Quick map guide

By Cleopatre,
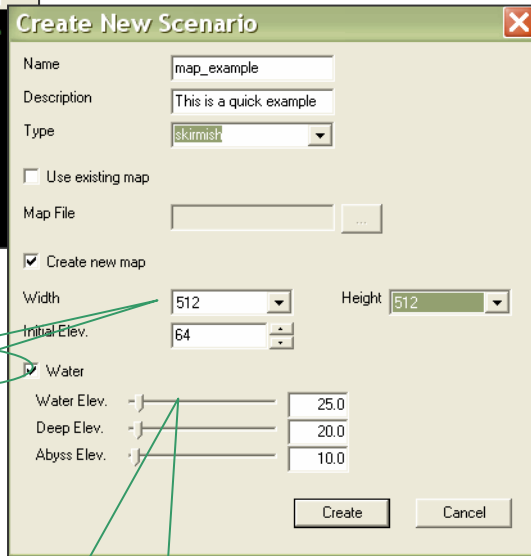Based on the work of AngryZealot
English checking by Goom

1. Start

SC Editor

File Edit View Options

New...
Open...
Open Recent
Save
Save As...
Export ▸
Import ▸
Exit

2. Create the map

Create New Scenario

Name   map_example
Description This is a quick example
Type   skirmish

☐ Use existing map

Map File   [   ] [...]

☑ Create new map

Width   512   Height 512
Initial Elev. 64
☑ Water
    Water Elev.   25.0
    Deep Elev.   20.0
    Abyss Elev.   10.0
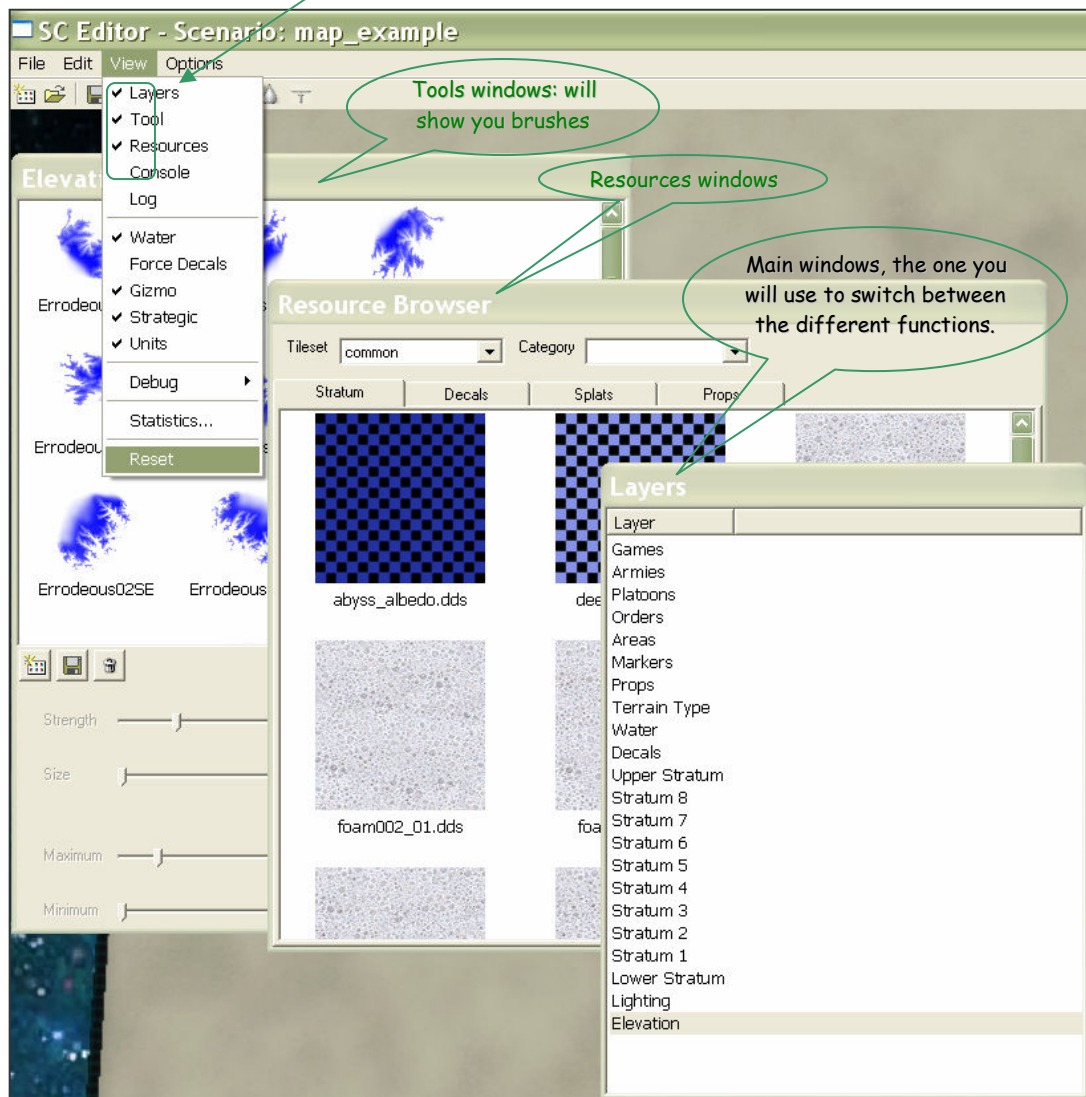
[Create]   [Cancel]
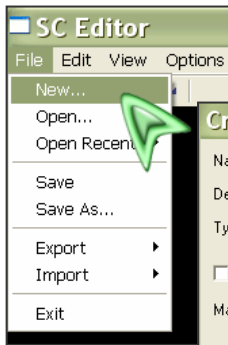
Here's a 10x10km

