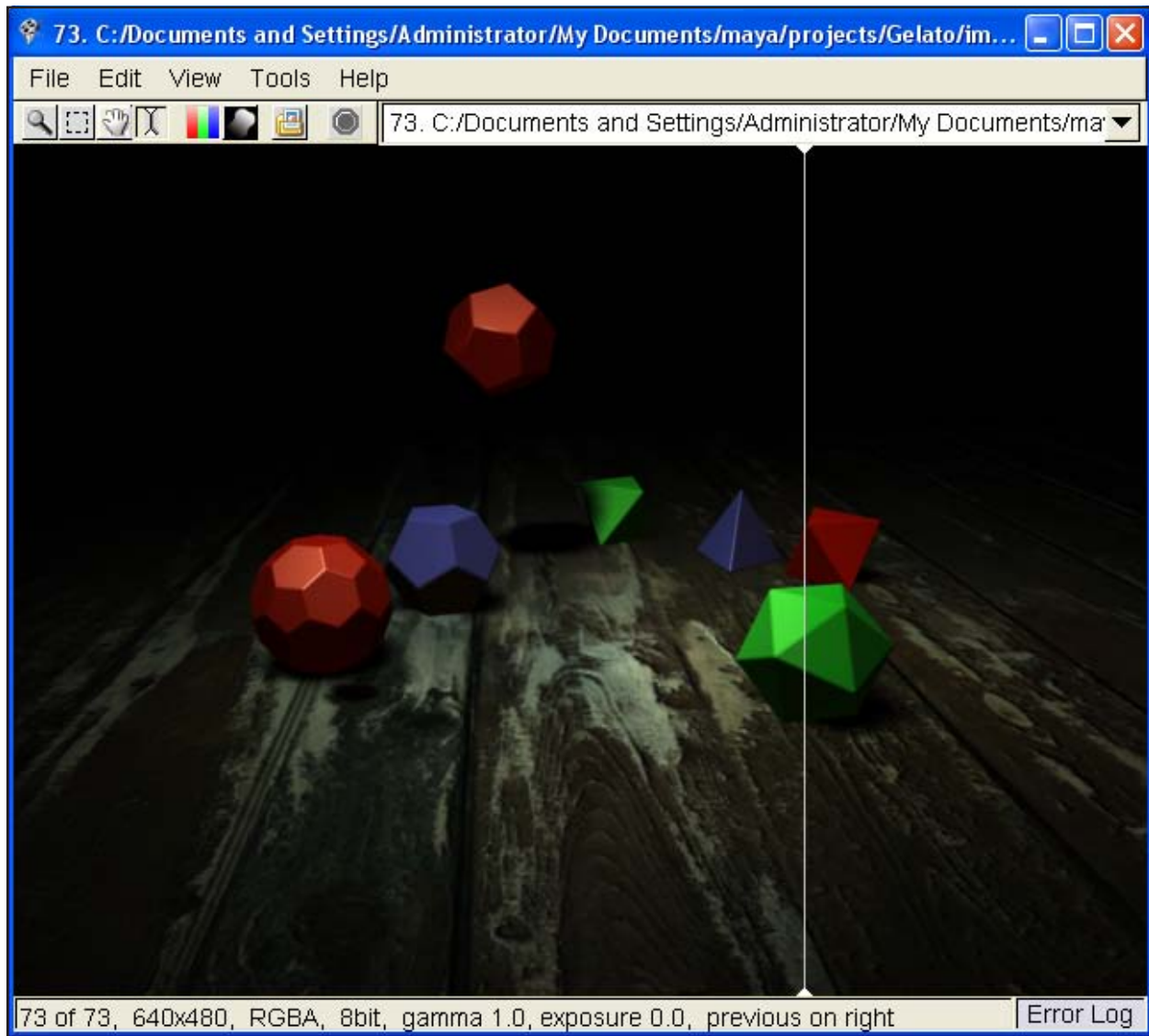
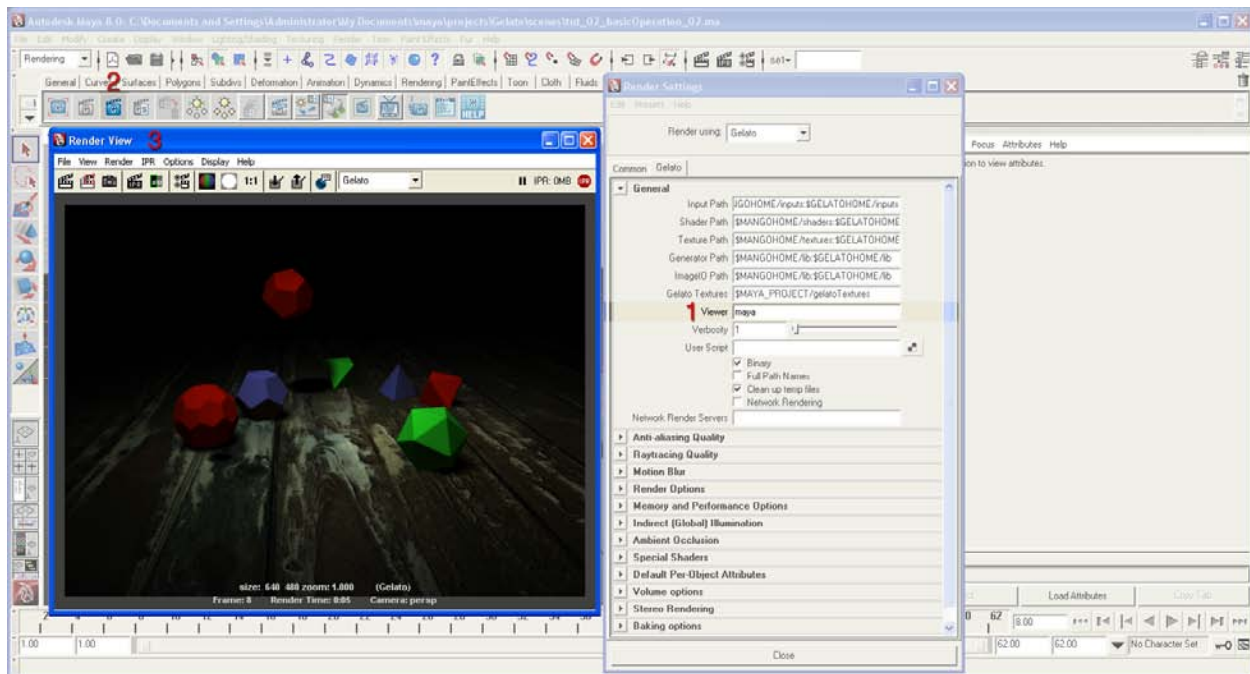


2.2 GELATO'S IMAGE VIEWER



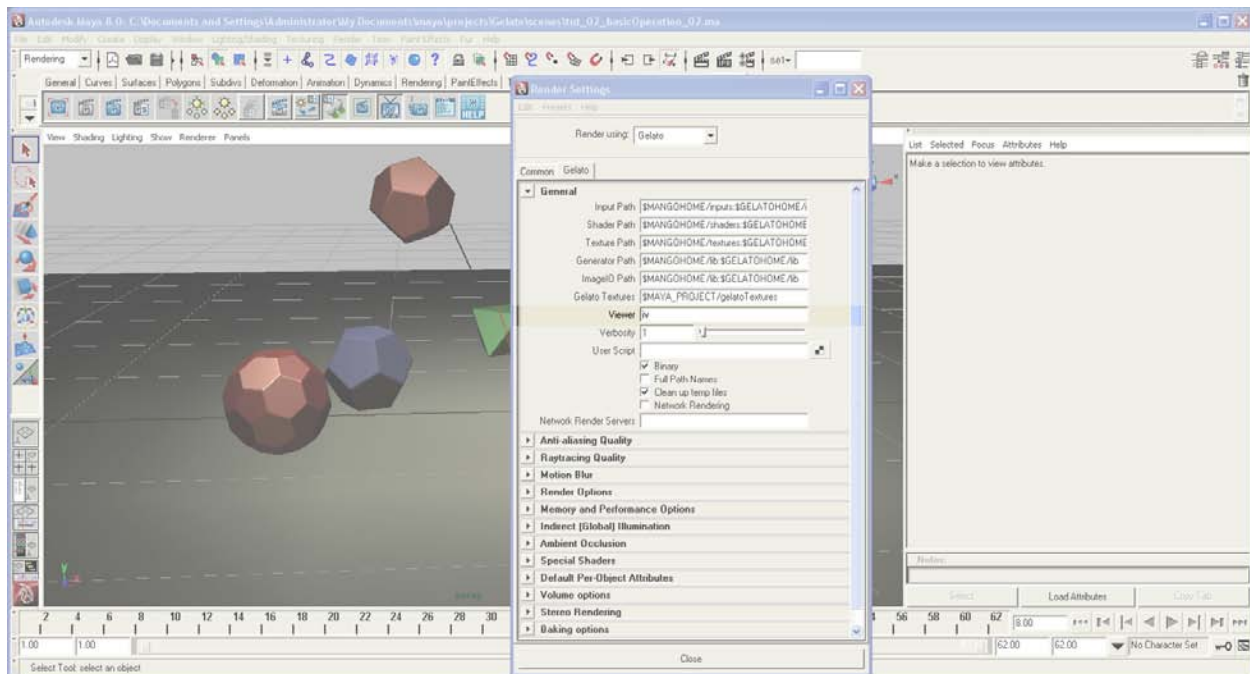
This is the companion to the movie, tut_02_02, part 2 of the 3 NVIDIA® Gelato® Basic Tutorials.

In the previous tutorial, we saw that if we wish to partner the familiar Maya RenderView with Gelato, it's an easy thing to do. In this tutorial, we will explore the advantages of using Gelato's own version of the render window, the Image Viewer, or "iv." Gelato's Image Viewer allows us to continue to work within Maya while a render is taking place, it allows us to compare rendered images directly to each other, and it doesn't confine us to viewing only our rendered images. We can not only open other images, including HDRIs, with the Image Viewer, but we can modify their gamma and exposure.

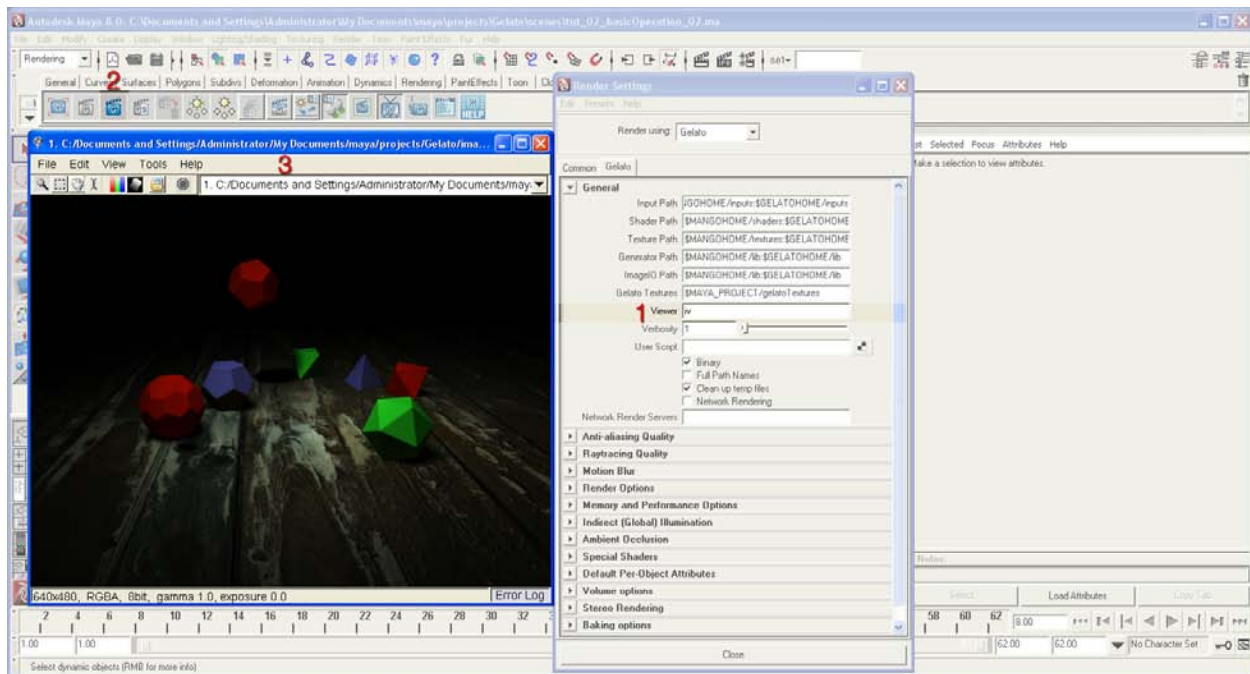


- If you still have the previous tutorial file open, you may just continue with it; if not, open “tut_02_02.”
- Open the Render Settings dialog.
- Render.

Previously we had the Viewer set to “maya,” so when render now, we bring up Maya’s Render View.



- Change “Viewer” to “iv”.

