

Yayap the Grunt's

HALO

Custom Edition

Beginner's Map Creation Tutorial

INTRODUCTION

Halo Custom Edition (Halo CE) is a multiplayer only add on for Halo PC Retail version, which can be used with the Halo Editing Kit (HEK) to make your own multiplayer maps. This 7 part (Bungie tradition. Heh – heh!) tutorial shows you the basics of custom map making.

Programs you will need

You will only need to buy the Halo PC Retail version (the trial version won't work). Everything else can be downloaded free or is already on your computer.

Programs you should already have are Paint and the Command Prompt.

You will need to download and install the following:

Gmax – <http://www.turbosquid.com/gmax>
(Click "Download Gmax")

Chimp – <http://www.halomaps.org>
(In the large menu to the left side, find "Halo Utilities" – it should be in there somewhere)

Halo CE – <http://www.halomaps.org>
(In the menu, find "Official Halo CE Files" – It should be in there somewhere)

HEK – <http://www.halomaps.org>
(Same as Halo CE)

You will also need a mouse with a scroll wheel which also acts as a third button.

PART 1: PREPARATION

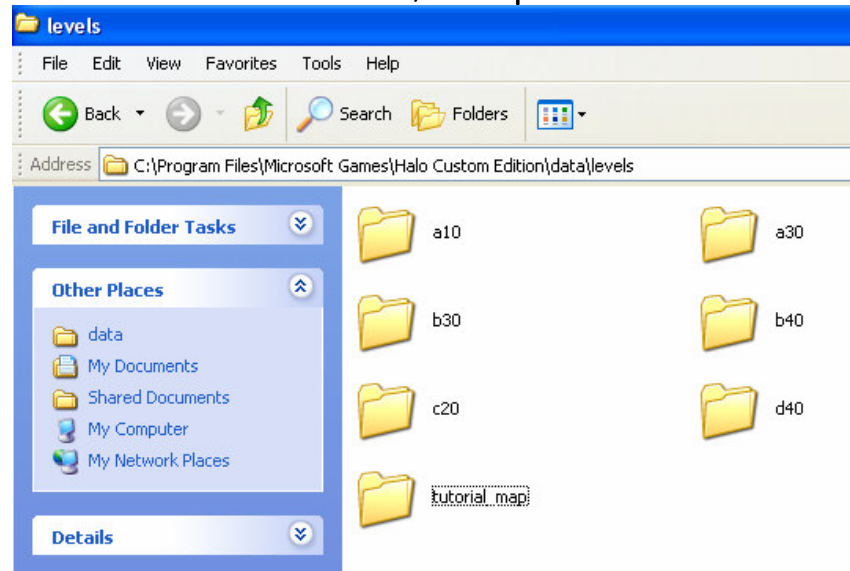
Part 1a – Folder Creation

Open My Computer, and navigate to

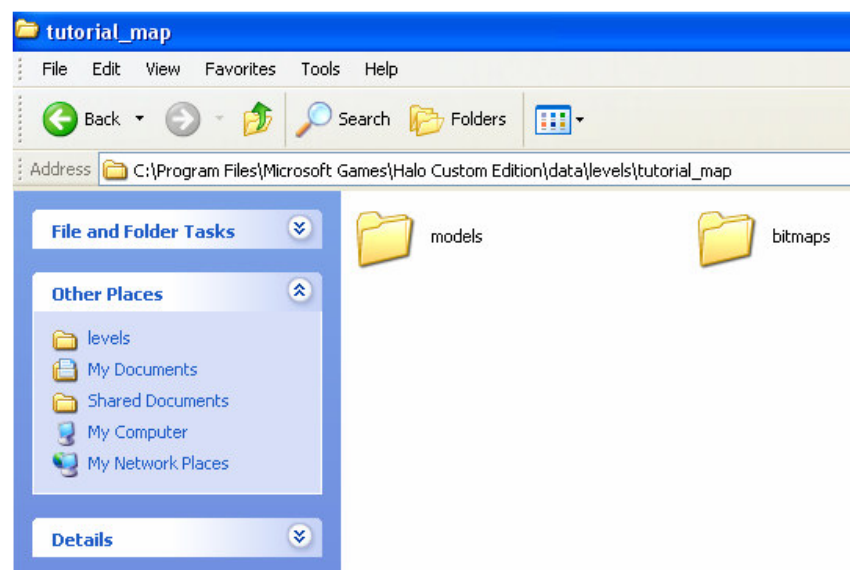
C:\Program Files\Microsoft Games\Halo Custom Edition\data\levels

Create a new folder and name it the name of your map. Your map's name must not contain any spaces or capitals. If you want a space, use an underscore (_) instead.

Note: For the rest of the tutorial, the map will be referred to as "mapname".

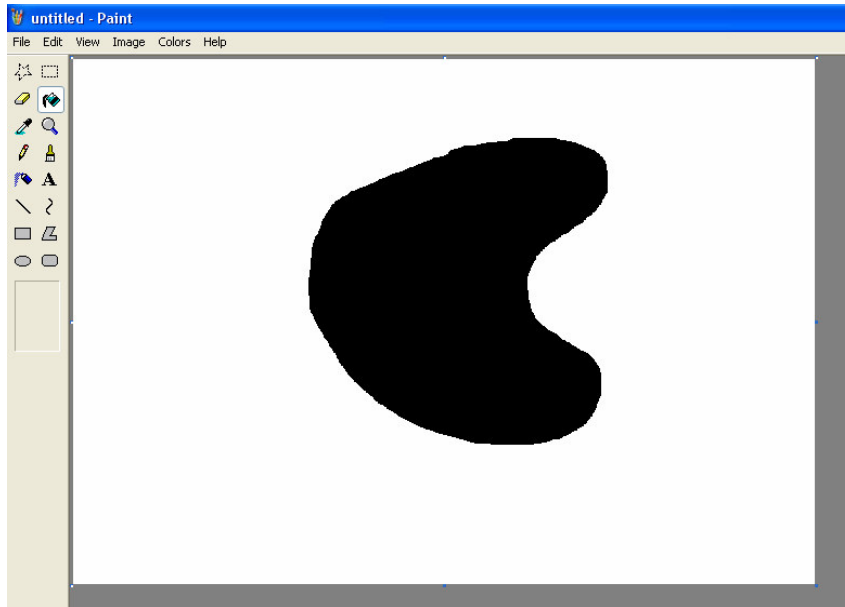


In that folder create two more folders. Name one "models", and the other "bitmaps".

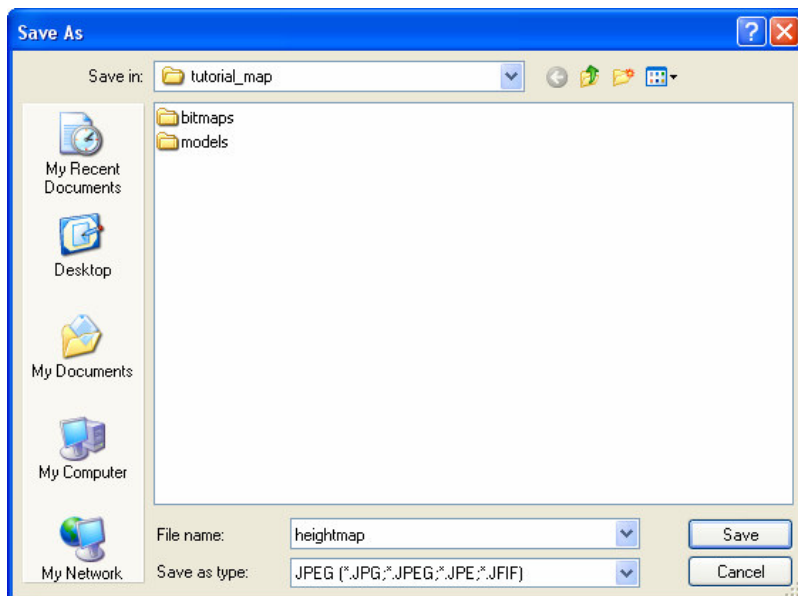


Part 1b – Creating the heightmap

Open Paint, and draw the outline of your map in black. When you are happy with the shape, fill it in, also in black.

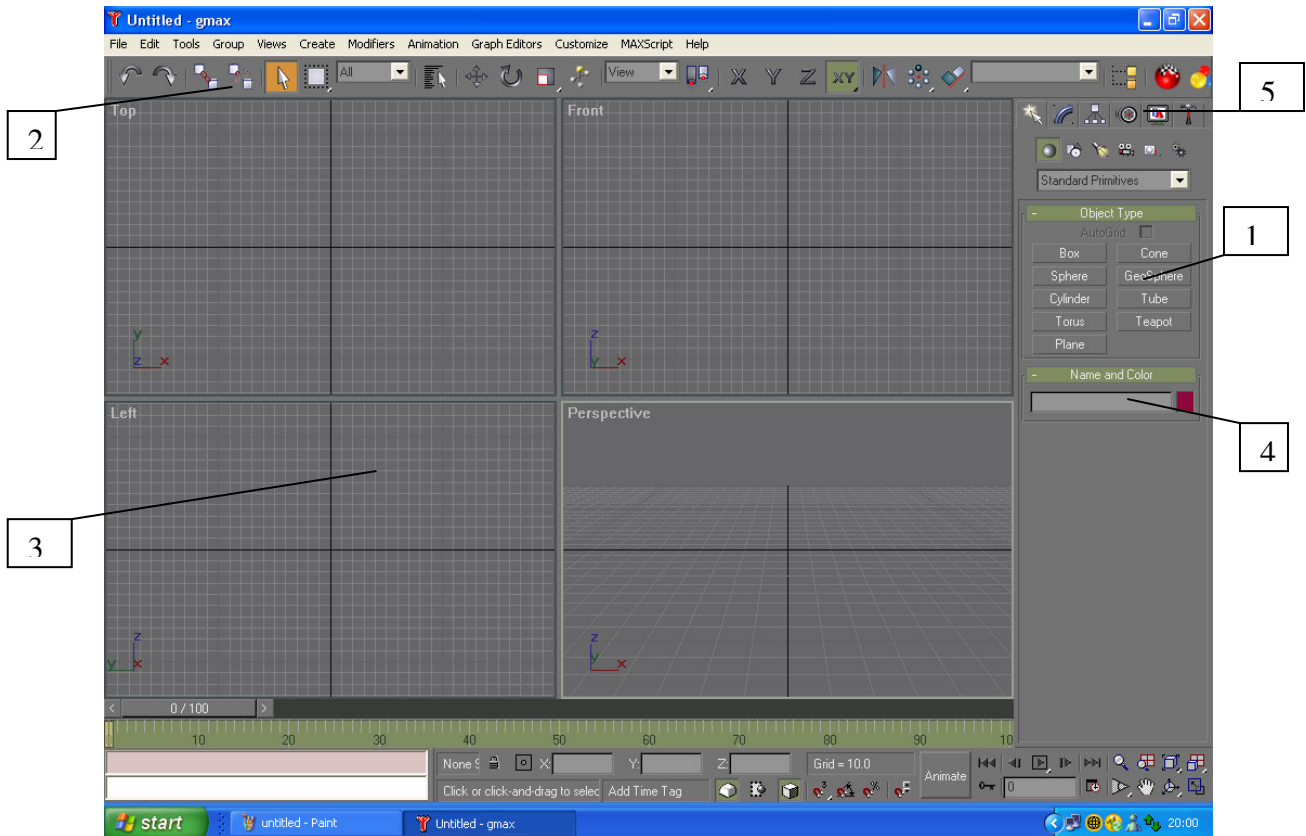


Save it in your map folder as “heightmap”, and as a .JPG file.



PART 2: GMAX

Introduction: The Gmax Screen



1: Object Menu – Allows creation on standard primitives.

2: Selection Chooser – Allows you to choose how objects are selected. You can Select and Link, Unlink, or simply select.

3: Viewing thing – Lets you see four different views of the virtual “world”.

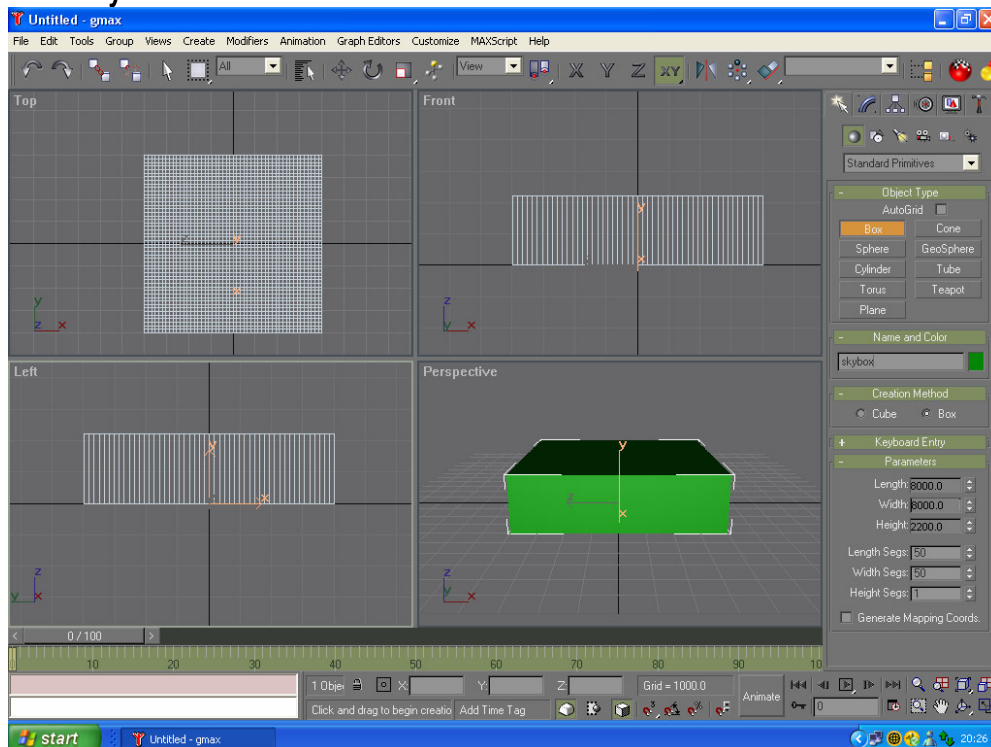
4: Name and Colour – Allows you to name and colour an object.

5: Menu thing – Allows you to choose different stuff to do. The options you will be using are Create (1st from left), Modify (2nd from left), and Utilities (1st from right)

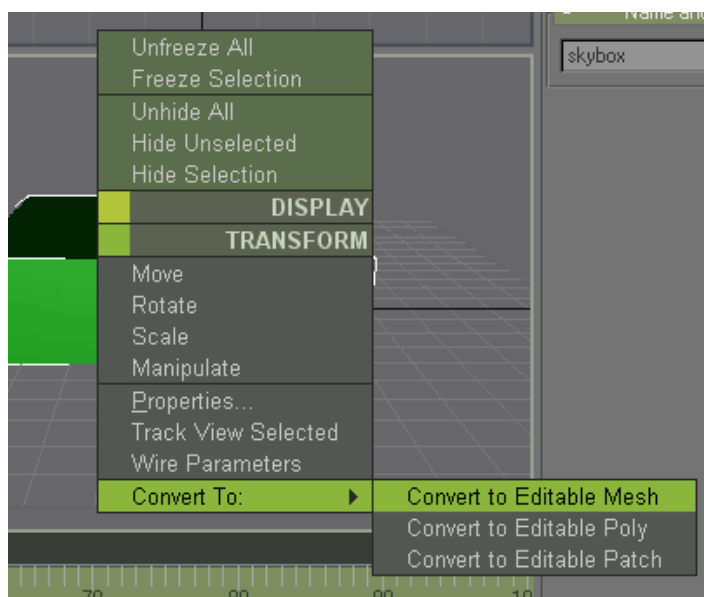
Controls: Use the scroll wheel on the mouse to zoom in and out, and hold alt and the middle mouse button at the same time to rotate. Click an object to select it, and drag a box around multiple objects to select them.

Part 2a – Modelling in Gmax

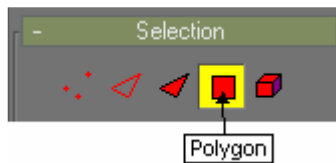
Make a box, and name it skybox. Give it a length and width of 8,000 and a height of 2,200 for a small map, a length and width of 12,000 to 15,000 and a height of 3,000 for a medium map, and for a large map, give it a length and width of 20,000 and a height of 5000, and change the length and width segs to 50. Then zoom out in each view so you can see the whole box.



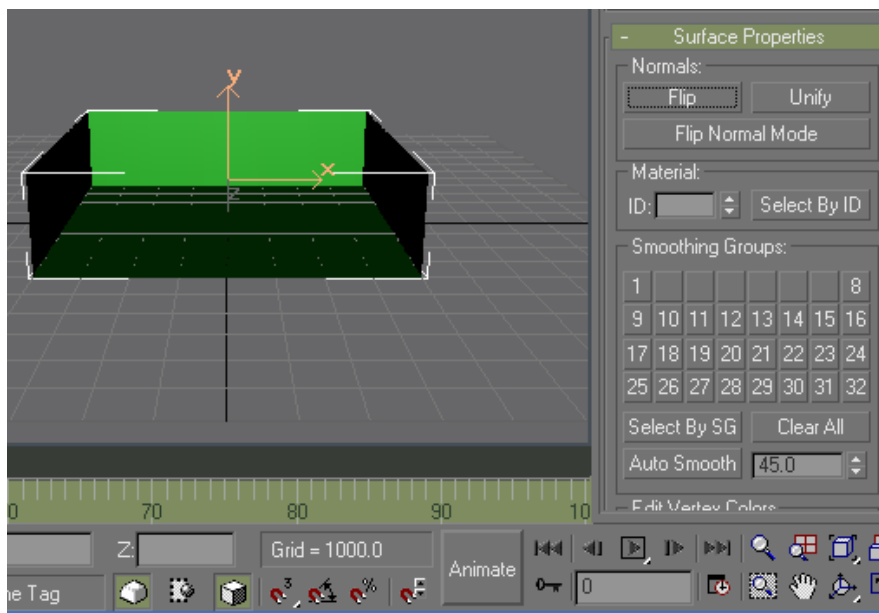
Then right click on the box, go to convert to, and select convert to editable mesh.



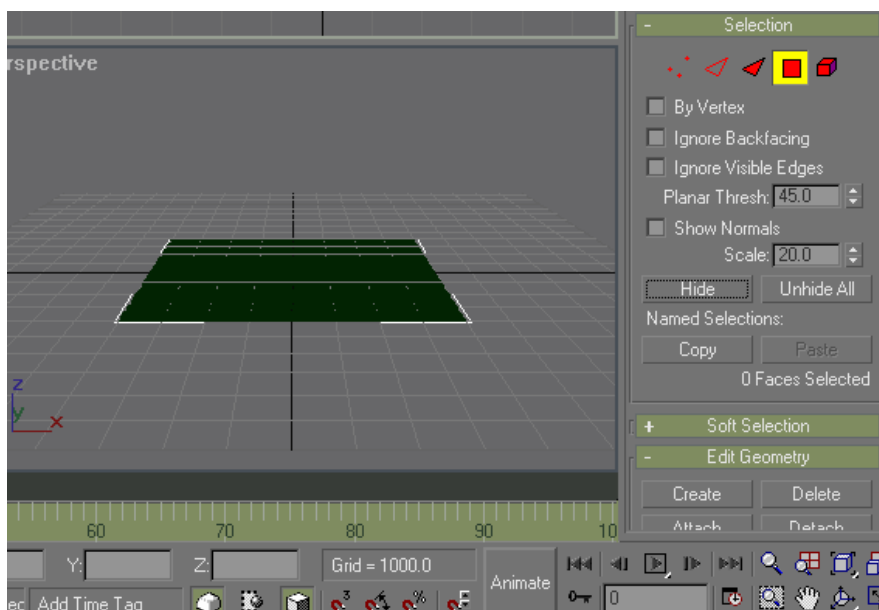
Then select the Polygon option



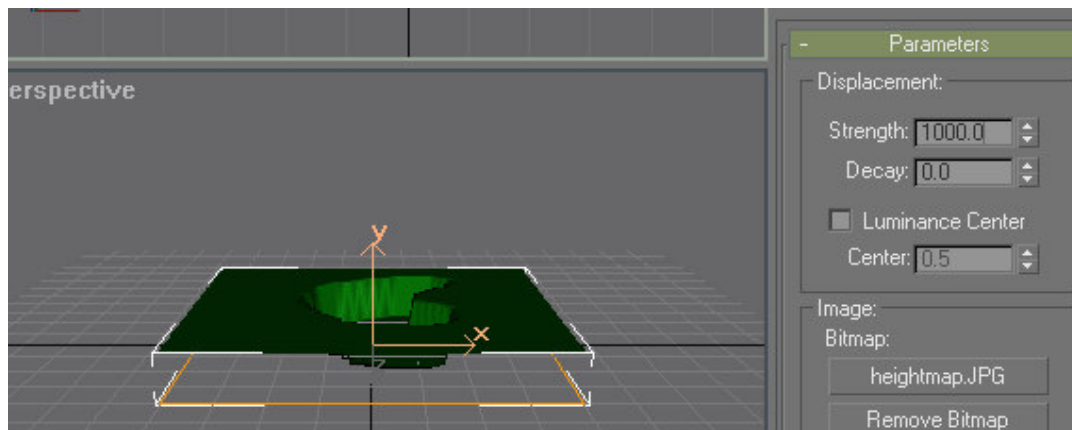
And in the front view, highlight the whole box (drag a box around it), then scroll down to Surface Properties, and click Flip. This will turn the box inside out.



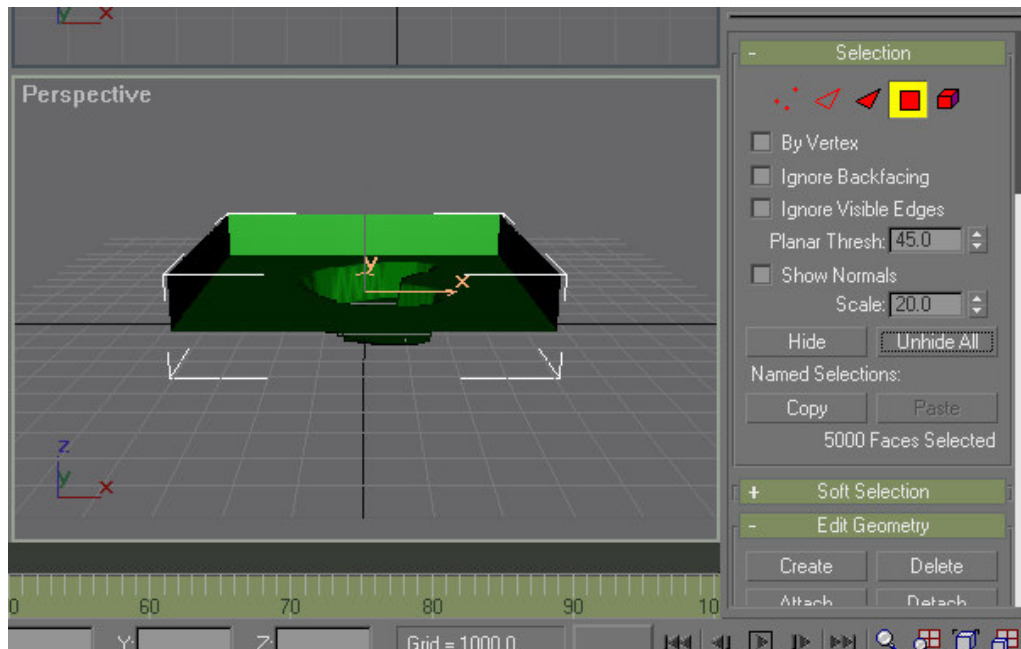
Now select everything except the bottom of the box, scroll back up, and click Hide.



Now select the whole of the remaining plane, and in the Modifier List drop down box, scroll down to Displace, and select it. Then click the None button, and an Open dialogue box should appear. Locate your heightmap.jpg file and open it. In the Strength field, change it to about 1000 for a small map, 1500 to 2000 for a medium map, and 2500 for a large map. The flat plane should now look a little like your map.



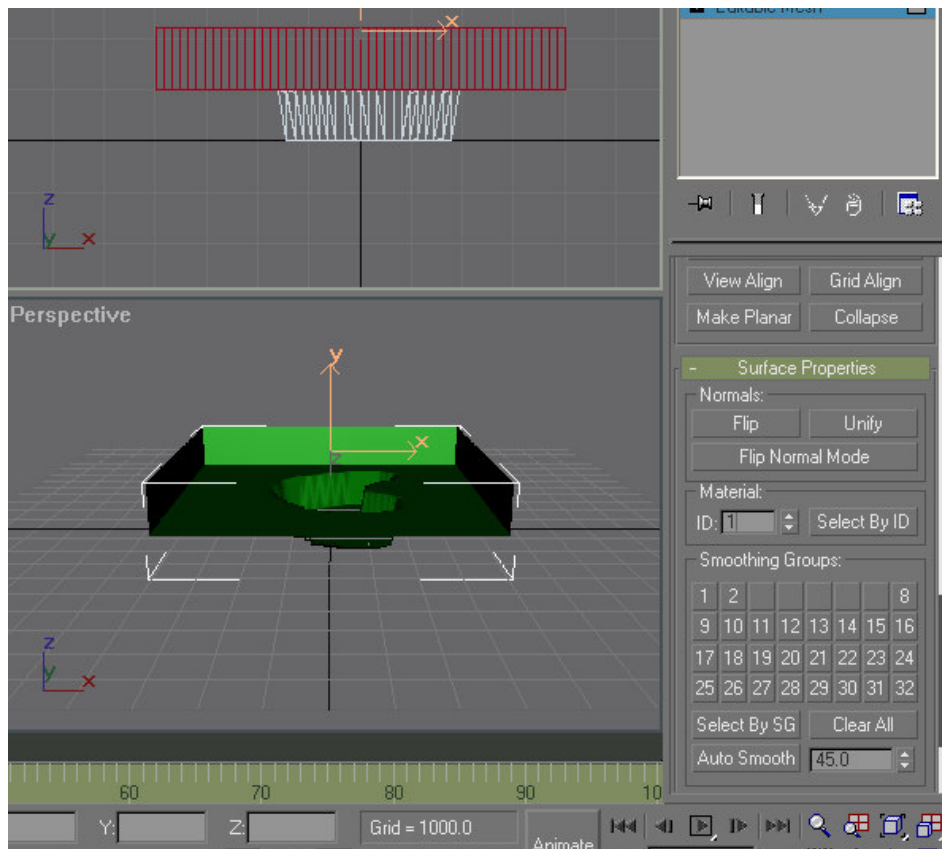
Now right click on the map and convert to editable mesh again. Select the Polygon option again and click the Unhide All button. The rest of the box should appear again.



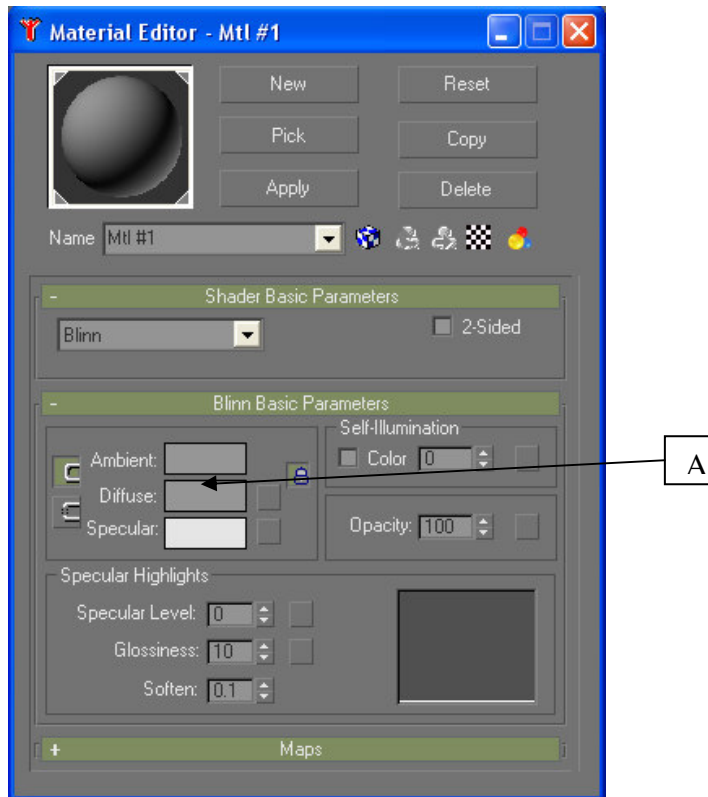
Now save the file in your models folder.

Part 2b – Texturing in Gmax

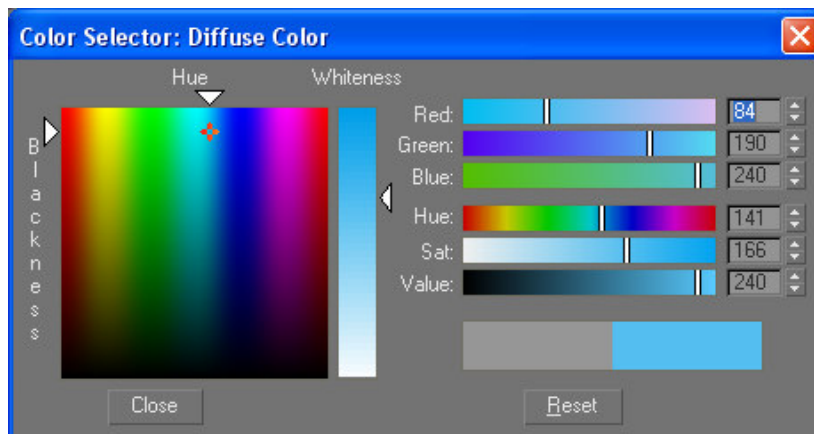
With the Polygon option still selected, select all the sky, and scroll down to Surface Properties, and give it a Material ID of 1.



Now open the Material Editor by clicking on the  icon in the top right hand corner of the screen. Click the New button, and create a Standard material.



Name it "+sky", and click the grey box next to Diffuse (A), and select a suitable sky colour. (Note: this is only temporary, a Halo sky will be added later.) then click Close.

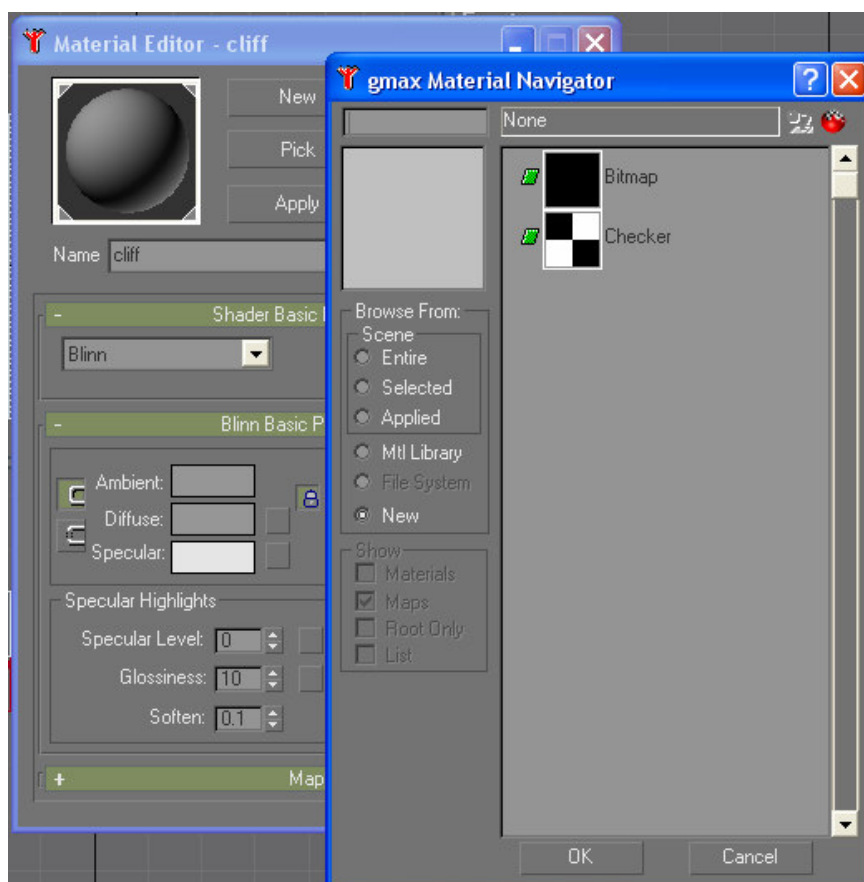


Finally, click Apply, and close the material editor.

Now hide the sky again, as it will only get in the way for the rest of this section.

In the front view, select all the cliff polygons (drag a box over the whole cliff from top to bottom, as sometimes smaller polygons are missed and don't get textured) and give it a material ID of 2.

Open the material editor, and create a new standard material, and temporarily name it "cliff". This time, select the smaller box, to the right of the grey box you selected previously. This window should appear.



Double click on Bitmap, and in the Open dialogue box, navigate to:
C:\Program Files\Microsoft Games\data\levels\test.

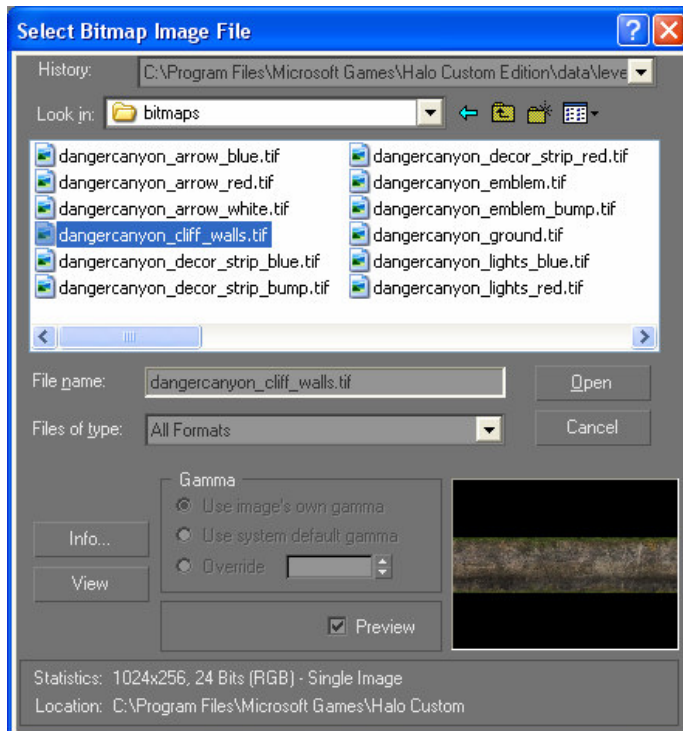
From there you can go in multiple directions. For a grey rock cliff go to
infinity\bitmaps\infinity.cliff.tif

For a red sandstone cliff go to bloodgulch\bitmaps\blood cliff rock.tif

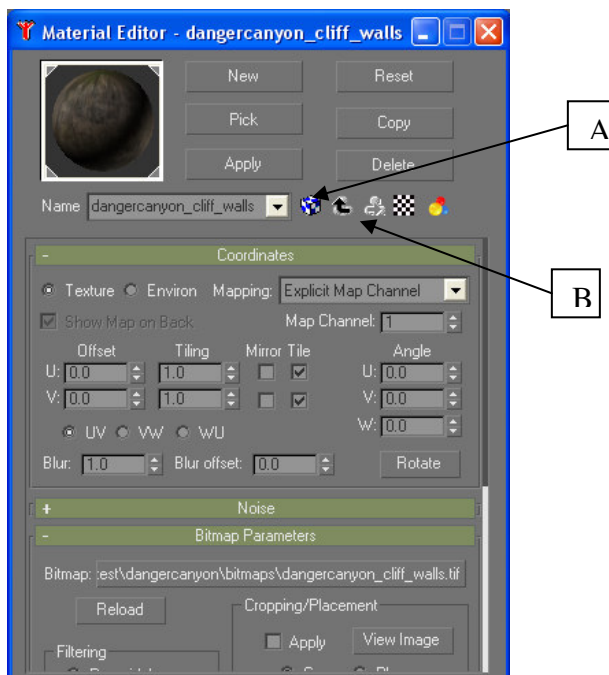
And for a brown rock cliff go to dangercanyon\bitmaps\dangercanyon_cliff_walls.tif

You can use any texture you want, just put it in your map's Bitmaps folder, convert it to a .tif file (open in paint, save as tif file) and name it mapname_cliff.tif

When you are happy with your cliff texture, open the file.

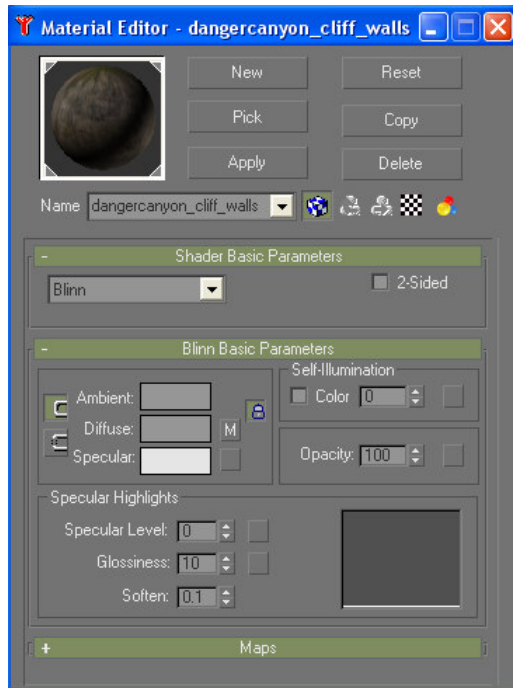


Then name the material the name of the texture you have chosen, click button A, then button B.



Then name the final material the name of the texture, click button A again, and click Apply, before closing the material editor.

Note: The textures will NOT show yet, so don't worry about them not being there.

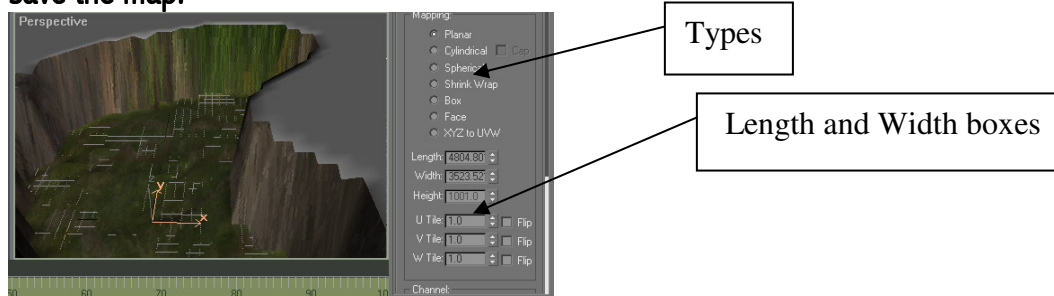


Then select all the ground polygons in the front view (you need to be very precise when doing this so as not to select the cliff) and do the same as the cliff, but when choosing textures, choose either one of the cliff textures for a rocky ground, or under dangercanyon\bitmaps, choose dangercanyon_ground.tif, or as with the cliff, you can choose your own, and call it mapname_ground.tif.

Note: The textures will STILL NOT show yet.

When you are done, close the material editor, minimize Gmax and open My Computer. Navigate to the folders you got the textures, and copy the textures you used into your own map's bitmaps folder. Then close the explorer and maximize Gmax again.

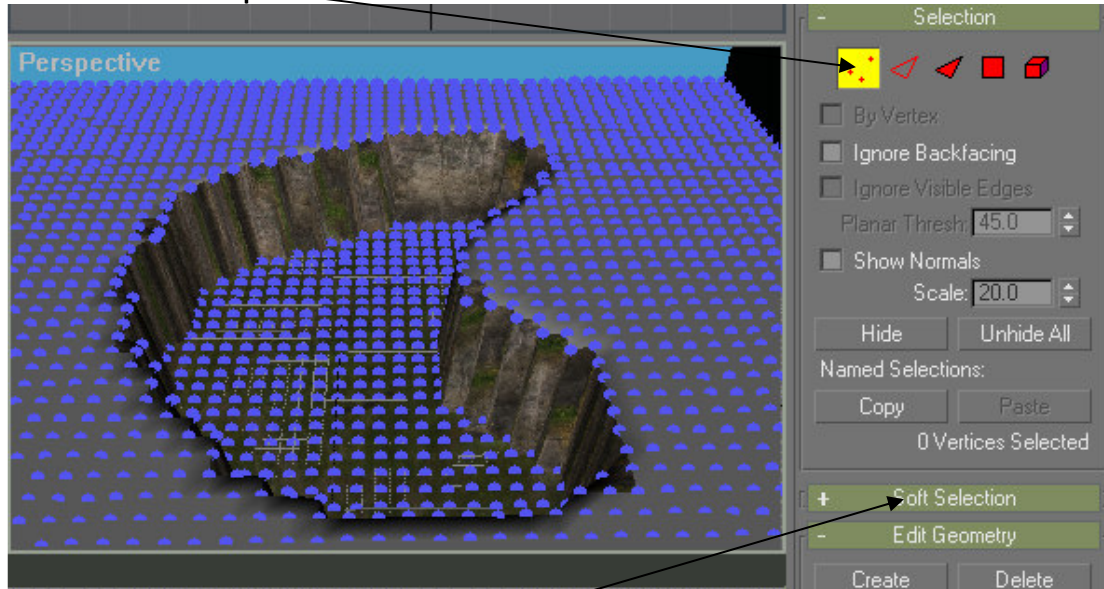
With the ground polygons still selected, in the modifier list, scroll down to UVW Map, and select it. The textures should appear. Now adjust the length and width boxes until you are happy with the texture's size and shape. For the cliffs, change the type to box. Now save the map.



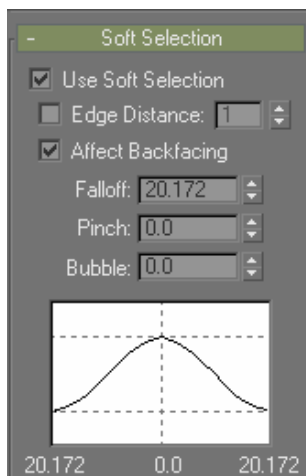
Part 2c – Adding Hills

Now you are going to make the flat ground a bit more interesting.

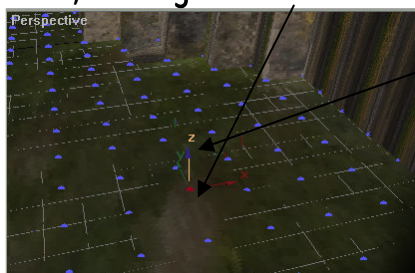
Select the Vertex option. All the vertices will show in blue.



Expand Soft Selection, and ensure Use Soft Selection is ticked.

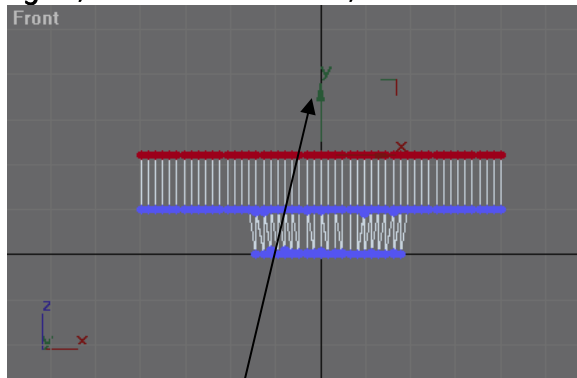


Now zoom in on your map, select a vertex, and use the blue arrow to move it up and down, creating a small hill.

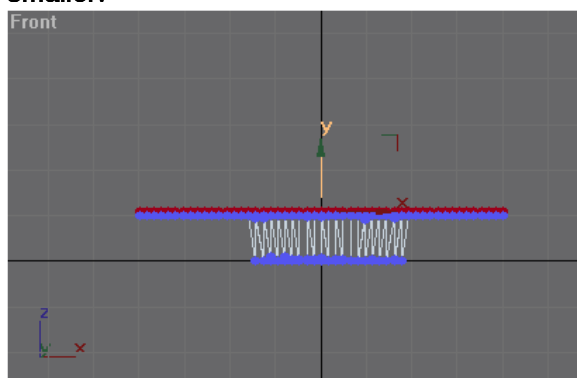


Do this with more vertices to create random hills in different places.

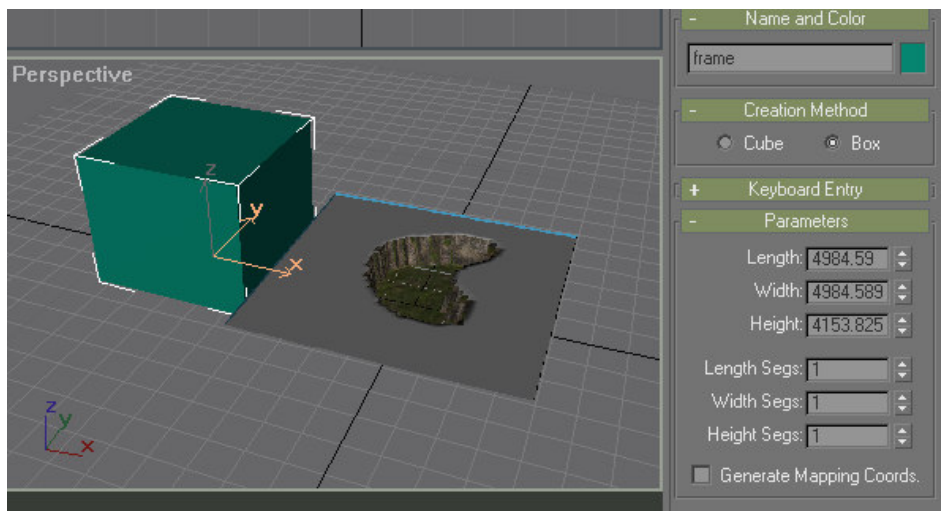
Now select the polygon option, and unhide all to reveal the sky. Select the vertex option again, and in the front view, select all the vertices that make up the top of the sky.



Then using the green arrow, drag it down so that the vertices just touch the top of the cliff. This makes the player unable to climb out of the map, and also makes the file smaller.

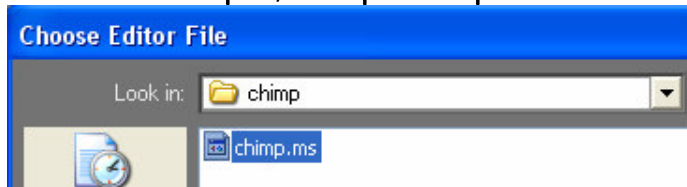


In the top view, create a new box of any size and colour just off to the side of the map, and name it "frame". Click off the frame box and select the map. Now select the Select and Link button at the top left of the screen, and drag a line from the map to the frame box. Now save your map.



Part 2d – Exporting the Structure

Click on the Utilities button (The hammer icon in the top right corner) and select “MaxScript”, and “Run Script”, and in the Open dialogue box navigate to wherever you downloaded chimp to, and open chimp.ms.



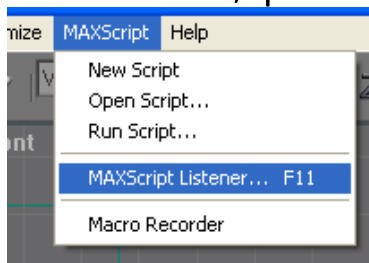
In the drop down box, select “chimp”, and scroll down until you see this:



Make sure “Listener Window” and “Write Debug Info” are selected, then click “Export Halo Structure”.

Chimp will now export the map. This will take a while, usually 30 – 45 mins for a small map and 45 – 60 mins for a larger map.

When it is finished, open the listener window as below, or by pressing F11.



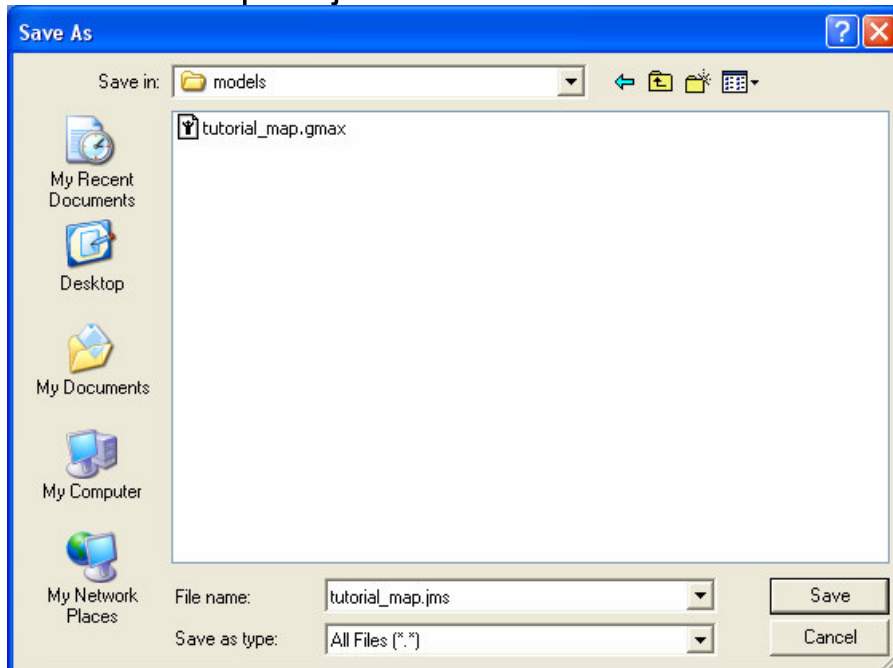
This should appear.



Minimize the listener window and Gmax, then open My Computer and navigate to wherever you downloaded Chimp. Open the GrabListener folder and run GrabListener.exe.



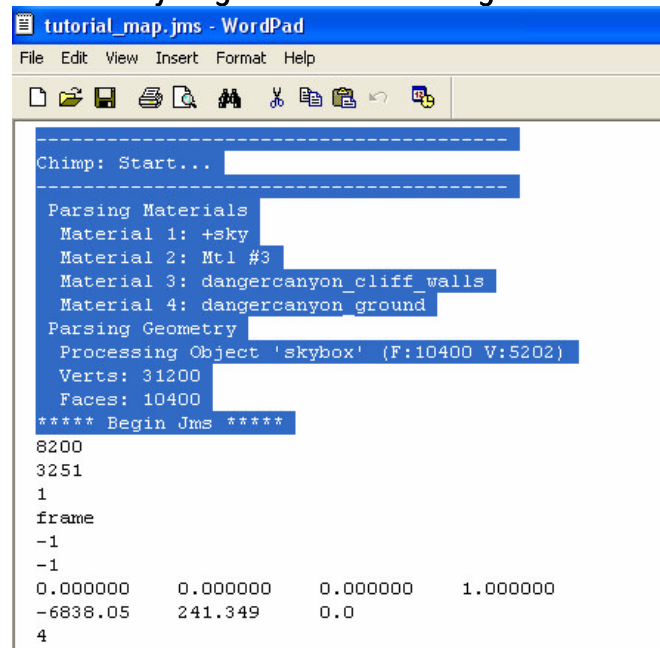
A Save dialogue box should appear. In there, navigate to your map's models folder, and save the file as mapname.jms.



Note: You **MUST** name it the exact same name as the gmax file, and you **MUST** add .jms at the end.

Then in My Computer, navigate to your map's models folder and open the jms file in WordPad. (Right click => open with => choose program => WordPad)

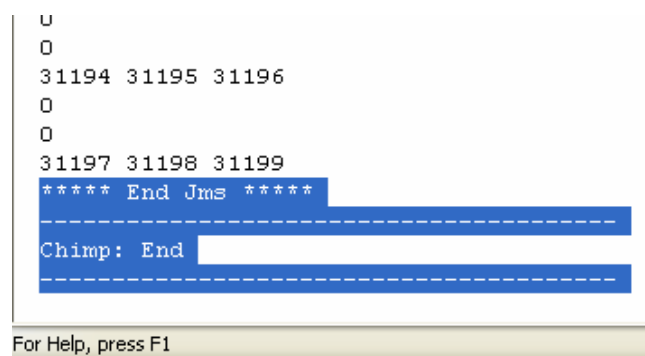
Delete everything before and including the line *******Begin Jms*******.



```
tutorial_map.jms - WordPad
File Edit View Insert Format Help

Chimp: Start...
-----
Parsing Materials
Material 1: +sky
Material 2: Mtl #3
Material 3: dangercanyon_cliff_walls
Material 4: dangercanyon_ground
Parsing Geometry
Processing Object 'skybox' (F:10400 V:5202)
Verts: 31200
Faces: 10400
***** Begin Jms *****
8200
3251
1
frame
-1
-1
0.000000 0.000000 0.000000 1.000000
-6838.05 241.349 0.0
4
```

Then scroll down to the bottom (drag down the scroll bar rather than scroll with the mouse wheel, as there are usually 3000+ pages) and delete everything after and including the line *******End Jms*******.



```
U
0
31194 31195 31196
0
0
31197 31198 31199
***** End Jms *****
-----
Chimp: End
-----

For Help, press F1
```

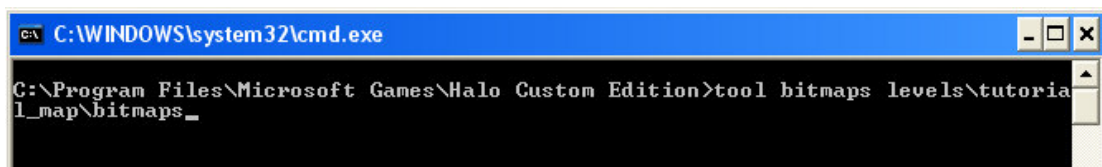
Finally, save the file.

PART 3: TOOL and GUERRILLA

Part 3a – Compiling the Bitmap Tags

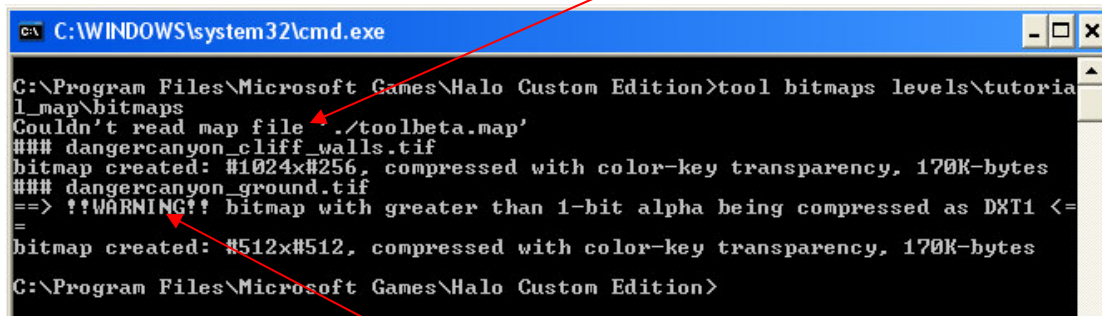
Open My Computer and navigate to C:\Windows\System32 and copy the file “cmd.exe”. Then navigate to C:\Program Files\Microsoft Games\Halo Custom Edition and paste it there. Now create a shortcut to it on the desktop for easy access, and double click on the icon to run it.

In the command window type this exactly:
tool bitmaps levels\mapname\bitmaps



```
C:\WINDOWS\system32\cmd.exe
C:\Program Files\Microsoft Games\Halo Custom Edition>tool bitmaps levels\tutorial_map\bitmaps_
```

Then hit enter, and some stuff should appear. Note: This happens every time and is not an error.

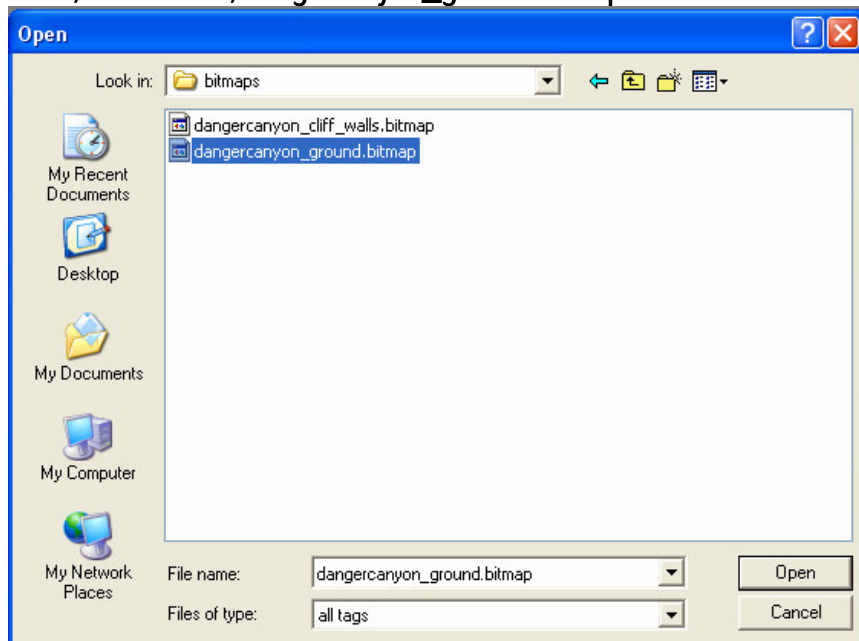


```
C:\WINDOWS\system32\cmd.exe
C:\Program Files\Microsoft Games\Halo Custom Edition>tool bitmaps levels\tutorial_map\bitmaps
Couldn't read map file './toolbeta.map'
### dangercanyon_cliff_walls.tif
bitmap created: #1024x#256, compressed with color-key transparency, 170K-bytes
### dangercanyon_ground.tif
==> !!WARNING!! bitmap with greater than 1-bit alpha being compressed as DX11 <=
bitmap created: #512x#512, compressed with color-key transparency, 170K-bytes
C:\Program Files\Microsoft Games\Halo Custom Edition>
```

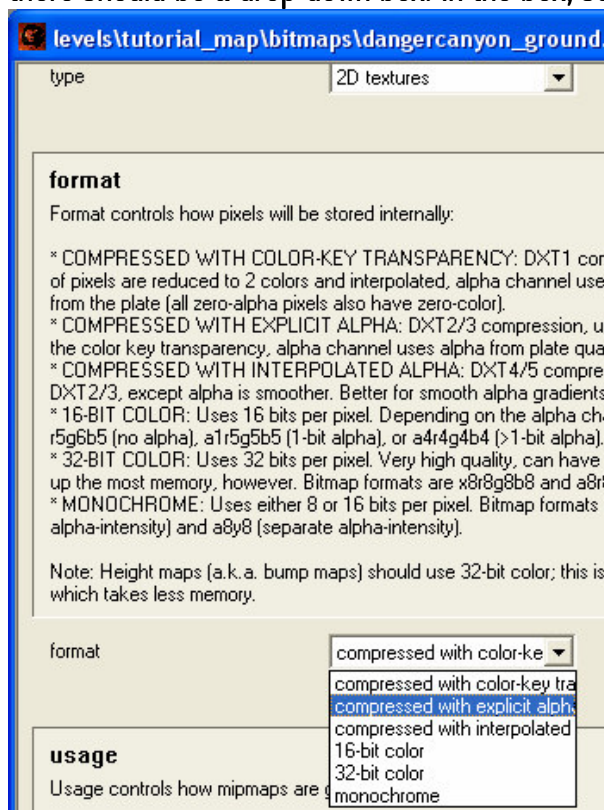
Unfortunately, we've encountered an error. However, this is very easy to fix.

The HEK should have come with a program called Guerilla. Minimize the Command Prompt and open this (The icon looks like Che Guevara as a gorilla) and got to File ==> Open. It will already be in the tags directory, so from there, go to levels\mapname.

There will only be one folder there, Bitmaps. Open that, and open the file which had the error, in this case, `dangercanyon_ground.bitmap`.



In the large window which should appear, at the bottom of the Format information box, there should be a drop down box. In the box, select “compressed with explicit alpha”.



Now save and close the file (but not the program).

Minimize Guerilla, and maximize the command prompt. Hit the up arrow to bring back your last command, and hit enter.

```
C:\Program Files\Microsoft Games\Halo Custom Edition>tool bitmaps levels\tutorial_map\bitmaps
Couldn't read map file './toolbeta.map'
### dangercanyon_cliff_walls.tif
bitmap created: #1024x#256, compressed with color-key transparency, 170K-bytes
### dangercanyon_ground.tif
bitmap created: #512x#512, compressed with explicit alpha, 341K-bytes
C:\Program Files\Microsoft Games\Halo Custom Edition>
```

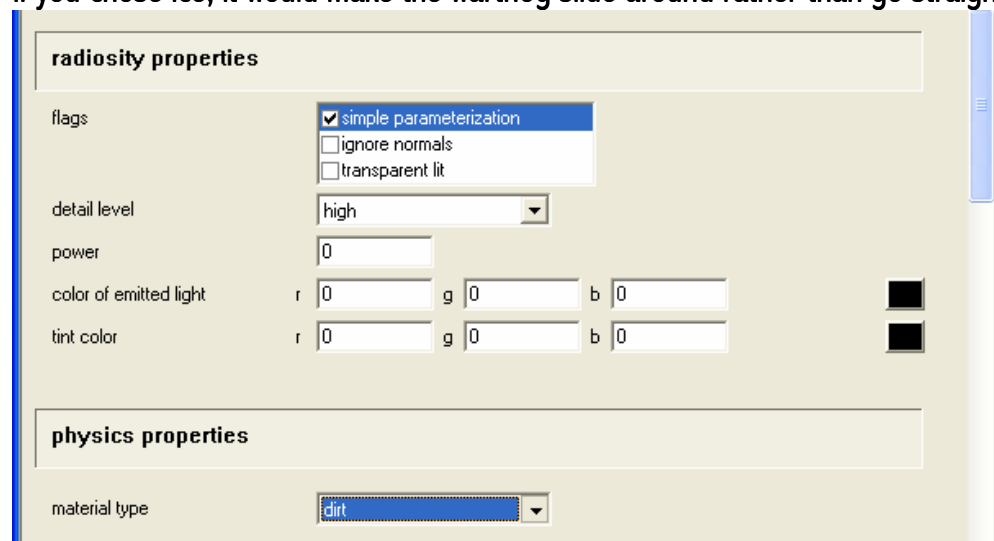
You can see we now don't get the error.

Now you need to create a shader for the level.

Part 3b – Creating a Shader

Minimize the command prompt and maximize Guerilla. Go to File => New and in the drop down box, find and select shader_environment, and click OK.

In Radiosity Properties, tick Simple Parameterization, then in Physics Properties, choose whatever ground you want the map to have. This changes the physics of the ground, so if you chose ice, it would make the warthog slide around rather than go straight.



Then scroll down to Diffuse Properties. Click the small button with three dots next to base map, and navigate to tags\levels\mapname\bitmaps and open the bitmap which you used as the ground.

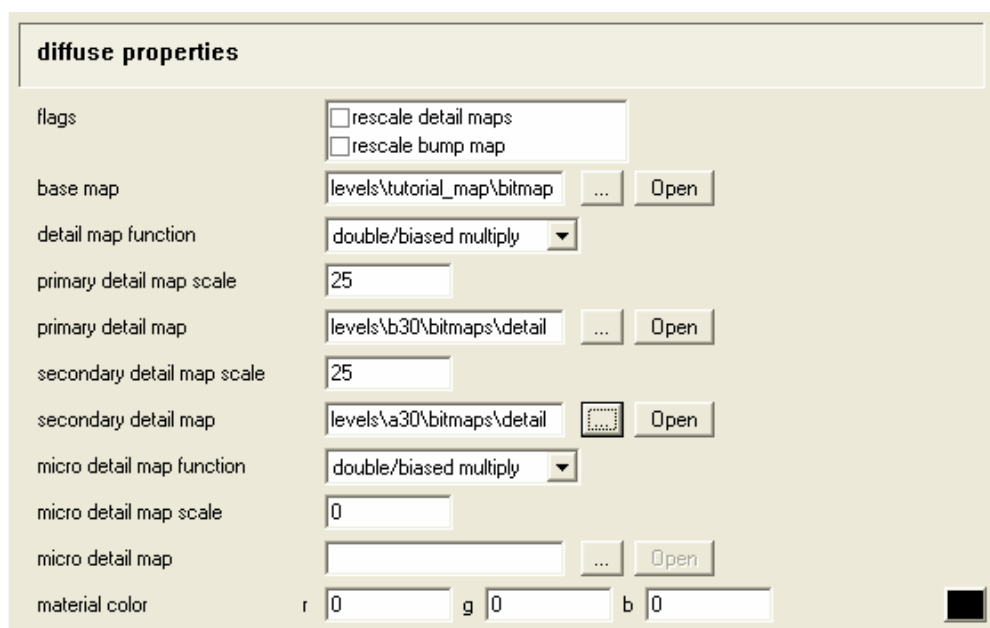
For a grass map:

Then change the primary detail map scale to 25, and under primary detail map, open tags\levels\b30\bitmaps\detail_ground.bitmap (top of second column).

Then change the secondary detail map scale to 25, and under secondary detail map, open tags\levels\a30\bitmaps\detail_grass.bitmap.

For any other map:

Change both primary and secondary detail map scales to 25, and under both primary and secondary detail maps open tags\levels\b30\bitmaps\detail_ground.bitmap (top of second column)



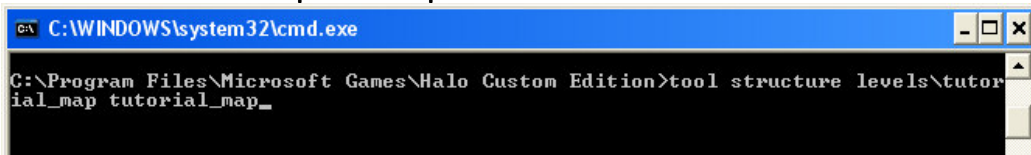
Then go to file => save as, and navigate to tags\levels\mapname, create a new folder called shaders, and save the file in there as mapname_ground.shader_environment.

Now close the file, and minimize Guerilla.

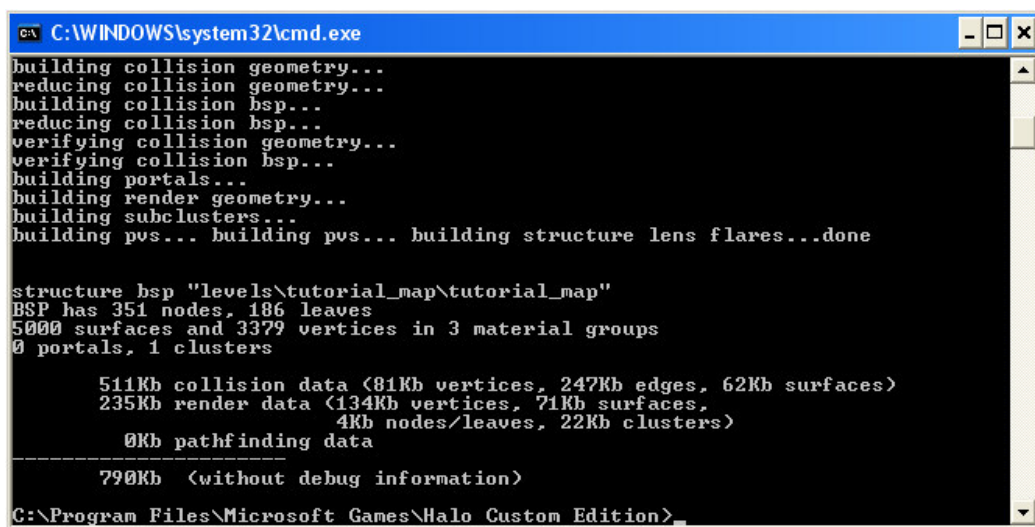
Part 3c – Compiling the Scenario

Maximize the command prompt, and type this exactly:

tool structure levels\mapname mapname



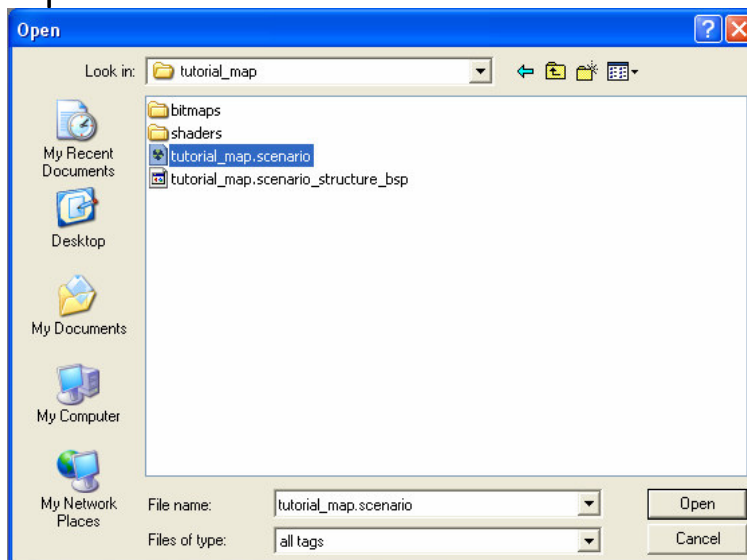
Then hit enter and watch as tool works its magic.



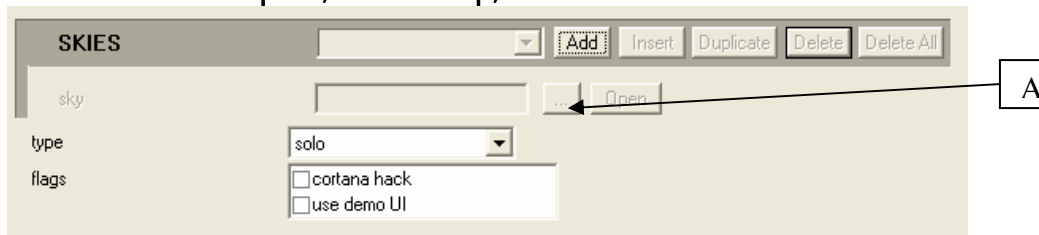
Now close the command prompt, and maximize Guerilla.

Part 3d – Basic Level Editing

In Guerilla, go to file => open and navigate to tags\levels\mapname and open mapname.scenario.



In the window that opens, near the top, there is the Skies section.



Click the Add button, then button A.

In the Open dialogue box, navigate to tags\sky and from there, choose either:

Clear afternoon – Normal day sky. Recommended for most maps.

Dusk – Slightly darker sky.

MP_Dusk – Dusk, but with no halo.

Sky_gephyrophobia – Night sky.

Sky_icefields/sky_infinity – Cloudless Clear Afternoon

Sky_timberland – Clear afternoon with different clouds.

From the folder you choose, open the .sky file in the folder (not the .gbxmodel)

Then, under Type, choose Multiplayer.

Now scroll down to Starting Equipment (a little up from the middle).



Click the Add button, then under Type 0, select All Games.

Then click the small button next to Item Collection 1, and in the Open dialogue box, navigate to: tags\item collections\single weapons, and from there, open whichever weapon you want the player to start with.

Then click the same button next to Item Collection 2, and again navigate to tags\item collections\single weapons and choose whichever weapon you want the player to have as a secondary weapon.

Then in Item Collections 3,4,5, and 6, open the frag grenades.item_collection if you want to start with four grenades, or just in item collections 3 and 4 if you only want to start with two, as I have done.

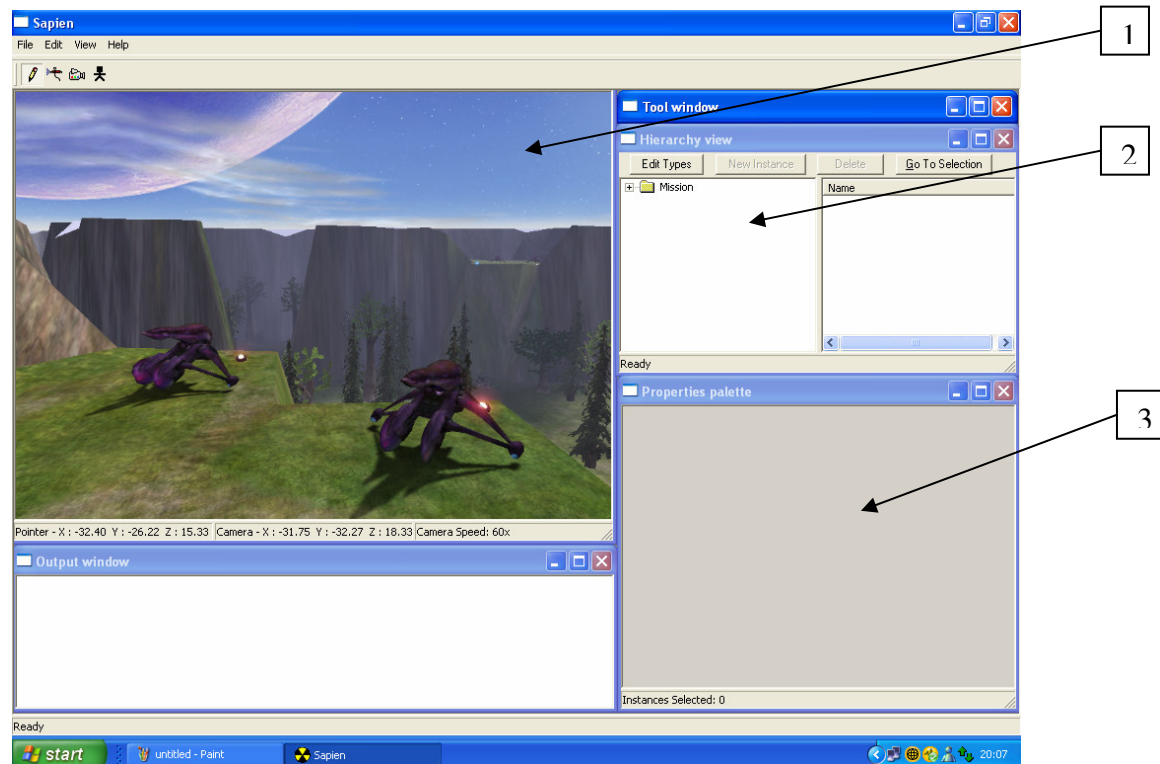
Category	Value	Action
flags	☐ no grenades ☐ plasma grenades	
type 0	all games	
type 1	none	
type 2	none	
type 3	none	
item collection 1	item collections\single wea	Open
item collection 2	item collections\single wea	Open
item collection 3	item collections\single wea	Open
item collection 4	item collections\single wea	Open
item collection 5		Open
item collection 6		Open

Now save the file, and close Guerilla.

PART 4: RADIOSTY IN SAPIEN

Part 4a - Introduction

The HEK should have also come with a program called Sapien. Here is a short intro on how to use it.



1: Game Window: This is where you see your level. You can also select, move and rotate objects in this window. (Map shown: Merciless Forest by Me)

2: Hierarchy View: This is a drop down list of all the objects you can put in your level, and all the objects you already have in your level. You can also select objects in this window.

3: Properties Palette: Allows you to change the properties of selected objects in your level.

Note: You won't need to use the tool or output windows.

Other Note: When you first start Sapien, the windows won't be arranged, so you need to do it yourself, making sure the game window is the right shape, so that the picture isn't stretched.

Controls:

Move Forward = W

Move Back = S

Strafe Left = A

Strafe Right = D

Rotate = Hold middle mouse button and move mouse

Go Faster = Shift

Move Up = R

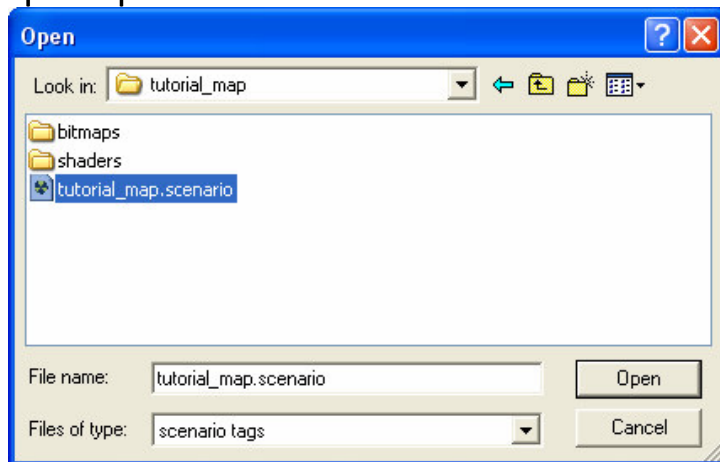
Move Down = F

Left Click = Select Object

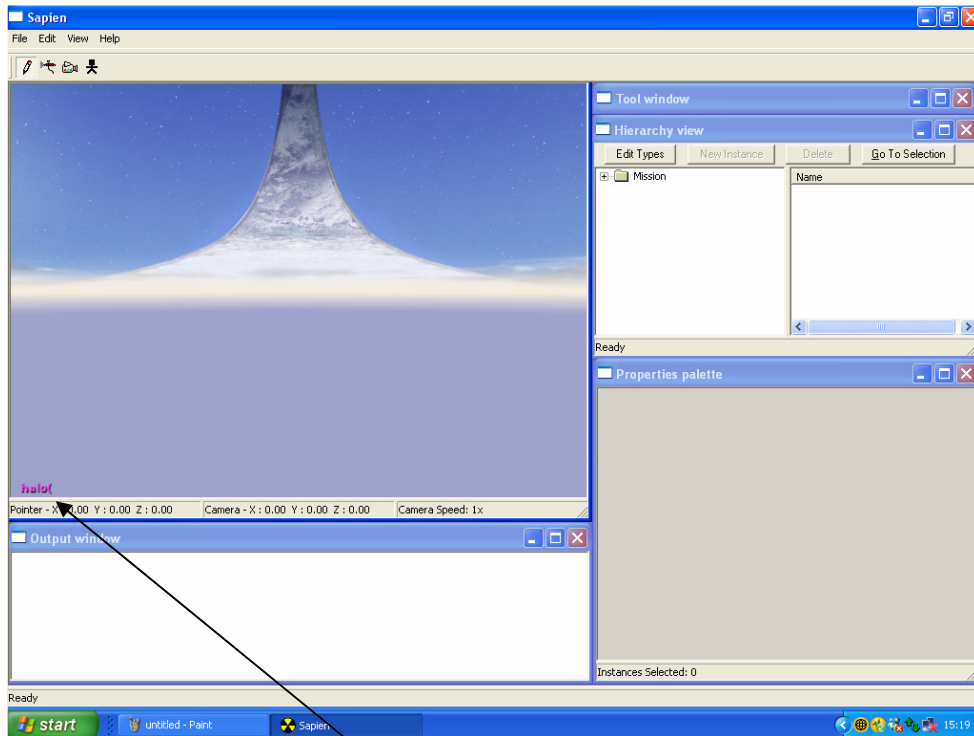
Right Click = Add Object

Part 4b – Running Radiosity on your Map

Open Sapien, and an Open box should appear. Navigate to tags\levels\mapname and open mapname.scenario.



You will notice that you can see the sky, but there is no level yet. This is because you need to run radiosity.

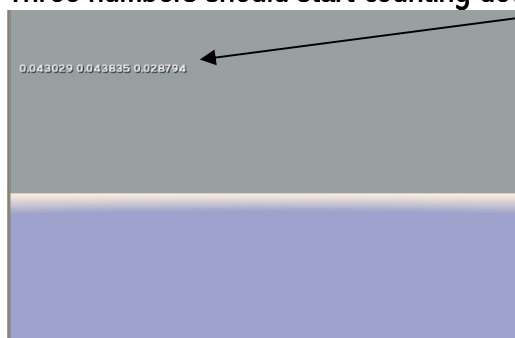


You need to open the Halo Command Prompt. To do this, you will need to press either ~ (the button next to 1 and above Tab) or @. Which button it is depends on the computer. This will make "halo(" appear in pink.

Now type this:
radiosity_quality 0
and hit enter. A grey 0 should appear above the command prompt.

Now type this:
radiosity_start
and hit enter.

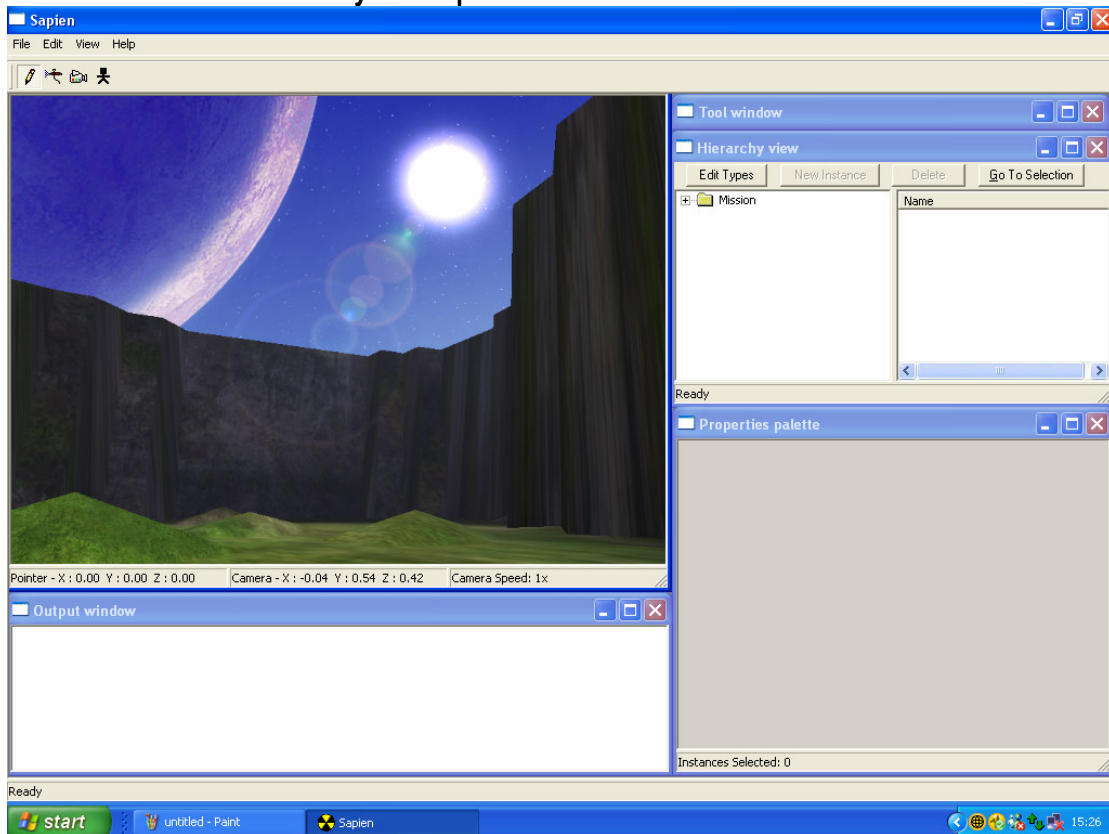
Three numbers should start counting down in the top left of the game window.



When all these numbers reach 0.000000 (which can sometimes take a while), radiosity has finished running. You still won't be able to see the level properly yet.



Now open up the halo command prompt again (If you pressed @ last time, you may need to press ~ instead) and type: radiosity_save
You will now be able to see your map.

