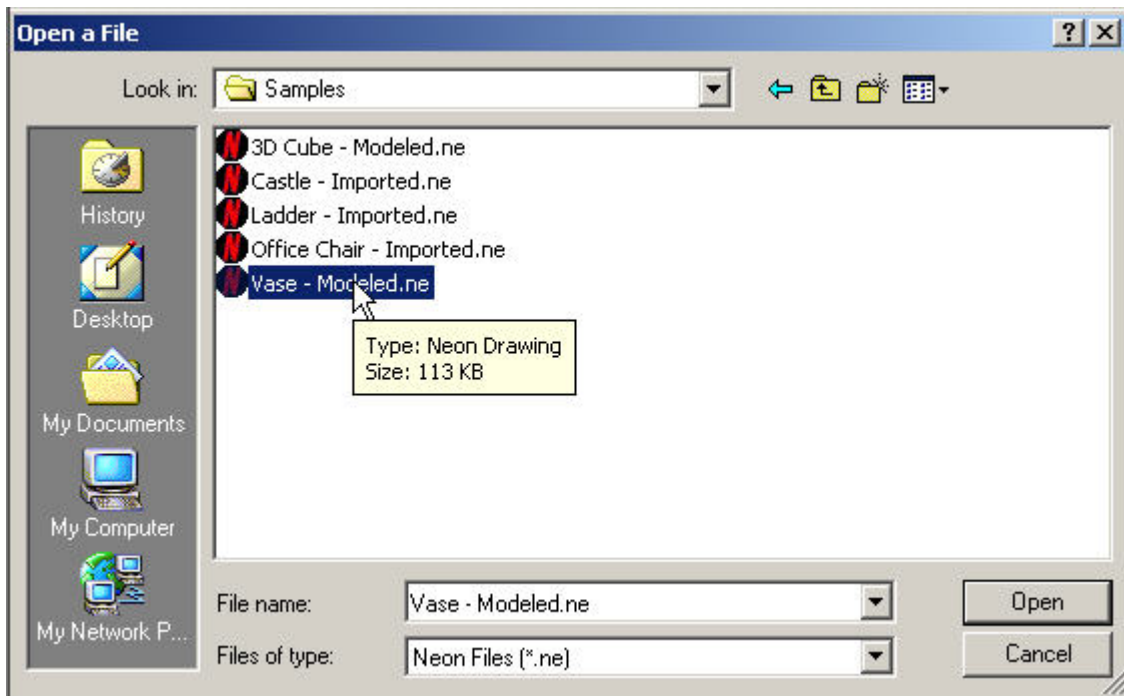
Go to ***File>Open***



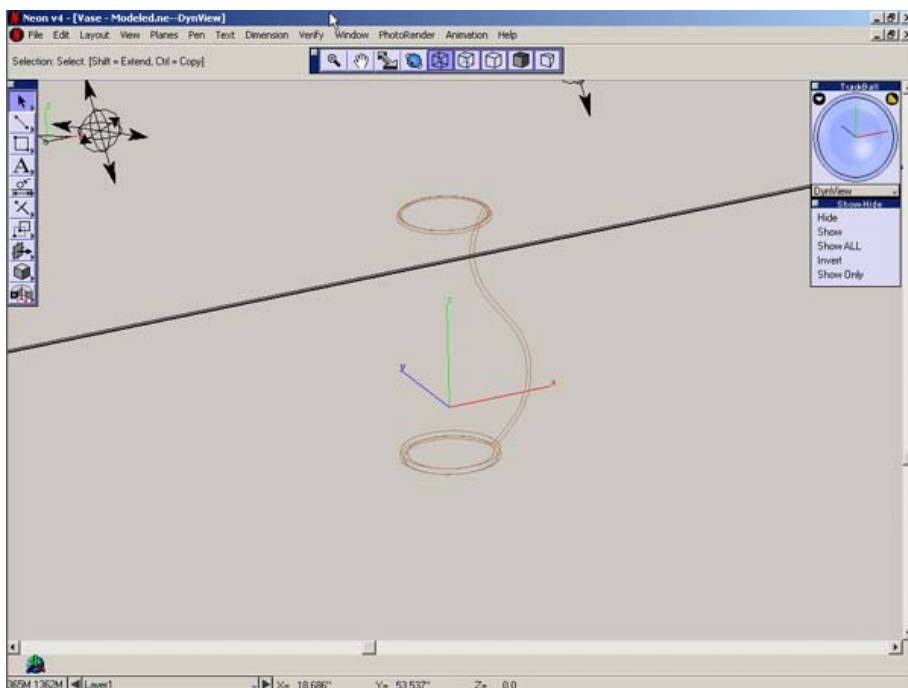
Find the **Samples** folder in the program files for Neon.

Open that folder and you will see a file named **Vase-Modeled.ne**

Open that file.

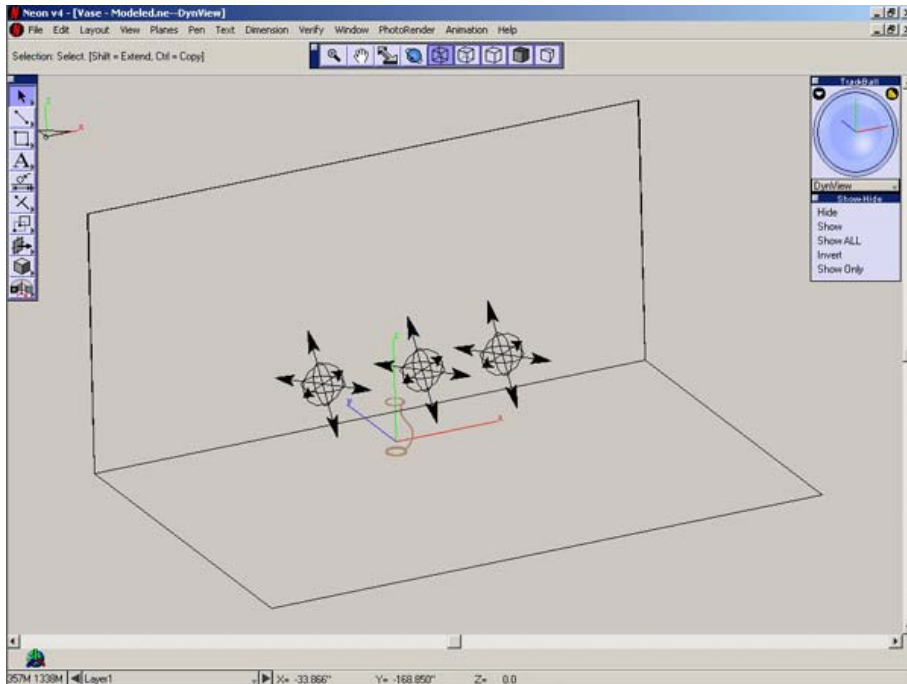


This is what your screen should look like.