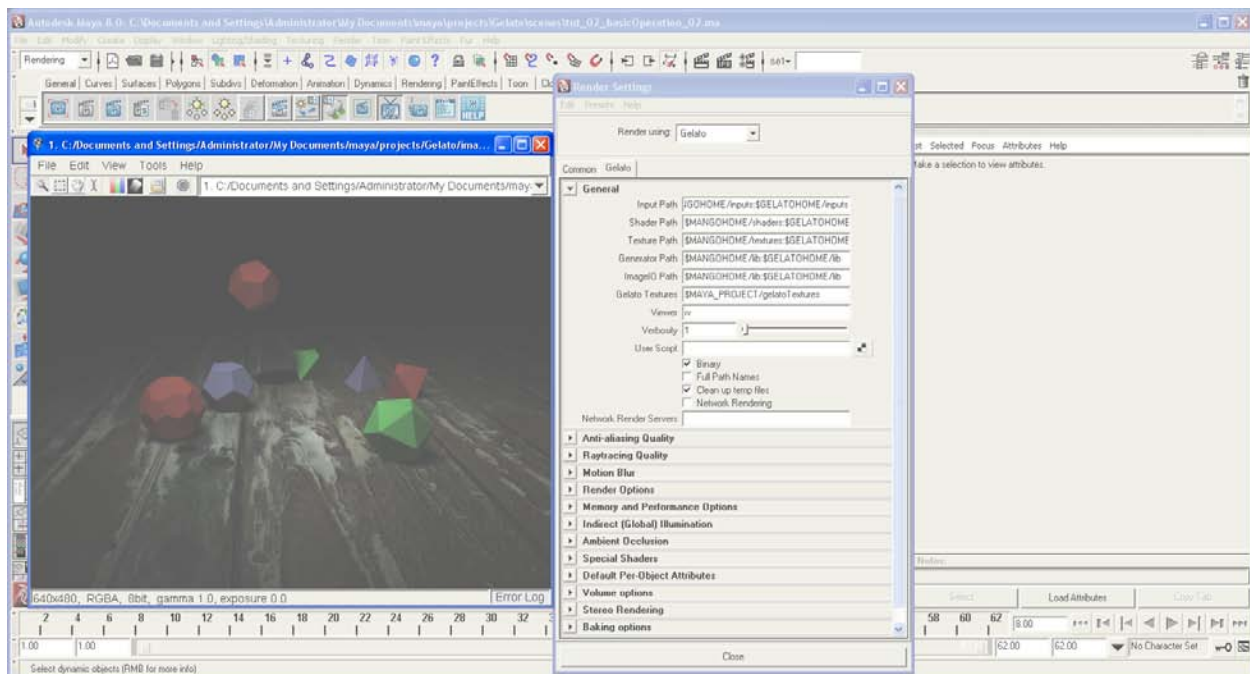


- Gelato Render.

The render now occurs in Gelato's Image Viewer.

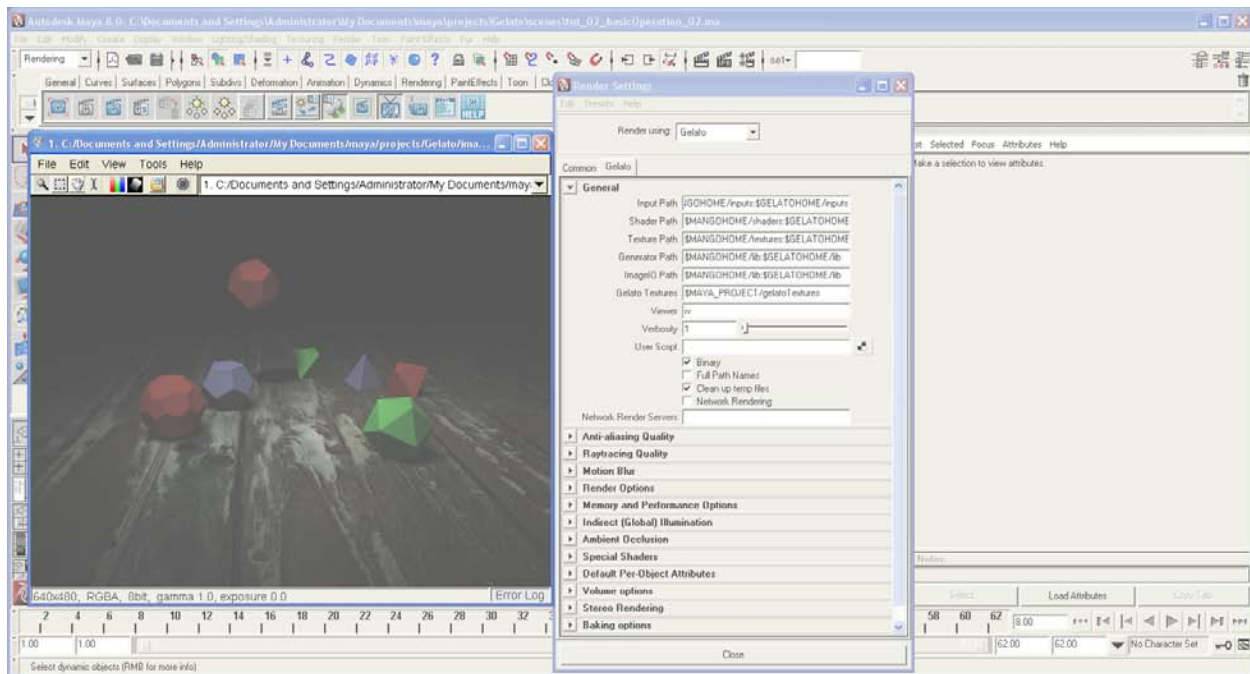
The first thing we notice after beginning this render is that while the image renders, we can still go into Maya and work since the image renders in the background. With a Maya render, the render takes over and doesn't permit us to work while the render is underway.

This is one of many valuable features.



The render is complete, so let's take a look at this iv...

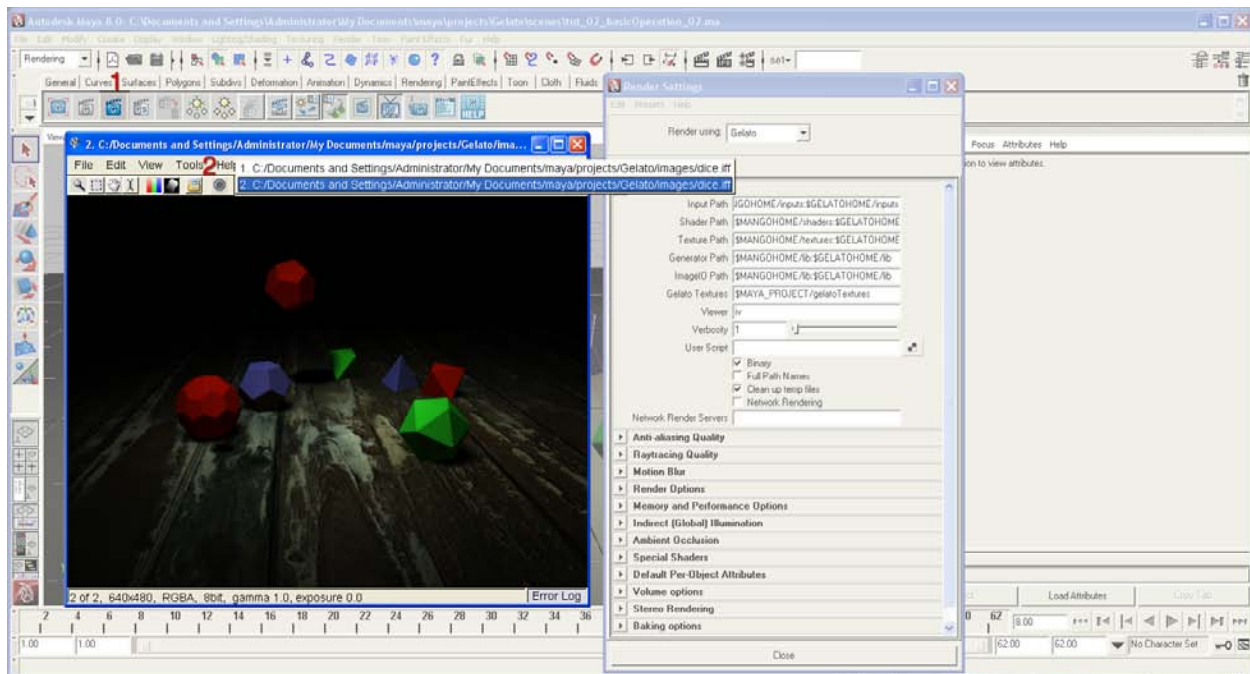
At the top of the Gelato Image Viewer, we see the path of the current render.



Below the render's path is the File Menu, then the Button Bar.

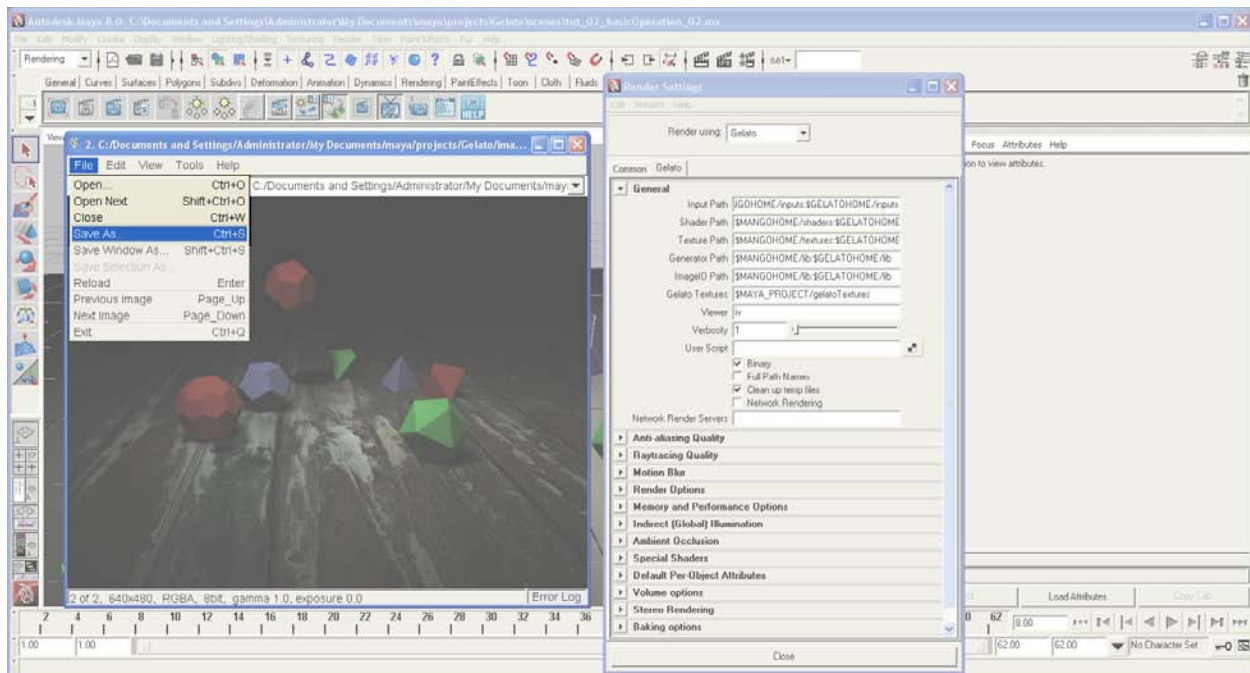


There is a drop-down menu to the right of the Button Bar which shows the different renders. Each time we render, the image is stored in this list; this field allows us to select which image is being viewed in the Image Viewer.



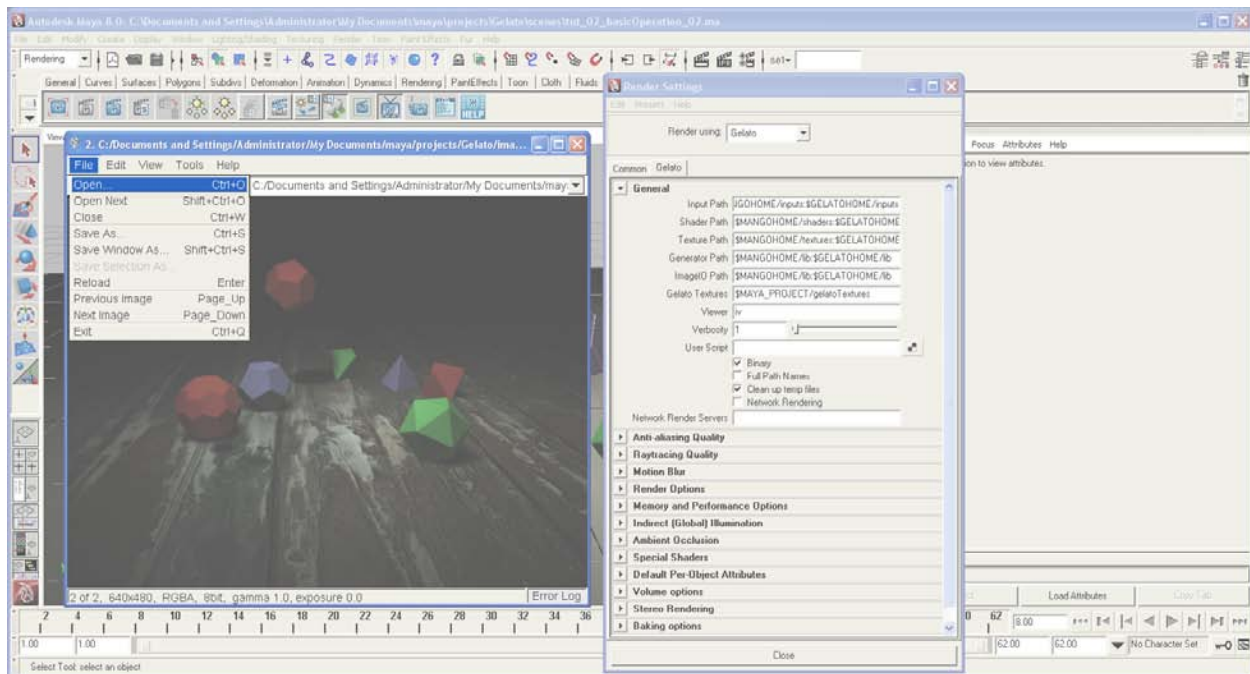
- Gelato Render.

If we go back up to the drop-down , we'll see that there is now another render listed there.



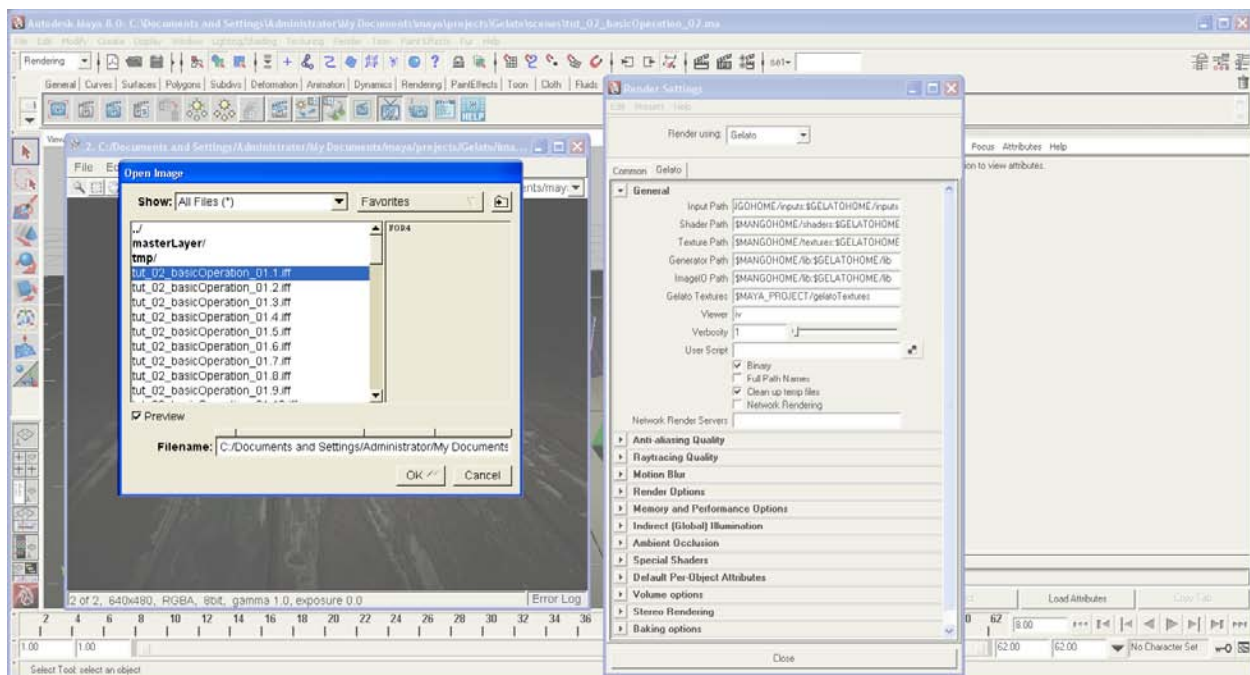
Any of the images in the stack can be saved.

- Select an image.
- Image Viewer > File > Save As.



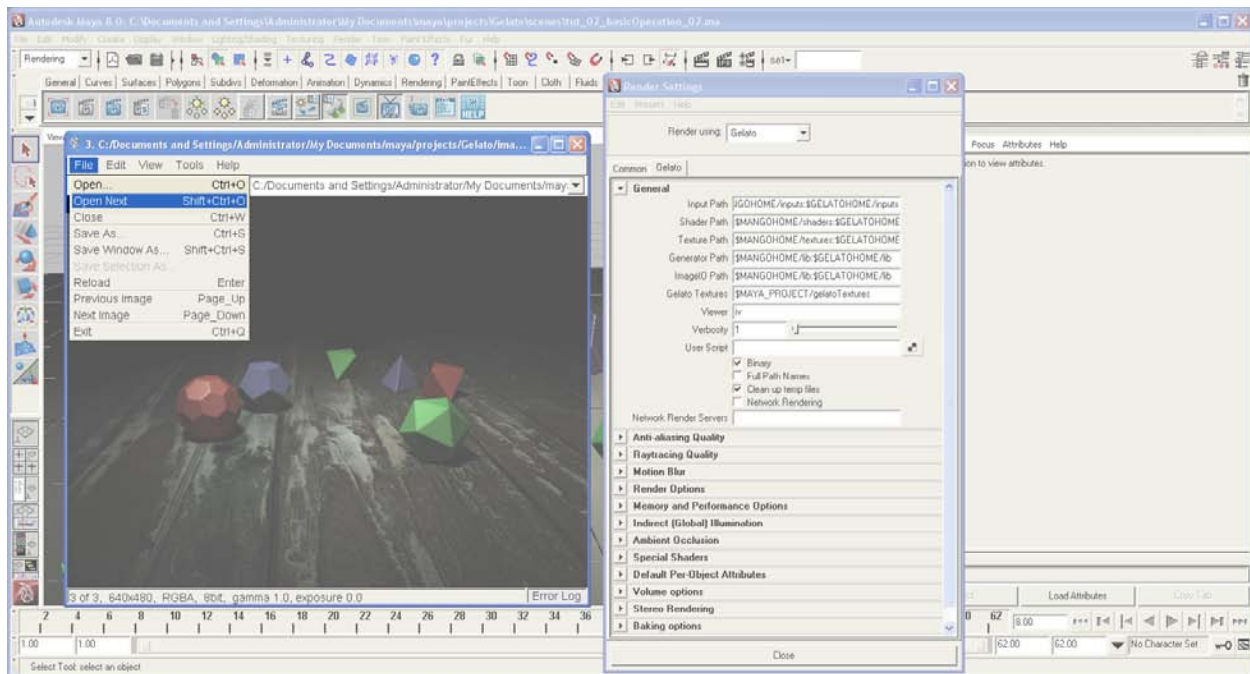
We can also open an image sequence.

- Image Viewer > File > Open.



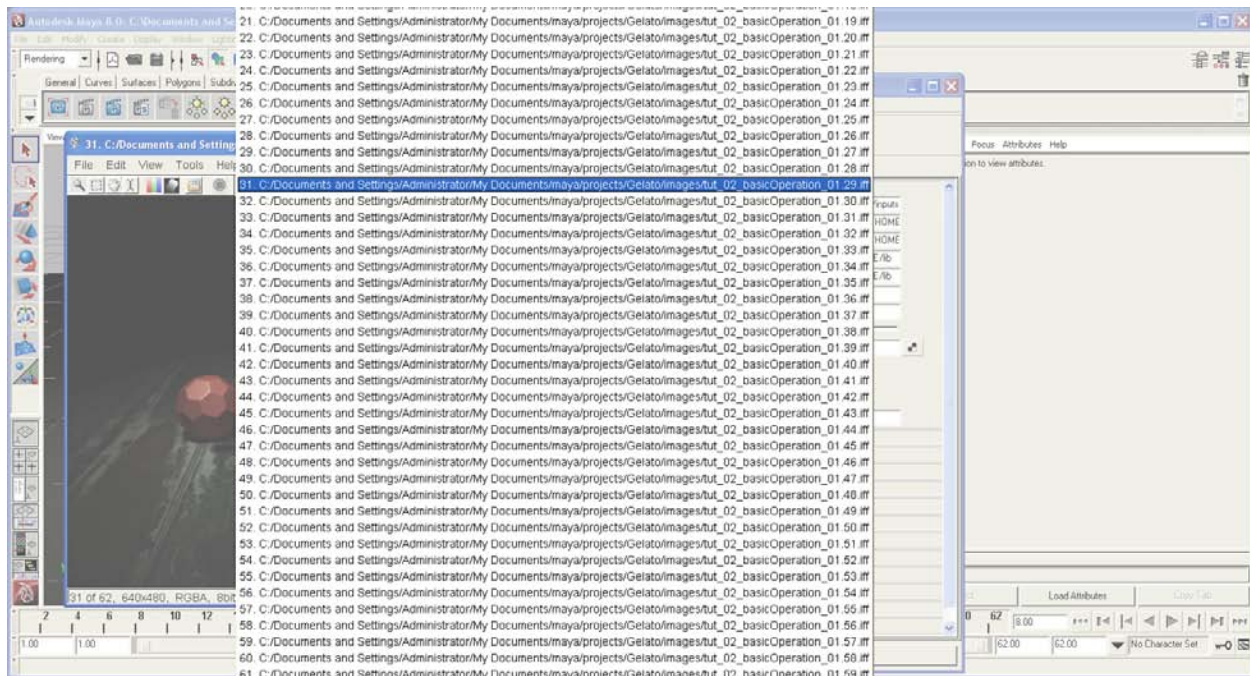
- Navigate to the image sequence we rendered out in tut_02_01.
- Select the first image of the sequence.
- **[CLK]** OK.

This will load that image into the iv.

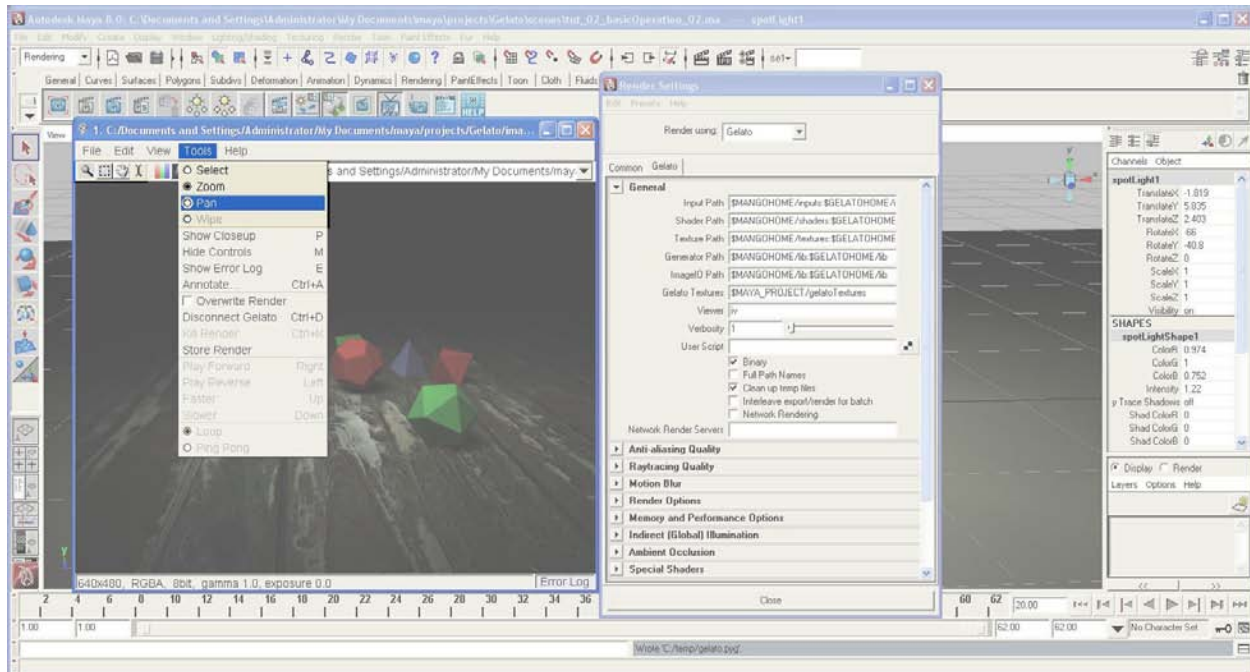


- Image Viewer > File > Open Next.

The next image of the sequence loads into the iv.



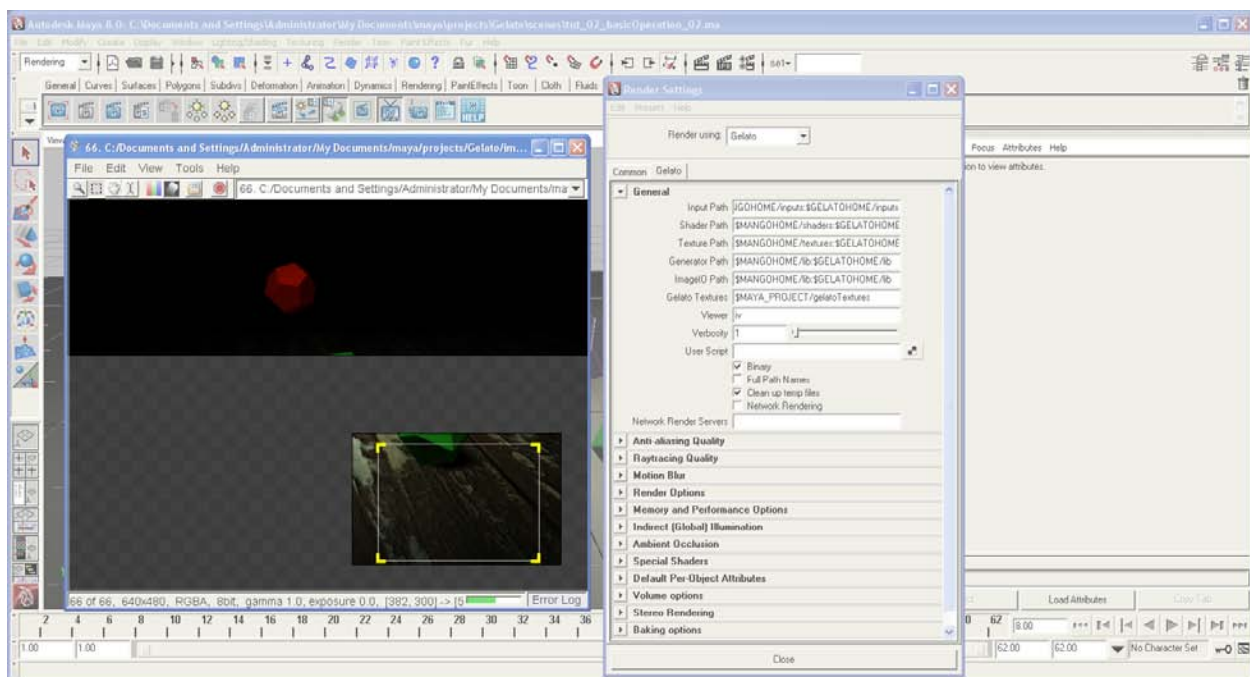
- Using the shortcut for Open Next, **[SHIFT+CTRL+O]** repeatedly to load in more of the sequence.
- Notice that the stack in the documents field has grown to show all the new additions.



