

MAYA TEXT TUTORIAL

THIS TUTORIAL ASSUMES YOU READ THE GENERAL TUTORIAL. Go back and read it if you have not.

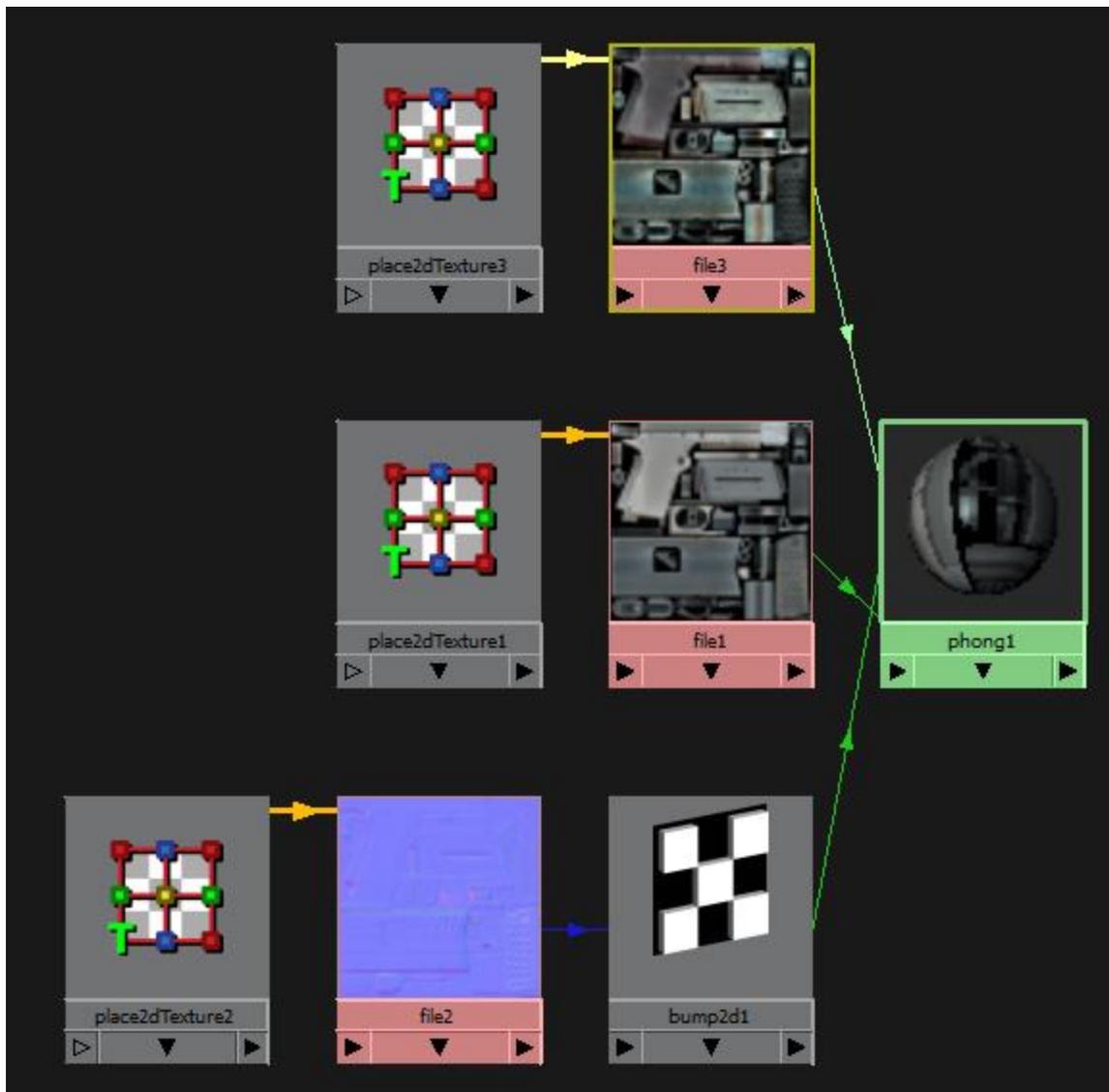
I won't be covering the actual details of modeling, because it is a gigantic subject to cover. If you are new to modeling I'd highly suggest seeking out the myriad of free and high quality tutorials available around the internet.