Take your time; it's an important value, hard to change later.

Take the time to adjust the settings of your map, it's an important step. Most of the values can not be changed later:
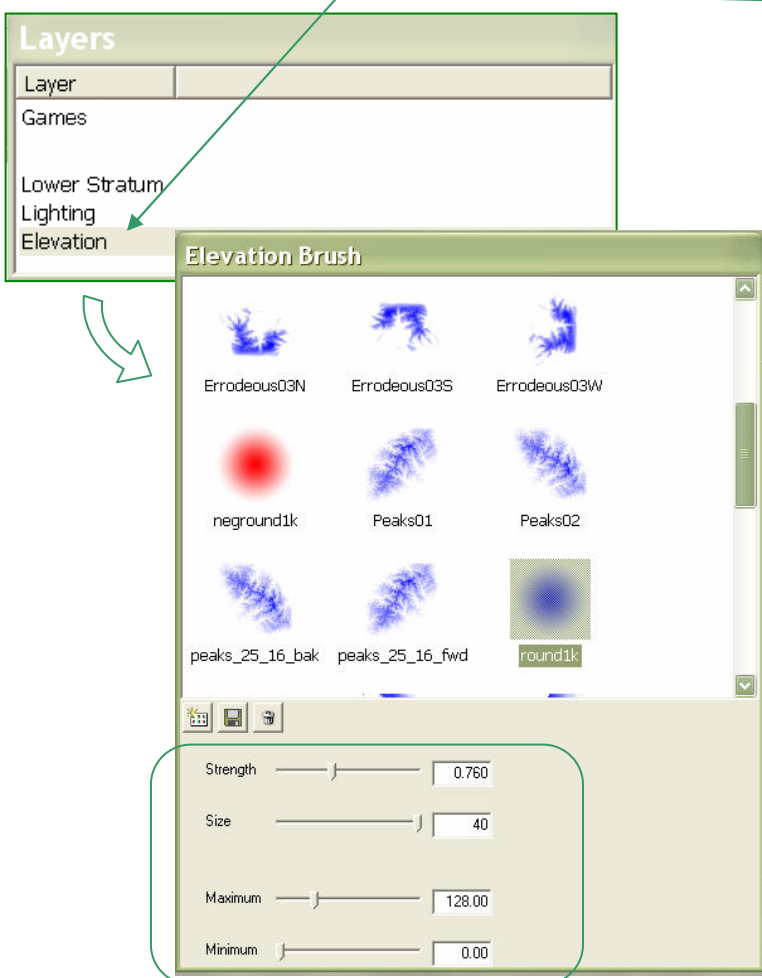
- **Width/Height:** Size of the map in game units. A 5x5 km map is 256x256 game units wide.
- **Initial Elev.:** How high the default terrain is. A good number is usually 64. Very low or very high initial elevations may cause problems later on when you are editing your heightmap.
- **Water:** Enables or disables water.
- **Water Elev./Deep Elev./Abyss Elev.:** The threshold values for rendering water. If the heightmap is below these values, the appropriate type of water will be rendered. It is important to keep these in mind if you are designing a map with water.

