# Expediting Textures While Maintaining Quality

by

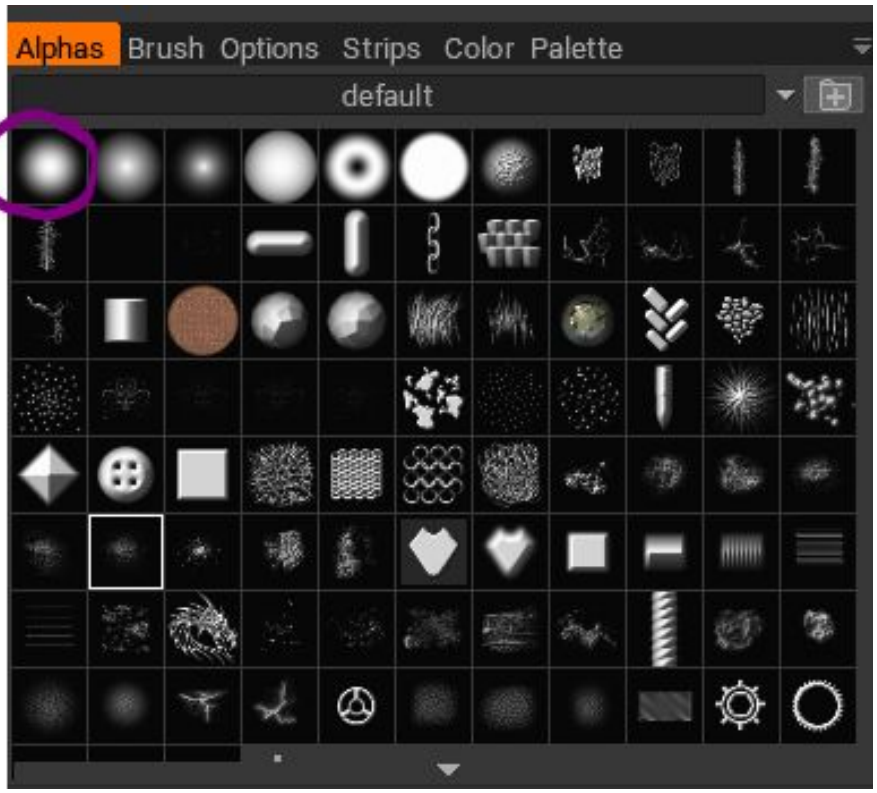
Angelica Duvic

DIG4434c

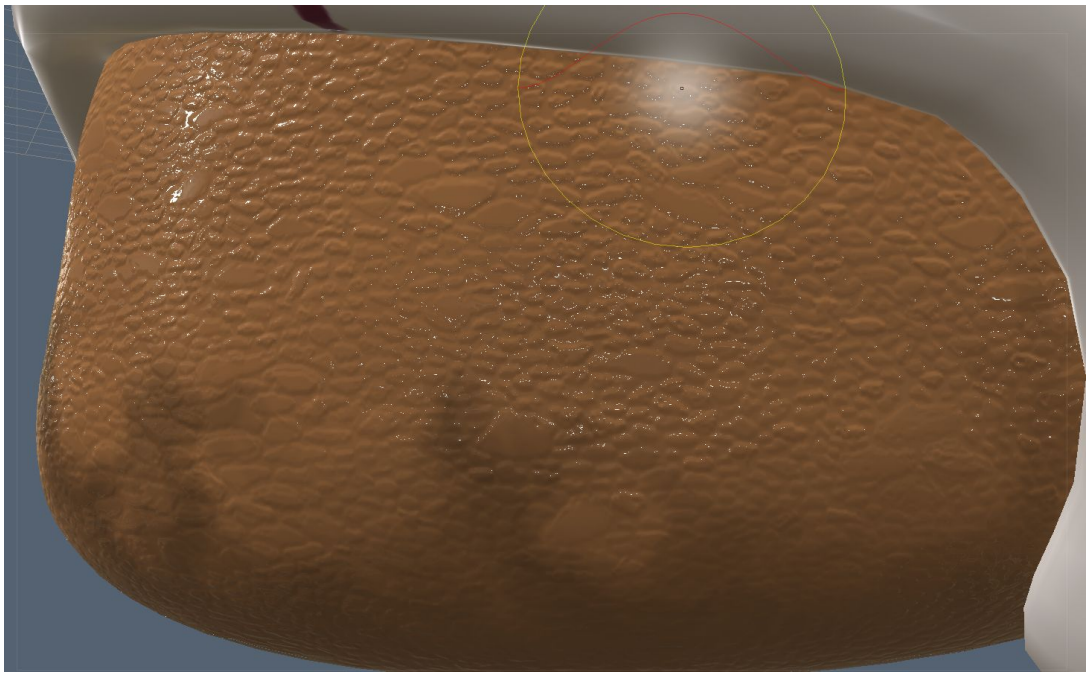
Narrative Techniques in the Moving Image