The icons in the Button Bar contain shortcuts to things found in the File Menu.

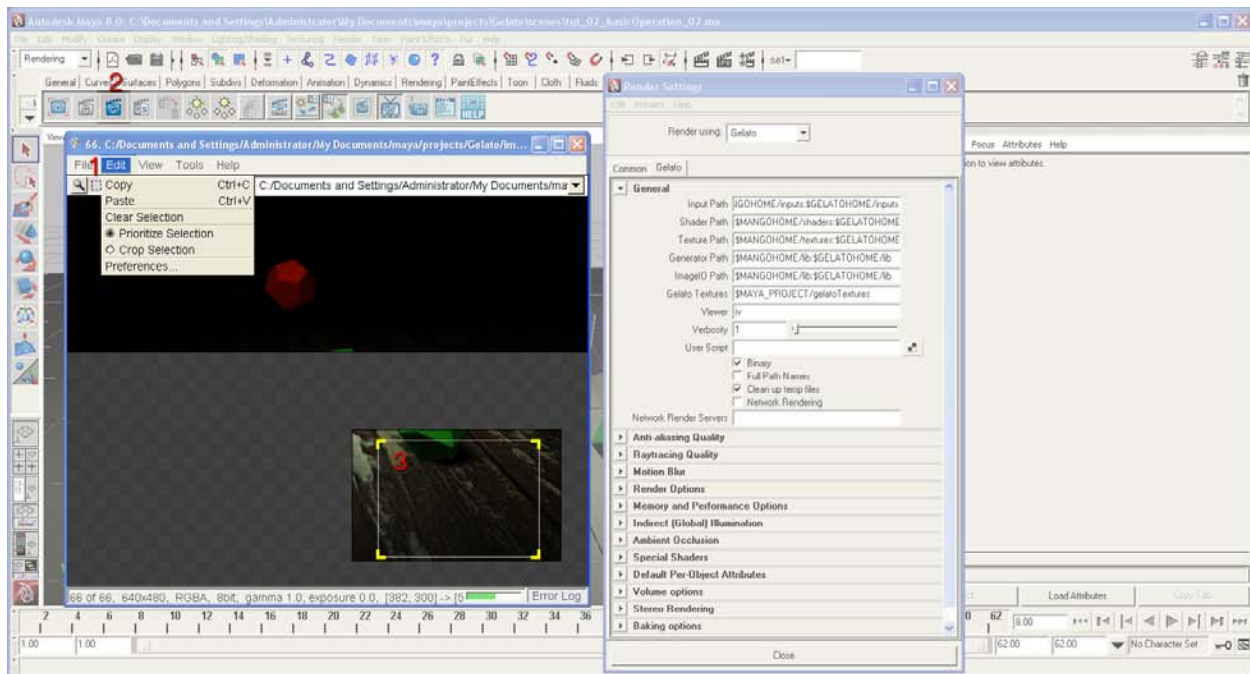
The first 4 buttons are Zoom, Selection, Pan and Wipe. These can all be found under Tools.

Wipe will be greyed out until more than one render has been performed.

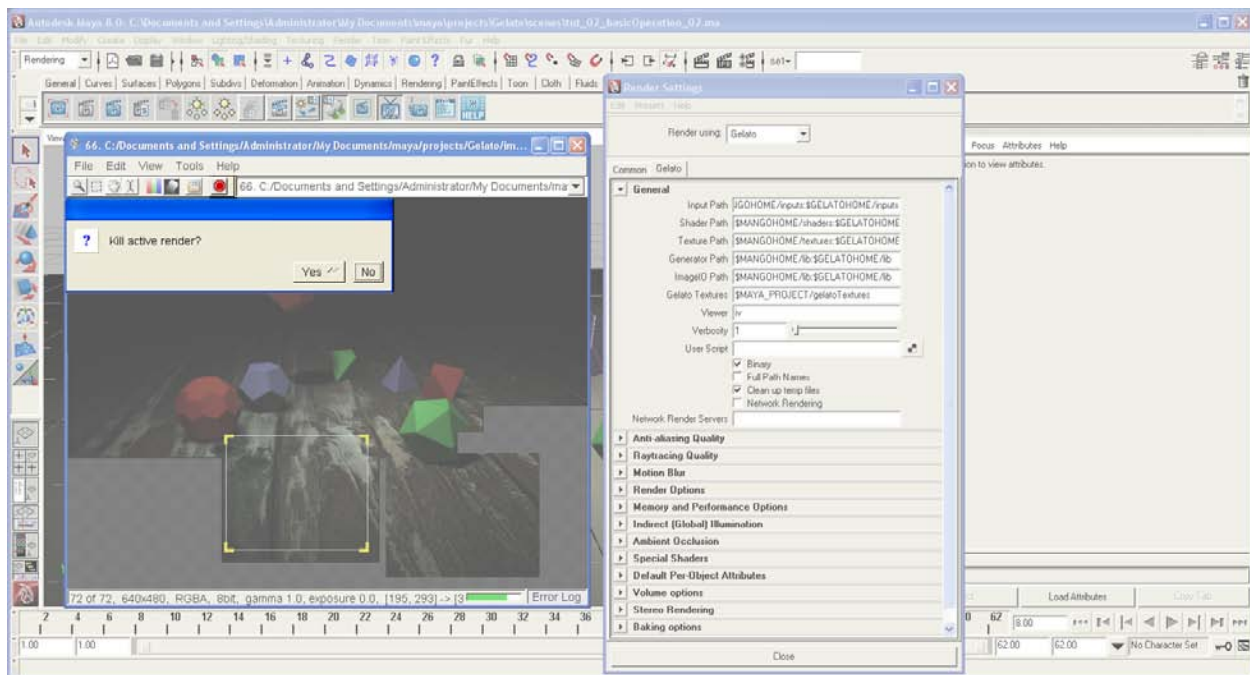


The first tool listed in the Tool menu is the second button in the Button Bar. The Selection tool allows us to prioritize which part(s) of an image get rendered first.

The Selection tool has two methods of prioritizing; the method can be set in the Edit Menu.

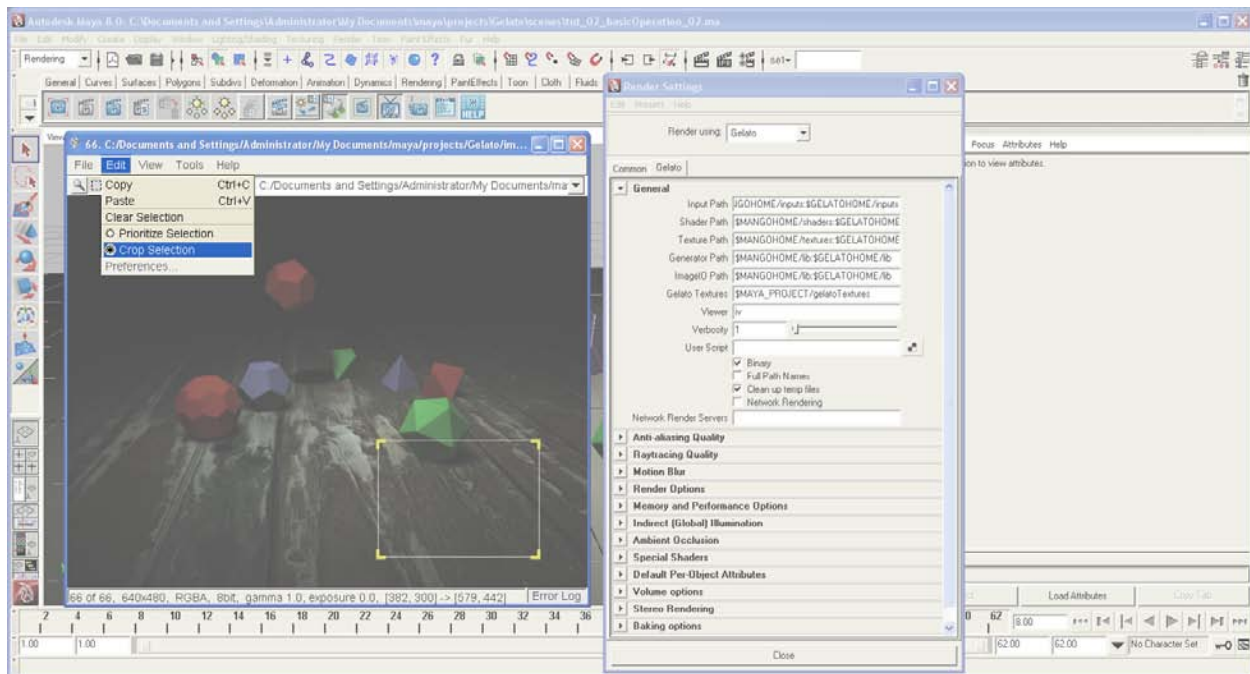


- **[CLK]** the Selection tool, the 2nd button from the left in the iv's button bar to make it the tool in play. Looking in the Edit menu, we can see that this defaults to Prioritize Selection.
- Gelato Render.
- As the render is underway, **[DRG]** a box somewhere in the window.
- Notice that the render then finishes within this box first before it continues with the rest of the scene.

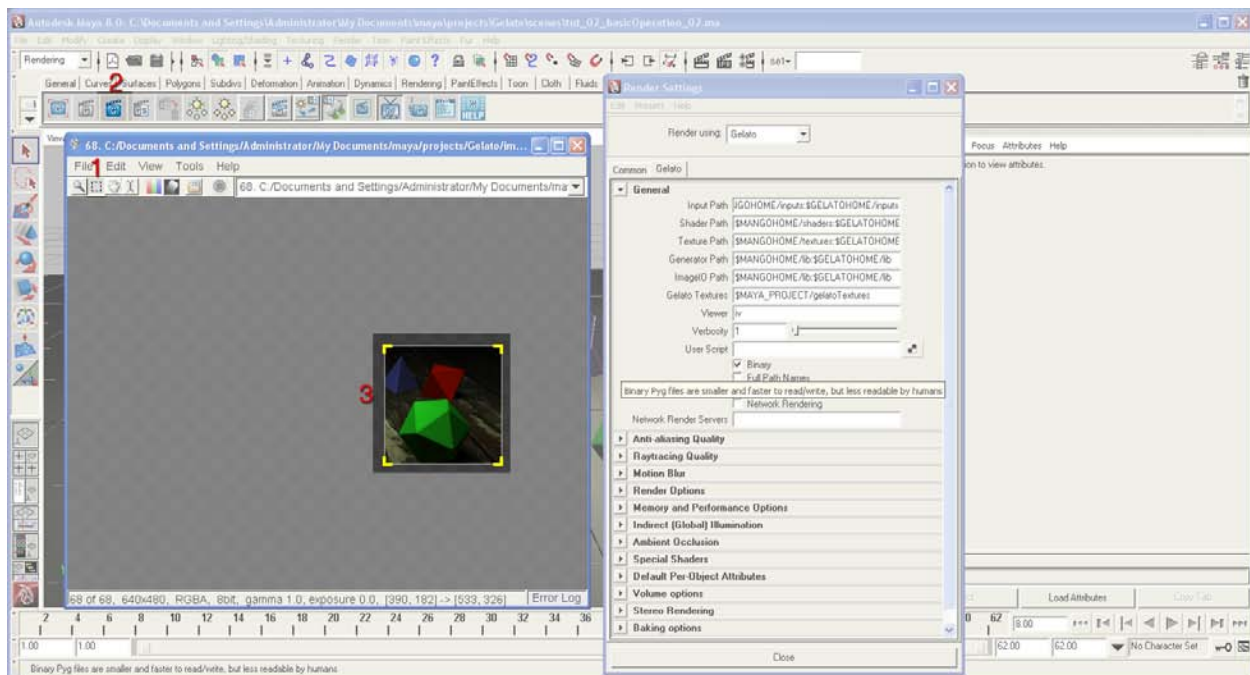


While a render is underway, we can continue to prioritize different parts of the image and if for any reason we feel that something isn't working, we can simply terminate the render.

- **[CLK]** the Stop button, the last icon in the Button Bar to stop a render in progress.