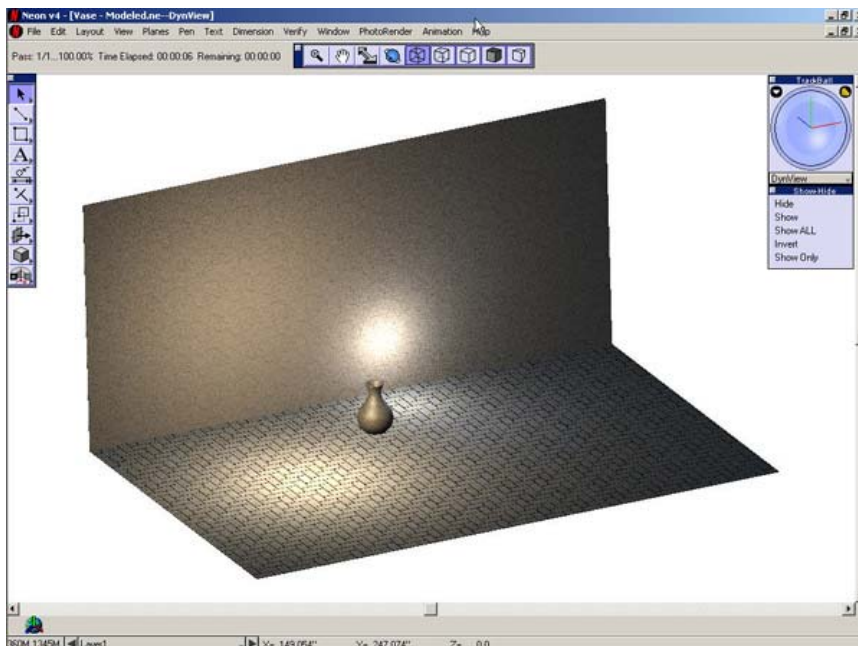


It may not look like much now, so let's take a closer look at.

Zoom all. The shortcut for this on a Windows machine is CTRL+F and use Command+F for a Macintosh. This will zoom out so that we can see all of the objects that are in the file.



It still looks a little ambiguous, so we'll render the image very quickly to see what is there. Go to **PhotoRender>Preview(No Shadows)**.



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 we need 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.

