

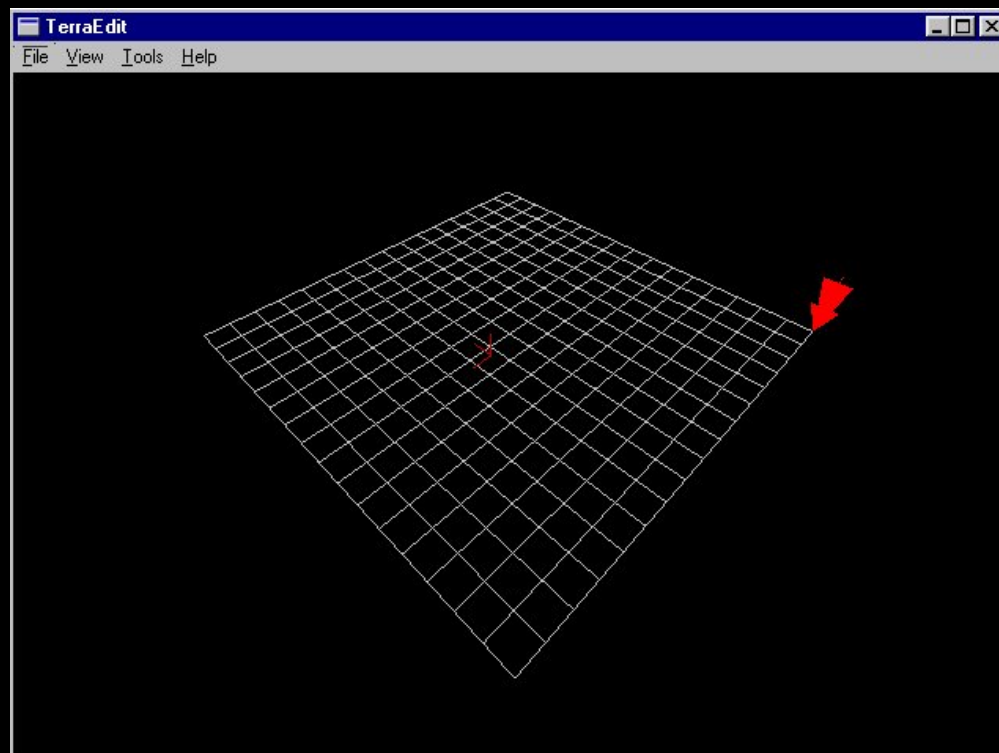
# Sniper's Paradise

## *Who Loves You Baby!!!*

Sniper's Paradise!

---

**Terra Edit** - terrain editing for the Unreal Engine



Terra Edit uses the same mouse movement control as in Ued. The red arrow indicates the currently selected vertex point. This selection arrow is moved by the keyboard arrow keys, relevant to your current view angle. You can individually manipulate the vertex points on the mesh, or you use a heightmap to rough out the terrain.

Create the Heightmap.

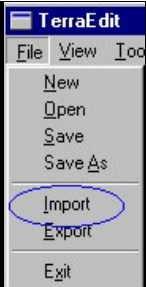
**NOTE:** The initial size of the heightmap will affect the size of the imported terrain. You can alter the scale / size after the import.

For this tutorial we will use a heightmap 256 x 256 in size. Terra edit uses greyscale values for the 'heights'. White is high and Black is low. Make an image 256 x 256 and convert it to greyscale. We are now going to paint a greyscale image of the terrain (Imagine a black and white satellite image of your landscape). I use the middle range of values to rough out the terrain first.

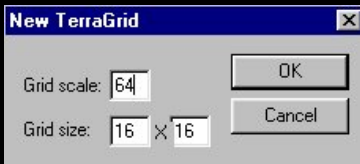
First fill the image with the 'high' color, and work down the scale to the lowest areas. I use the airbrush tool for this. I will keep it basic for this tutorial. You can work at the pixel level, but there's no need to be exact, as we will tweak the terrain later, in Ued.