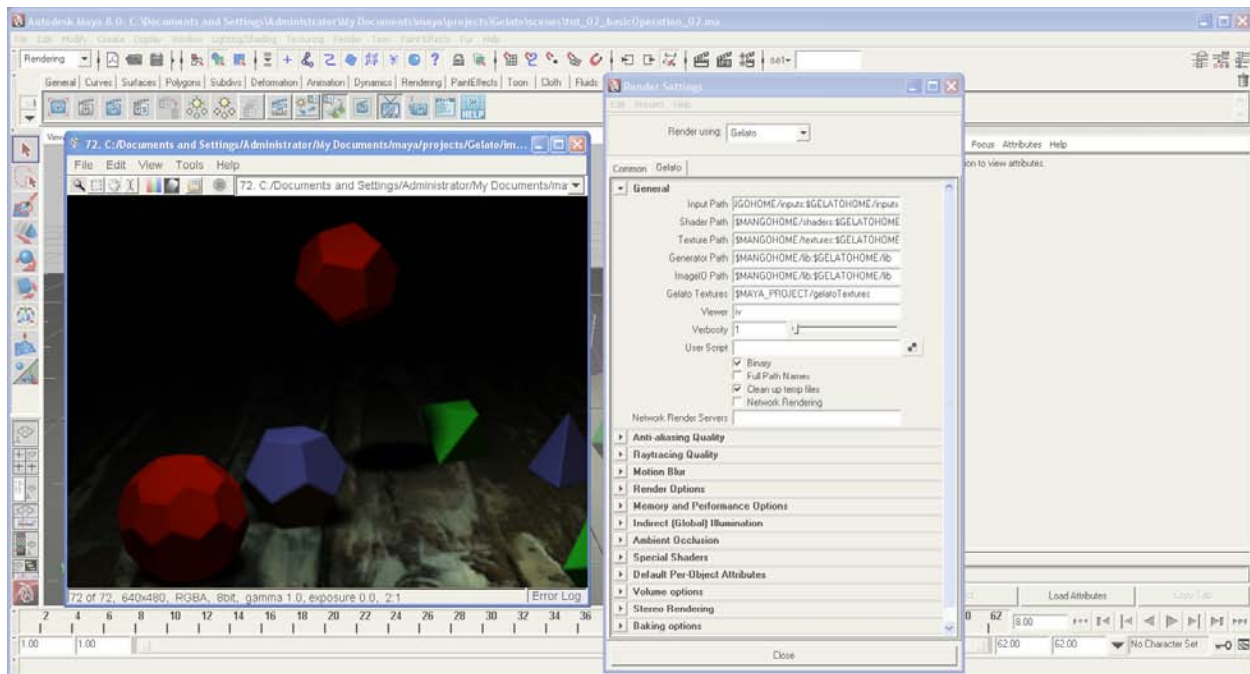
- Image Viewer > Edit > Crop Selection



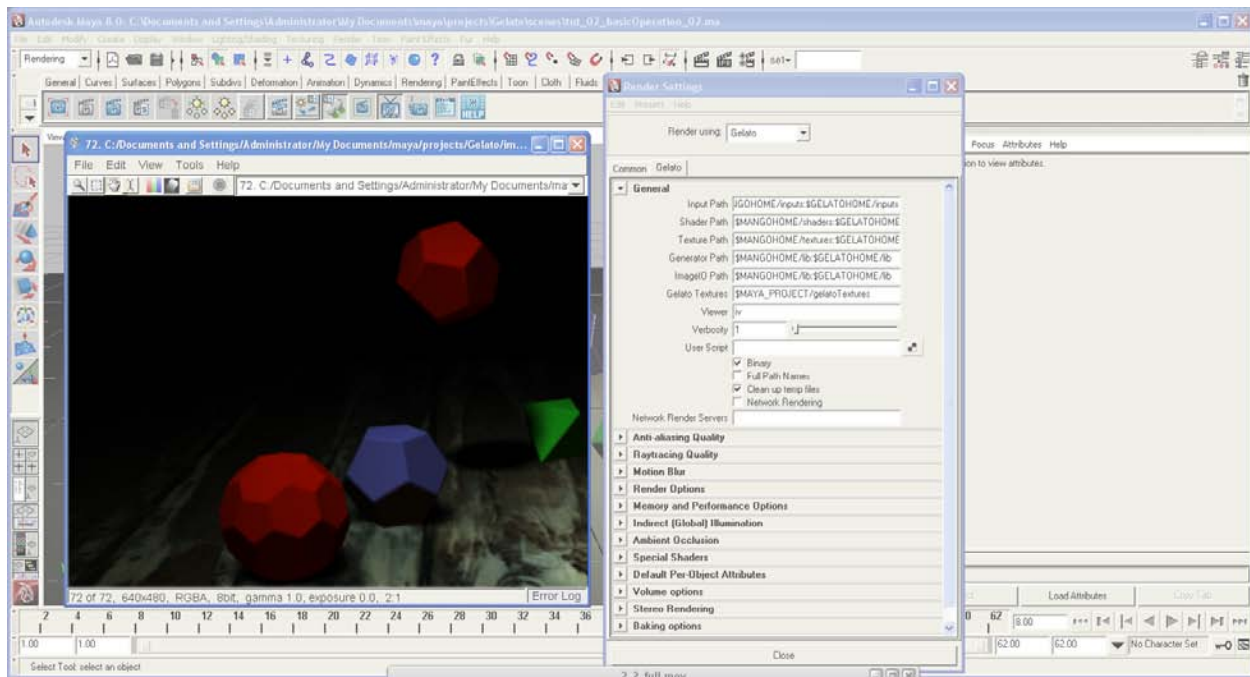
- The Selection tool should still be activated.
- Gelato Render.
- **[DRG]** a box somewhere in the window.

This time, the render happens only within the box.

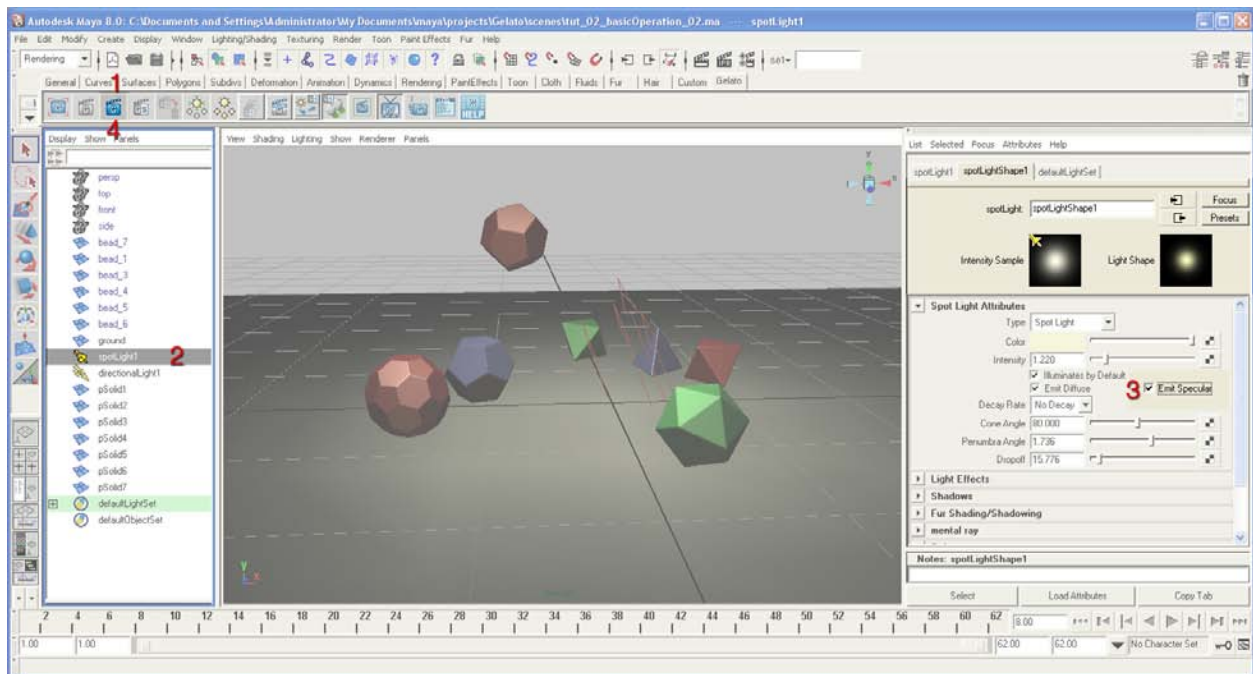
Because of its greater flexibility, the Prioritize Selection is generally considered the most practical, but this will depend on individual preferences and needs.



Using the Zoom tool, the first item in the Button Bar, and using the left and right mouse buttons, we can zoom in and out of the rendered image: **[LMB]** for zoom in; **[RMB]** for zoom out.

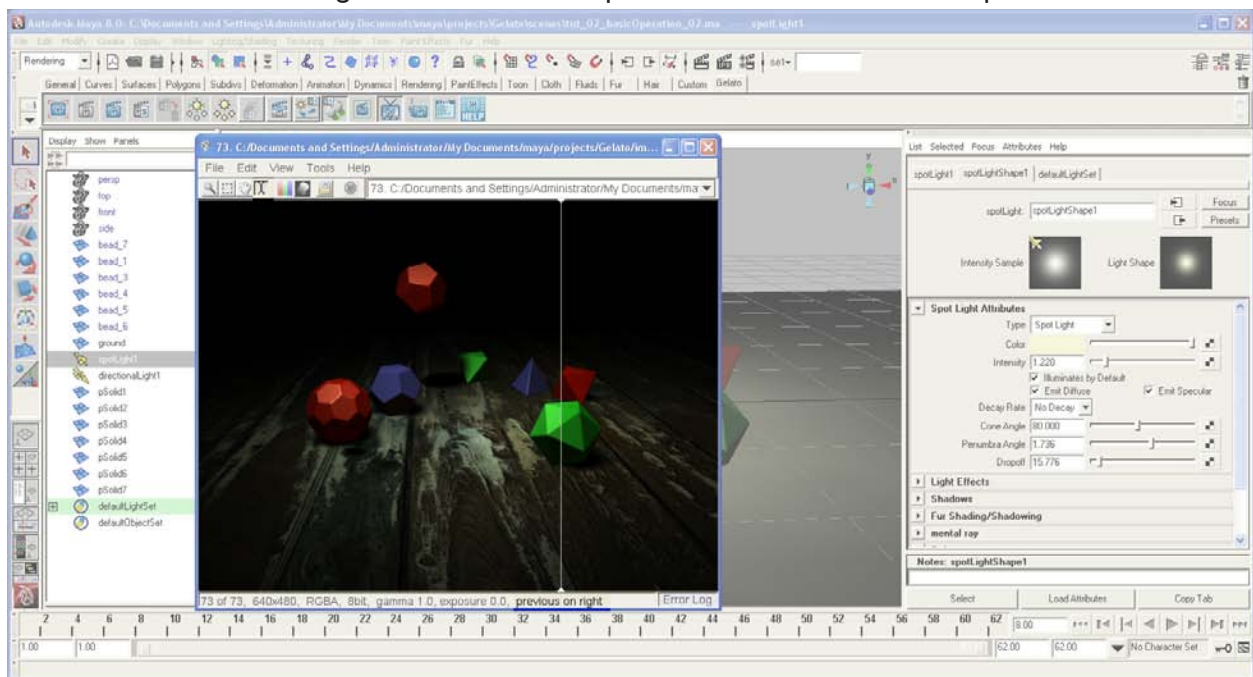


Using the Pan button, third from the left, will allow us to pan around the image.



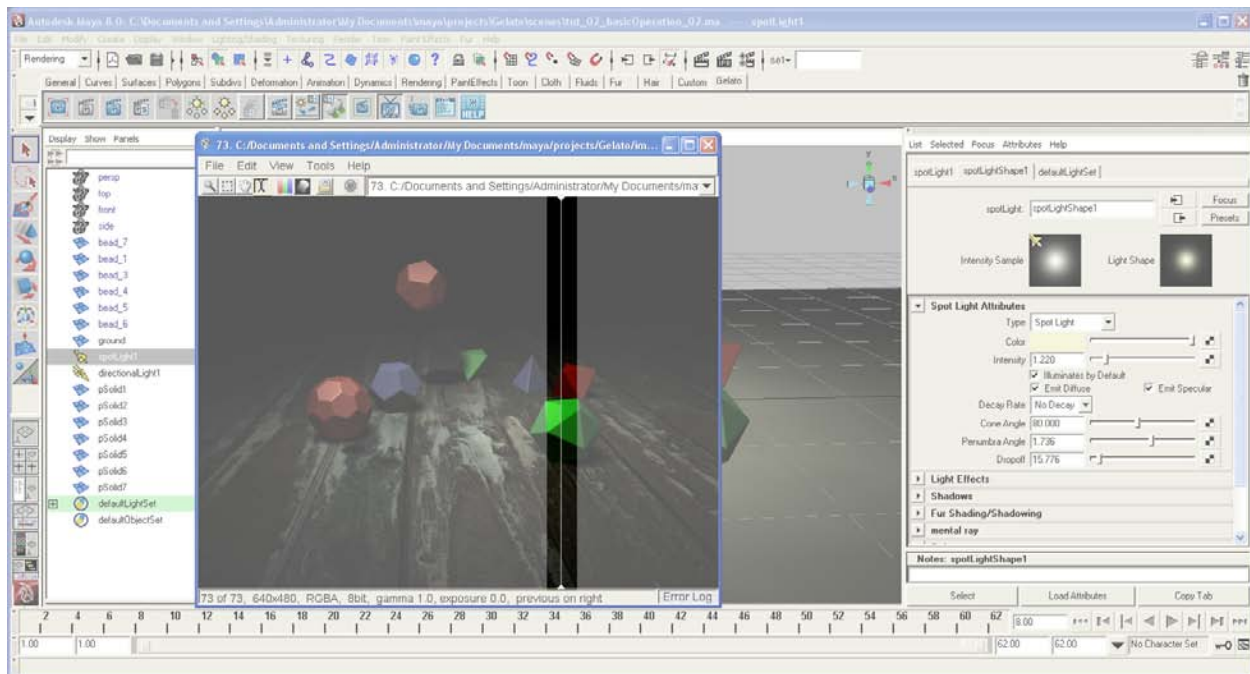
- Gelato Render.
- Open the Outliner.
- In the Outliner, select “spotLight1.”
- Spotlight Attribute Editor > enable Emit Specular.
- Gelato Render.

Now we have rendered images with and without specular back to back. Let’s compare them...



