

Creating a Double Sided Shader

This tutorial will go over a few simple steps to show you how to create a double sided shader. What is this useful for you ask? Well, this is great for wrapping paper or any flat surface where each side has a different color or texture. This would be easier than modeling the two separate surfaces sometimes.

For this example I am just going to start with a cube that has been sculpted to look like it is a present that has wrapping paper that has recently been opened (Fig. 1).

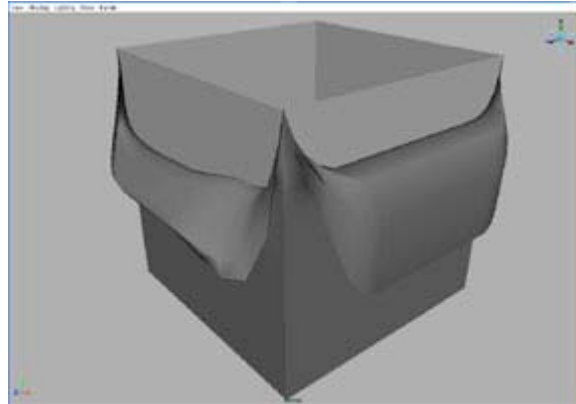


Fig. 1

- ① Open your Hypershade window (*window > rendering editors > Hypershade*) and create the following nodes (illustrated in Fig. 2):
 - a. Two materials, one for each side
 - b. A surface shader
 - c. A condition utility
 - d. A sampler info utility

Each of these can be found in the left side of the Hypershade window. The materials and surface shader are in the surface section and the condition and sampler info and all the way down in the general utilities section.

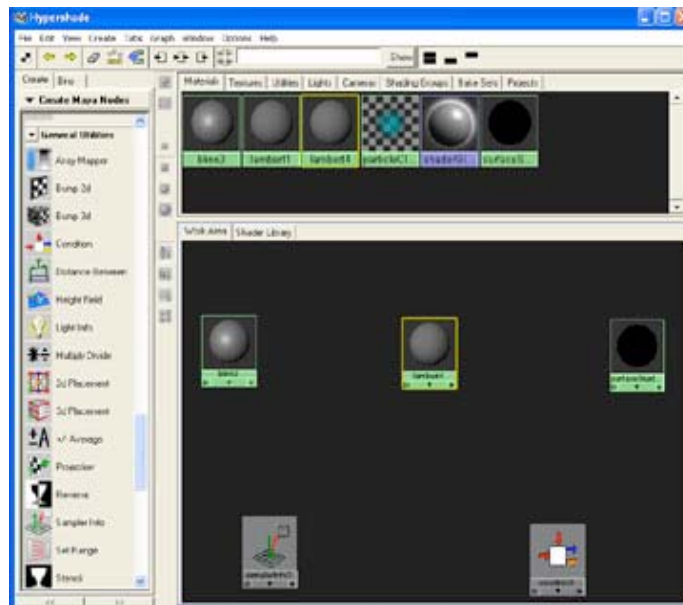


Fig. 2

- Using the two materials you created, add any color or maps you want for either side. For this example I made one a plain white and the other has a simple grid texture (Fig. 3).



Fig. 3

Now for the fun part, we will need to connect all these nodes to one another in some form or another.

- Using your middle mouse button, drag your first material over the condition node and when the pop up window appears, select other (Fig. 4). This will open the connection editor window (Fig. 5).