3. Discover and create your own desktop

Select the windows you need, these are the important ones for starting.

SC Editor - Scenario: map_example

File Edit View Options

✔ Layers
✔ Tool
✔ Resources
  Console
  Log
✔ Water
  Force Decals
✔ Gizmo
✔ Strategic
✔ Units
  Debug ▸
  Statistics...
  Reset

Tools windows: will show you brushes

Resources windows

Main windows, the one you will use to switch between the different functions.

Elevati...

Errodeou...

Errodeous02SE   Errodeous...

Strength
Size
Maximum
Minimum

Resource Browser

Tileset common   Category [   ]

Stratum | Decals | Splats | Props

abyss_albedo.dds   dee

foam002_01.dds   foa

Layers

Layer
Games
Armies
Platoons
Orders
Areas
Markers
Props
Terrain Type
Water
Decals
Upper Stratum
Stratum 8
Stratum 7
Stratum 6
Stratum 5
Stratum 4
Stratum 3
Stratum 2
Stratum 1
Lower Stratum
Lighting
Elevation

4. Molding the terrain

SC Editor - Scenario: map
File Edit View Options

Layers

Layer	
Games	
Lower Stratum	
Lighting	
Elevation	

Elevation Brush

Errodeous03N	Errodeous03S	Errodeous03W
neground1k	Peaks01	Peaks02
peaks_25_16_bak	peaks_25_16_fwd	round1k

Strength ——————— 0.760
Size ———————————— 40
Maximum ———————— 128.00
Minimum ——————— 0.00

Classical brushes

round1k

neground1k

Used to create elevation. Put a Maximum height and use it create your landscape.

Used to lower the ground, if you go below the waterline you will get water.