**Expediting Textures While Maintaining Quality**

The style of “Serpendipity” involves a significant amount of high frequency detail. However, the schedule did not allow for texture team to invest months worth of time into hundreds of meticulous normal, diffuse, and specular maps. I learned the hard way with the first texture I created for the film, which was the Papanasi. The Papanasi is the dessert served to Theresa during the dinner show. Even though the time spent painting its texture was well worth my contentment of its aesthetic, it took three days to complete to my liking. Then it still needed approval from the Co-art directors, the texturing lead, and finally professors. Achieving the look of flaky fried crust posed a challenge. I wanted the dough to look fresh from a pot of oil, with each air bubble to form and have its own shape and identity. To begin, I used the default brushes in 3D coat:



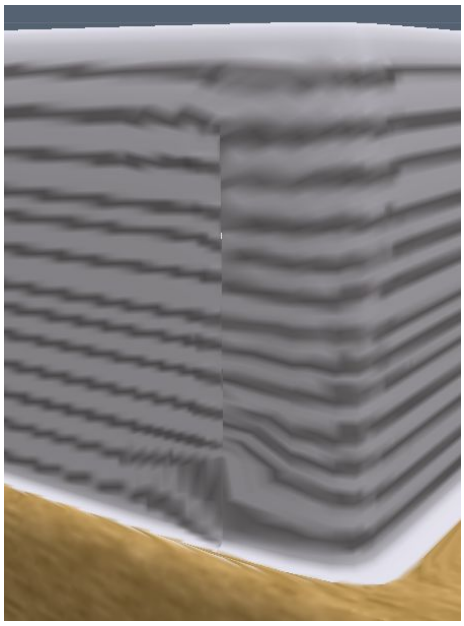

I painted every little bump by hand, taking the time to hold down shift to smooth out each edges as I went along.