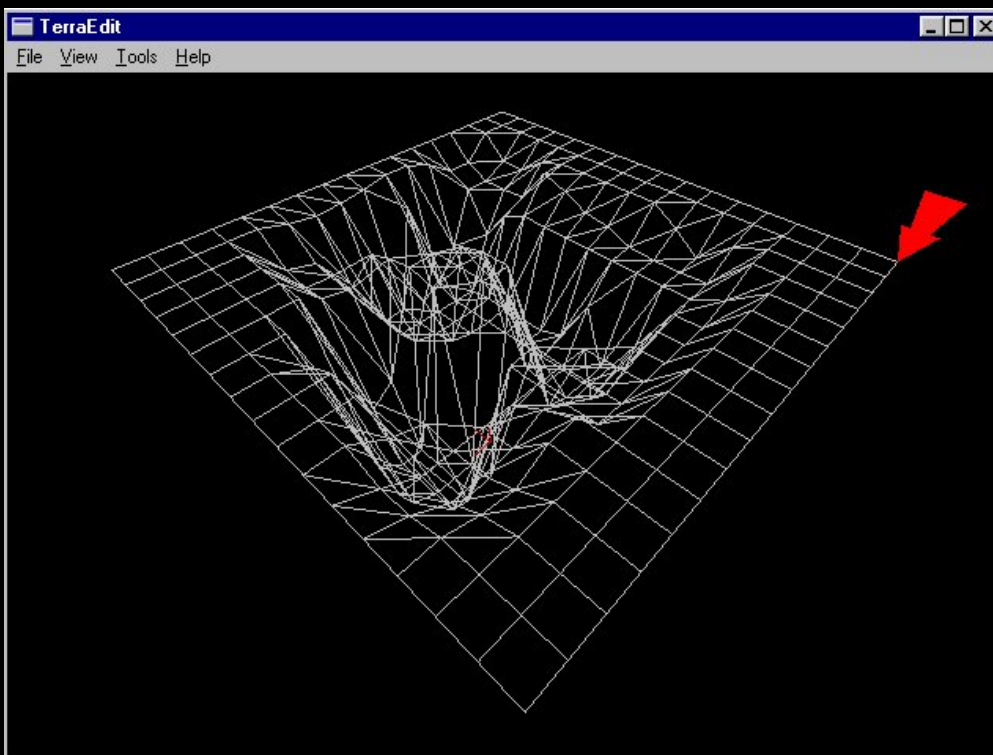
Save the image as a .bmp file , and we will import the heightmap into Terra Edit.



This window will appear. Change the 32 value to 64. Experiment here for different results. Terra edit may crash, but live and learn. This is where we control the level of detail in the terrain. The smaller the grid scale, the more faces we end up with, raising the poly count.

