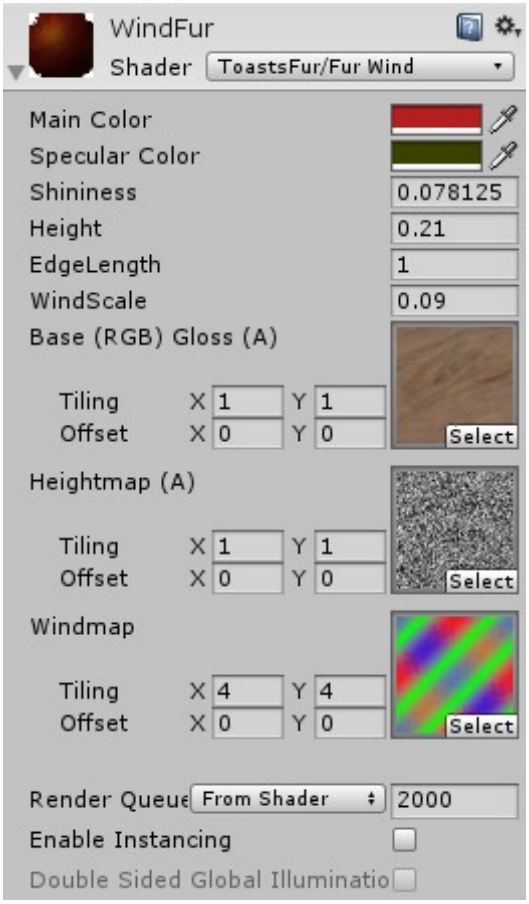
Fur Shaders

by Leo Traub

!!!!IMPORTANT!!!!
Keep in mind, that this tesselation shader generates a lot of vertices and high resolution fur should not be used too often in one scene. Otherwise your GPU might suffer a lot and your game will run slow. Consider using the lower quality fur shader from the package instead.

Description



- Main Color: The color of the material.
- Specular Color: Set this to black if you dont want a specular
- Shininess: Affects the specular
- Height: The height of the fur. For some meshes you might need to try really small values here
- EdgeLength: Kind of affects the resolution of the height map. If you can set this value high, do it. This will affect the speed of your game.
- WindScale (only for wind shader): Mulitplicator value for the wind map
- Base: The texture of the fur.
- Heightmap: The map that generates the geometry of your fur. White pixels are spikes, black pixels are low, grey is in between. IMPORTANT: Tiling is disabled (wont do anything) for the lower quality shaders, but therefore the lower quality shaders are more efficient. Always try out the lower quality shader variants to keep your framerate constant!!
- WindMap: Describes a vertex transformation of the fragments generated with the heightmap. The red channel changes the position along the tangent of a vertex, the blue channel changes the position along the normal of the vertex (like the heightmap) and the green channel changes the position along a vector perpendicular to the normal and the tangent.

Wind

The package features a script, that basically just shifts the wind map along the mesh via the offset. Just look at the implementation and you will get an idea of what happens.

Sharp Edges

If you look at the cube in the example scene "Fur", you might realize that there is a second cube with a different material right inside the first cube. This is a quick fix for a problem occuring with the fur shaders. Usually if you have sharp edges, like a 90 degree edge of a cube, there will be some free space between the furry faces. This can easily be fixed by duplicating the object and assigning a unity standard material to the second object! Just make sure not to copy any colliders or other things on that object! ;D

Have fun integrating your own textures with these shaders and maybe you will come up with your own heightmaps or windmaps. In some cases of heightmaps it might be necessary to change the texture import settings (Texture Type --> Single Channel, Alpha Source --> From Gray Scale).

Helicopter Scene

In this scene you can see that the Windmap can be animated for more organic Scenes using a gif. The GifData object was created using my product Simple Gif Converter from the asset store.