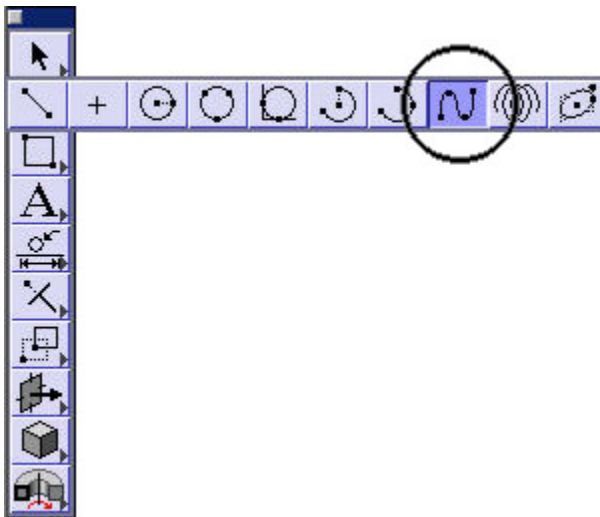
The path

That path will just be a spline that we draw

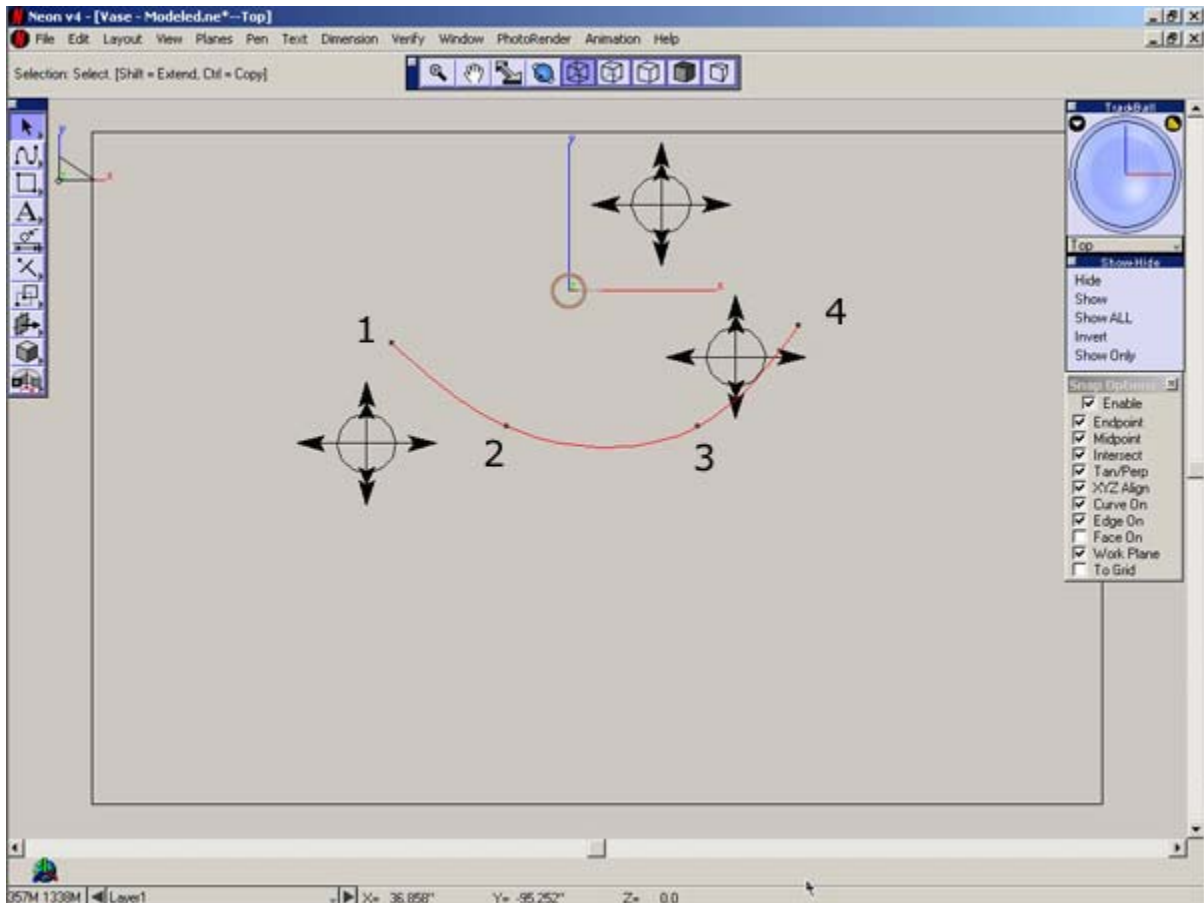
Go to the top view of the model. The shortcut for this is the letter **d** on your keyboard. You may have to **Zoom All** to see the whole model. (Use the shortcut we did earlier, Ctrl+F for Window and Command+F for Macintosh.)

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 you see in the image below. The points do not have to be exactly where I put them, but try to get them close.

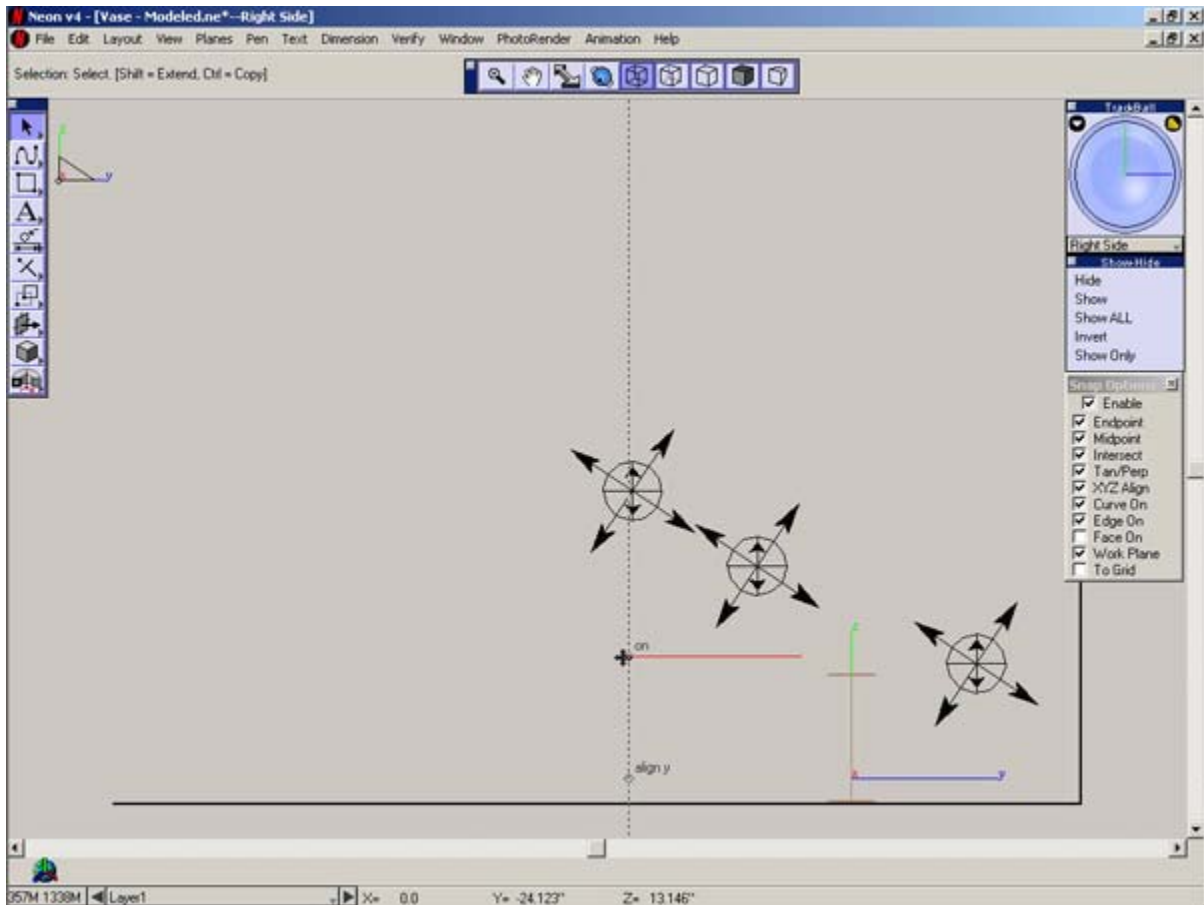


Since we turned the Work Plane snap on to create this, the spline we just created was drawn level to the bottom of the vase. This could work if we wanted to make a movie that went around the bottom of the vase, but we want to see the whole thing. Therefore, we need to move it up a little bit.

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

Zoom all.