1. Create a copy of one of the template folders. I created a copy of the SMG_Large_A template. Import the FBX inside of Maya 2014. (File > Import)
2. Model your weapon. After modeling, align your weapon with the template. Keep in mind your proportions / chosen weapon style. (i.e., you probably want a pump shotgun replacement to have a pump.)



A good place to line up would be the trigger area. Grips should be roughly the same size.

3. UV unwrap your weapon and texture it. (Again, plenty of tutorials out there to detail this process.)
4. Overwrite the default textures of the SMG_Large_A with your own. Make sure your images are the same size as the defaults. If you are utilizing all the features of the shaders you will make a diffuse, normal, and specular map.



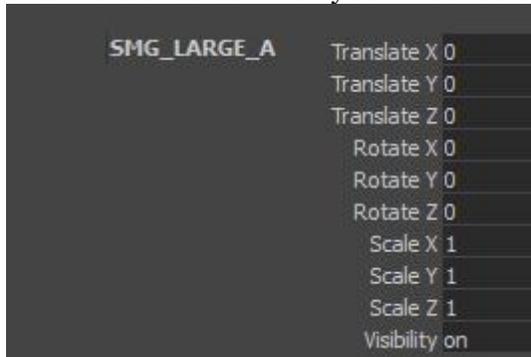
4. Open the Hypershade. To lay out the materials like above, hover over **Phong1** and right click drag down to select graph network. At this point you've replaced the default textures with your new ones. To reflect this change hover over **Phong1** and right click drag down to the left to "*Refresh Swatch*". This will refresh the files it has loaded to your new ones.

Assign **Phong1** to your new mesh. To do this, select your mesh in the main viewport, and right click drag up while hovering over **Phong1** to select "*Assign X to Selection*".

5. We need to adjust our pivot positions before step 6. For the main weapon mesh the pivot needs to be set at origin. (0, 0, 0) Press Insert while your mesh is selected, and you can move around the pivot. Hold X while middle mouse dragging on the grid. Set it to the middle of the grid.

The clip pivot should be set at the same position as the "gunmag_handle" tag. You likely have not adjusted where your attachment tags are yet. (Detailed in step 11.) But take a look at the pivot locations for the template's clip and you can get a good idea of where it should be.

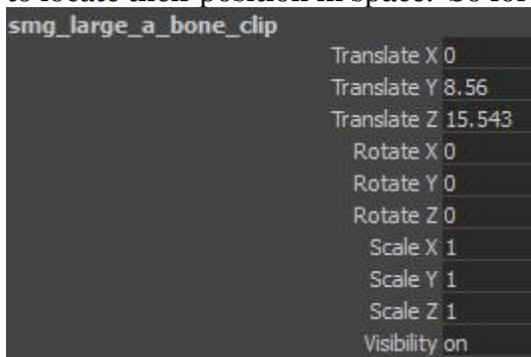
6. During the modeling and UV unwrapping process you likely have scaled your mesh and moved it around a fair amount. We want to make sure these values are frozen so they don't mess with us when converted. On your *main* mesh freeze all your values. (Right click in the channel box editor with your mesh selected. Freeze > All.)



Values for the SMG_LARGE_A mesh.

DO NOT FREEZE YOUR TRANSLATE VALUES for Clips / Projectile meshes.

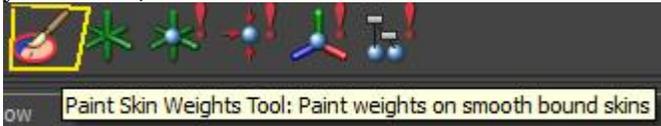
The attachment tag for the clips and the pivot need to be the same, as well as their translate values. This means in world space, exact same. Below you see that my clip is 8.56 in X and 15.543 in Z. The converter uses the translate values of the mesh and the clip attachment tag to locate their position in space. So for these just freeze their scale and rotation values.



