Progress Report

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A Procedural, Minimal Input, Natural Terrain Plug-in for Blender

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1 Previous Objectives

1. Make border cells completely lossy.
2. Try the flat plane approach: changing erosion constants to create mountains and rivers and then eroding (this must be done after making the border cells completely lossy otherwise the system will still be very contained).

2 Progress

2.1 Lossy System

The border cells were made completely lossy in an effort to further combat sediment and water buildup on the terrain being eroded. As visible in Figure 1, this technique made a noticible difference in the outcome of the terrain, having a positive effect on the bottom end of the terrain, but an adverse effect on the top end, sinking it in, but never eroding it since all the water is just lost before any effect can be had by erosion. Overall the effect is positive, so this may be worth pursuing by re-introducing border cells onto the terrain during erosion processing.

2.2 Terrain Emulation

In an effort toward the eventual goal of the project of creating realistic terrain, two different terrain situations found in reality were tried using the current system:

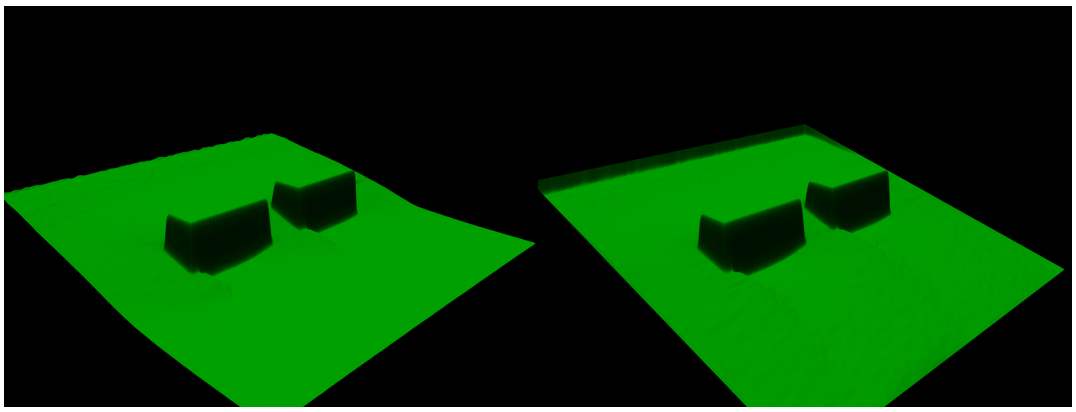

Figure 1: Terrain Emulation, also showing border cell loss difference

2.2.1 Dual hard obstacle

A situation noticed by Shaun Bangay in a burnt field was where two hard obstacles reasonably close to each other on a hillside caused an interesting erosion pattern to be generated by the sediment being eroded down the hillside, an attempt was made at this (as visible in Figure 1) by approximating the two hard obstacles (presumably rocks) with two rectangular patches of unerodable terrain.

2.2.2 “Boob Hill”

Another natural phenoma noted by Kevin Glass is what the photographer termed “Boob Hill”, refering to the photo in Figure 2. This was attempted by again creating a base terrain specifically tailored toward creating this effect, and eroding it, as is visible in Figure 3. Unfortunately after erosion the terrain still does not look very realistic, and this may be due to the flat plane around the mountain, so the effect may be improved if a slight slope is introduced.

3 Problems

None

4 Objectives for Next Week

Sustain Kevin on my tears.

Figure 2: “Boob Hill” photo

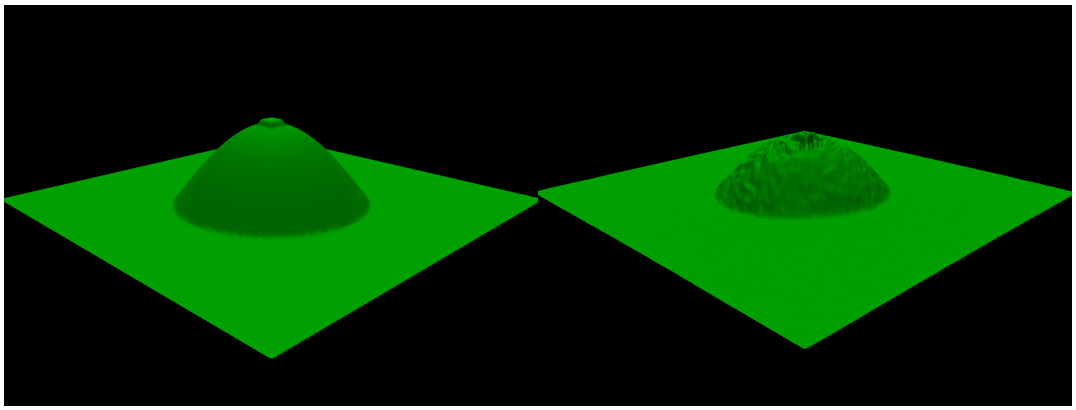

Figure 3: “Boob Hill” Emulation, before and after erosion