- **Strength:** How quickly the brush changes the height.
- **Size:** Size of the brush is in world units.
- **Maximum:** The maximum height allowed by the brush. If you are raising the terrain, a plateau will form at the height you specify here. Using a brush on terrain with a higher elevation than Maximum will cause the terrain to be lowered to Maximum.
- **Minimum:** The minimum height allowed by the brush. It functions the same as Maximum, except that it acts as a lower boundary.
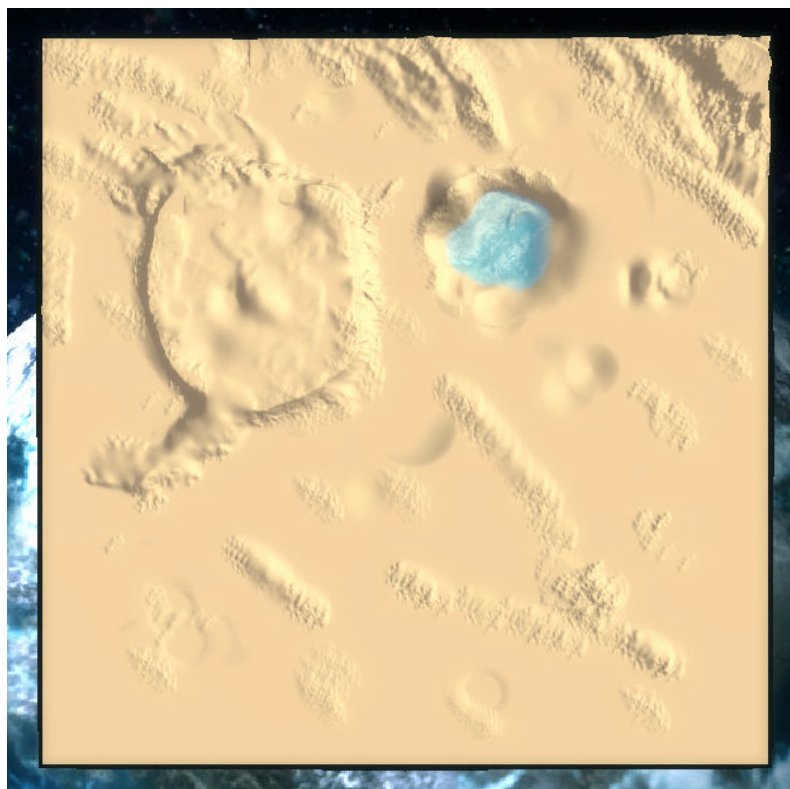
Take your time to do all the ground of your map. Here is my example, Bethesda Fortress! The water was created by going under the value you set in the step 2.
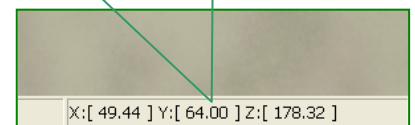