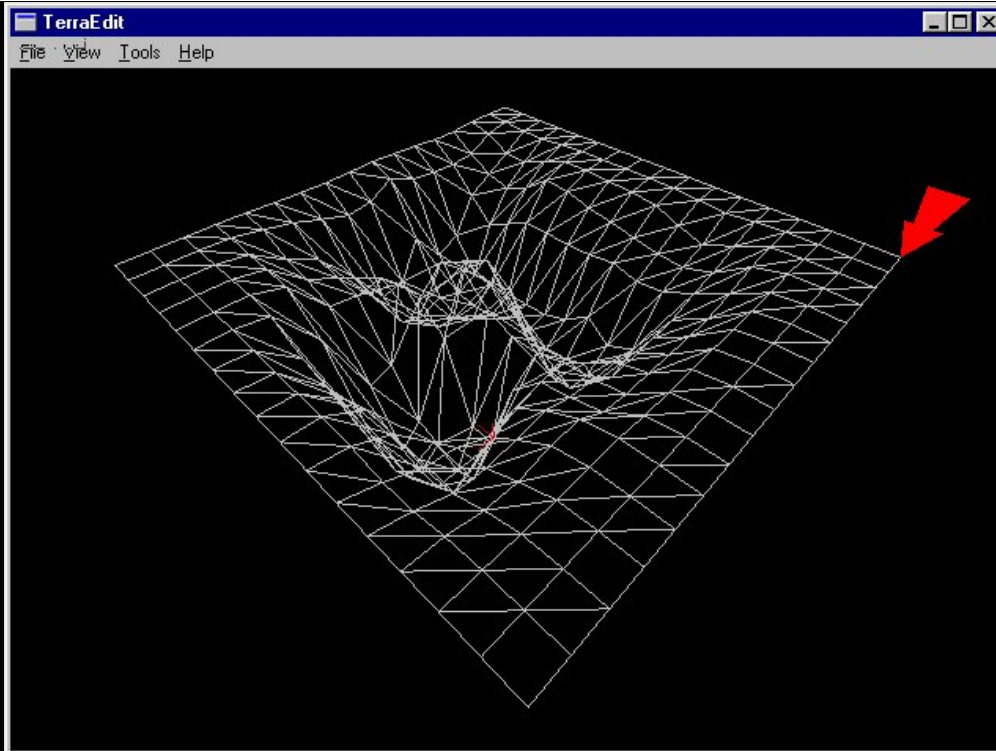


Our result is



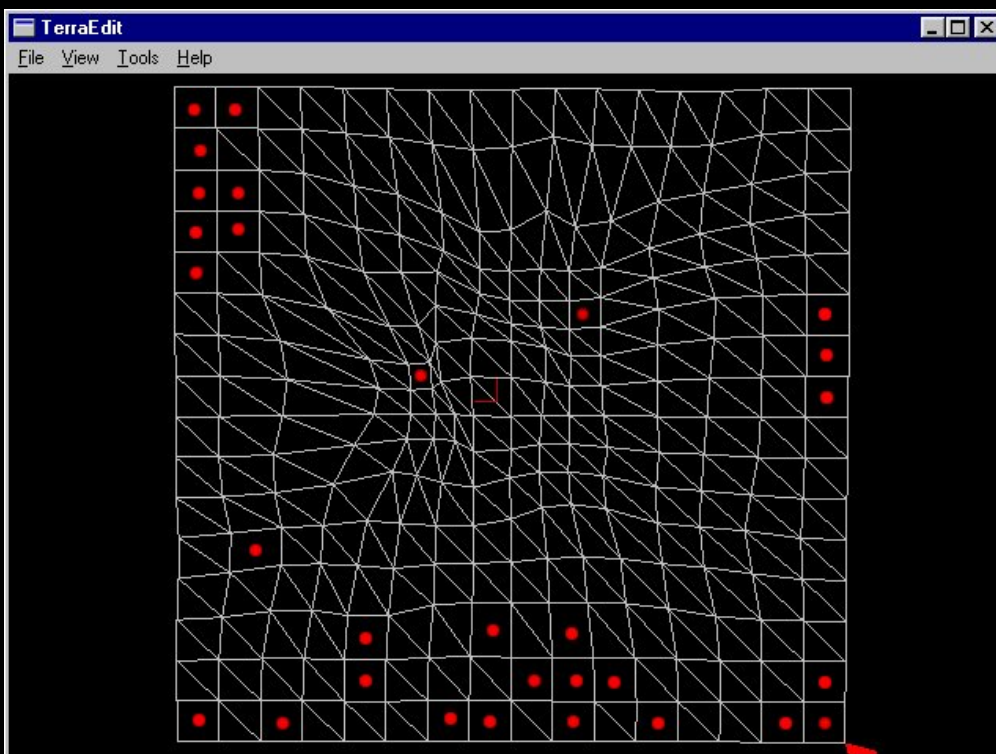
Use the smooth tool (try twice) to tessellate the mesh further.





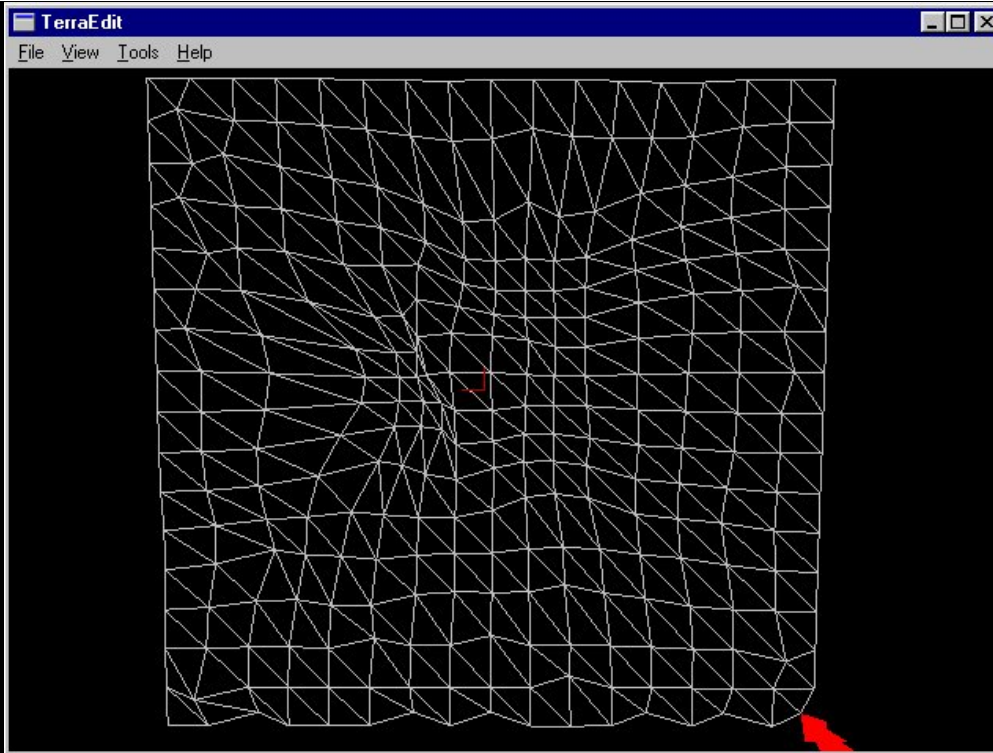
Now...