Fig. 4

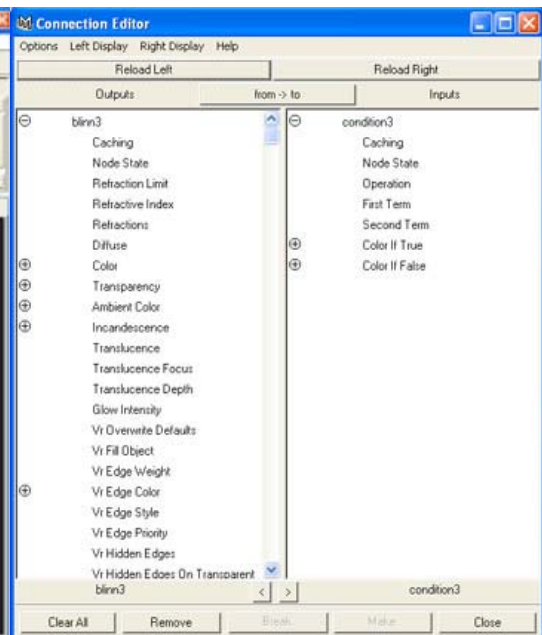
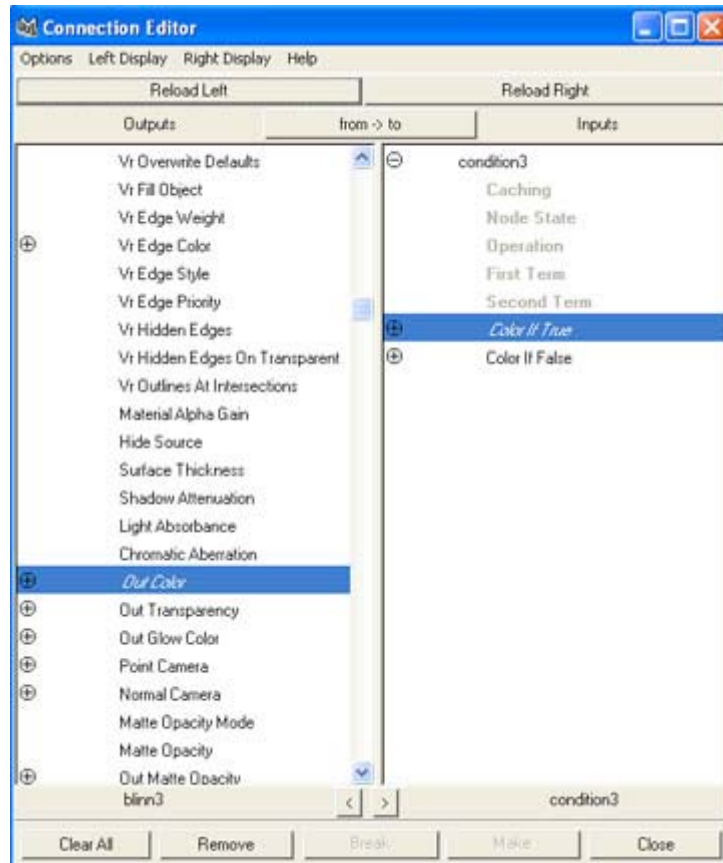


Fig. 5

- ⌚ In this window you want to connect the out color of the material to the color if true of the input side. This is done by simply selecting it in each column and hitting close as shown in figure 6 to the right.



- ⌚ Repeat the same steps for the other material except you will connect the out color of the material to the color if false of the condition.
- ⌚ Using your middle mouse button again, drag the sampler info node on top of the condition node and when the pop up menu appears, select other again to open the connection editor. This time we want to connect the flipped normal of the samplerInfo with firstterm of the condition (Fig. 7).

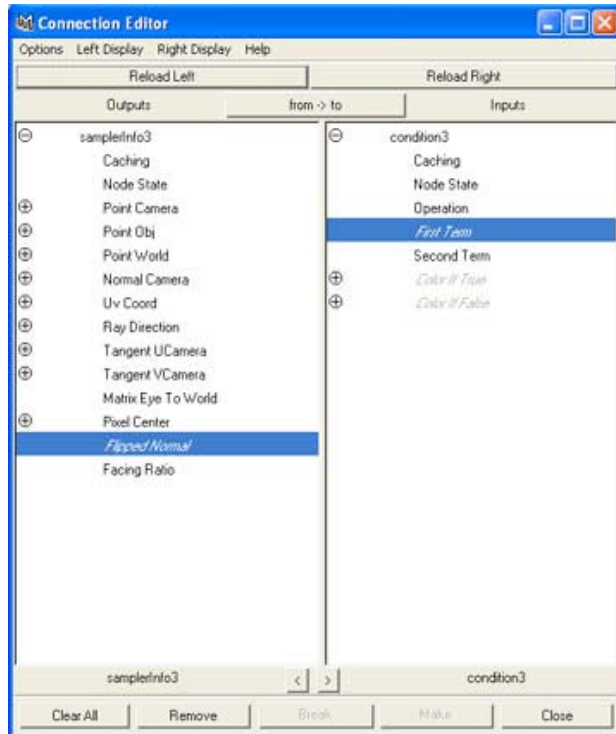


Fig. 7

Lastly we want to connect the condition to the surface shader which we will assign to the object.

