Hi, and thank you for acquiring Terrain Deformer, this package is an engine for creating unity terrains that mimic snow and/or sand, what follows is a tutorial on how to apply it in your project, an explanation on the TerrainEngine attributes and a few guidelines on how to get the best results from the engine, some others for specific occasions.

How to setup

Unpackage the TerrainDeformer.unitypackage into your project, by doing so unity will automaticly create a folder named TerrainDeformer with 2 folders inside it, Scripts and SampleScene.

- SampleScene contains a sample unity scene along with all the necessary files for it(except the scripts), you can use this scene to see TerrainDeformer working.
- Scripts contains a DLL where you will find all the scripts required for to you to make the TerrainDeformer engine to work in your project.

Now in your unity project, on editor mode, create a unity terrain, you can do that by clicking on the buttton, at the top left corner, *GameObject->CreateOther->Terrain,* name it BaseTerrain.

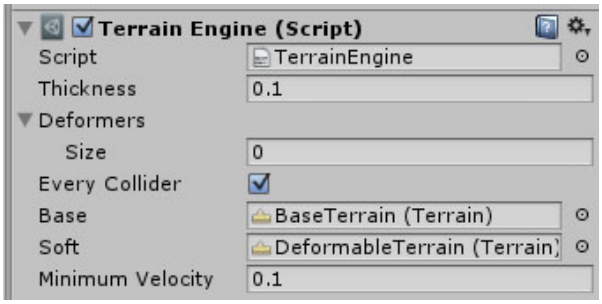
Here its preferable that to set your BaseTerrain Heightmaps resolution to be at least the double of its width or length, so if the width and length are 50 and 50 the ideal is that the heightmap resolution be 100, you can set all 3 of this attributes of your terrain by: selecting it, in the inspector window it should have the component *Terrain(script),* in it there should be a button with a icon of a gear, clicking in it will open the options window of your terrain, that is where you will be able to set the width, length and heightmap resolution.

Now with the BaseTerrain in your Scene you are ready to use the engine, go to back to the TerrainDeformer/Scripts and and drag the Script TerrainEngine in to your new Terrain, and with that the basic setup is done, the TerrainEngine will automatically create a second terrain that will be deformable by any Unity GameObject with a RigidBody component or a CharacterController component.

In order to create parts of the Terrain that won't be deformable, all you need to do is use the Unity Terrain tools to raise the Base terrain where it is above the Deformable Terrain or to lower the Deformable Terrain below the Base Terrain, even if you increase the height in the DeformableTerrain to higher than its original setup it will all be deformable in till it reaches a minimum distance from the BaseTerrain.

TerrainEngine Attributes

With the engine setup the following Script should be in your BaseTerrain.



- Thickness: will define both how much weight its necessary to deform the Terrain, and how much is the minimum distance from the DeformableTerrain to the BaseTerrain.
- Deformers: is what Rigidbodies or CharacterControllers will deform the Terrain, if EveryCollider is checked every GameObject that collides with this Terrain will be added to this list.
- Base: is the BaseTerrain that was created in the How to setup section and its the basic attribute for the engine
- Soft: is the Deformable Terrain created automatically by the engine.
- Minimum Velocity: Is the minimum Velocity necessary for a Rigidbody or CharacterController

TerrainEngine guidelines

As it was mentioned before at the *How to setup* section it's preferable that the Base Terrain have its heightmap resolution as at least the double of its dimensions width and length, but this is not to be overdone, the Unity Terrain system is not the most optimal one and having Heightmap resolution too high, or just Terrains too large, could make your project very slow, also having too many Deformers could prove itself to be a similar problem, in this case you might want to consider to uncheck the EveryCollider variable in the TerrainEngine Script and use only a few Deformers.

The TerrainDeformer engine does most of its setup in the Unity editor mode, this is done to avoid long loading times , but that is why for some procedural modifications such as adding Deformers to the Deformers list require the use of the function RestartDeformers() after you add all of the deformers to the engine, and if you want to generate the engine procedurally you will need to use the function RestartEngine() after adding the script to the Terrain.

Considering the very specific conditions for the development of deformable terrains, its included with the Engine a tool for adapting your pre-existing terrains to this conditions, you can use the Script TerrainEditor to divide your terrain into smaller ones, or to increase this terrain resolution without losing the heightmap.