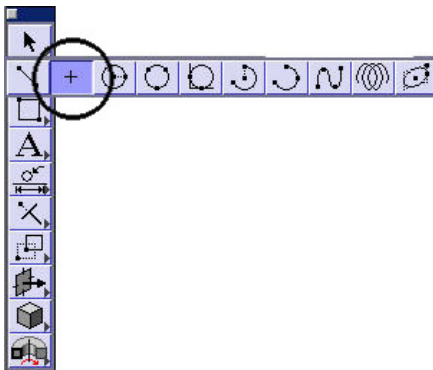
With the arrow tool selected, click and drag the spline that you created up a little bit as shown in the image below.



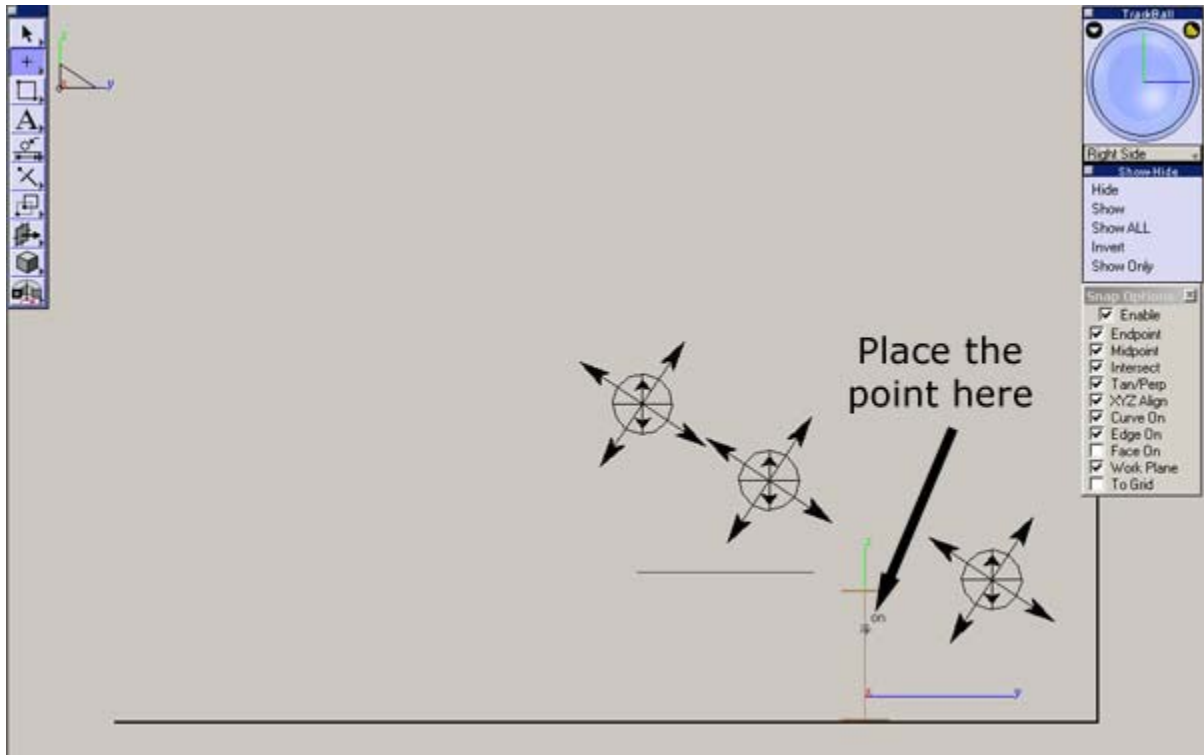
The next part we need to do is to place a point in the model for the camera to look at.

The Target

To do this select the **Point Tool** from the Tool Palette.



Place the point as shown is 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 does a user achieve the animation they want the first time they create one. 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**.

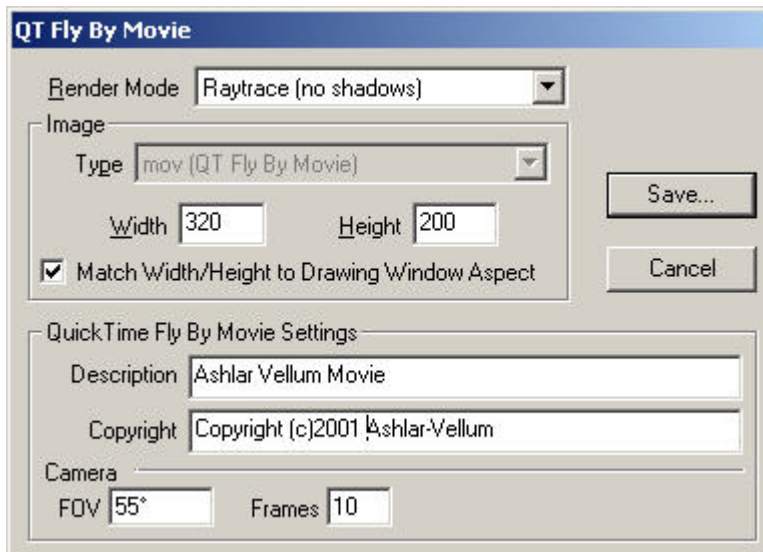
The Message Line will ask you for the **Curve for the Camera Eye Path**. This is the path that we want the camera to move along. In this case, the curve is the spline that we created. Select the spline.

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

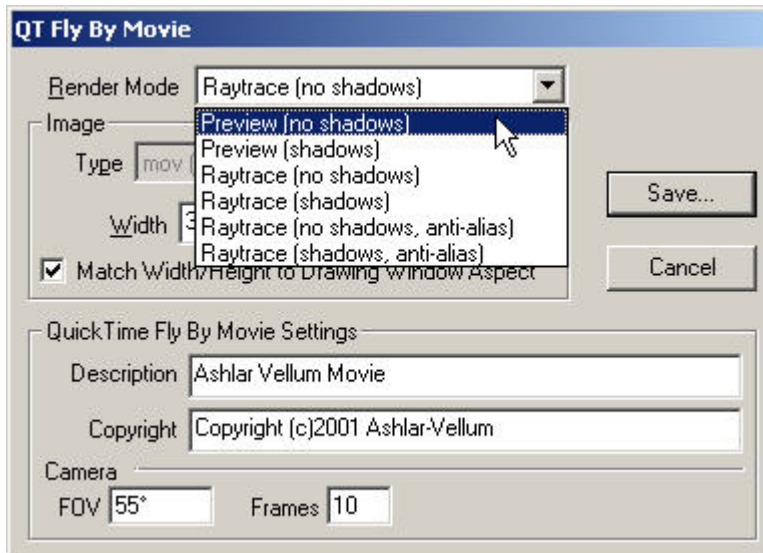
Next the Message Line will prompt you for the location for the camera reference point. This is the point that you want the camera to look at while it is flying by. In our case, it is the point that we created. Select that point.