This next part is very important to avoid bsp holes. We can go over the mesh, and tweak vertex points to our liking. What we must ensure, is that every face is a triangle. Thus the entire mesh will be tessellated, and we can edit/tweak the mesh as we like in Ued. The best way to do this is to view the mesh from above.



See all the square faces? They all need to be triangles before we export. Use the arrow to select vertex points, and then by using the Shift, or Enter keys, you can raise or lower the vertex point, and cause the mesh to tessellate. Once again, we do not need to be exact. The only purpose to this is to create all triangles. It may take some time, and go over it a few times to make sure there are no squares left. Zoom in, to be sure.

Here is the same mesh, after I have altered it as said above .



Save the mesh in Terra Edit so you can come back here if needed. If problems occur in Ued, the first thing you should check is if the previous step was not done in full. Export the mesh as a .t3d file, ready to import into Ued.

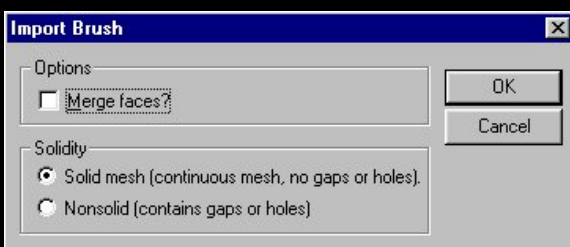


For the purpose of this tutorial, we are finished with Terra Edit . Open Ued.

Import the terrain.t3d mesh.

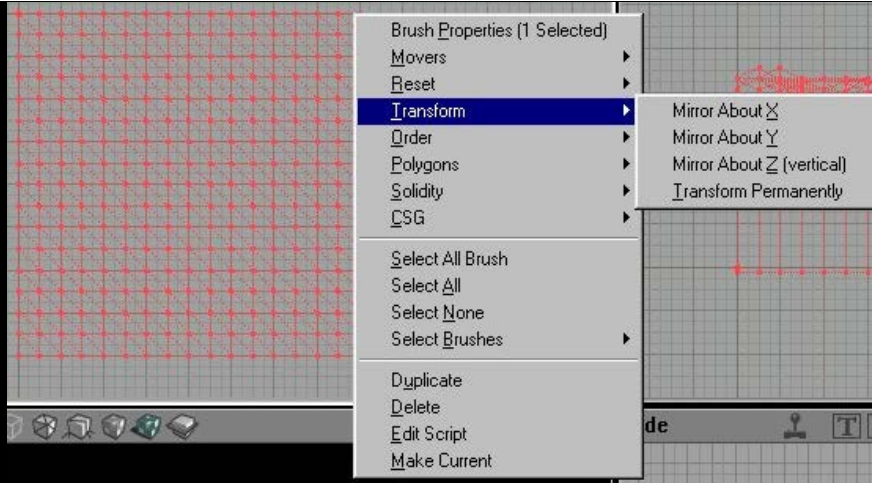


DO NOT check Merge faces.