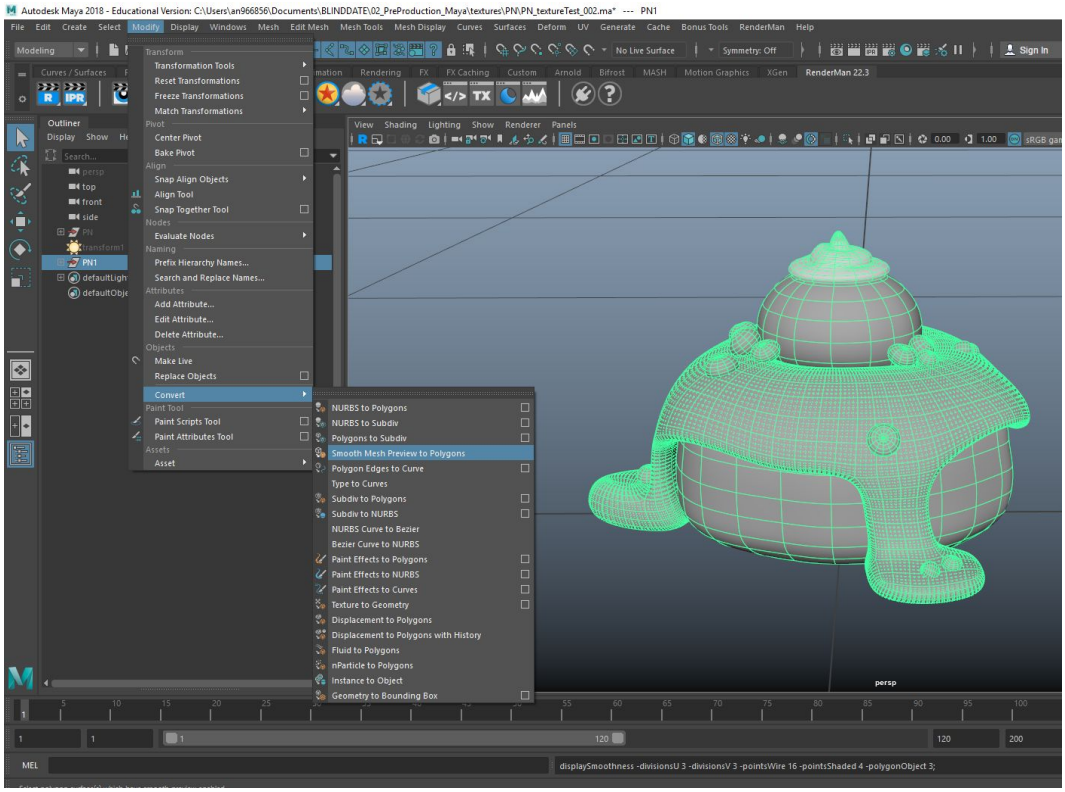
With the next high frequency asset I textured, which was the cork, I explored using different brush options such as jitter opacity and spacing. This method only got me so far. The brush was creating jagged intersecting lines that would fade off towards the ends. I proceeded to fill in where the strokes faded off with more lines. In the end, I spent a considerable amount of time still trying to make the brush strokes look more like the cells of a typically porous surface. The end product after adding more color variation and imperfections unexpectedly consumed about two days from start to end.

Completed textures needed to come to fruition at a faster rate to meet the goal deadline, but I did not want to give up my full control. Out of necessity, I expedited the texturing process, without sacrificing quality, using a feasible approach of creating various black and white alphas to lay down a base layer. After establishing the base layer, more minute details were then implemented.

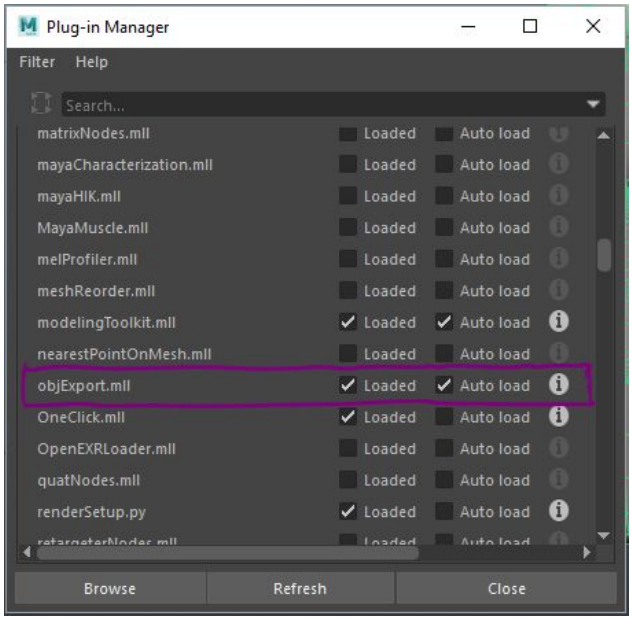
Before texturing anything, the UVs of any asset need proper unwrapping, 3D coat only bypasses seams to a certain extent. Stretching of pixels can still occur and fixing it after the fact will be absurdly more painful than having spent the time to create appropriate shells in the UV editor of Maya. Otherwise the texture may end up with distracting pixelation and pulling, like the bottom of the notepad the waiter holds to take the daters order. (see below image)



Once the asset is fully modeled and topology is clean, duplicate it in the Maya scene file. While in the modeling menu set, enter the Modify menu, and navigate down to Convert smooth preview to polygons. This step is integral to the way the maps will lay in the final version of the renders. UVs start stretching when objects are smooth previewed, therefore it is necessary to painted them all the already stretched version of the prop, environment, or character.