Fly By Animation: Pick location for camera reference point.

After you have fulfilled these prompts, the QT (QuickTime) Fly By dialog will appear.

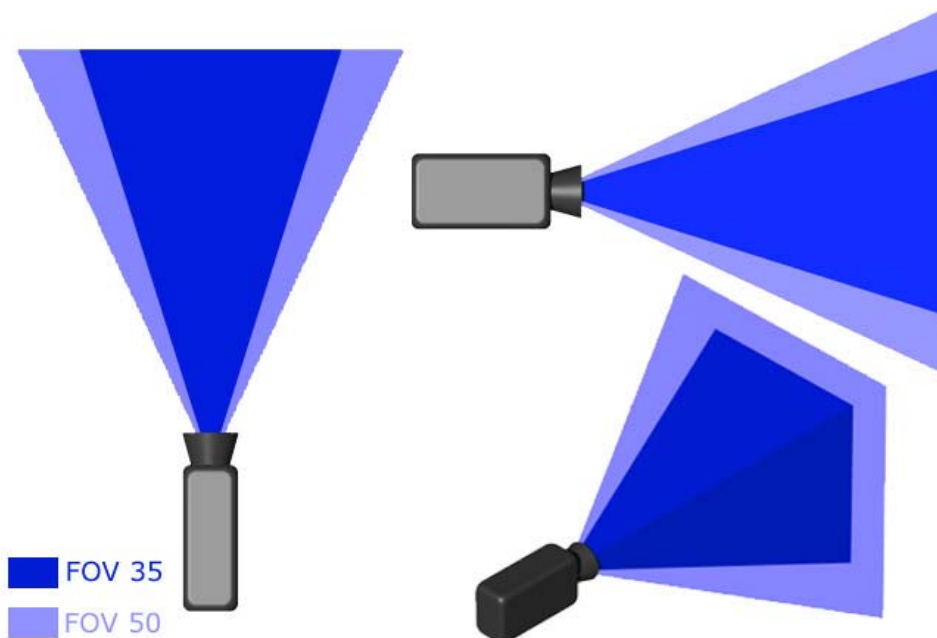


The first option available is the **Render Mode**. The list that it contains is the same as the PhotoRender list. Since we are creating a small test movie we will set it to the lowest setting, **Preview(No Shadows)**



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

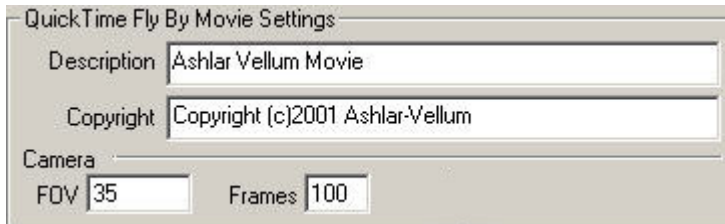
The Field of View (FOV) is the angle that the lens is able to see. Its range is from 1 to 179 degrees. Having a high FOV would be similar to having a wide angle lens, a low FOV would be similar to having a telephoto lens. See the image below.



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

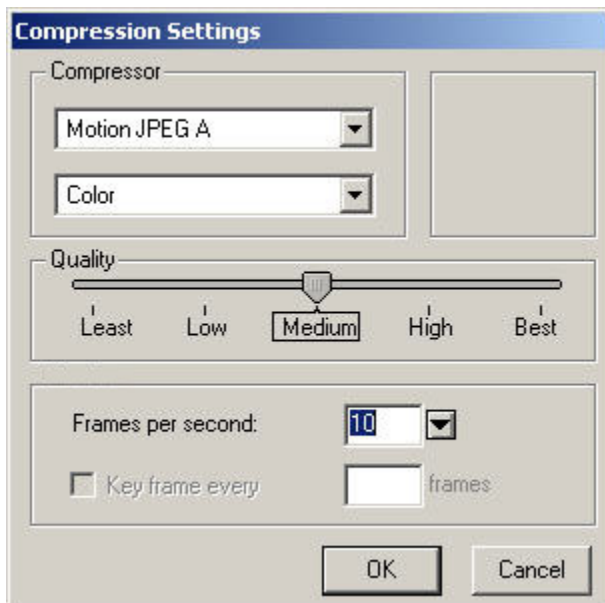
Change the FOV to 35 degrees.

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 you want to store it.

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

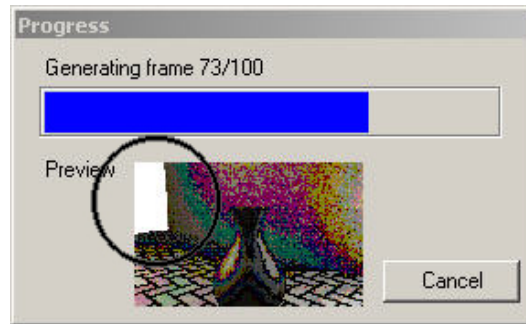
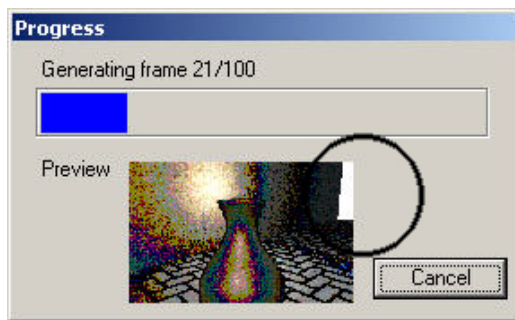


For now we can leave the settings to the default. Since our movie is 100 frames long and the fps is set to 10, our movie will be ten seconds long.