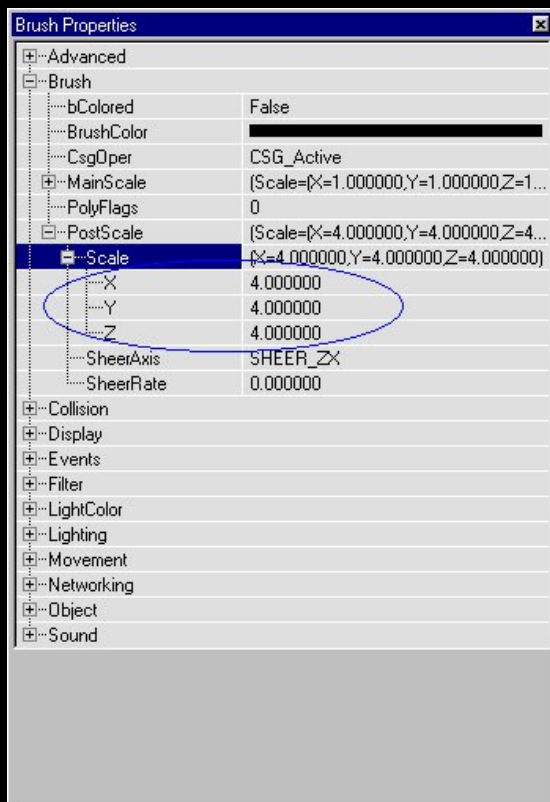
You will notice when the mesh imports, it may disappear when zooming in on it. Select the brush, and Transform Permanently.





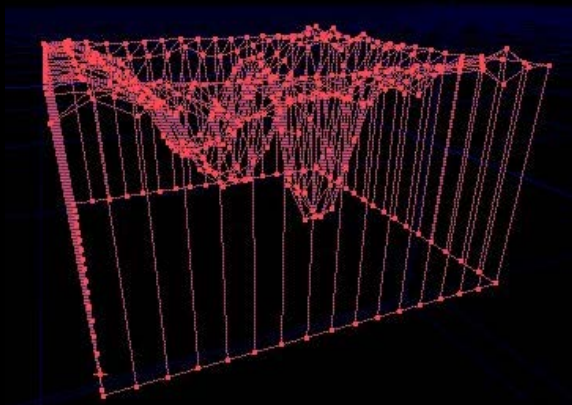
Now is also a good time to check in the top down window, that no 'squares' exist. If so, return to terra edit, fix, and re-export/import.

Now to scale the brush . As mentioned before, the initial size of the brush is relevant to the size of the heightmap used ie. If you use a heightmap of 512 x 512, then the resulting terrain brush will be larger. Select the brush properties, and for now, let's make the scale increase by 4.



I prefer to work in the center of Ued, so I would now move the terrain brush to a central position. Also, Transform Permanently. I also like to increase the grid size, and click the brush to the grid. Do this by selecting the terrain brush, then select one of the bottom, corner, vertex points, and right click it. This will 'snap' the brush to the grid. Now, position the brush where you like.

