

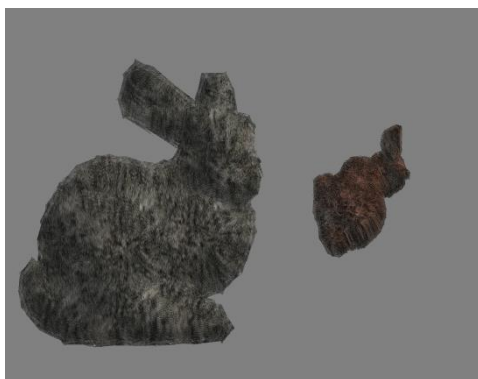
1.1 Scene Editor& add fur

I use VBO Indexing to load the mesh. When press 1, it will show the bunny with fur. I first get the size of vertices and indices, and input the data from the off file and scale it. Then computer the normal and put it in the same index. There are surface layers for the fur and shells layers for the fur. For the shell layers, I add the new level with formulate $V_i = V_0 + (h_i/m)*N_0$. There will get different levels to place volume texture.



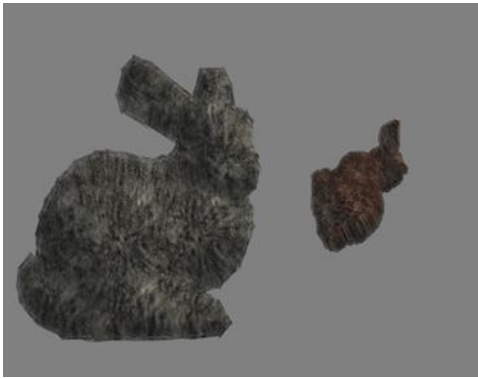
1.2 Object Control

When click the object, the selected object will turn red. And you need to select a mode first to translate or rotate or scale the object. When pressing 'O' button, it will turn to translation mode, and then when you press keys 'A' and 'D', it will move alone positive or negative x axis. when you press keys 'W' and 'S', it will move alone positive or negative y axis. when you press keys 'Q' and 'E', it will move alone positive or negative z axis. When pressing 'R' button, it will turn to rotation mode, and then when you press keys 'A' and 'D', it will rotate clockwise or counter-clockwise alone x axis. When you press keys 'W' and 'S', it will rotate clockwise or counter-clockwise alone y axis. When you press keys 'Q' and 'E', it will rotate clockwise or counter-clockwise alone z axis. When pressing button 'K' or 'I', It will scale the object. When pressing 2,3,4, the bunny will change to different colors.



1.3 Camera Control

When pressing key '7', it change into orthogonal projection. When pressing key '8', it change to perspective projection. I just add a Perspective or orthogonal matrix to suppose the Perspective or orthogonal view. When press keys $\uparrow, \downarrow, \leftarrow, \rightarrow$, it will change the view of a camera.



Orthogonal



Perspective