- ⊙ Once again, using your middle mouse button, drag and drop the condition node on top of the surface shader node to open the connection editor window. This time we want to connect the outColor of the condition into outColor of the Surface shader (Fig. 8).

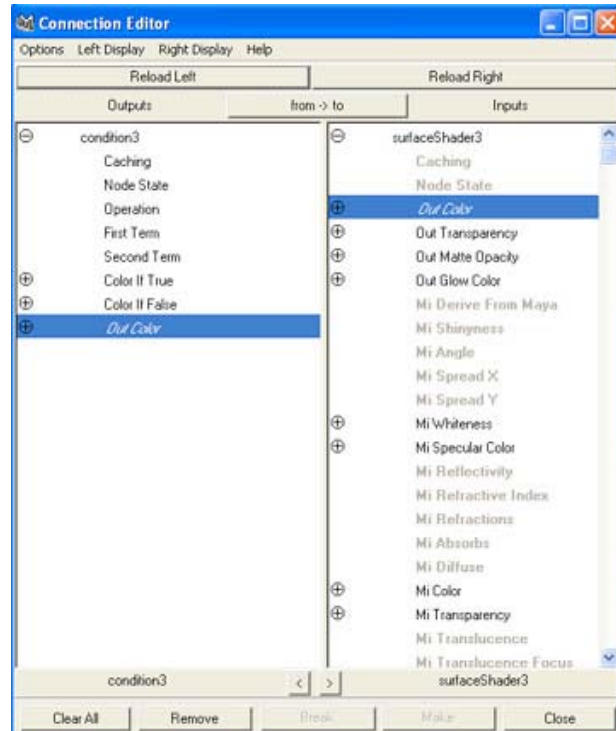


Fig. 8

Now we are ready to assign the surface shader to the object and test the results. You will see that the outside of the wrapping paper has our texture while the inner part is the white I assigned to it (Fig. 9).

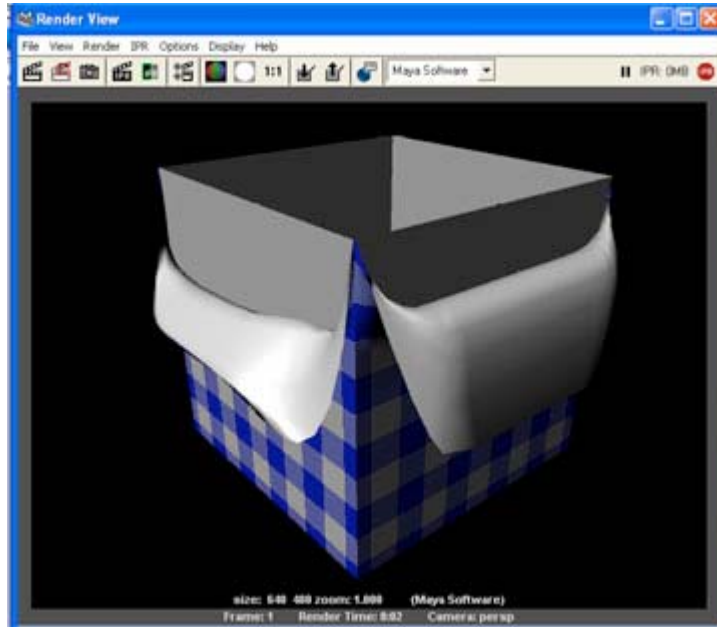


Fig. 9

We now have two separate materials on either side of the surface. Once again, this is great for wrapping paper or any flat surface where each side has a different color or texture.

