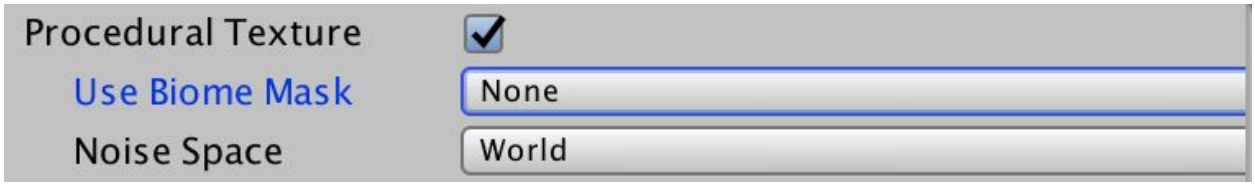
MicroSplat

Procedural Texturing Documentation

Overview

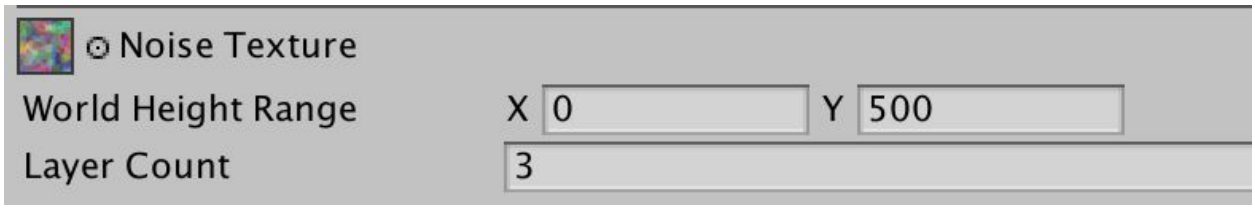
The procedural texturing module of MicroSplat allows you to texture your terrain based on rules. The texturing is executed in the actual terrain shader, so no splat map textures or painting is needed.

Shader Features



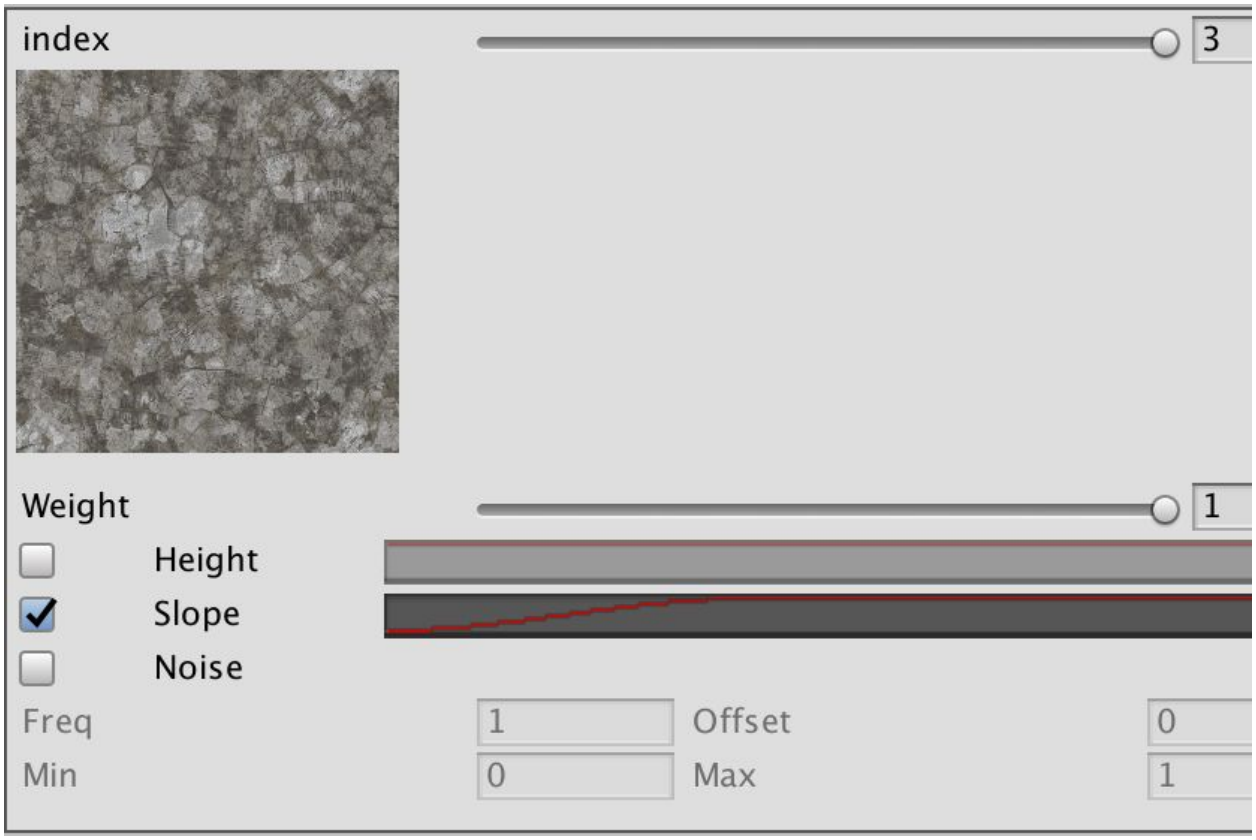
Enable the Procedural Texture option in the Shader Generation section of the material. An option to enable the Biome Mask is available- this is an RGBA texture that can be used to mask out layers. In SplatMap mode, the RGBA channels of the texture correspond to weights of four biomes. In ExclusionMap mode, you can get 16 biomes by masking colors like 1,1,0,0 as a unique biome filter.