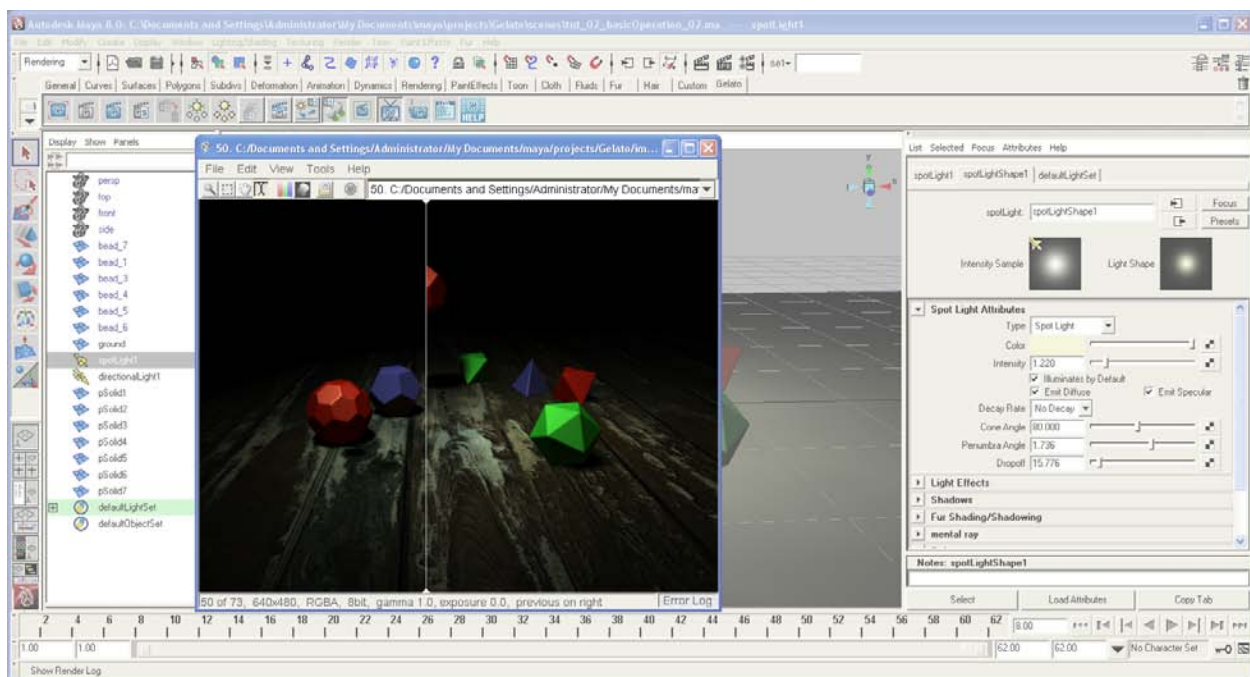
- **[CLK]** on the Wipe tool, the 4th icon from the left in the Button Bar.

A white line appears in the image; looking at the text at the bottom of the Image Viewer, we see that it says “previous on right.”



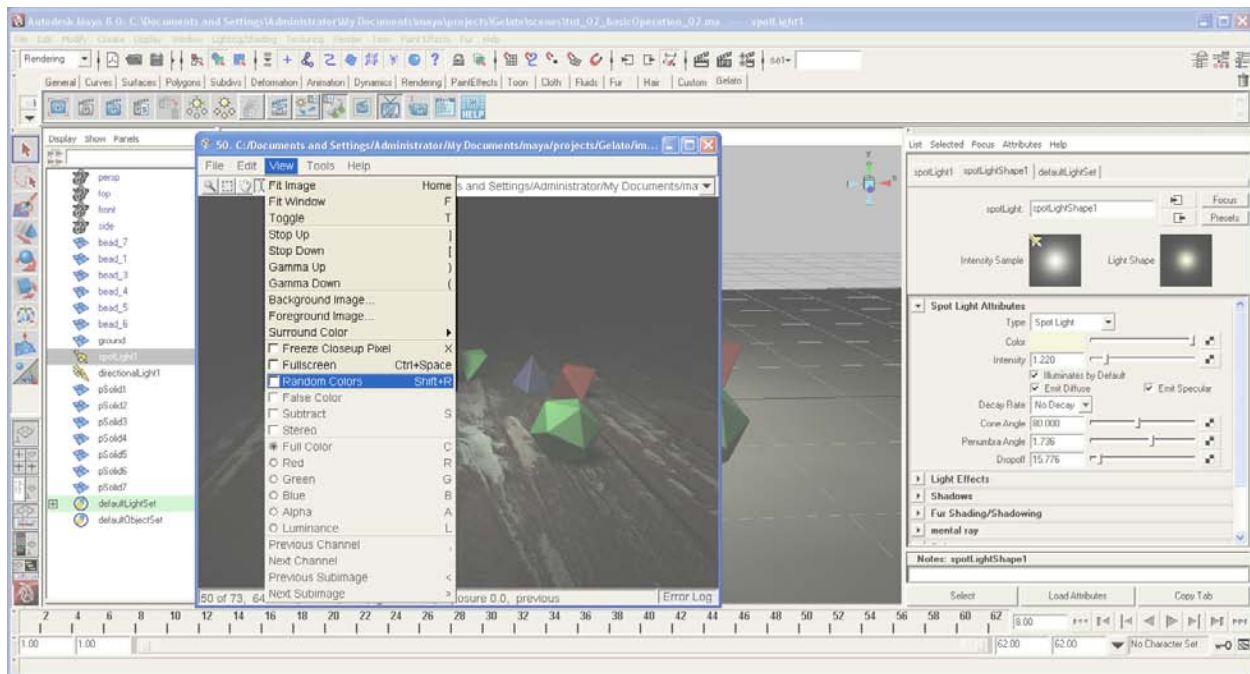
- **[DRG]** the white line back and forth across the image.

As the line moves to the left, the previous render is revealed, allowing us to compare the image with and without specular highlights.



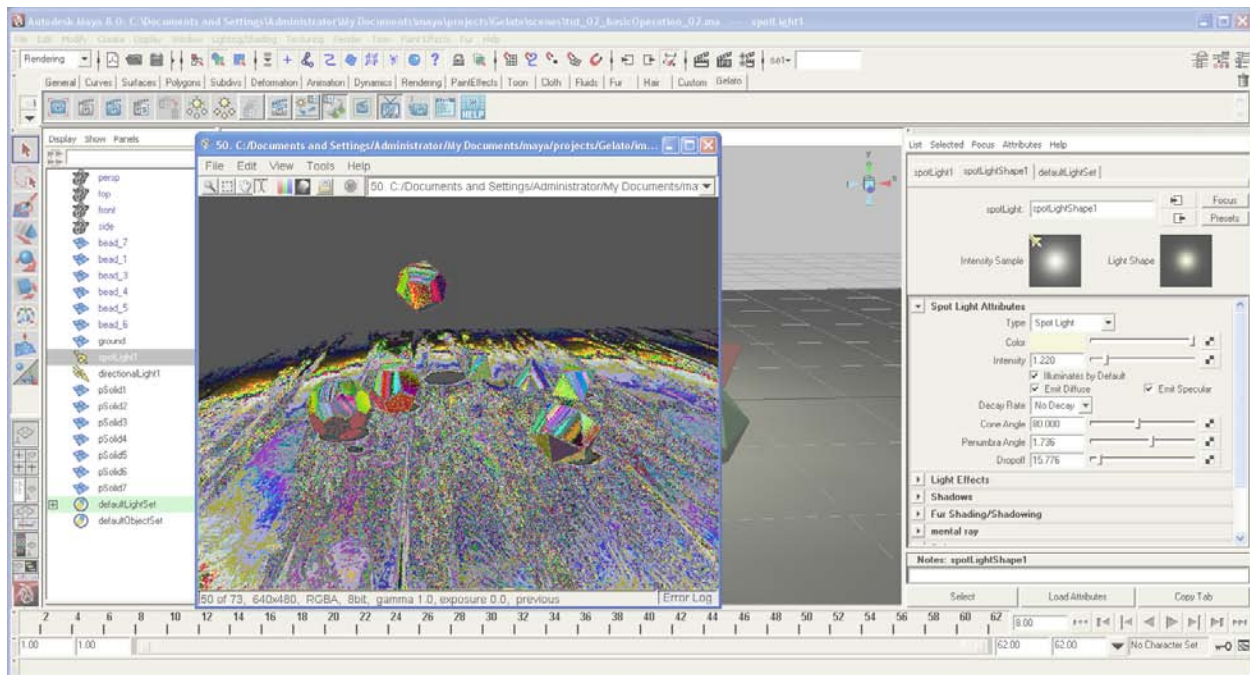
- In the Documents field of the button bar, choose a frame quite a ways away from the current one - where it's likely that the geometry has moved in the animation.
- Use the Wipe tool to compare this image to the most current render.

We can compare renders anywhere in the stack. When we select a render in the Documents field, we can compare it with the item which was previously selected in the Documents field.



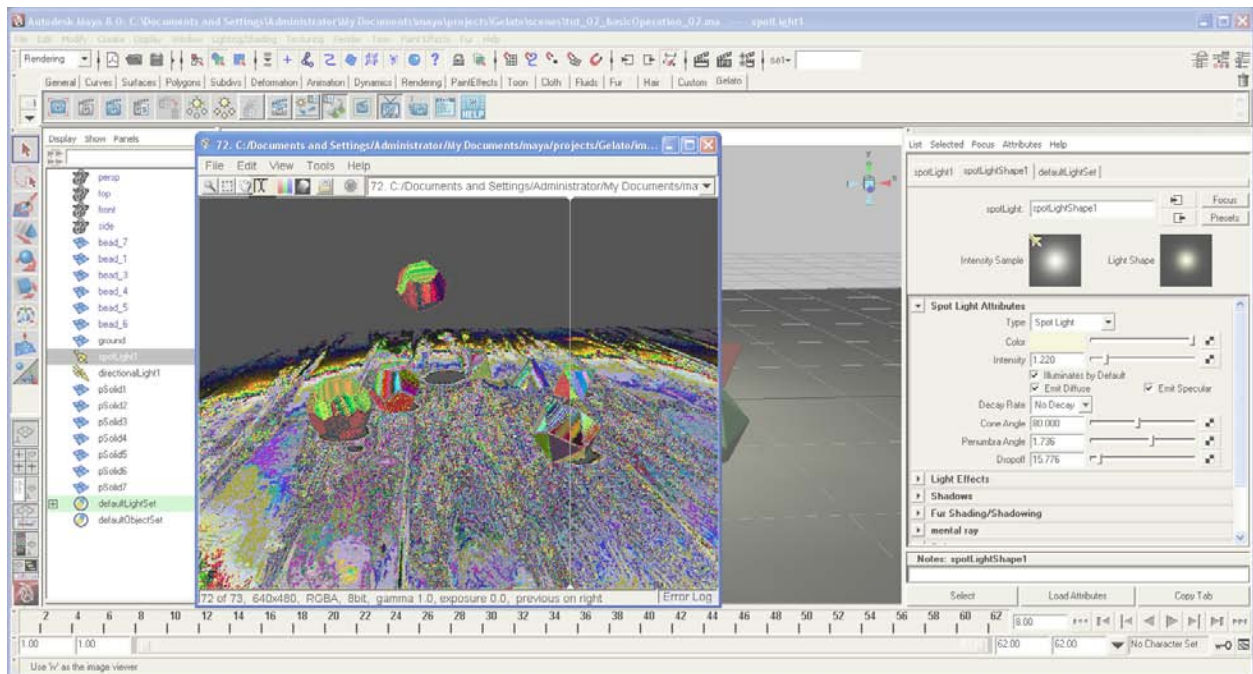
- In turn, select the two most recent renders in the Document field stacks so that we are once again in the position to compare the with and without specular renders.
- Image Viewer > View > Random Colors.

We're going to look at another method of comparing images.



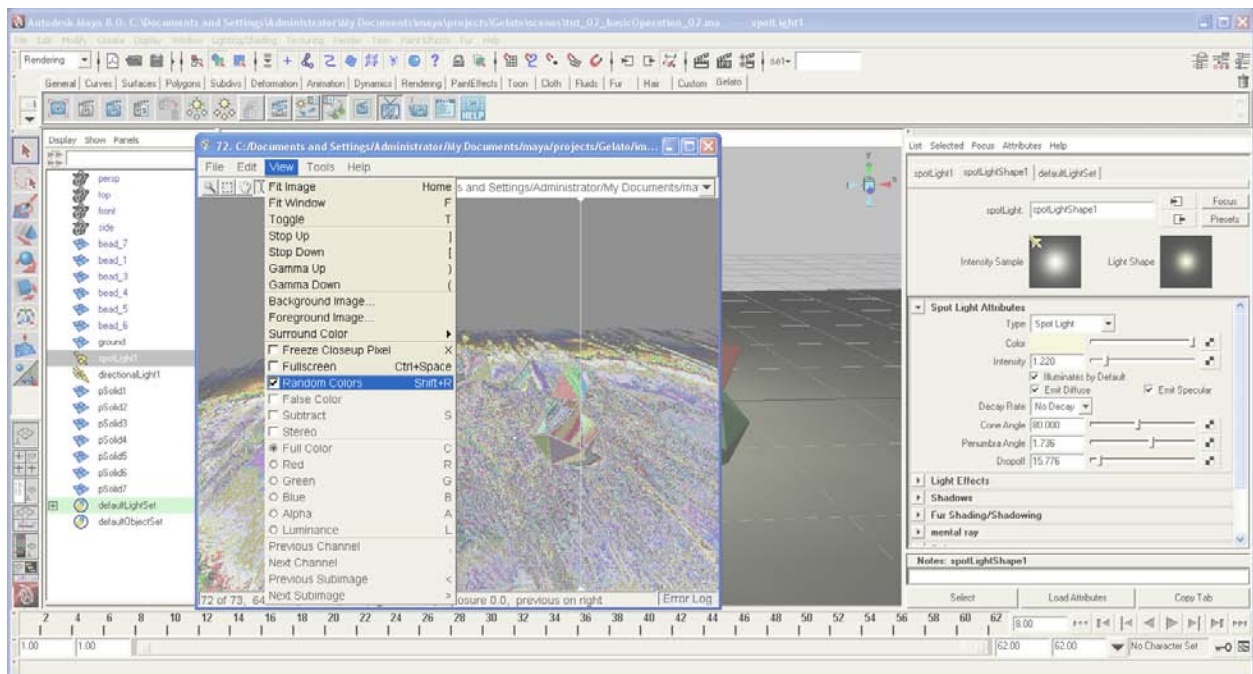
What happened???