Add the brush

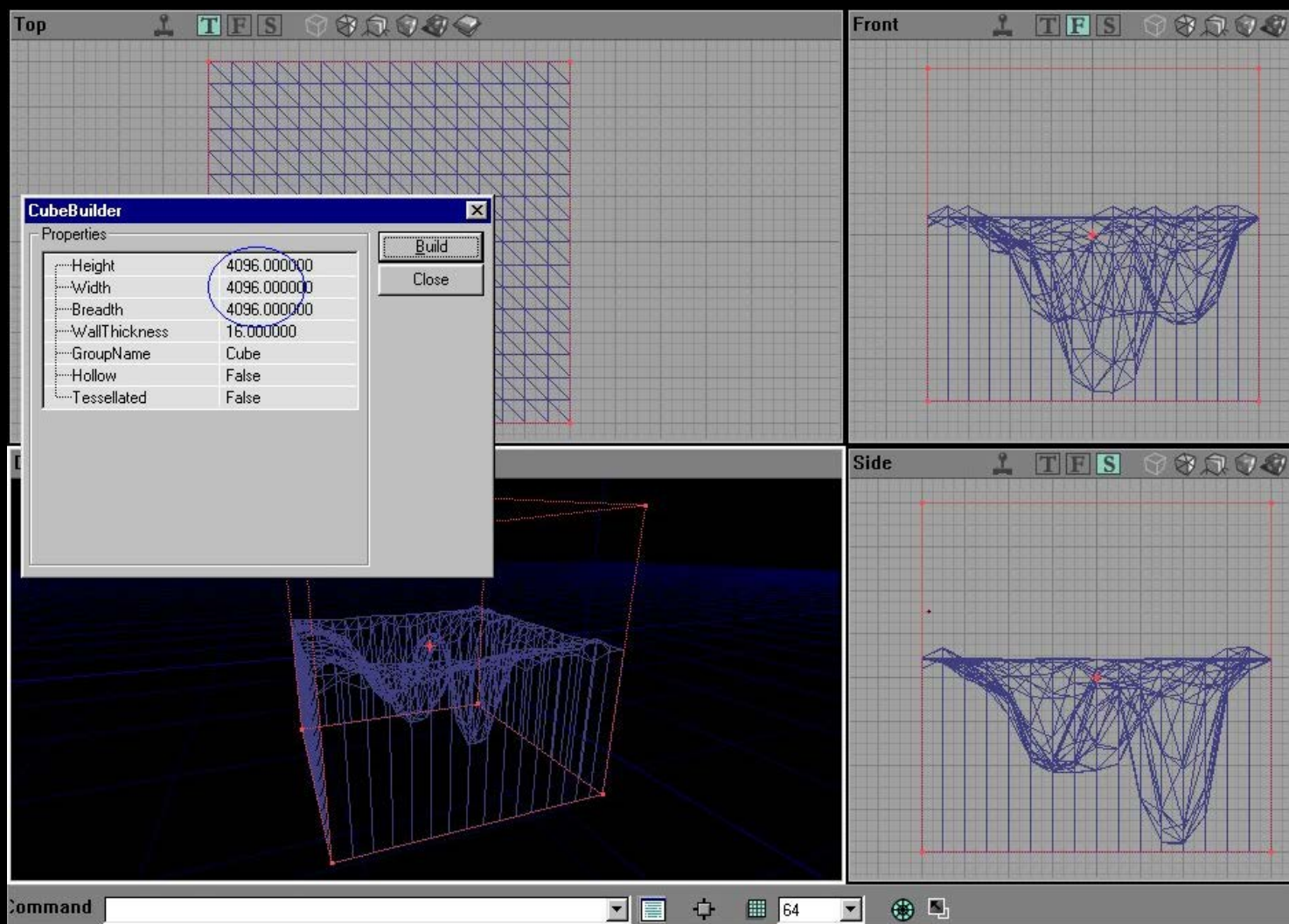


Don't panic!

You have added the brush, but see nothing ! We now need to create the 'space'. Seems like working backwards? Once again don't panic. There are many ways to do things. This

is one way I use.

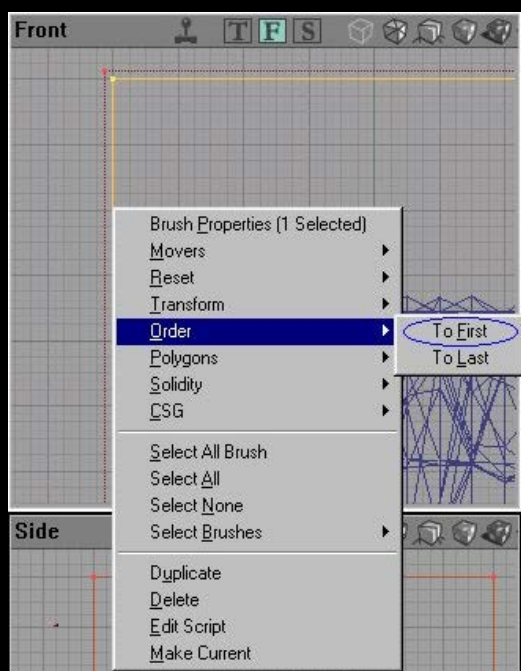
Make a brush to fit neatly around our terrain brush. In this case, the size is 4096 square. No doubt, someone could work out the math here, with respect to the initial size of the heightmap, the terra edit grid scale, and the scaling after import into Ued. Work in multiples of 256, and it's easy.



Subtract the brush

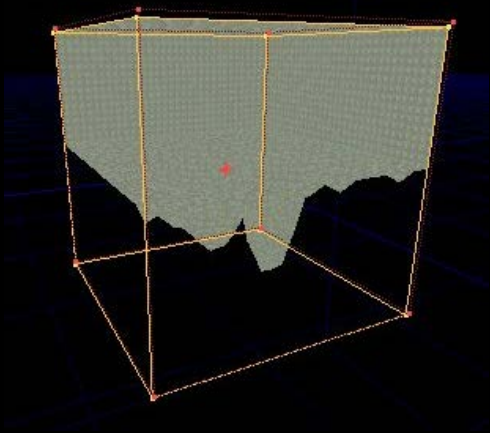
What? The terrain brush is gone !!! All is well.