Properties



Once enabled, a Procedural Texturing section will be added to the material settings. At the top are the following options:

- Noise Texture. The noise texture allows you to rough up your ruleset with noise. One noise texture is used across the whole system for speed.
- World Height Range. Height based rules need to know the range of the terrain, so you can enter your minimum and maximum world height for your terrain(s) here
- Layer Count. This controls how many rules you have in your system. Each rule is processed a bit like a photoshop layer, where layers on top have priority over layers below them.



Each layer has an interface like the above. At the top, you can choose the index of the texture you are going to apply. Remember, layers are ordered like photoshop layers, so it is suggested to have the last layer be the “background” layer, with higher layers deciding where they should have weight.

The layers properties include:

- Weight. This is the overall opacity of the layer.
- Height Curve. When enabled, you can use a curve to determine how much weight the layer should have at what heights. Remember to set the height range. Weight is defined on the vertical axis, height is on the horizontal.

- Slope Curve. When enabled, lets you define a curve to determine which slopes the layer should appear on. Weight is defined on the vertical axis, while angle is defined on the horizontal axis. The angle goes from 0-1, with 0 being down and 1 being up.
- Noise. Noise modifies the weight of the layer. You can use the frequency and offset to scale or move the noise, while the min and max parameters remap the noise output. You can use the remapping to make the noise faint (0.0 to 0.2), increase contrast (0 to 5), or even be subtractive (-1 to 0).

Biome Mask

When the biome mask is enabled, you can supply a texture to filter each rule by biome. In Splat Map mode the texture is an RGBA texture, allowing for four biomes areas. Each rule has 4 values which determine the weight for that rule set on that biome. For instance, if you set the value for a rule to 1, 0, 0, 0, then the rule's weight will only be applied where there is red in the biome mask. Essentially, these values are multiplied together to produce a weight.

In exclusion mode, values like 1,1,0,0 can be used allowing for 16 possible biomes.

Workflow Advice

If you are familiar with Photoshop layers, then the way weights work in this system will make a lot of sense. Create several layers, set their weights to 0, and set the last ones weight to 1. Select something universal for this last texture.

Then go through the other layers, choosing textures for them, and raising their weights to 1. Then enable noise of a filter curve and adjust the parameters to get the texture to appear where you want it.