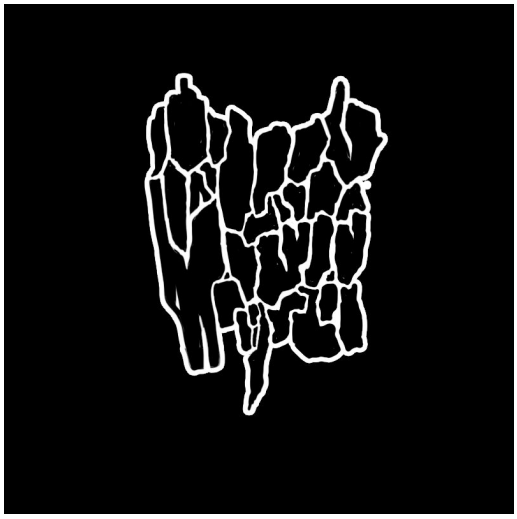
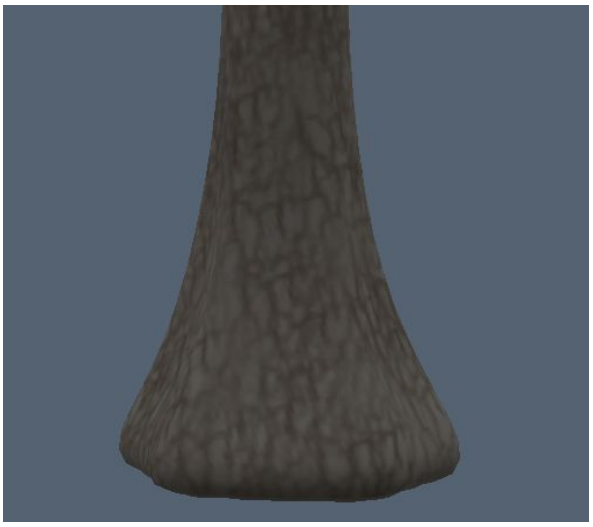



With the now smoothed version of the asset selected, export selection as an .OBJ. If this option is currently unavailable, navigate to the plug-in manager found in the windows menu of Maya. The .obj file consists of only the geometry and is imported to create a texture in 3D coat.

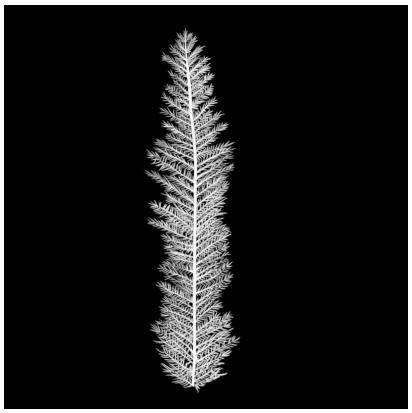
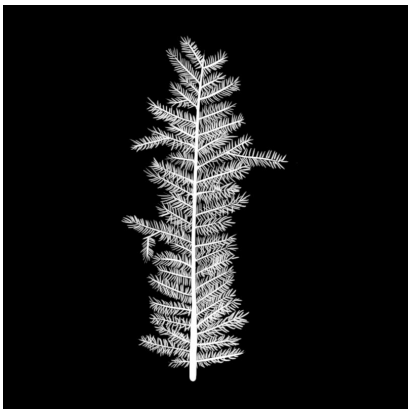
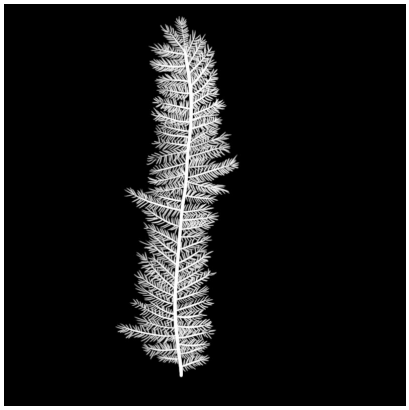



To use 3D coat to my advantage, and to make the process inescapably faster. I create the aforementioned alphas in Photoshop. With Photoshop open, research as many applicable

images as you can. For example, the trees that populate the mountains are *Pinus Sylvestris* or Scots Pine. I started with getting the feel of bark motifs (see image below). I ended up with the outlines of bark cells. I then took this brush and imported it into 3D Coat. Do so by clicking the new button with a plus sign in the alphas menu of the Painting workspace in 3D coat. I used this alpha as a stamp as opposed to making brush stroke gestures. Afterwards, I took the time to add highlights and anomalies.