Select **OK** and the program will begin generating the movie.

Neon offers a preview window that allows you to see 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 you see below show areas where the walls do not exist.



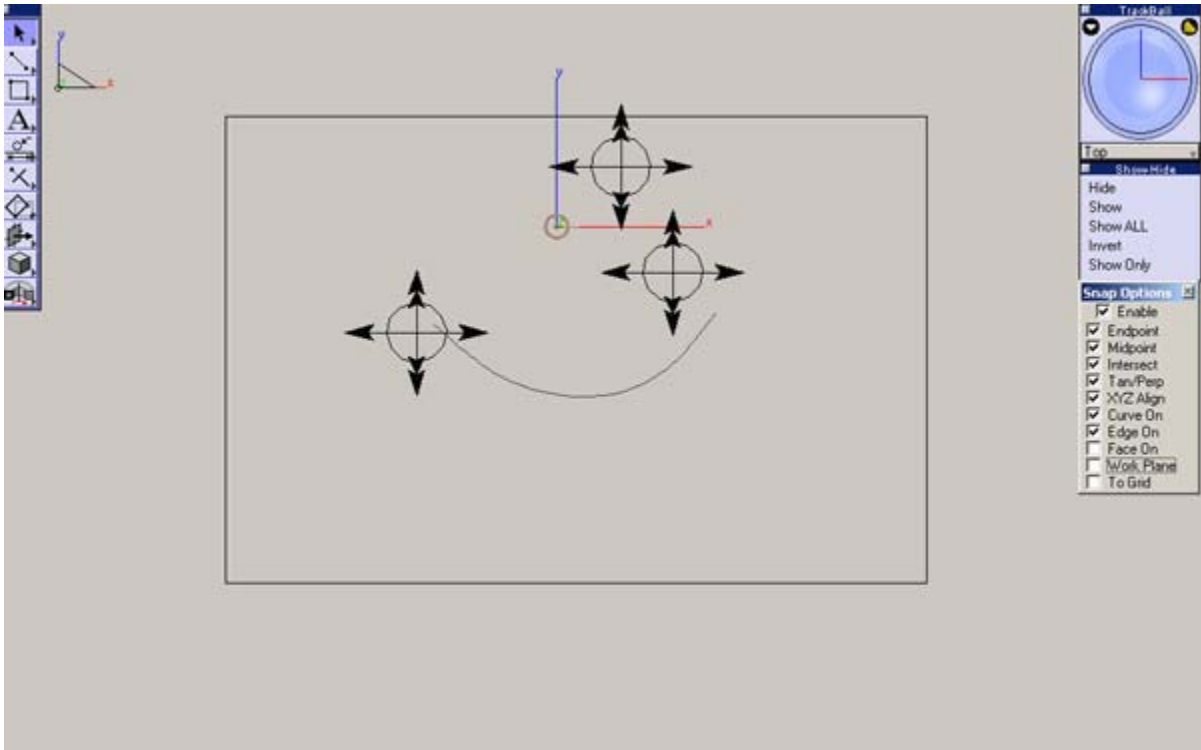
Now we could try to adjust the camera and its setting so that it did not see that area or we could put walls there. The second will be easier to do, so lets do that.

MODIFYING THE SCENE

To get rid of the white spaces in the animation, we will 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



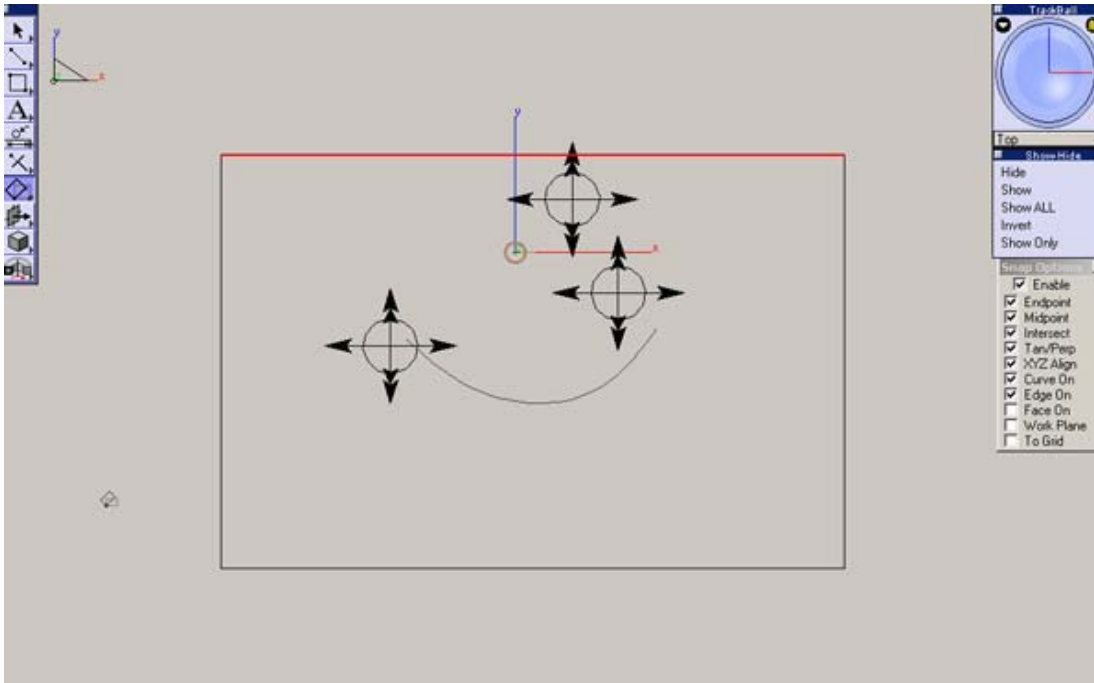
Next, select the **Rotate Object** tool from the Tool Palette.



