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Tutorials

Toon Shading



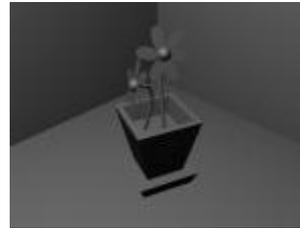
Chris Garrett



2000 11 27

id80

This tutorial presents the techniques that I use to achieve a toon style render directly in Blender without any post production in another program. In this tutorial we will modify a basic Blender scene of a simple flower pot to look toon shaded by changing the lighting and materials. At the end the left image should look like the right image.



Begin (left), end (right)

This tutorial is designed for users who have a reasonable knowledge of the use of Blender. Before you start this tutorial you should know how to add lamps, move and rotate objects and add materials to the surface of objects. If you have trouble with these concepts visit the Blender web site and examine some of the getting started tutorials first.

Before we can start you will need the flower pot model - you can download it below.

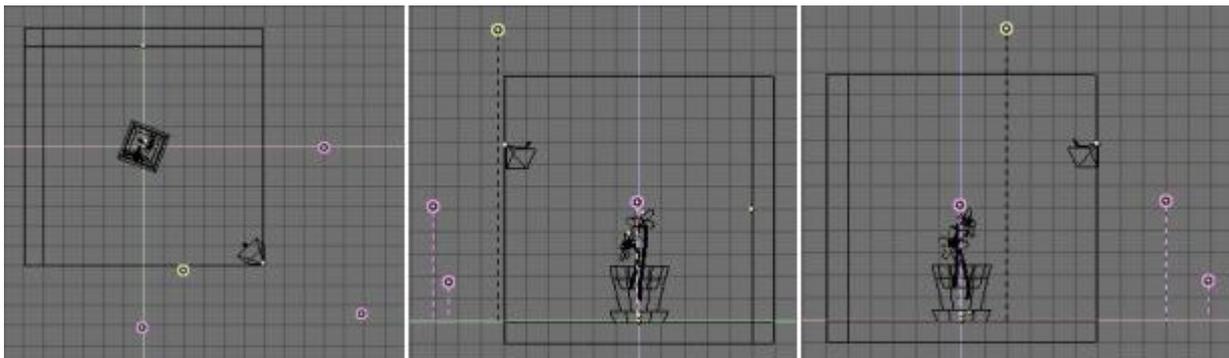
Once you have downloaded and unzipped the model open it in Blender.

Download:  [toon_shade_tutor.zip](#)

Step 1: Lighting

The first thing we need to do to the scene is to brighten it up. When lighting a scene I use a minimum of four lights, three fill lights and one detail light. The fill lights are placed around the camera, one on each side and one behind. The detail light is a spot light placed above the scene pointing at the most important thing in the scene, it is used to highlight the subject and to supply shadows.

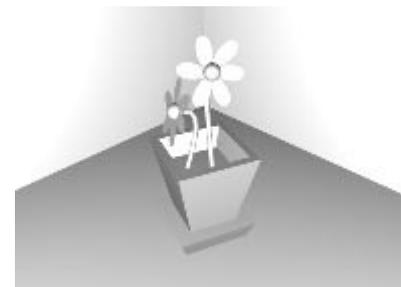
The lights in toon shading are particularly important, there must be enough light or brightness on the faces to supply contrast to the edges. If the edges are not visible it won't look as good.