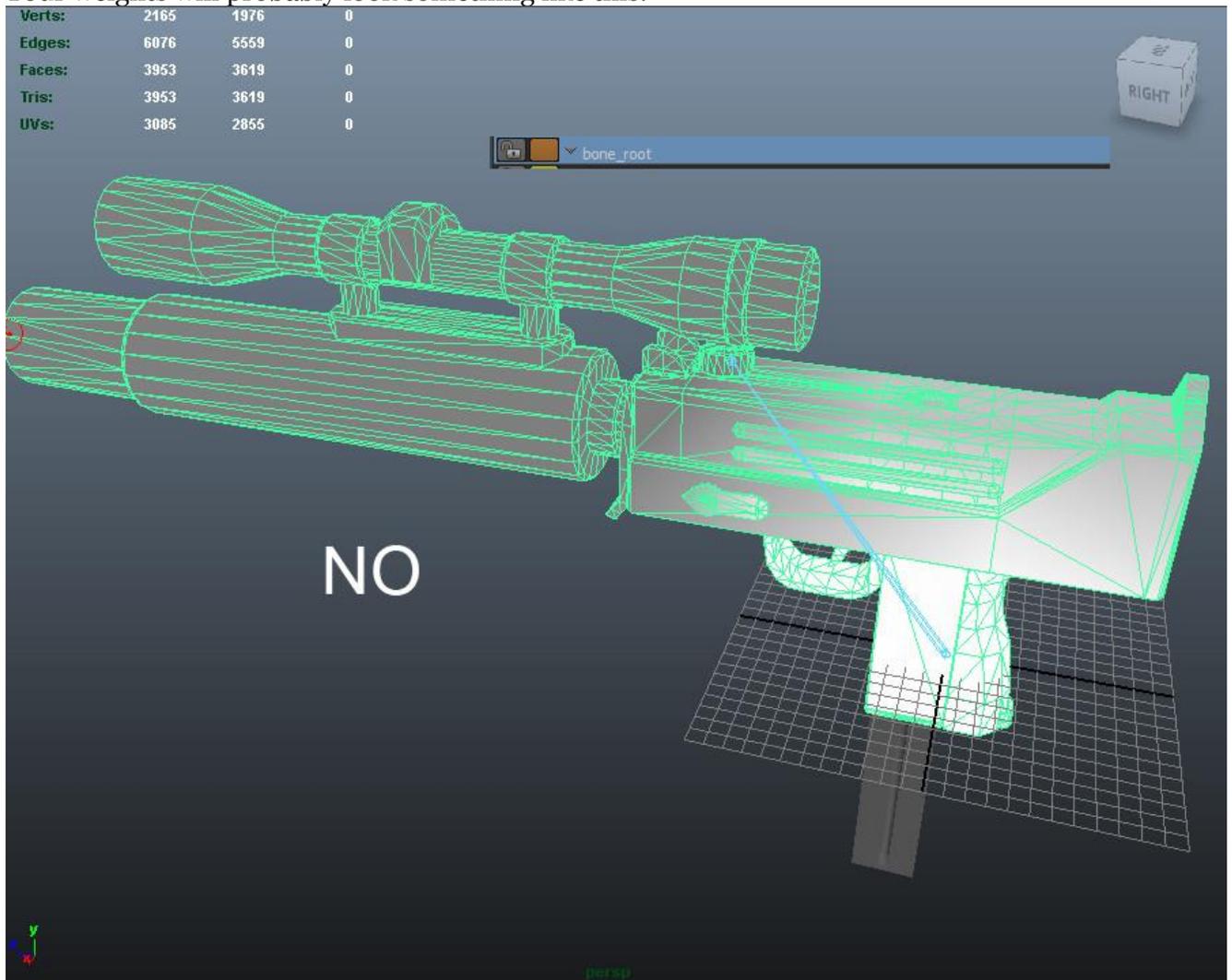
8. We now need to separate the default mesh from its bones, and while doing this we will also delete any construction history for your new mesh. Select *Edit > Delete All By Type > History*. At this point you want to delete the template mesh. Before you do though, make sure you have their names copied to your new mesh(s). (Maya will append a 1 to an object with an identical name to another object in the scene. Just remember to delete the 1 after you delete the original.) Delete the template mesh(s).

9. Time to skin the bones to our mesh. Select the bone_root bone and *then* your mesh. Make sure you've selected the Animation menu set. (Top left dropdown box.) Then select Skin > Bind Skin > Smooth Bind. (Smooth bind should have its default values selected.)