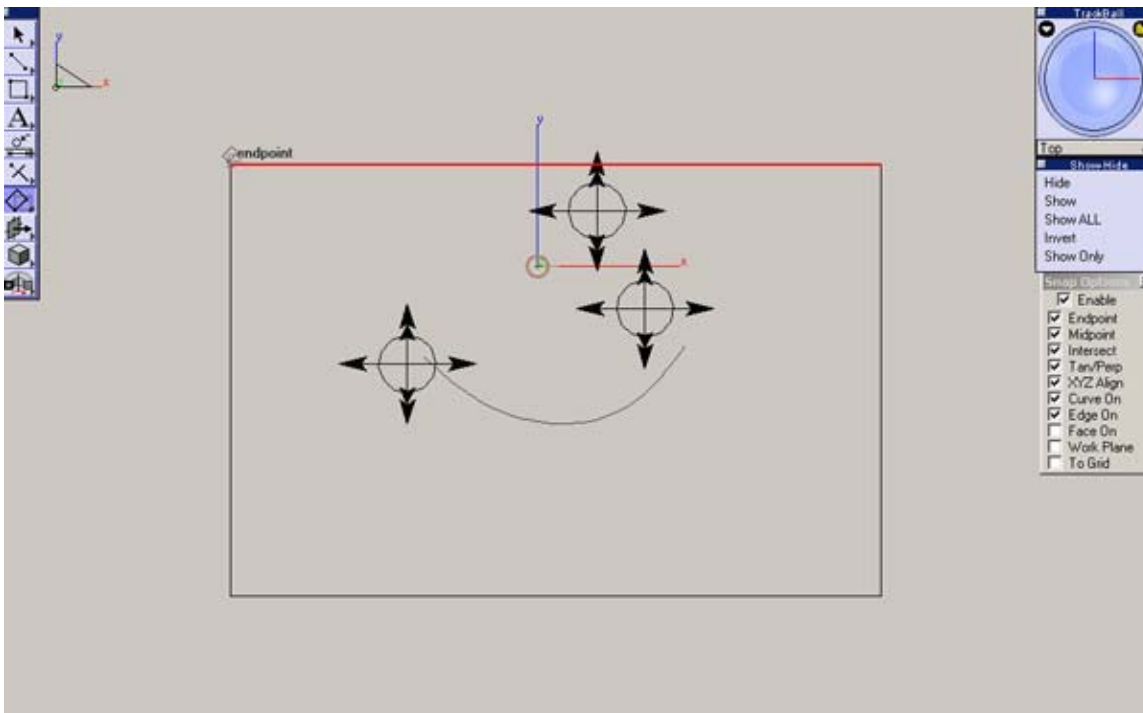
In the Message Line set the Rotation Type to **Rotate by Angle** by selecting rotation method button on the left side. Set the option to the right to **Z-Axis**.



Select the back wall to rotate.



The message line now asks for a point to rotate about. While holding the **Ctrl** key on Windows and the **Option** key on the Macintosh, select the corner of the wall in the upper left hand corner. (Holding the Ctrl key or the Option key will rotate a copy instead of the original.)



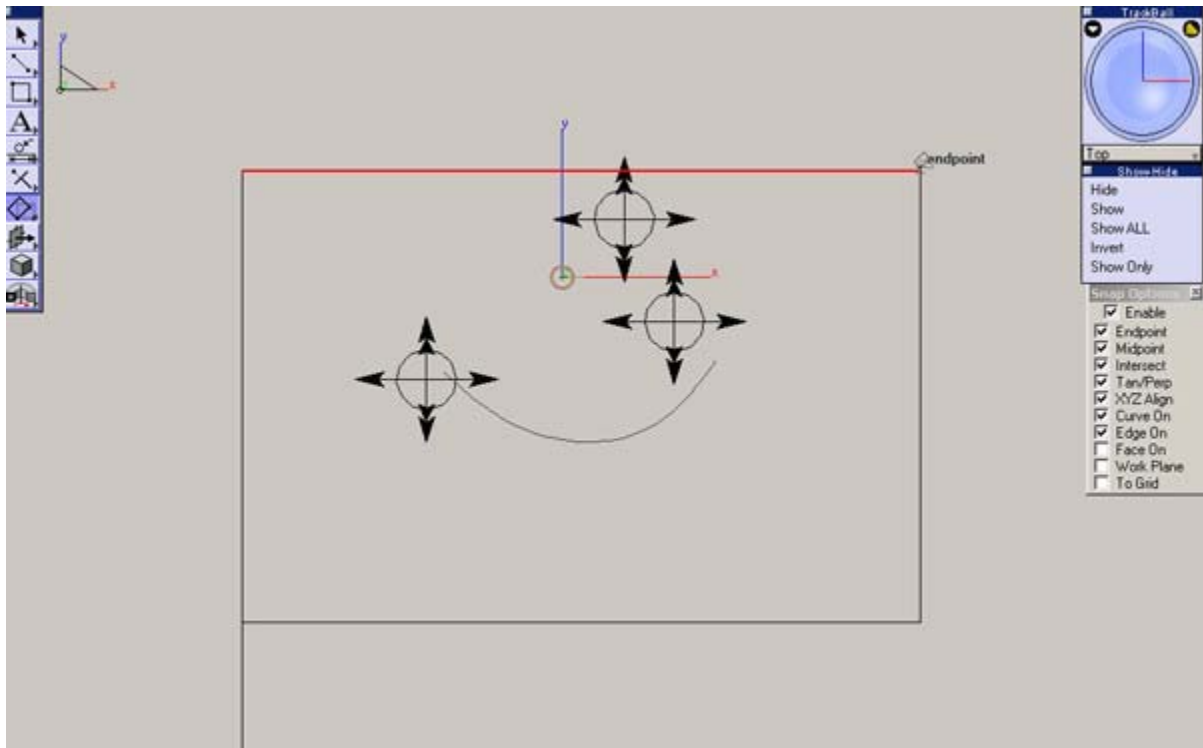
Change the **Angle** value in the Status area to **-90** degrees and press **Enter**.