4.a Check the slope
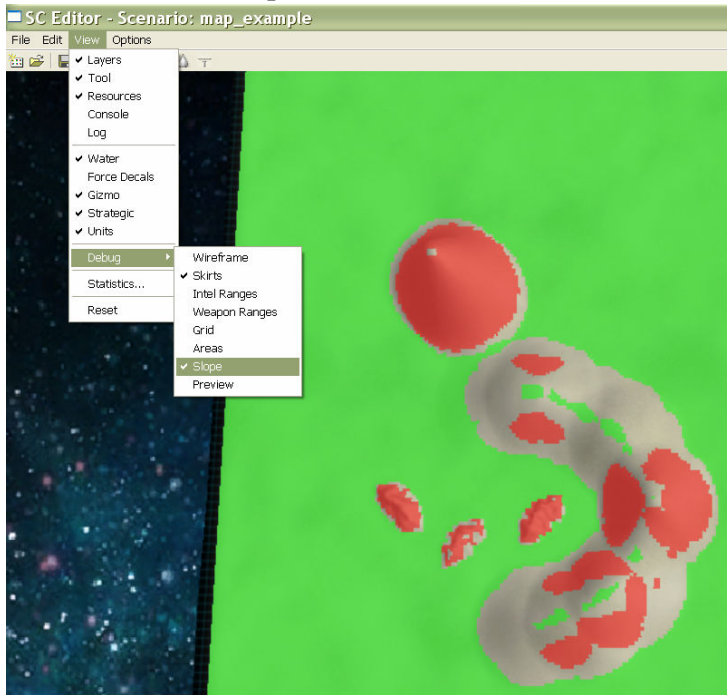
To know where you'll be able to build and where the unit can go, just use the slope option. Keep in mind that: a height difference of 2 is not passable by units, but such a low cliff is difficult to work with. Cliffs should typically be at least 4 units high.
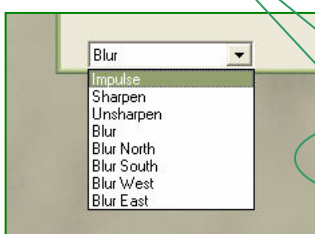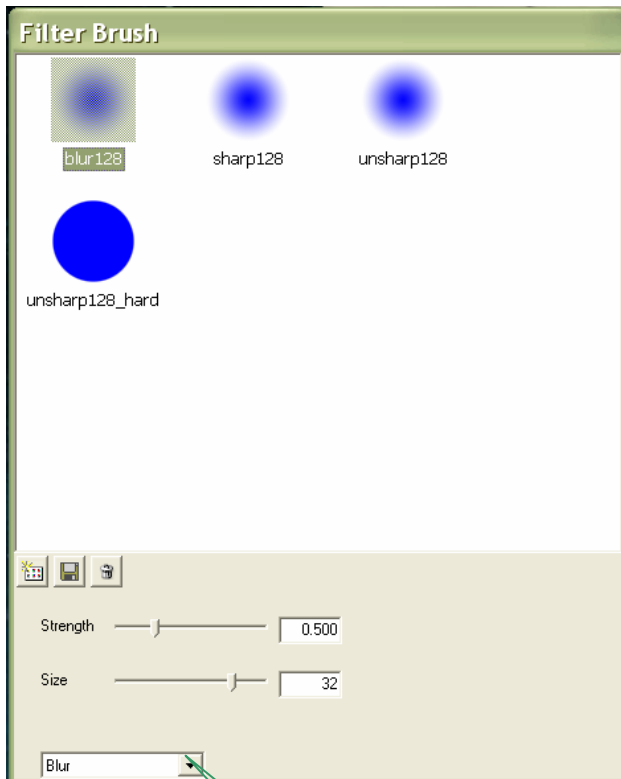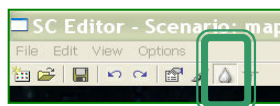
Green indicates that land is flat enough to construct buildings on.
Red indicates that land is too steep for units to traverse.
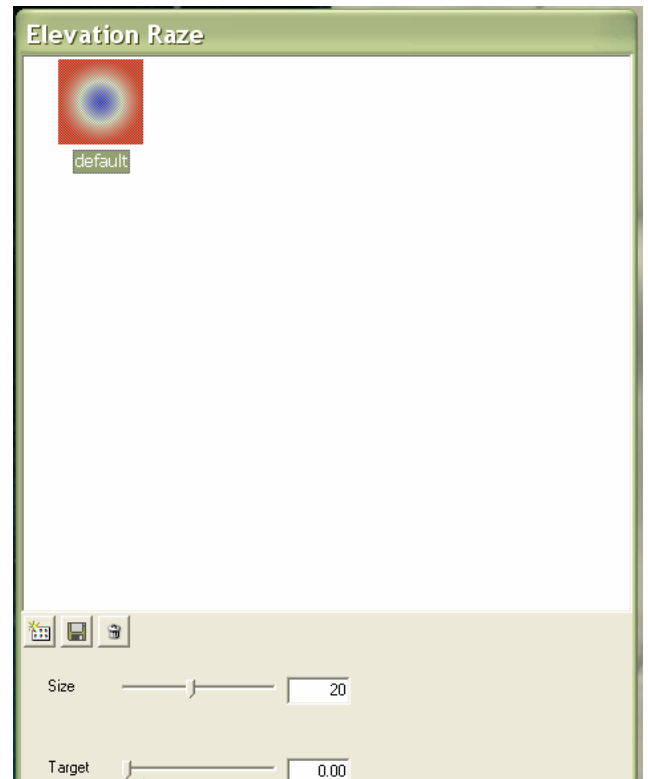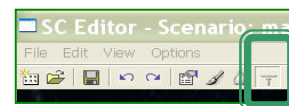Colorless means that units can traverse that land, but it is too steep to build on.

