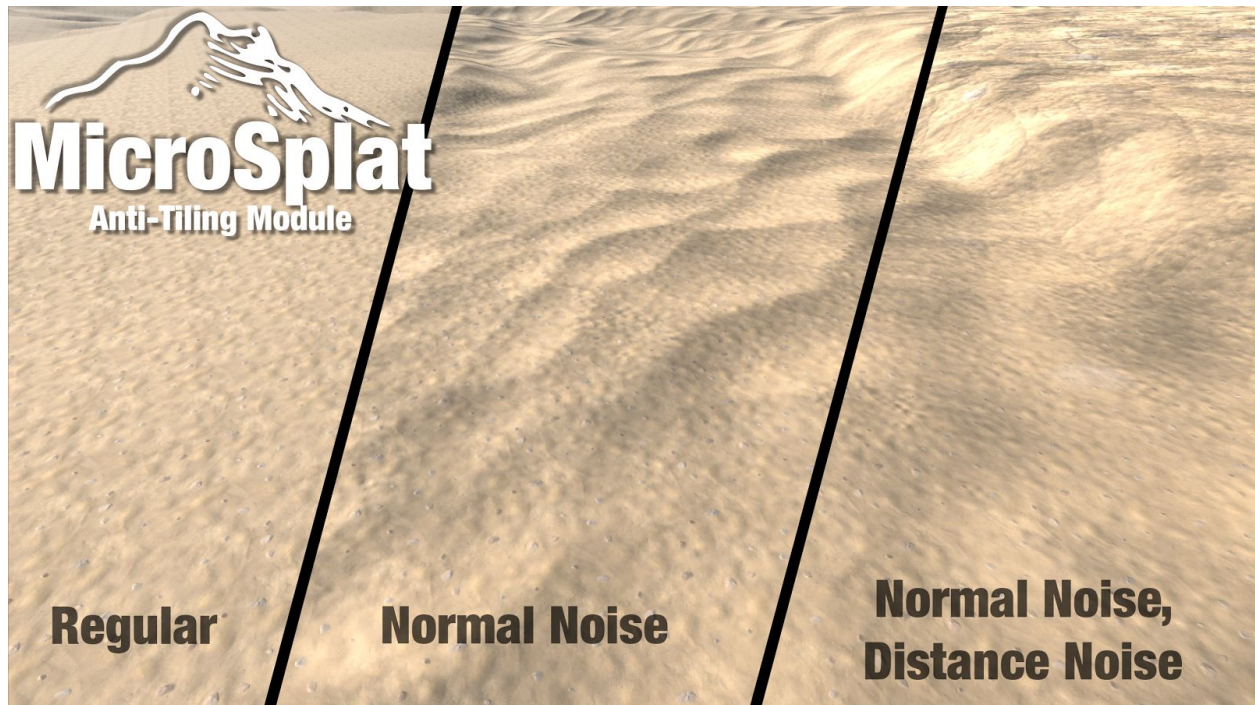


MicroSplat

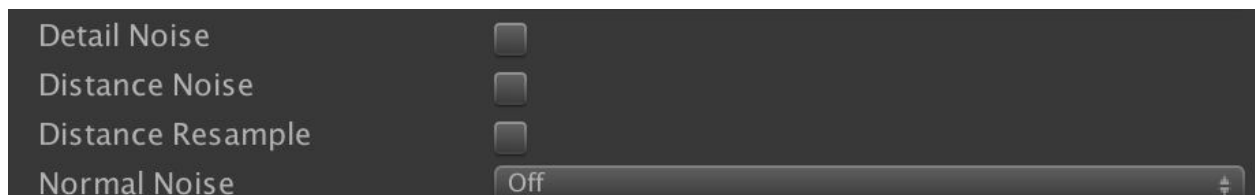
Anti-Tiling Module, Documentation



Overview

The Anti-Tiling module adds several techniques to the MicroSplat framework. These techniques can be used to greatly enhance the look of a scene, both preventing tiling, adding detail, and providing an overall more complex look to your terrain.