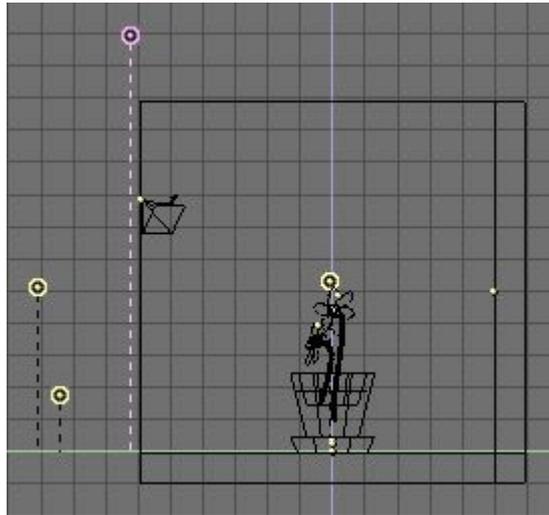
Lamps (top/side/front)

As shown here the extra lamps have added the brightness that we need, all the edges of the model are clearly visible and no face is completely black.

We now need to modify the original light to cast shadows and to point at the flower pot.

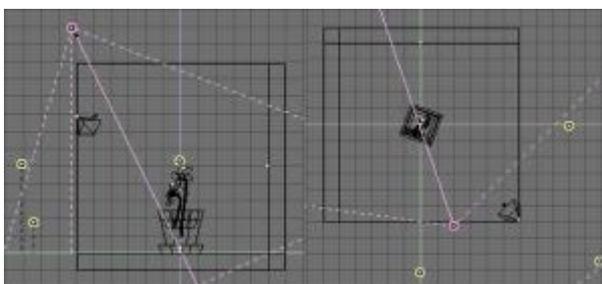


Select the original light.



Press the light button or press **F4**.

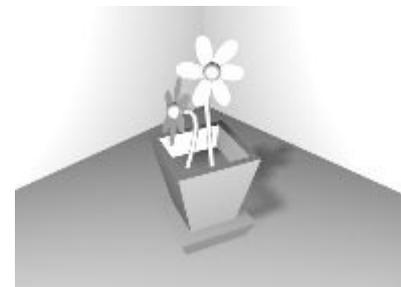
In the buttons window set the following properties for the original light.



(side/top)

Rotate the light so that it points at the center of the flower pot.

The lighting is now complete, the modifications to the original light have added the highlights and shadow that were needed.



Step 2: the object rendering material

I found that the toon shading looks better if objects are set to render smooth rather than solid. Setting them to render smooth appears to make the edges more defined.

Select each object in turn and click the set smooth button in the edit buttons window (F9).



Setting materials to auto smooth.

Step 3: Adding Materials to objects

Now we get to the fun bit, materials. Materials in toon shading need to be flat with little or no specularity. Generally when creating materials for toon shading the colors need to contrast. Try not to create dark colors or overlap colors of similar style. The colors need to contrast so that the edges are clearly visible.

Select the flower pot model.



Floor (left) and Walls (right) materials



Flower stem (left) and Lower Petal (right) materials



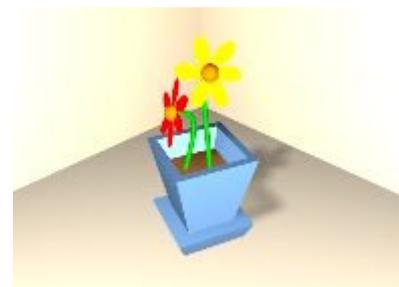
Upper Petals (left) and Flower Center (right) materials



Pot Dirt material



Once you have added all the materials to the objects you should have a scene that looks similar to the following. It is then time to move onto the last step, the edges.



The higher you set the Eint: value the more edges will be outlined. In a simple scene like this setting the value very high is not a problem, but in more complex scenes be careful how high you set it. If the value is very high and the objects have many faces, the faces themselves will start to get outlines. The goal that we are seeking is to get black lines only on the edges of the object not the internal faces as well.

Experiment with the Eint: value to get the look that you require. Sometimes a scene with only a few edges highlighted can look much better than a scene where every edge has a black line.

If everything has gone well you should now have a image that looks like this!



Feedback



GammaRayQ21

2000 11 27



This tutorial will help me very much.



zoo

2000 11 27



Great, I see the tutorials entering the site! And Blender can not have enough tutorials. Thanx Chris.