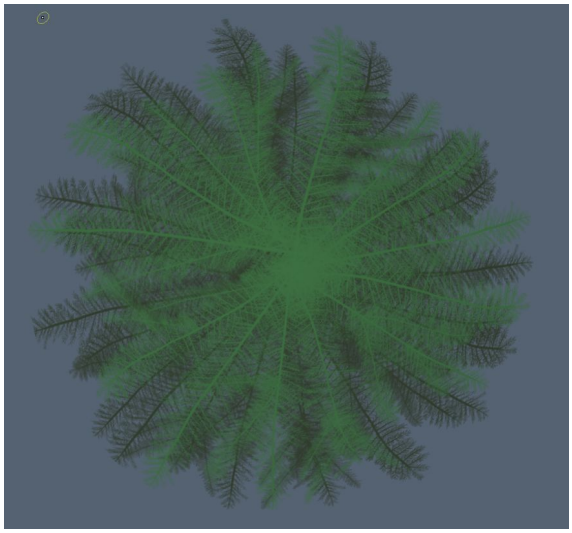



For the next element, I got an idea for the general shape of the Scots Pine branches and leaves. There is a central branch that runs all the way out to the extremities. That branch flows into many smaller stems, which then sprout thin spiky leaves. I create three different variations of branches. I started by painting the main spine structure and then proceeded to make short burst movements to create the organic feel of branches and coniferous leaves.

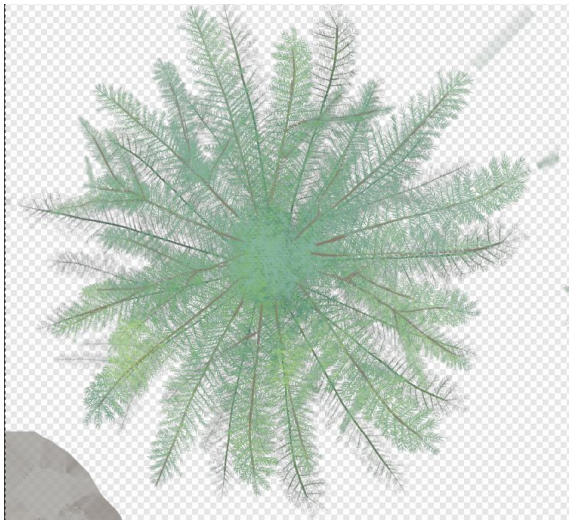




Returning to 3D coat, I then imported the three brushes. I hid the geometry of the trunk by selecting the eyeball on the left side of the Painting workspace, and created a new layer. This ensured I would not be stamping branches on the bark texture. Although any spillage would not be hard to clean, that is more time I could have better spent furthering another aspect or possibly another asset's texture. The angle of the surface required adjustments to the camera. I preferred holding down Alt and left mouse to change the camera's position. The camera positioning menu, found by clicking on the drop-down arrow next to where it says

“[Camera]”, can change custom navigation to work like Maya. It just worked for me and helped speed up my process being able to maneuver in a way that I was already comfortable. Following the adjustments to the camera, I went into brush options and changed the brush’s rotation. This allowed me to position the base where I needed it to. I continued to change the rotational value so branches all flowed outwards from the center. I switched between the three brushes so the tree did not look uniform. Once I stamped in my base layer, I scaled down the alphas and used them to make the foliage look nonuniform. Lastly, I cleaned up the edges where the alphas bled off the edge in certain areas. Each layer then looked something like this:



Having this base layer down made it considerably easier on myself to edit the diffuse maps in Photoshop. I used a combinations of clipping masks that I masked out with a custom brush to add color variation, and then painting in the brown of the branches.



The end product appeared as follows and took three hours to complete:

I followed this process with any assets requiring repeating or similar motifs to move on the setting up shaders in Renderman and making texture tweaks according to their relationship with lighting. All of which consumed a considerable amount of time, effort, and research.