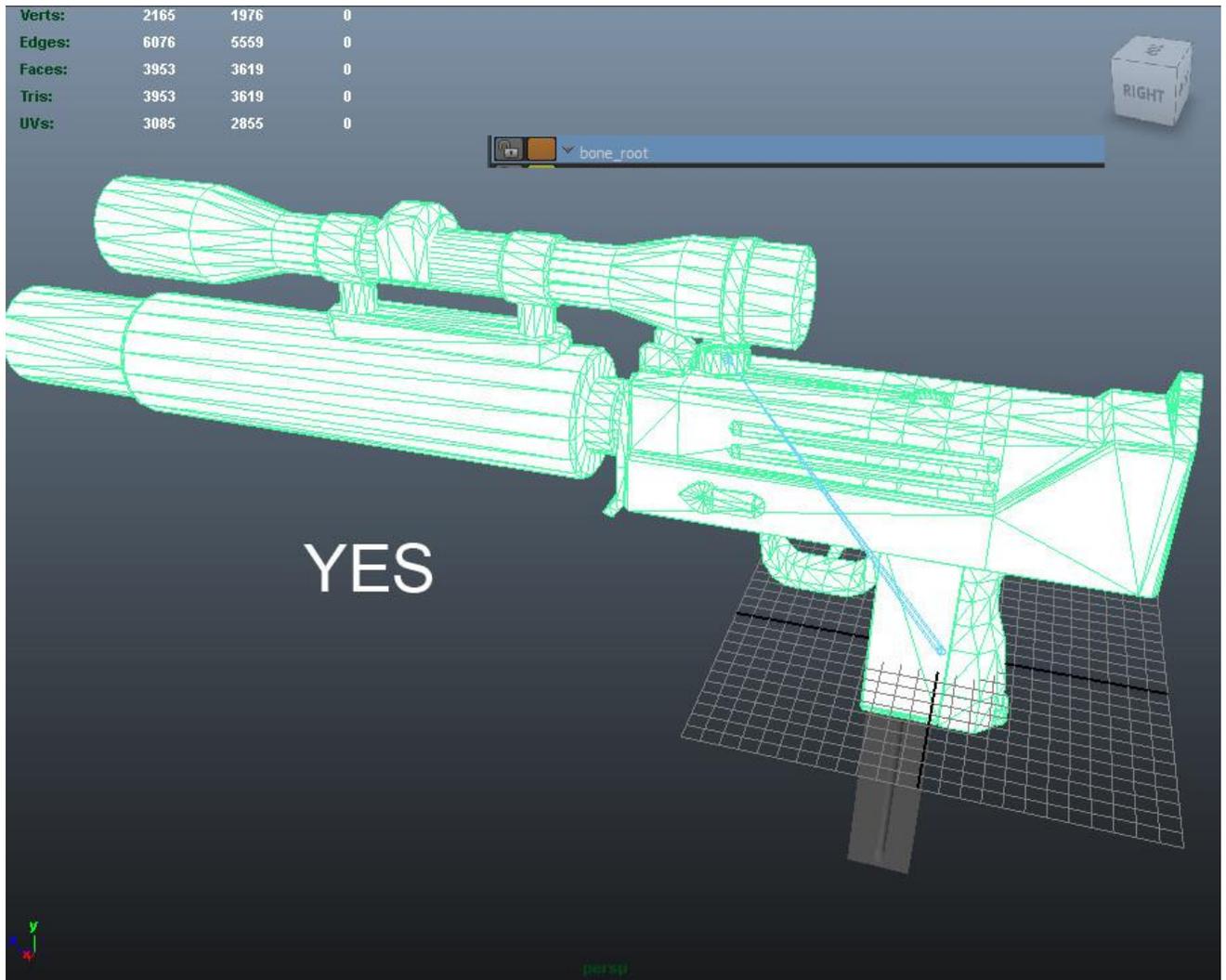
10. Skin Weight Time! The skin weights it assigned to your bones need to be changed. Select your bone, and then mesh. Then select the Paint Skin Weights Tool.