Now move the red builder brush aside, so you can see the subtracted brush (or press B to hide it. Remember to hit B again to bring it back !). Select the subtract, and we want to alter the order of this brush To First.



Rebuild the map.

That's better. If it isn't, go back a few steps.

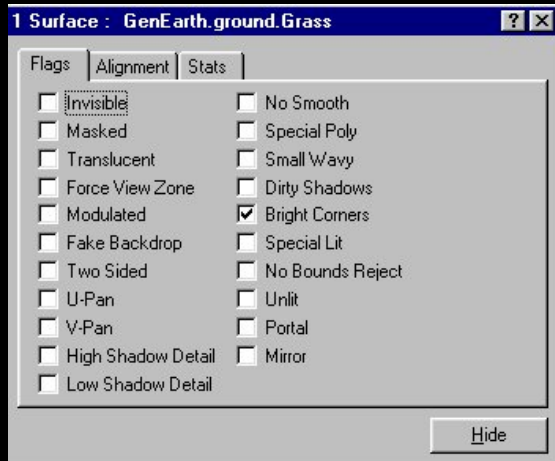


Lets go in!

Click on a face, press Shift-T to select all textures (Shift-B for all faces of a brush), and add a grass / earth type texture. From GenEarth perhaps.



I have added a light to show contrast. I also gave the terrain texture properties values of BrightCorners, and aligned as Floor.



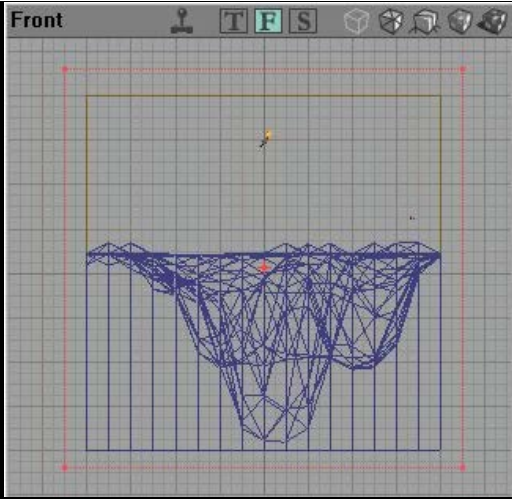
If all goes well, you should now be able to vertex edit the terrain, and tweak it how you like. It is best if you get close with the initial heightmap, to avoid extra work later. Planning, and experimenting is the key.

BEWARE: If you began to alter the terrain brush a lot, you must not overlap faces, have vertex points sharing the same grid position, or other things that may cause bsp holes, and collision problems.

There is another way also, where we end up with one subtract brush, insted of the subtract, and the add.

Create a brush that will surround (but not touch) the existing brushes.

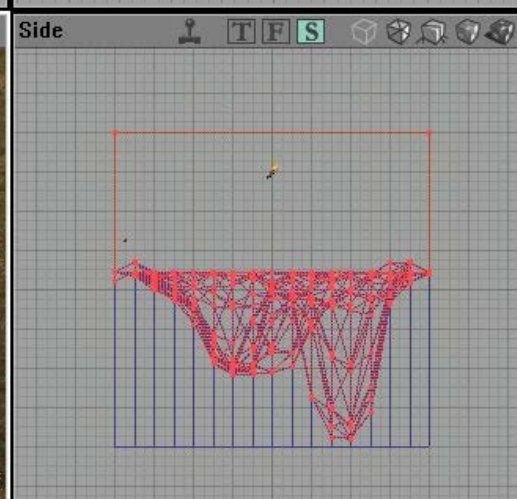
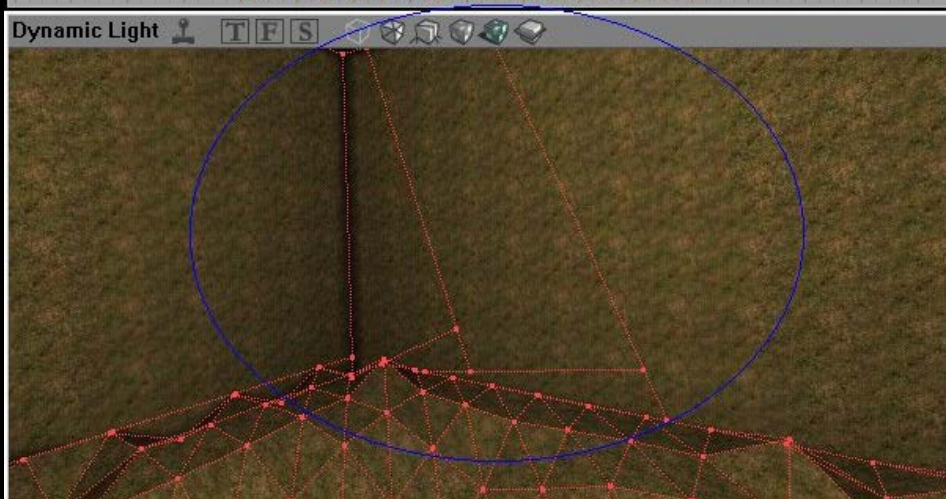
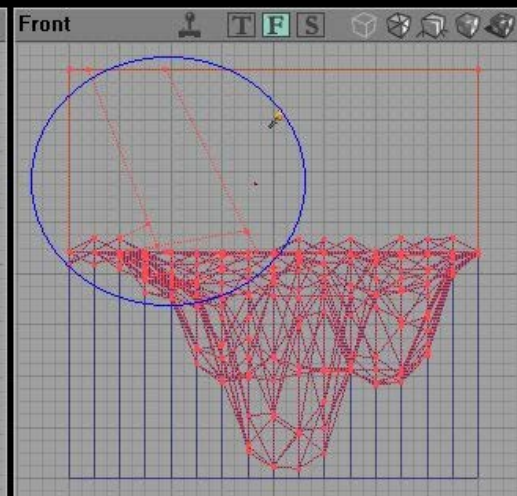




Press the deintersect button.

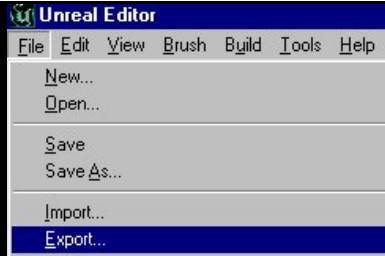


Now we have one brush, which can be subtracted to achieve a similar result. Each way has its ups and downs. This time it has deintersected quite well, except for this area. I have found that when this occurs, trouble could result, although, Ued seems better at it these days.

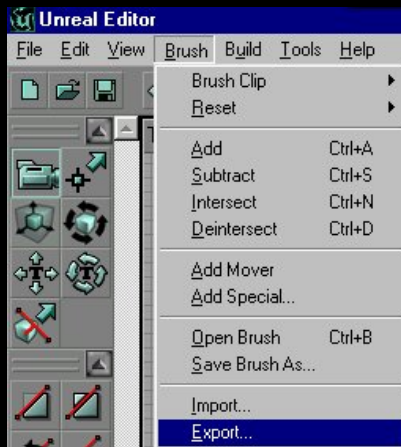


You can try moving vertex points around in the area, rebuild, and each time you will get a different deintersection. If you are continually unhappy with the result, use the first method. Either way, I would edit the terrain to my desire, and save the terrain using BOTH methods. If one somehow doesn't work out for some reason, you can import the other. Do this by exporting the Map, as .t3d files. One when you complete the terrain in the first method, and , when you deintersect, export the Brush.



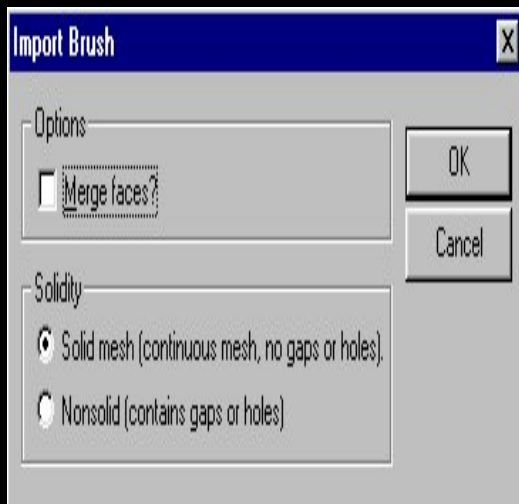


Export map.



Export Brush.

The result of using the saved, imported brush, to subtract the area. I think this way is best, but only when the deintersection goes well.



Good luck with your terrains. Planning, and experimenting are both important.

Jaspos.



[Back To Top](#)