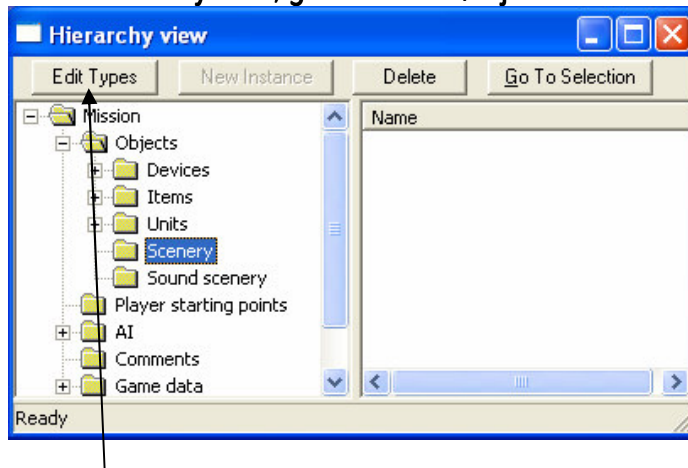


Now go to file => save, and save the level.

PART 5: POPULATION

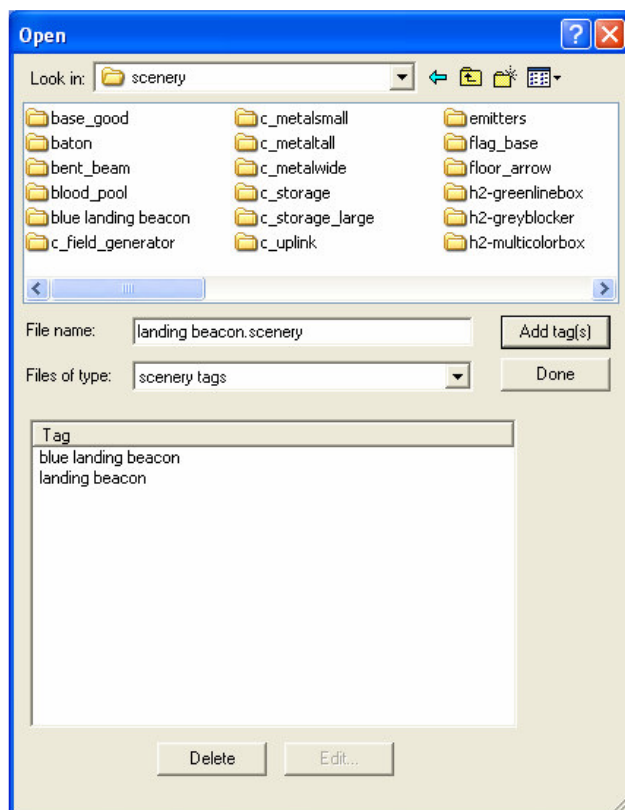
Part 5a – Adding the Team Beacons

In the Hierarchy View, go to Mission\Objects and click on Scenery.



Click Edit Types, and in the window that opens, click Add. In the Open box, navigate to tags\scenery and open the Blue Landing Beacon folder, and double click on blue landing beacon.scenery.

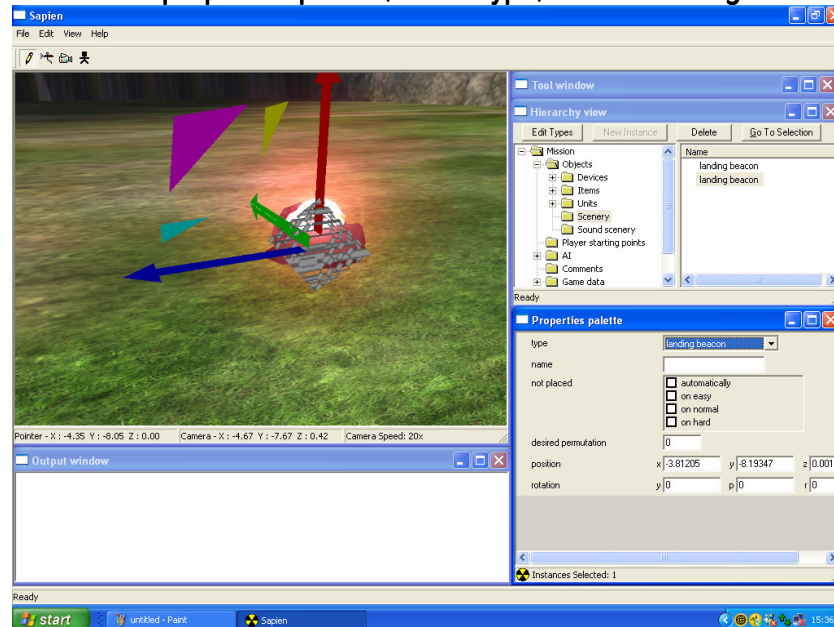
Then navigate to scenery\landing beacon and double click on landing beacon.scenery



Finally, click Done, then OK, to close both windows.

Now in the game window, fly to where you want the red base to be, and right click where you want to put a red beacon.

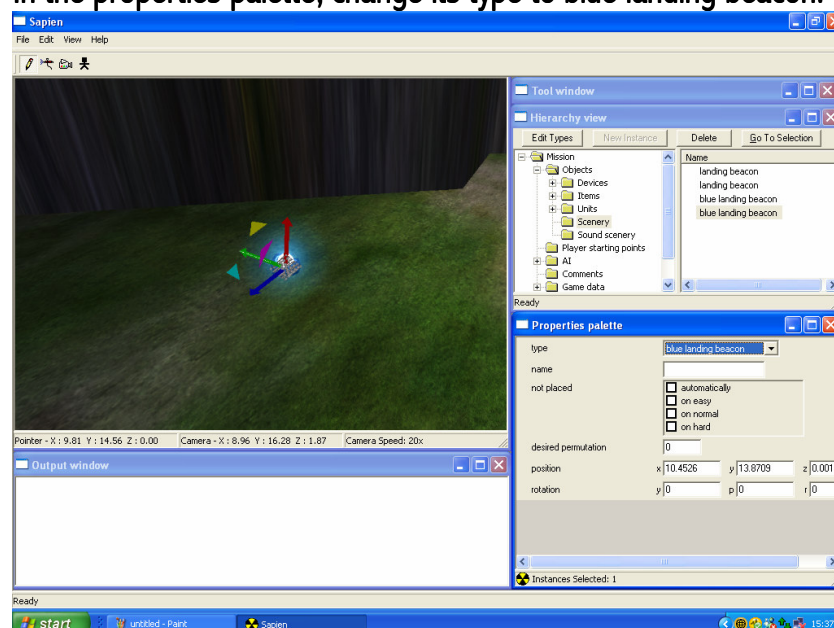
Then in the properties palette, under type, choose landing beacon.



Now put another one on the other side of the base.

Fly over to where you want the blue base to be, and right click to create another landing beacon.

In the properties palette, change its type to blue landing beacon.



Now add another on the other side of blue base, and save the level.

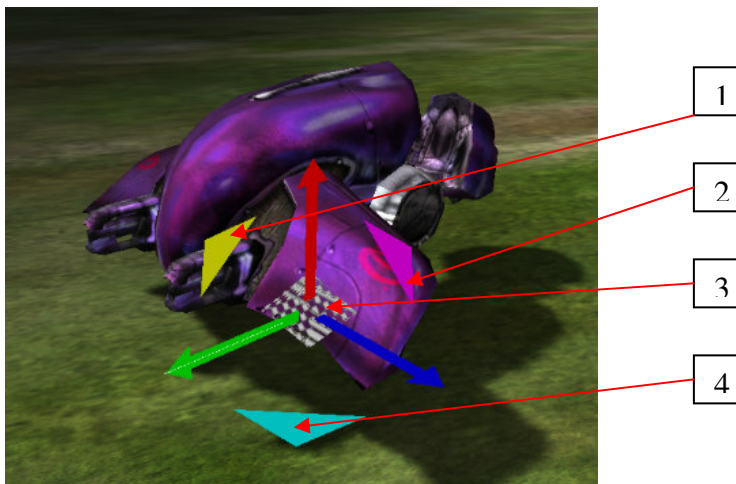
Part 5b – Adding Vehicles

In the Hierarchy view, navigate to Mission\Objects\Units and select Vehicles.
Click Edit Types, then Add.

In the Open box, navigate to tags\vehicles and choose a vehicle from there. Open the folder of the vehicle you have chosen and open the .vehicle file. If there are two, open the one with the prefix or suffix “MP”

Then go back to the vehicles folder, and open more vehicles you want to put in your map. Then click Done and OK.

In the game window, fly to the red base, and right click where you want your first vehicle.
Then, in the properties palette under type, choose the vehicle you want, and ensure it has a team index/multiplayer team index of 0.



To rotate on the Y axis, click and drag 1
To rotate on the X axis, click and drag 2
To move the vehicle, click and drag 3
To rotate on the Z axis, click and drag 4

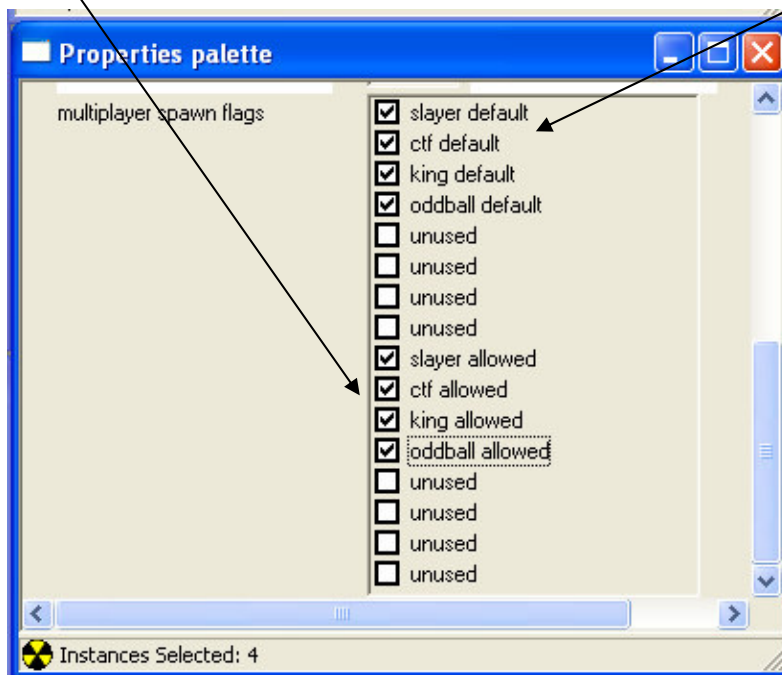
Now add more vehicles at the red base.



Now do the same at the blue base, but give them a team index/multiplayer team index of 1, rather than 0.



Now on the right of the hierarchy view, select all the vehicles (control + click) and in the properties palette, scroll down to multiplayer spawn flags, and tick all the Default and Allowed boxes.



Now save your level.

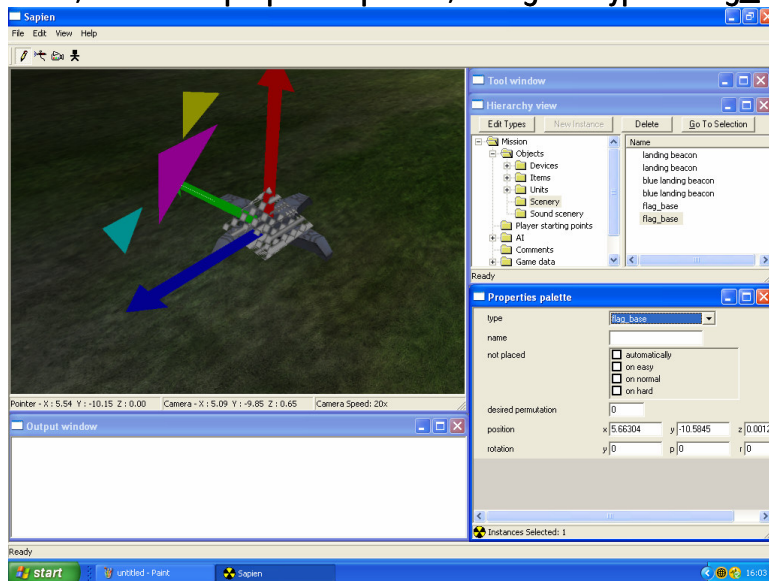
Part 5c – Adding Scenery

In the hierarchy view, go to Mission\Objects and select Scenery. Click Edit Types, then Add. Then navigate to tags\scenery, and add the following scenery:

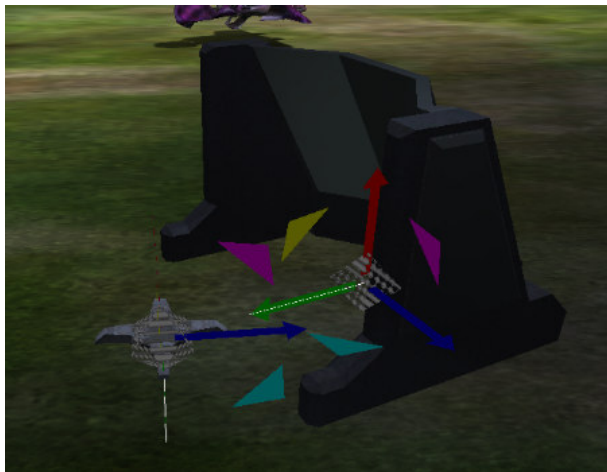
- flag_base
- h_barricade_large

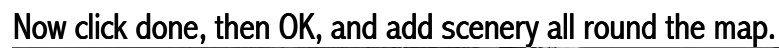
Then click Done, and OK.

Now, in the game window, fly to red base and right click where you want the actual base to be, and in the properties palette, change its type to flag_base.



Then, in front of that, add a h_barricade_large and rotate it so it faces away from the base.

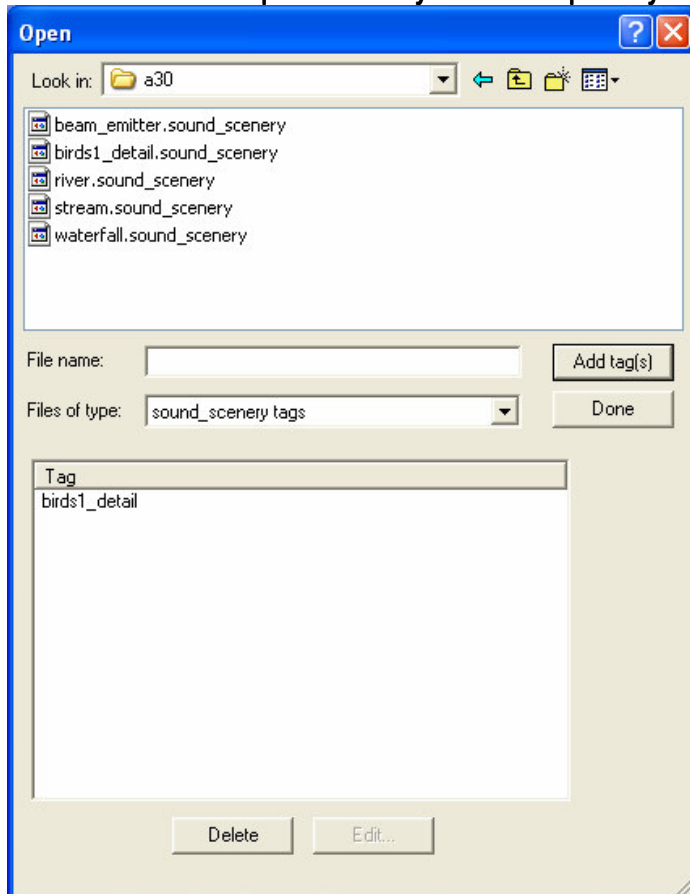




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Part 5d – Adding Ambient Sound

In the Hierarchy view, go to Mission\Objects and click on Sound Scenery. Then click Edit Types, and Add. Navigate to tags\sound\sfx\ambience and from there, explore the folders to find and open sounds you want to put in your map.

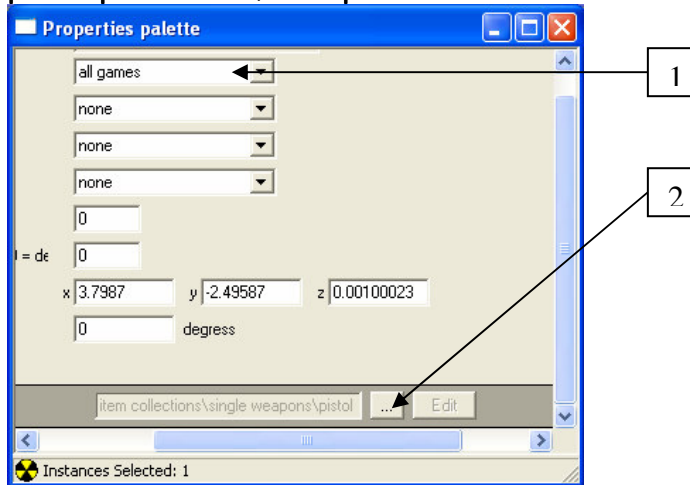


Now right click where you want the sound in the map, if it will only play in a small area, or place the sound at “20 meter” intervals (the warthog is about 5 meters long, so see it as 4 warthogs long) around the map. Now save your level.



Part 5e – Placing Weapons and Powerups

In the hierarchy view, go to Mission\Game Data and select Netgame Equipment. In the game window, right click where you want to place a weapon or powerup, and in the properties palette, in the Type 0 drop down box, select All Games (1), then click the small button with three dots in the dark grey box at the bottom of the properties palette (2), and in the Open box, navigate to tags\item collections and choose a weapon or powerup from there, and open it.



Now add more weapons and powerups around the map, and finally save it.

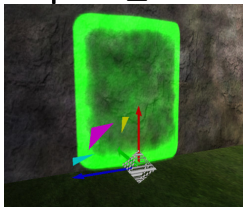
Note: In the game window, you won't be able to see the weapons/powerups yet, as they only appear in the game.

Part 5f – Adding Teleporters

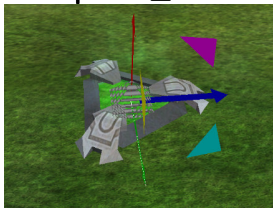
Teleporters consist of two things. The shield or base, which are just for show, and the netgame flags, which actually do the teleporting.

Part 5f.1 – Placing the Scenery tags

In the hierarchy view, go to mission\objects\scenery, click Edit Types, then Add. Then navigate to tags\scenery, and add the teleporter_shield and the teleporter_base. Then right click where you want the player to teleport from, and change its type to a teleporter_shield.



Then right click where you want the player to teleport to, and add a teleporter_base, or a teleporter_shield if you want to be able to go both ways.



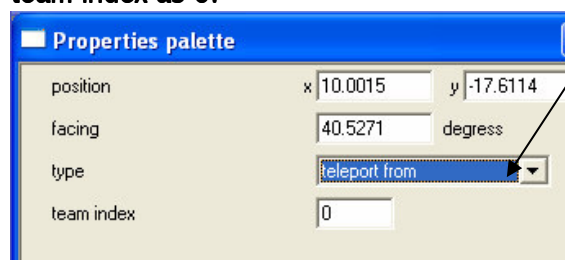
Now make as many teleporter pairs as you want around the map.

Part 5f.2 – Placing the netgame flags

In the hierarchy view, go to mission\game data and select netgame flags, then right click just behind your first teleporter shield, and make sure the blue triangle is facing forwards.



Then in the properties palette, change its type to teleport from. Make sure you keep its team index as 0.



Now add one where you want it to teleport to, but change the type to teleport to.

If you want the teleporter to go both ways, add a teleport from next to the teleport to, but give it a team index of 1, and add a teleport to next to the first teleport from, with a team index of 1.

Now do the same for each teleporter pair, but give each pair a different team index. As we've already done two pairs, we'd give the next pair team indexes of 2, the next 3, and so on.

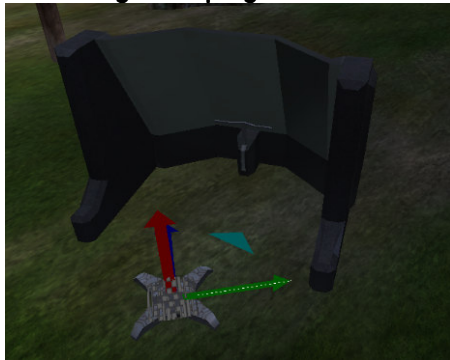
Now save your level.

Part 5g – Adding Netgame Flags

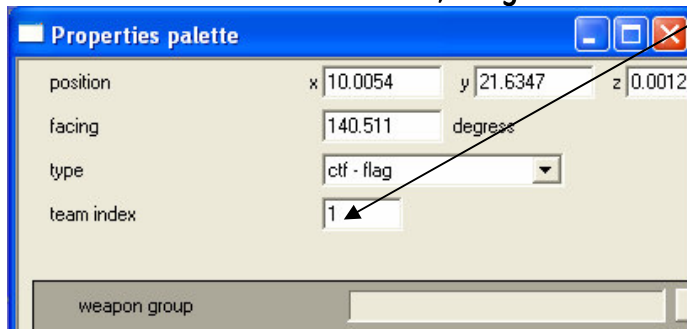
You have already added netgame flags in the teleporter section, but we're going to add more here.

In the hierarchy view, go to mission\game data and select netgame flags.

In the game window, right click on the red flag base, and change the new flag's type to "ctf – flag", keeping its team index at 0.



Now do the same at the blue base, but give it a team index of 1.



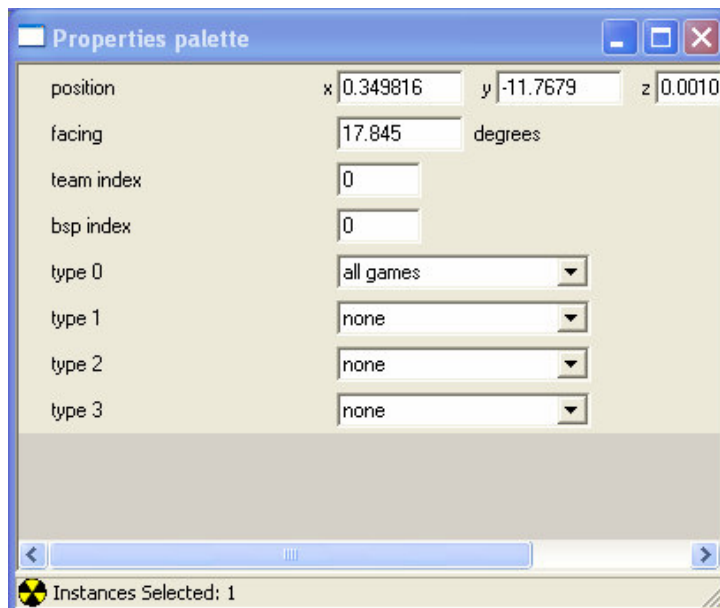
Now add a random new flag in the middle of the map and change its type to “oddball – ball spawn” with a team index of 0, then add five to ten more with a team index of 1. (0 = Location for main ball in 1 ball games, 1 = Location for other balls in multiple ball games)

Now add a “race – track” flag near the red base, and give it a team index of 0. Then add another where you want the next race flag to be, and give it a team index of 1, give the next a team index of 2, and so on. Then add two “race – vehicle” flags next to each base, giving the red’s team indexes of 0, and the blue’s team indexes of 1.

Now add a ring of “hill – flag” flags with a team index of 0 around where you want the main hill for King of the Hill to be. This is usually near the middle of the map. Then add another ring somewhere else, and give them team indexes of 1, and another with team indexes of 2, and for larger maps, add another with team indexes of 3.

Part 5h – Adding Spawn Points

In the hierarchy view, go to mission, and select player starting points. In the properties palette, in the type 0 drop down box, change it to all games, and make sure you keep its team index as 0.



Then add four around red base and four slightly further out.

Then do the same at blue base, but give them team indexes of 1.

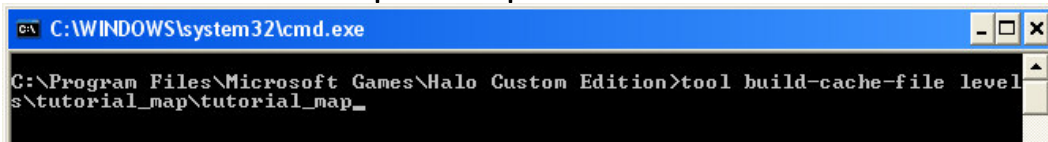
Finally, save your level, and close Sapien.

PART 6. FINAL COMPILATION

Now go to the desktop and double click on the cmd.exe shortcut you made earlier.

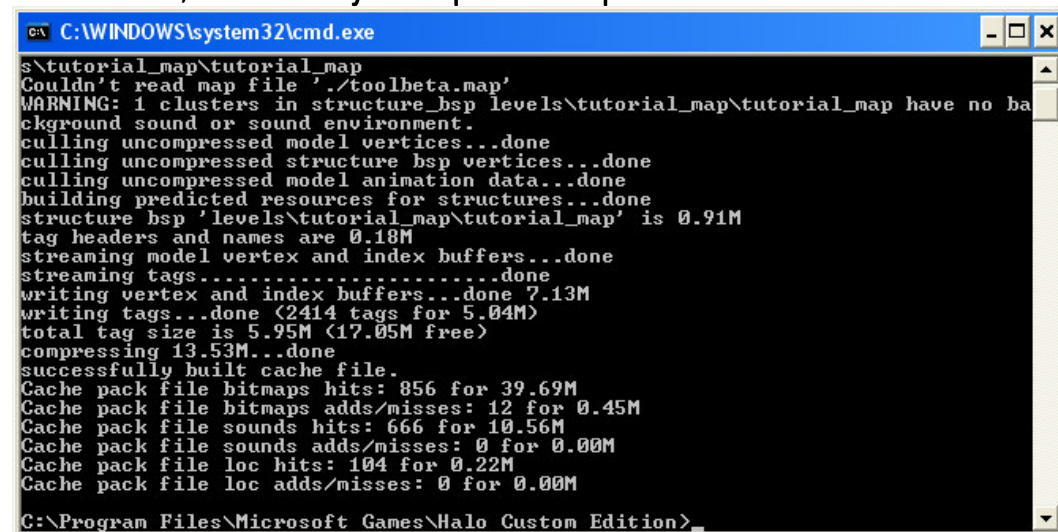
In the command prompt, type:

tool build-cache-file levels\mapname\mapname



```
C:\WINDOWS\system32\cmd.exe
C:\Program Files\Microsoft Games\Halo Custom Edition>tool build-cache-file levels\tutorial_map\tutorial_map_
```

Now hit enter, and wait for your map to be compiled.



```
C:\WINDOWS\system32\cmd.exe
s\tutorial_map\tutorial_map
Couldn't read map file './toolbeta.map'
WARNING: 1 clusters in structure_bsp levels\tutorial_map\tutorial_map have no background sound or sound environment.
culling uncompressed model vertices...done
culling uncompressed structure bsp vertices...done
culling uncompressed model animation data...done
building predicted resources for structures...done
structure bsp 'levels\tutorial_map\tutorial_map' is 0.91M
tag headers and names are 0.18M
streaming model vertex and index buffers...done
streaming tags.....done
writing vertex and index buffers...done 7.13M
writing tags...done (2414 tags for 5.04M)
total tag size is 5.95M (17.05M free)
compressing 13.53M...done
successfully built cache file.
Cache pack file bitmaps hits: 856 for 39.69M
Cache pack file bitmaps adds/misses: 12 for 0.45M
Cache pack file sounds hits: 666 for 10.56M
Cache pack file sounds adds/misses: 0 for 0.00M
Cache pack file loc hits: 104 for 0.22M
Cache pack file loc adds/misses: 0 for 0.00M
C:\Program Files\Microsoft Games\Halo Custom Edition>
```

Now close the command prompt.

PART 7: PLAYING

Run Halo Custom Edition. It will take longer to load than normal Halo, so be patient. When it has loaded, select Multiplayer, then under Create Game, select LAN, then when you get to choose the multiplayer map, your map should be in the menu.



Click OK, then select any gametype, and click OK, then Start Game.

The game should load, and you'll be able to play in your map.



THE END