You will see that the copy that was just created is now the current one selected. We are going to need to deselect that one and reselect the original so that we can rotate it the other way.

While holding the **Shift** key you can deselect the one that is selected and reselect the original.

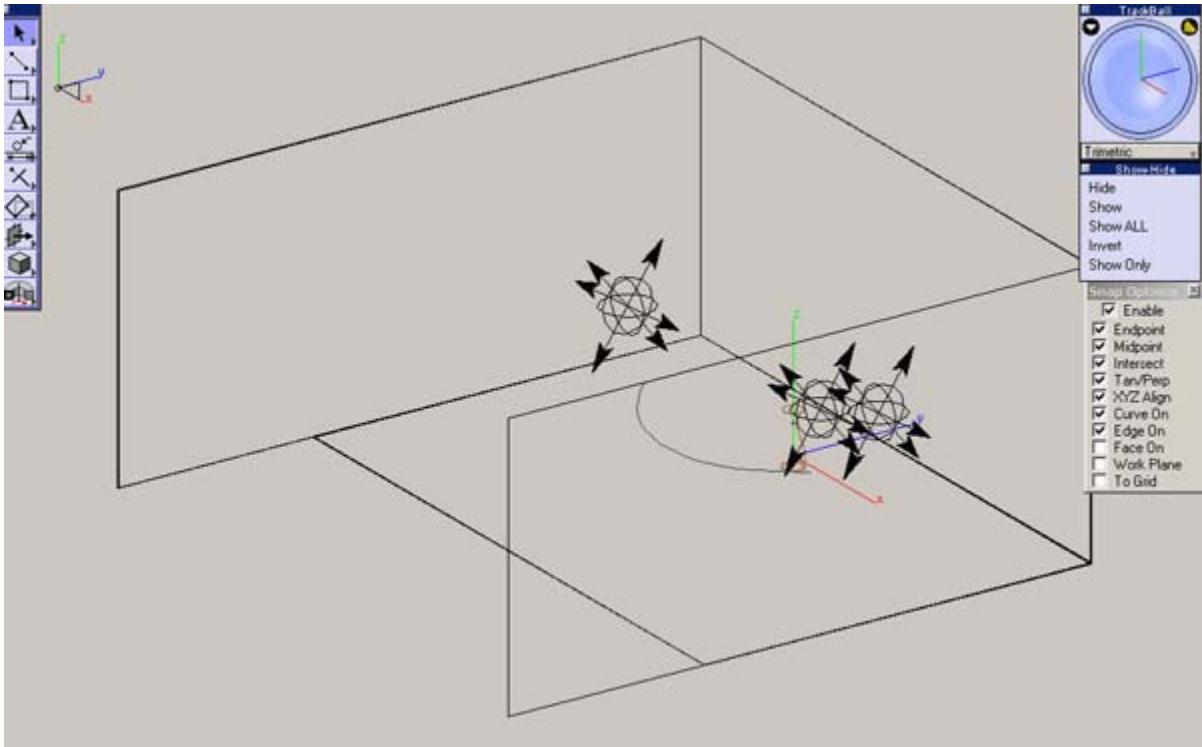
To create the other wall, select the other corner of the back wall while holding the **Ctrl** key on Windows and the **Option** key on Macintosh.



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



We now need to copy the material from the back wall to the new walls. You can see that if you render the image right now the new walls do not have the material that the back wall has. Fortunately, Neon has 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 that we have filled the white spaces that were in our animation, we can create our final animation.

CREATING THE FINAL ANIMATION

To create the final animation we will use the same method that we used before to create the test animation but we will increase certain parameter 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 we created for the camera path and the point that we created for the camera target.

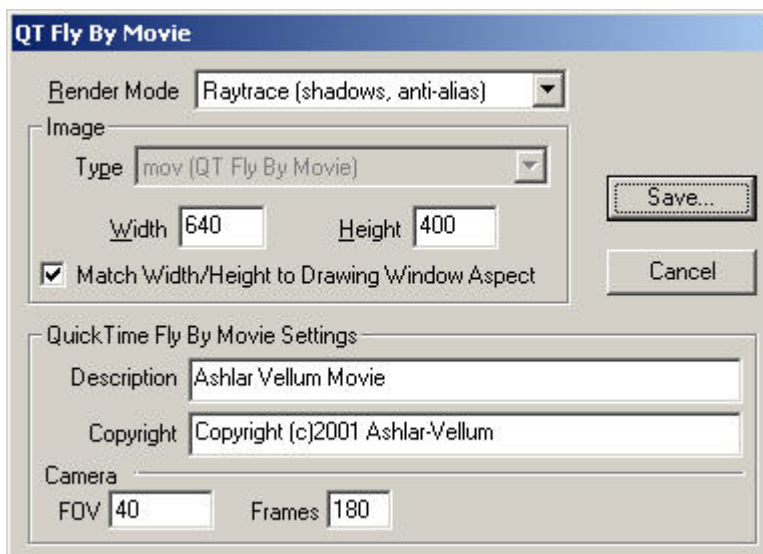
In the QT Fly By dialog we will increase the quality of our movie.

Set the Render Mode to **Raytrace (shadows, anti-alias)**

Preview (no shadows)
Preview (shadows)
Raytrace (no shadows)
Raytrace (shadows)
Raytrace (no shadows, anti-alias)
Raytrace (shadows, anti-alias)

Set the size to 640 by 400 pixels.

In the first animation I noticed that I was not able to see all of the vase during the animation so I increased the FOV to 40 degrees. I have also increased the number of frames to 180.



Select Save.

Choose a file name and a destination for the movie.

In the next dialog I have left the compression at Motion JPEG A, but I have increased the quality to **Best**.

I have also increased the number of fps to 15. This will give the animation a smoother motion.

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 your computer. I suggest that you do this at the end of the day if this is your work machine or before you go 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 you have completed these settings, select **OK**.

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