

"The Gate"

by: *Endre Barath*

Story

My goal was to make a triumphal arch-like gate with ancient and fantasy feeling, and with original patterns. I wanted to place the gate in an abandoned, undiscovered place. I had no concept of drawings, but the composition was in my mind: nearly orthogonal (isometric) view from top, as though an explorer had climbed a big rock having looked downwards on a gigantic building.

I had got no idea of the ornamental style, because I wanted to use my new modeling technique, called "kaleidoscope modeling". This is a strange technique that I can't control at all now, but with it, I can make strange shapes in 10-15(!) seconds. At the end of this article I will write more about this "kaleidoscope modeling" technique.

I never change the view when I create a picture, because I work as a painter: the view is fixed and I "paint" the new parts. Maybe the lights will change, but not so much. So, from the beginning the view in my mind was this:

First I made the base of the gate with simple modeling: scaling and extruding cubes. Then I made the two base pillars, that gave the style of the gate. For this I used the "kaleidoscope modeling" technique. The result

I used this pillar for making the top arch of the gate. The original pillar mesh is simple, so my work was easy: I lifted up the center vertices of the pillar. With this I created an arch - smooth arch, because of the subdiv. (In Blender, the subdiv is real-time, like a modifier. In edit mode we can modify only the original mesh.)

Important Parts

Now I had the three important parts of a gate: base, pillars, arch.

Next step is to make the roof and the additional important patterns on the base and on the pillars. I used my favourite pillar again to make the roof. I deleted the half of pillar and scaled (it) up at the end.

To the base I copied the top pattern of the pillar and I filled the base stone with it. The bended bearer-pillar was made by additional half-pillar.

In the center of the gate I used these bended pillar parts again.

Now that I got the base lines of the picture I could make the materials and the lights.

I constructed a simple material for the stone of the gate. I used various marble textures to control the color, bump, and the reflectivity of the final material. With a procedural marble texture I added red-yellow color to some parts of the material. I used global texture coordinates and cubic projection, so I didn't have to make UVs. Although this could cause some not conspicuous texture break.

Lights

Lights are simple too. There are 3 spot lamps with shadow buffer and one area light as

Sun. The area light gives the strongest light and the strong shadows. I love the soft shadows of the area light.

Area light rendering is slow, but with dithering, we can use only 2 samples for draft rendering. This is fast, and on the final render, we can increase the number of the samples. There is a faint red spot lamp directed to the golden door. It makes a warm "glow" on the door.

At this point I have the the overall color and feeling of the picture. I had to elaborate the environments of the gate in order to fix the composition.

Rocks and Plants

For the rocks and plants on the rocks (maybe grass) I used displacement mapping. The geometry is very simple, as you can see in the picture. In Blender, the displacement works by modifying the mesh's vertices, so if we need complex result, we need many vertices. So I used the subdiv again. In Blender we can set the viewport subdiv and the render subdiv.

I can set very high subdiv on render, the viewport will not slow down. I use same texture for color and displacement. But on the grass, the displacement texture has higher contrast and it has alpha channel. For alpha channel I used the color channel with high contrast.

The base geometry of the rock/grass is the same.

Trees

Trees are simple again. Maybe these trees are not trees, maybe roots. I created only one tree and deformed it into many trees. On some trees I used simple subdiv, on others I used fractal subdiv to make roughness.

As you can see, the original tree is plain. (To make plain trees is a very simple work.) I twisted, bended these plain trees to the shape of the walls, rocks as I needed.

With the rocks, trees, lights and shadows now I have the composition of the picture. Now I can work on the details.

Ornaments

Utilizing "kaleidoscope modeling" I created some ornaments. These pictures show the details of the patterns.

Others

Finally I created stone pots, bowls, stone blocks, a carpet, and a man. The man is not a good model, I didn't want to show it in details. You are lucky that you can't see him face to face. ;-)

Postprocessing

On all of my pictures I make a strong post-process in Photoshop. With color correction (with Color Curves) and global blur/fade blur I can make my special style, that is not my style.

My favourite fantasy painter, Rodney Matthews (www.rodneymatthews.com [<http://www.rodneymatthews.com/>](http://www.rodneymatthews.com/)) has the same color style (he works with airbrush

and ink).

Color curves are my favourite effect to assign "feeling" to a picture. I used various curves on the color channels.

Blur and Fade Blur (Edit menu) makes a global "glow" in the picture.

About the "kaleidoscope modeling" technique

Now comes the core of the modeling that I used on this picture. Maybe this "kaleidoscope modeling" is my invention, but it is very simple thing. With this technique we can create complex and nice shapes in seconds!

We need: a simple starting object, Catmull-Clark subdivision and face scaling/moving along normals (shrink/fatten). This technique works in 3dsMAX, Lightwave, Cinema4d and of course, in Blender.

I want to tell the method with pictures. Note: the parameters of the shrink/fatten applied in Blender. Simple example is above, and now more to follow...

- Step 1: create a cube!
- Step 2: subdivide it twice!
- Step 3: turn on Catmull-Clark subdiv
- Step 4: Shrink/fatten by 0.4
- Step 5: Shrink/fatten by 1.6
- Step 6: Shrink/fatten by 0.5
- Step 7: Shrink/fatten by 1.3
- Step 8: Shrink/fatten by 1.2
- Step 9: Shrink/fatten by 1.046
- Step 10: Wondering!

I think, no more talking is needed. The next pictures will show more examples with various starting shapes.

And please try this modeling method, discover new things with it!

Here you can see some rendered examples of kaleidoscope modeled objects:

Finally here is the completed image in wireframe and shaded mode:

...and the final render with post-processing applied: