**LOD terrain**

Ever made a patch of LOD terrain? Started to pull the vertexes to get it into the shape you wanted? Did you scrap it? Did it look like crap? Did it take you way longer than you expected? Did you rip your hair out in frustration?

Thought so... but it does not have to be that way.

LOD terrain is a **great** tool for doing terrain. But when you pull a vertex, the ones around follows it unless you lock them in place. Sometimes this is a good thing, sometimes not so good. And making large LOD patches will make you AND your computer crawl on your knees.

There IS a better way. And because I'm a nice guy, I will tell you how it works.

**On this page...**

1. [A word on the grid before we start.](http://gronnevik.se/rjukan/index.php?n=Main.LOD" \l "toc1)
2. [Draw a brush](http://gronnevik.se/rjukan/index.php?n=Main.LOD" \l "toc2)
3. [Make it a LOD](http://gronnevik.se/rjukan/index.php?n=Main.LOD#toc3)
4. [Select the LOD](http://gronnevik.se/rjukan/index.php?n=Main.LOD#toc4)
5. [Save To Image](http://gronnevik.se/rjukan/index.php?n=Main.LOD#toc5)
6. [Open the \*.tga](http://gronnevik.se/rjukan/index.php?n=Main.LOD#toc6)
7. [Redraw it](http://gronnevik.se/rjukan/index.php?n=Main.LOD#toc7)
8. [Back to Radiant](http://gronnevik.se/rjukan/index.php?n=Main.LOD#toc8)
9. [Load the \*.tga](http://gronnevik.se/rjukan/index.php?n=Main.LOD#toc9)
10. [Are you satisfied?](http://gronnevik.se/rjukan/index.php?n=Main.LOD#toc10)

**A word on the grid before we start.**

Set the grid to an absolute minimum of 8 before starting this tutorial, I'd say use 16. Do this now. NOW! Believe me, you will thank me later... ( actually this is true for all mapping except a few cases, and if you need to read tutorials: those few cases are not for you ) I repeat: GRID, NOW.

**Draw a brush**

Draw a brush over the area where you want the terrain. The height does not matter, only the width and length. Make sure it is selected before moving on to the next stage.

**Make it a LOD**

Select "LOD terrain" -> "Create from brush". You now have a patch of LOD terrain roughly the same size as your original brush. This is because LOD can only exist in sizes made up by 512\*512 units. This means its smallest size is 512\*512 units and then any sizes that can be constructed by squares of 512\*512 units ( like 512\*1024 and 2048\*3584 ).

**Select the LOD**

As it is now without height and has no bottom, you must select it from above.

**Save To Image**

Select "LOD terrain" -> "Save To Image". Save it as something that you will remember, like <TheNameOfYourMap>.tga.

**Open the \*.tga**

Load the \*.tga file into a good drawing application. Preferably one that supports "fussy" brushes ( Like [PhotoShop?](http://gronnevik.se/rjukan/index.php?n=Main.PhotoShop?action=edit) or [PaintShopPro?](http://gronnevik.se/rjukan/index.php?n=Main.PaintShopPro?action=edit) ). With "fussy" brushes, I mean the ability to draw like this ( with smooth edges ):

[](http://gronnevik.se/rjukan/uploads/Main/LOD_smooth.p.jpg)

This image would become a deep canyon ( dark ) with rather steep slopes up to the high plateau ( light ).

**Redraw it**

Remember when drawing that white is high, black is low. The angle of the slopes you create are dependent of how smoothly the color fades from light to dark. If one pixel is white and the one next to it is black, it will be a wall, not a slope. Having really steep slopes seldom looks good for two main reasons:

1. It does not look natural, simply because nature does not look that way.
2. It has a tendency to result in errors in the completed map, because soldiers can often manage to stick there heads into the ground and see under the map to places they should not be able to see at these places when using the lowest terrain settings ( most people use the lowest settings when they play ).

[](http://gronnevik.se/rjukan/uploads/Main/LOD_vemork_approach.p.jpg)

This is an example of an early image I used when making the terrain for **TODO: change link** [Vemork approach](http://www.planetmedalofhonor.com/rjukanproject/download/download_maps.html#approach_obj) When you are done save it again ( still in \*.tga format ).

**Back to Radiant**

Go back to Radiant and select the LOD again.

**Load the \*.tga**

Select "LOD terrain" -> "Load From Image", and select the \*.tga file you just edited. Load the \*.tga with "merge method": "Replace existing terrain". Wohaa! Cool eh? An not really a lot of work either.

**One thing** if this is the second or third time you load the \*.tga file after making small changes to it: If you look carefully you will notice that each time you "Load from image" and "Replace existing terrain", all of the LOD jumps up a bit from where it was before ( say 32 units or something ). This is not a problem if you only have the LOD in your map so far, but as soon as you start to add spawns and houses and other stuff: you kind of would like it to stay put even if you removed a hill or made a new river in [PhotoShop?](http://gronnevik.se/rjukan/index.php?n=Main.PhotoShop?action=edit)... So just be warned and be prepared to note were it were before so you can move it back afterwards.

**Are you satisfied?**

If you are satisfied at this point, your done... If not: go back to **Select "LOD terrain" -> "Save To Image".** and repeat the process until you ARE satisfied.

- [Bjarne](http://gronnevik.se/rjukan/index.php?n=Profiles.Bjarne)