Gelato has assigned random colors to the image. Where the pixels have changed in the compared images, a new random color is assigned.



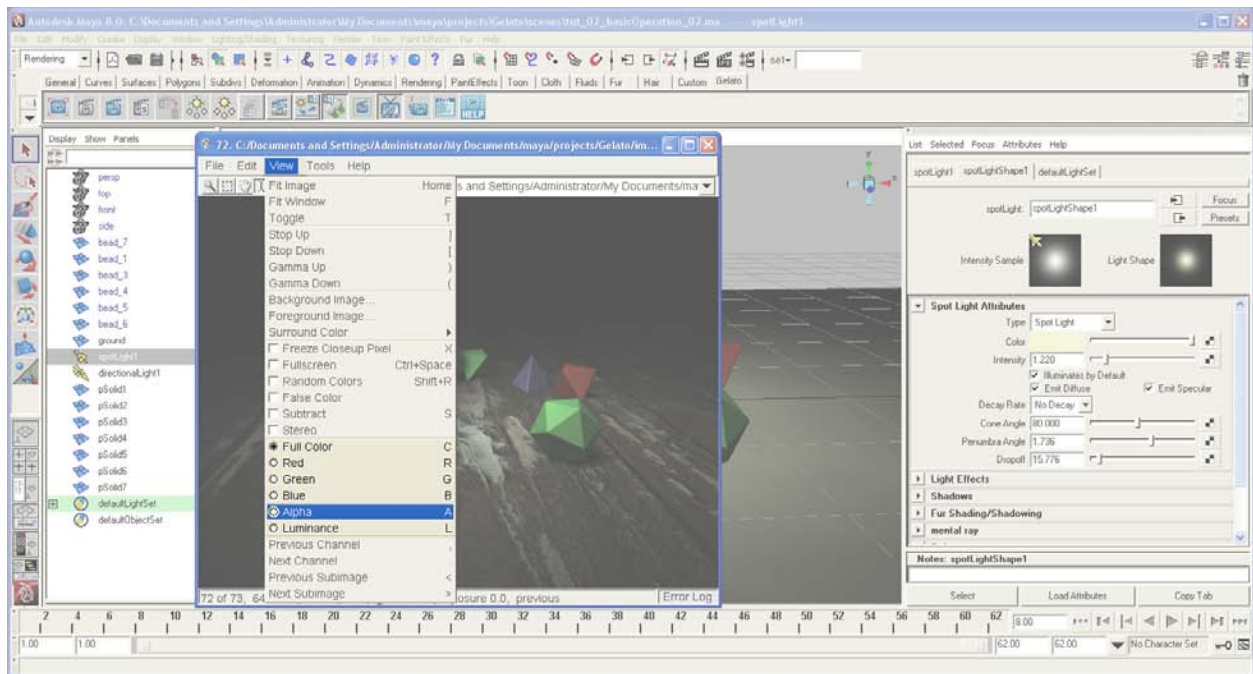
- Wipe to compare the two images.

There are subtle specular highlights on the table which otherwise would have been difficult to pick up, but which we are picking up easily through the use of the Random Colors feature.

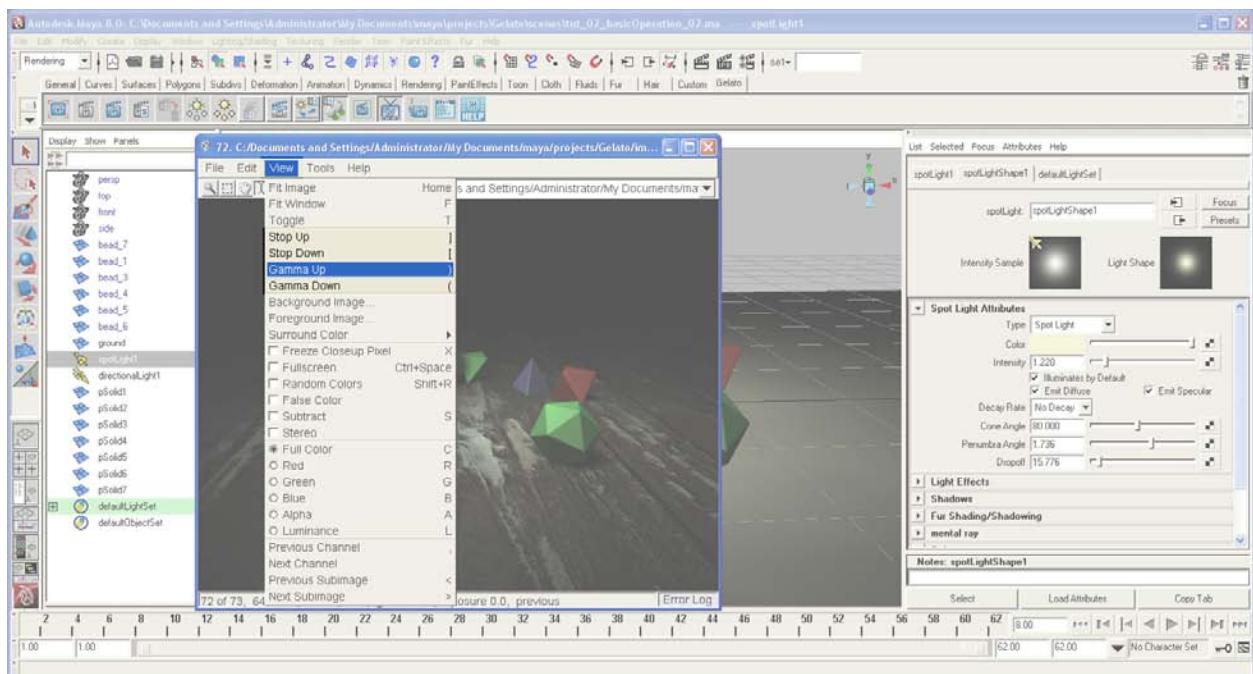


Let's return to normal color mode...

- Image Viewer > View > Random Colors

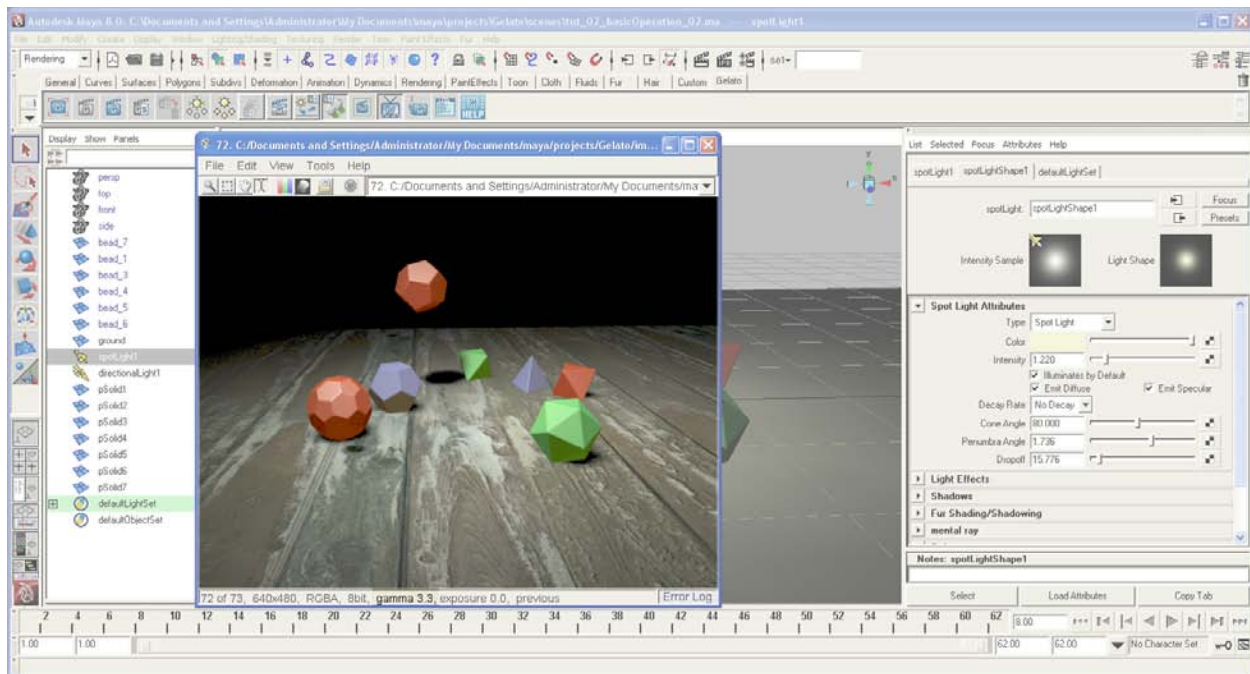


The Color and Alpha buttons, the 5th and 6th buttons from the left, can be found under View.



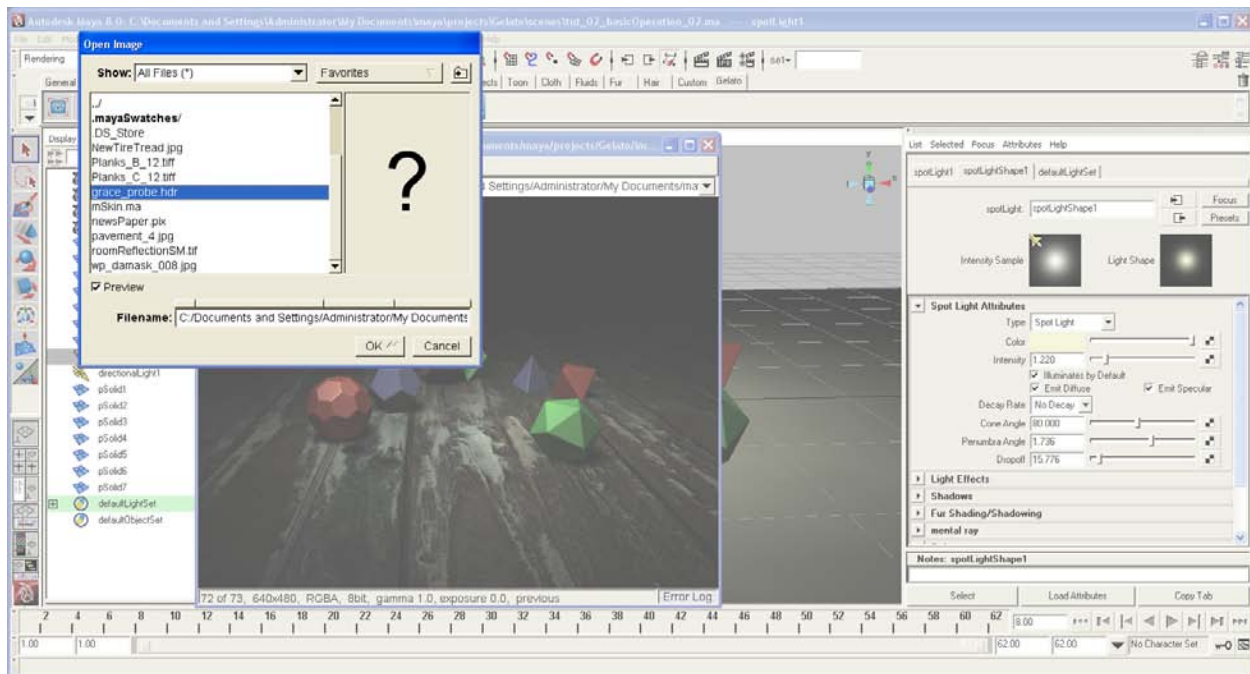
Also under the View menu, is the ability to adjust the exposure and gamma of the image.

- Note that the shortcuts for Gamma Up and Gamma Down are **[SHIFT+0]** and **[SHIFT+9]**.

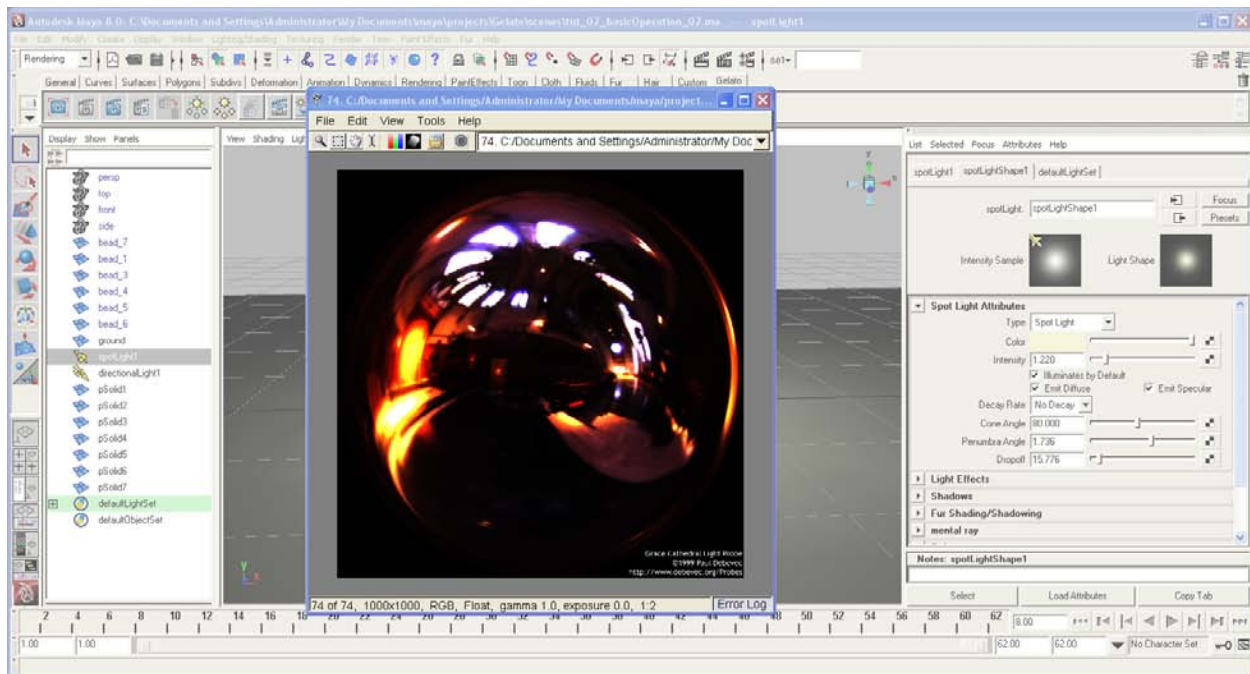


- Use **[SHIFT+0]** to increase the gamma of the image.
- Note in the text at the bottom of the iv that we can read the current gamma value for the image. In the image above, the value is 3.3.
- When done, use **[SHIFT+9]** to return the gamma value to 1.