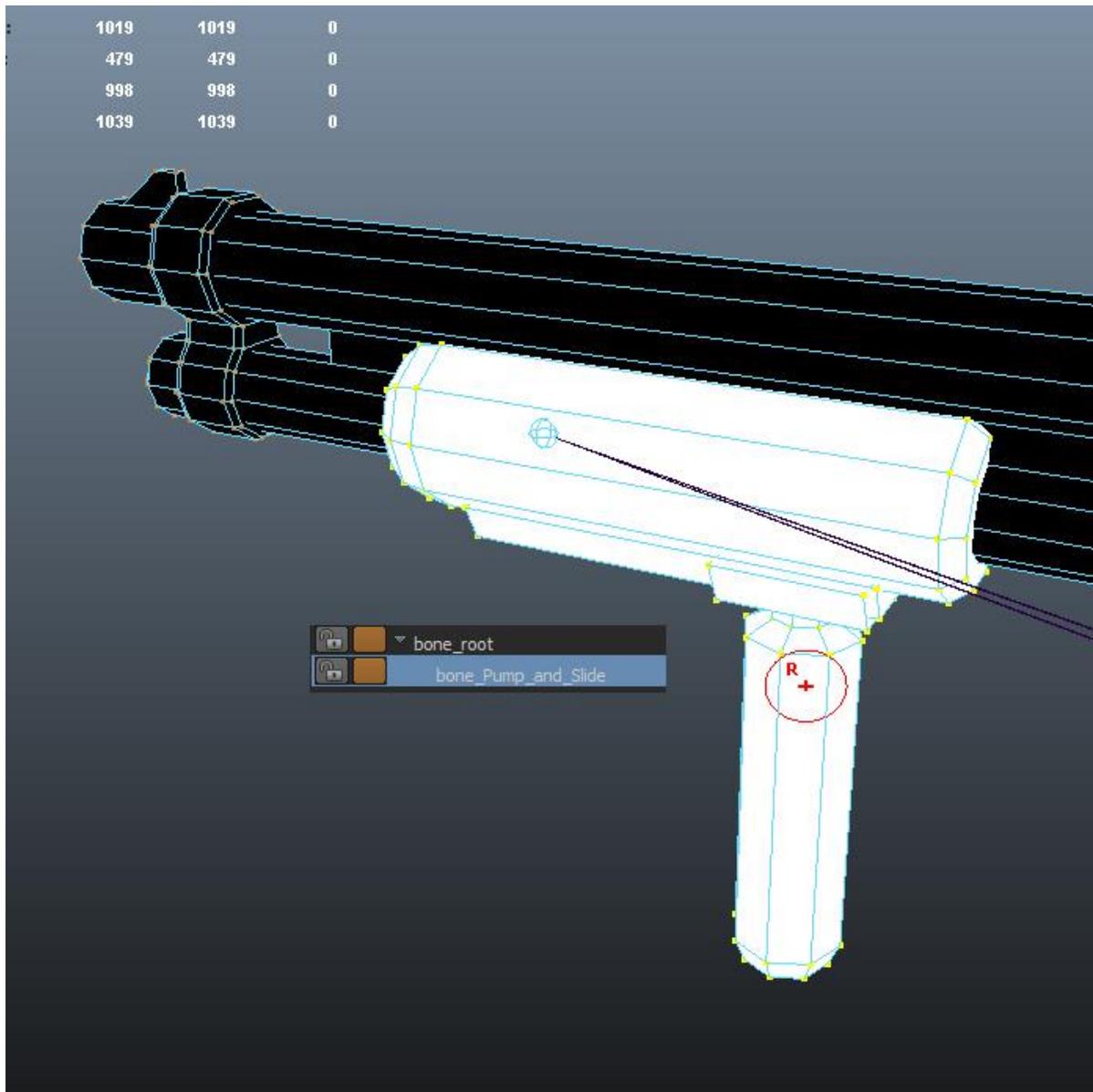
Your weights will probably look something like this.



White = Full influence over vertices. Black = No Influence. Set your opacity and value to 1.0 and hit flood. This will make your mesh look like the picture below.



Now select your other bones and flood them with a value and opacity of 0. Do this for each bone that isn't 'bone_root'. This will turn the entire model black which is what we want.



After you've done this, select all the vertices of the area you want affected by each bone. Then go back into the paint weights tool and flood these areas with a value and opacity of one. On the right you can see an example of the pump shotguns weights for the pump bone.

11. Now your weights are set correctly. All that's left is to make sure your attachment tags are in the right spot. Select them via the Hypergraph > Hierarchy and move them to new spots if need be. Below you can see the muzzle flash locator I moved to a new spot on my new mesh.



12. Now it's time to export! Make sure your Hypergraph looks like the template at the start.

Go to File > Export All. Select FBX from the dropdown menu below. Now make sure your settings look like [this picture](#). (Linked because of size.) Make sure you are exporting to your copied template folder. The FBX needs to be in the same directory as the textures assigned to it.

STOP: Now we will want to go back to the main tutorial in order to continue!