Shader Features

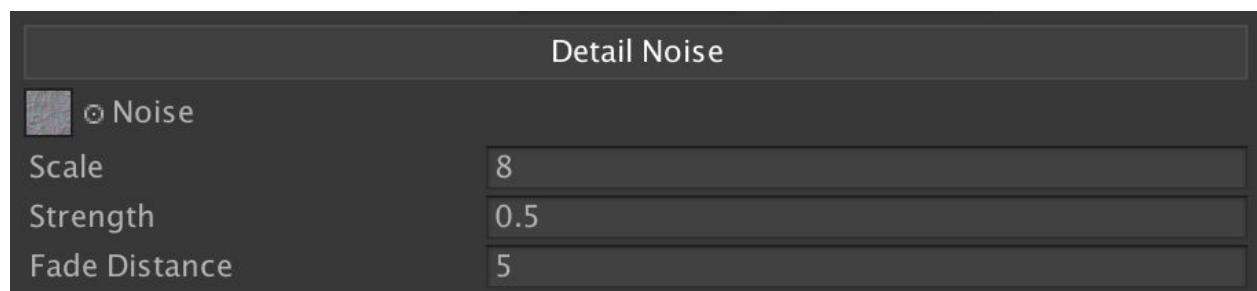


Once installed, several new features can be added to the shader. These are:

- Detail Noise
 - This is a detail texturing technique that blends in a special texture when the terrain is very close to the camera.
- Distance Noise
 - Distance noise is like detail noise, but is applied to things in the distance.
- Distance Resample
 - Distance Resampling will resample the Albedo textures at a different UV scale and cross fade the result over a distance.
- Normal Noise
 - Up to 3 layers of normal noise are available. These are normal maps that are blended into the terrain at different UV scales.


When any of these features is enabled, Per Texture properties become available in the Per Texture Property section of the shader, allowing you to control how much of each feature appears on each terrain.

Shader Parameters



Detail noise uses a single texture which is scaled based on the terrain UVs. This texture contains a luminosity adjustment in the Red channel, with a normal adjustment in the G and B channels. A default one will be assigned for you.

Scale controls how many times the texture should tile within one of the terrain textures. Strength controls the amount of the effect. Fade distance controls when the effect starts fading out.


Distance Noise	
 Noise	
Scale	10
Strength	0.5
Fade Start	100
Fade End	150

Distance noise uses a single texture which is scaled based on the terrain size. This texture contains a luminosity adjustment in the Red channel, with a normal adjustment in the G and B channels. A default one will be assigned for you.

Scale controls how many times the texture should tile within the total terrain. Strength controls the amount of the effect. Fade start and end control when the distance noise starts to fade in, and when it should be completely faded in.

Distance Resample		
Resample UV Scale	0.1	
Resample Begin/End	X 40	Y 200

Resample UV scale controls the size of the texture vs. the original texture size. The Begin and End parameter control where the crossfade occurs.

Normal Noise	
 Normal	
Scale	8
Strength	1

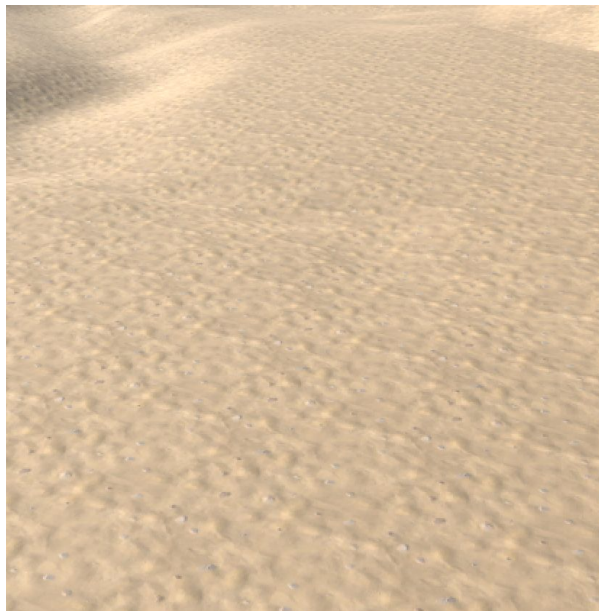
You can have up to three normal noise textures, and control how much of each is applied to each terrain texture. These are standard normal maps, with a single UV scale setting each, and a global strength for the effect of each.