We'll see how we can take advantage of the ability to adjust the gamma of an image in a later tutorial.

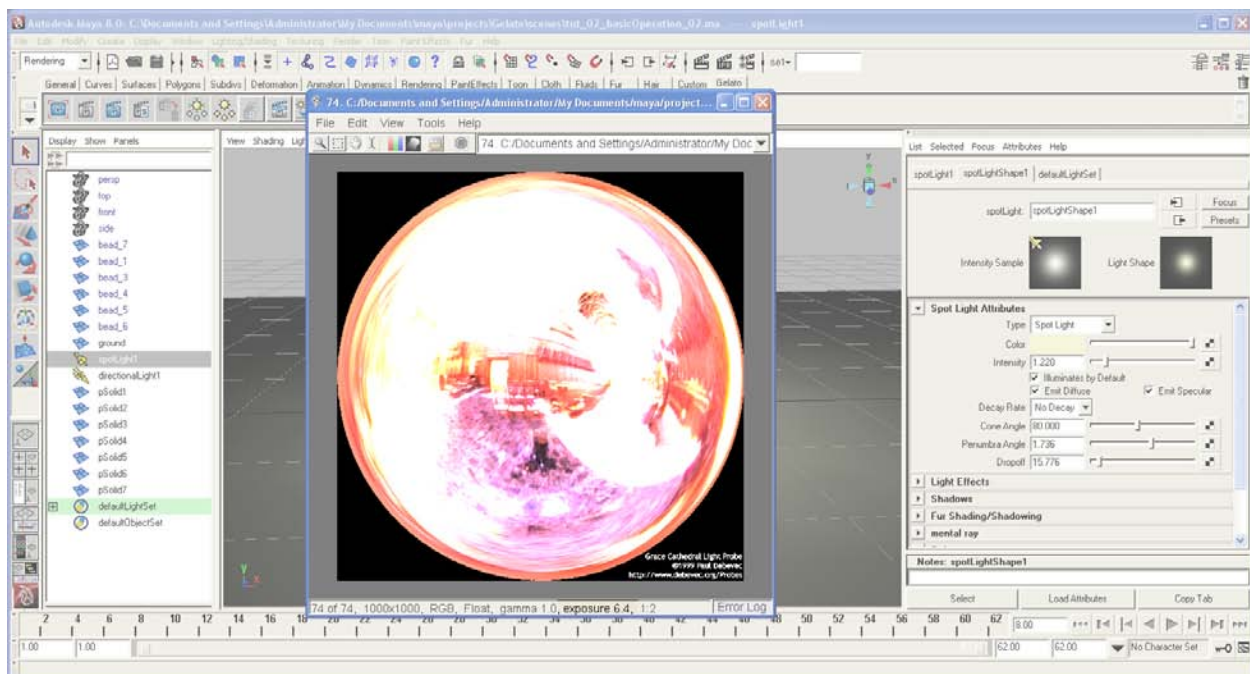


- Image Viewer > File > Open.
- In the Open Image browser, navigate to "grace_probe.hdr," in the sourceimages folder.
- **[CLK]** "OK."



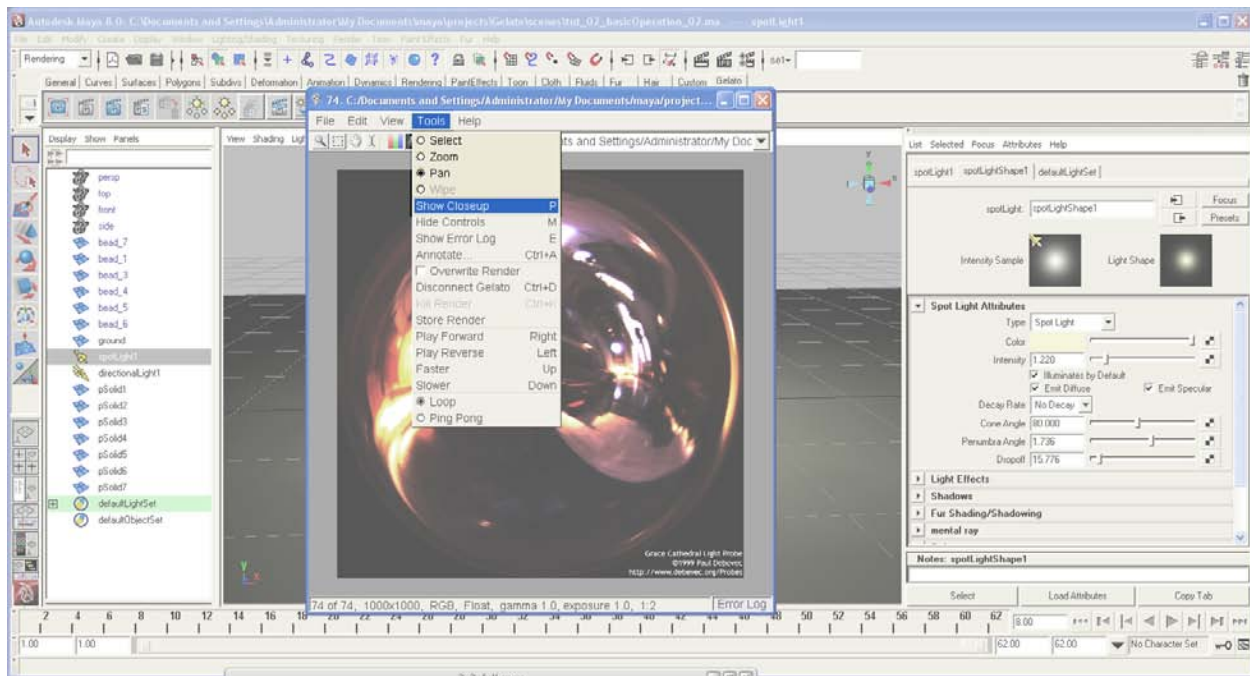
This opens an HDR image in the iv.

HDRIs, high dynamic range images, can be used as environment maps which can be used to light 3D scenes. They are particularly useful for matching lighting when integrating a 3D element into live footage.



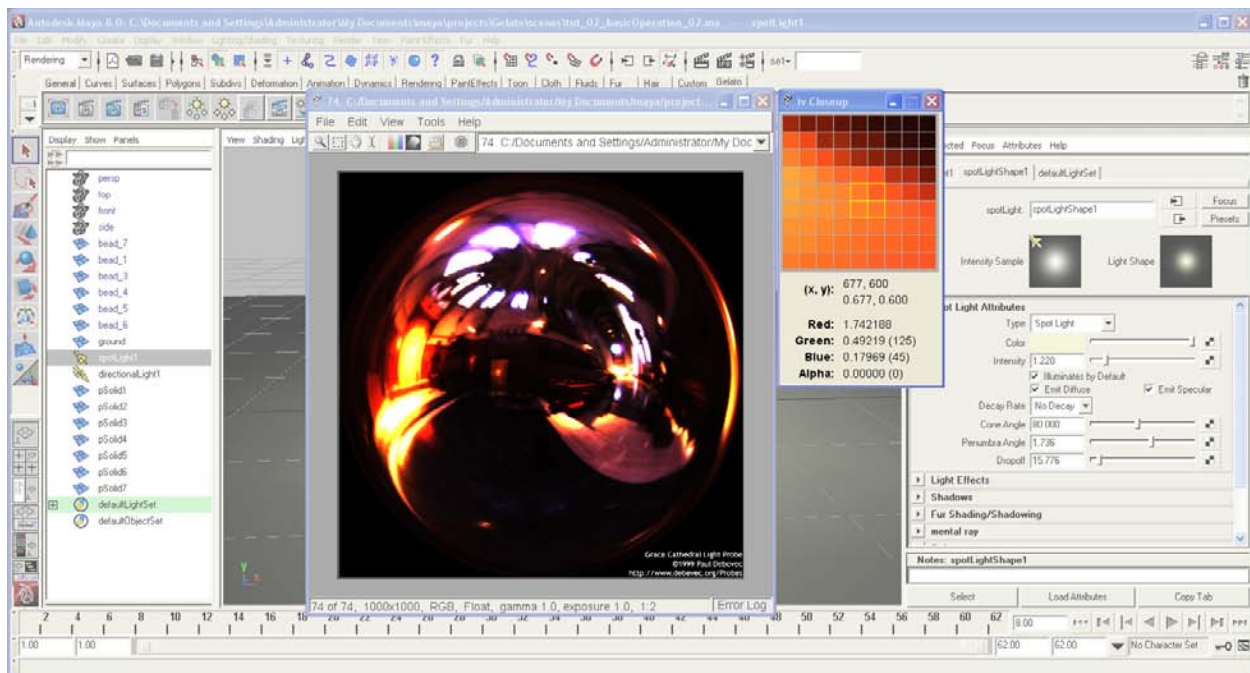
As you've probably already guessed, we can adjust the exposure and gamma of the HDR image.

- Use the **]** key, the shortcut for Stop Up, to increase the exposure of the image. The image above has an exposure of 6.4.
- When you're done, return the exposure to 1 by using the **[** key, the shortcut for Stop Down.



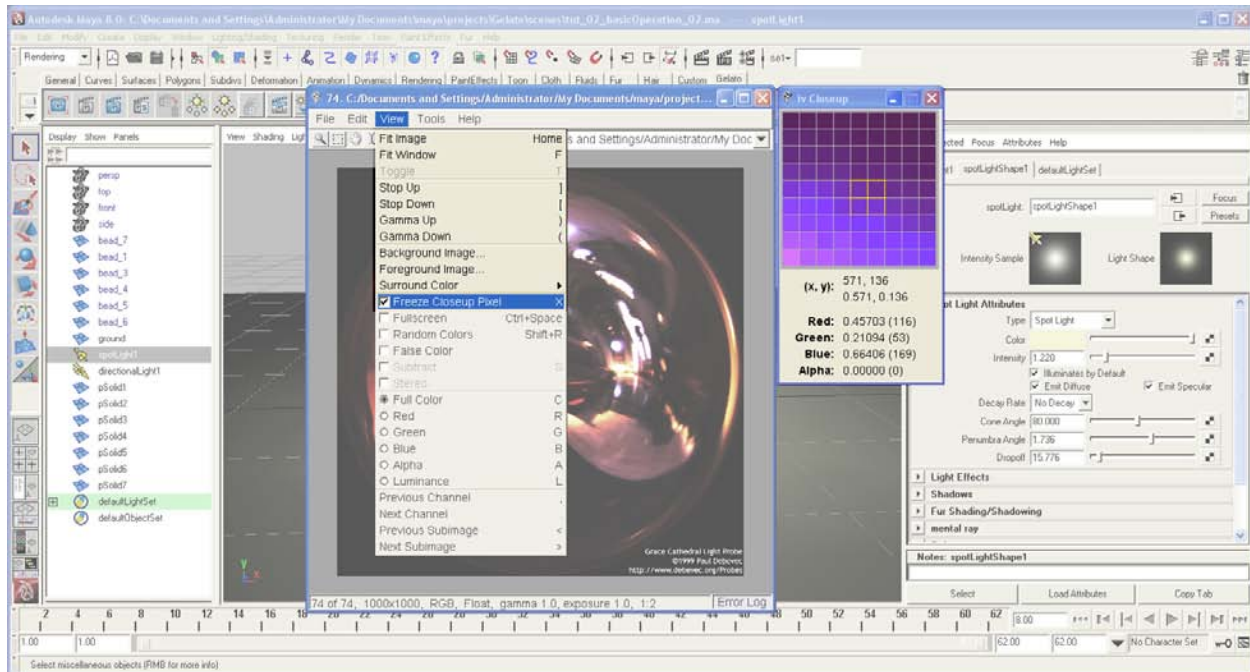
We are going to end this tutorial by looking at one more valuable tool for inspecting our renders - the Show Closeup window.

- Image Viewer > Tools > Show Closeup.



The iv Closeup window appears. The area represented in this window is the area around where the cursor is resting in the image.

We are actually looking at the pixels, an ability that is tremendously useful when we are trying to remove artifacts, as we will see in later tutorials, since it allows us to see exactly how the large artifacts are.



To freeze the view in the iv Closeup, hit the **X** key. This is also done by: Image Viewer > View > Freeze Closeup Pixel.

Gelato's Image Viewer gives us a lot of power and flexibility when it comes to viewing and comparing our rendered images, whether those images were freshly rendered or are other images on our hard drive that we want to view. The iv not only permits us easy access to other images and sequences of images, including HDRIs, for purposes of comparison, but allows us to modify their exposures and gammas. The iv is a powerful addition to our workflow.

In the next tutorial, we'll take a look at the Gelato Shelf and see what else is lurking about waiting to be exploited for the greater good.