Best Practices

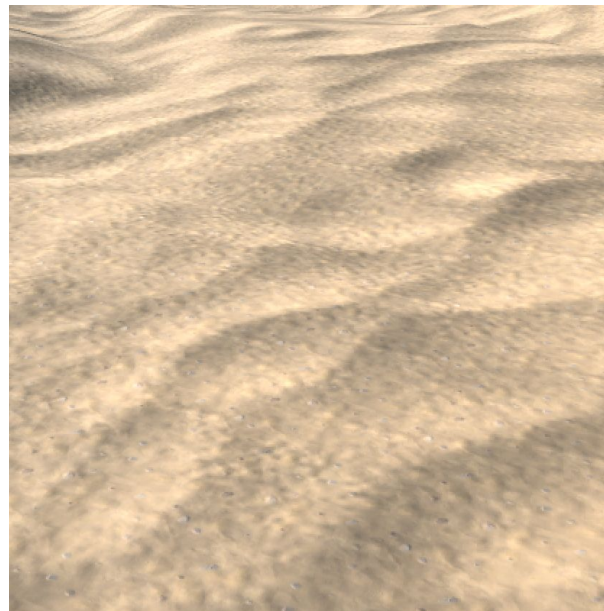
Each effect in this package can be used in a number of ways, and all can be combined. Each effect is reasonably cheap as well, so using them in combination is a powerful way to enhance your scene.

Detail noise is a simple technique to add detail if your camera will get close to surfaces. When you consider the cost vs. something like doubling all the texture resolution of your textures, it's incredibly inexpensive.

Noise Normal is one of my favorite techniques, which is why I let you have 3 of them. You can create large signatures in a terrain with it, such as the dunes created by wind on sand, or rocks eroding under the moss of a terrain.



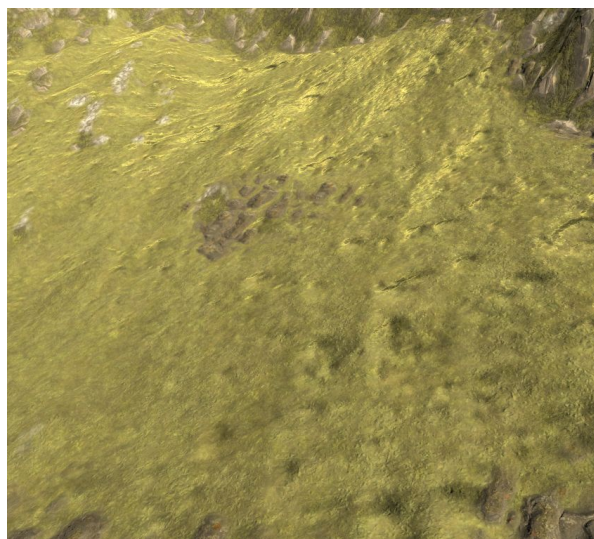
When viewed from far away, the sand not only tiles, but doesn't have large scale details that we expect to see in the desert.



With Noise Normal applied, we create the waves of sand you expect to see, yet retain highly detailed sand up close.



Without Noise Normal, our grass is uniform and featureless.



With a Noise Normal applied, we get the look of a larger subsurface, where grass and moss has grown over it.

In this example, 2 different textures were used, and using the Per Texture property for them, filtered such that the wavy sand normal was only used on the sand, and the rocky normal only used on the grass.