You can also check the height of your ground at the bottom-left of your windows.

X:[49.44] Y:[64.00] Z:[178.32]

4.b Use blur and raze elevation

Filter Brush

blur128   sharp128   unsharp128

unsharp128_hard

Strength —— 0.500

Size —— 32

Blur

Elevation Raze

default

Size —— 20

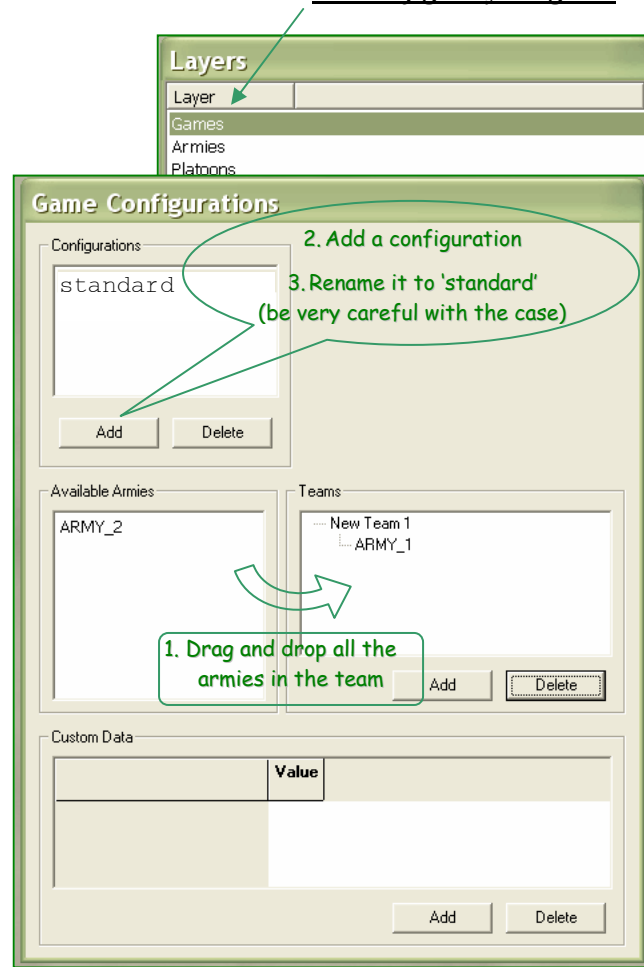Target —— 0.00

Blur
Impulse
Sharpen
Unsharpen
Blur
Blur North
Blur South
Blur West
Blur East
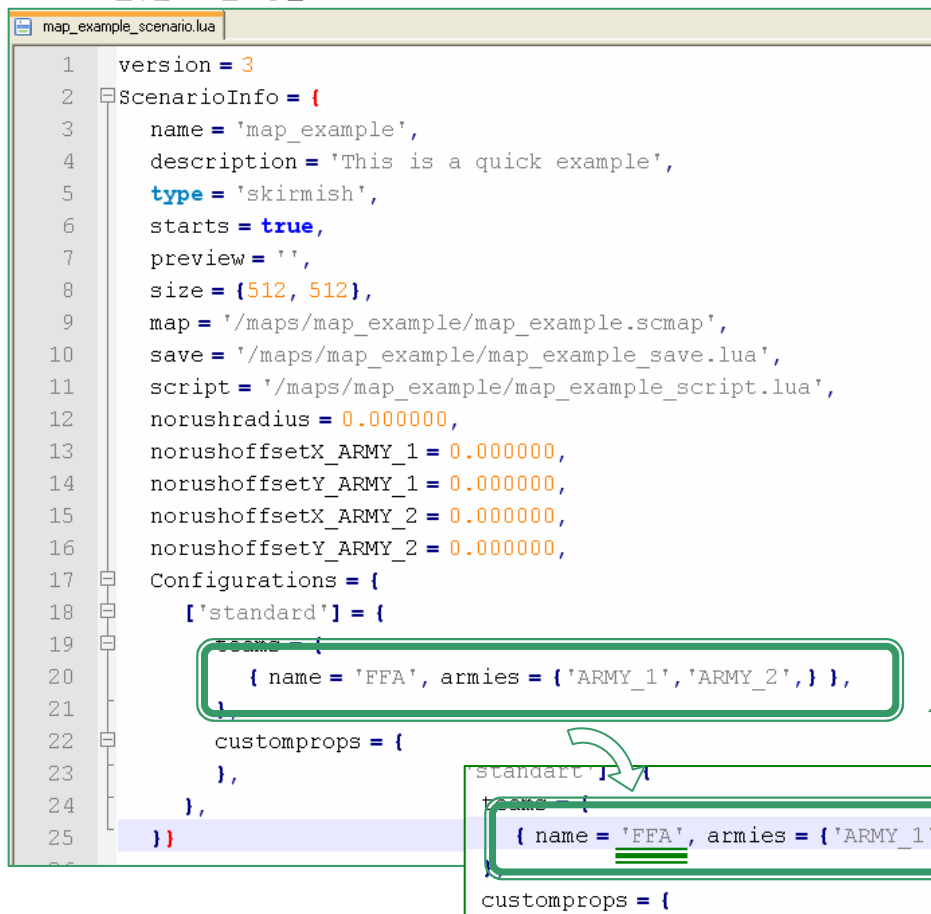
Also use the impulse option

Very useful to allow structures to be buildable on harsh ground.

5.a Add your players

Layers

Layer	
Games	
Armies	
Platoons	
Orders	
Areas	

Armies

Name	Faction	
⊞ ARMY_1		
⊞ ARMY_2		

Add the number of player you want.

Abs Yaw [ ] Set   Select Stacked

5.b Configure your game

Layers

Layer	
Games	
Armies	
Platoons	

Game Configurations

Configurations

standard

Add   Delete

2. Add a configuration

3. Rename it to 'standard'
(be very careful with the case)

Available Armies

ARMY_2

Teams

New Team 1
  ARMY_1

1. Drag and drop all the armies in the team

Add   Delete

Custom Data

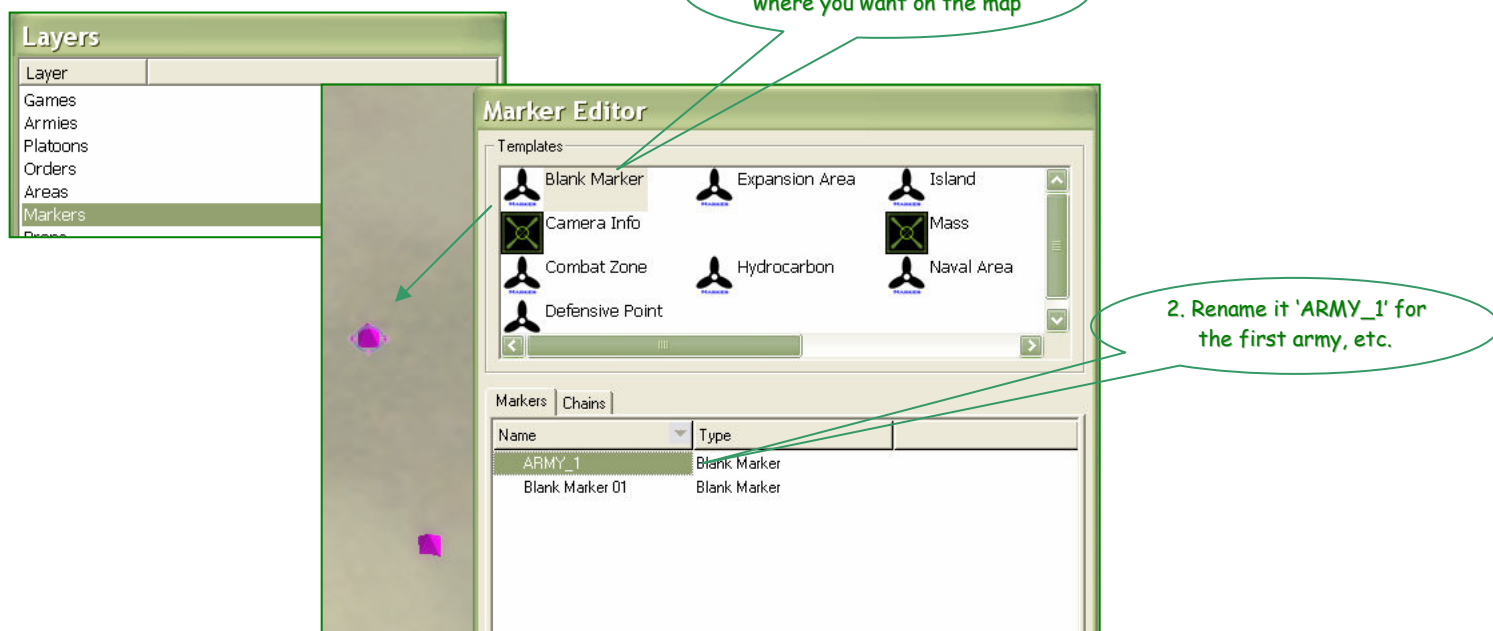|	Value

Add   Delete

5.c Close the editor and go editing a file

open: C:\Program Files\THQ\Gas Powered Games\Supreme Commander\maps*name_of_your_map*\ *name_of_your_map*_scenario.lua

```
map_example_scenario.lua

1    version = 3
2    ScenarioInfo = {
3        name = 'map_example',
4        description = 'This is a quick example',
5        type = 'skirmish',
6        starts = true,
7        preview = '',
8        size = {512, 512},
9        map = '/maps/map_example/map_example.scmap',
10       save = '/maps/map_example/map_example_save.lua',
11       script = '/maps/map_example/map_example_script.lua',
12       norushradius = 0.000000,
13       norushoffsetX_ARMY_1 = 0.000000,
14       norushoffsetY_ARMY_1 = 0.000000,
15       norushoffsetX_ARMY_2 = 0.000000,
16       norushoffsetY_ARMY_2 = 0.000000,
17       Configurations = {
18           ['standard'] = {
19               teams = {
20                   { name = 'FFA', armies = {'ARMY_1','ARMY_2',} },
21               },
22               customprops = {
23               },
24           },
25       }}
```

Change the name of the team in 'FFA'. Save and re-launch the map editor

```
['standard'] = {
    teams = {
        { name = 'FFA', armies = {'ARMY_1','ARMY_2',} },
    },
    customprops = {
```
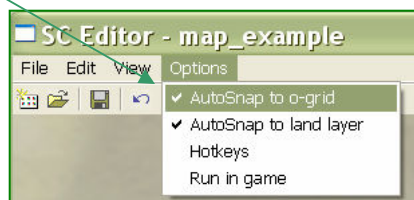
5.d Placing the makers

- **Caution:** you must have 'AutoSnap to o-grid' checked to get good results

5.e Creating the initialising script

Create the file C:\Program Files\THQ\Gas Powered Games\Supreme Commander\maps*name_of_your_map*\ *name_of_your_map*_script.lua

And put inside:

```lua
local ScenarioUtils = import('/lua/sim/ScenarioUtilities.lua')

function OnPopulate()
    ScenarioUtils.InitializeArmies()
end

function OnStart(self)

end
```
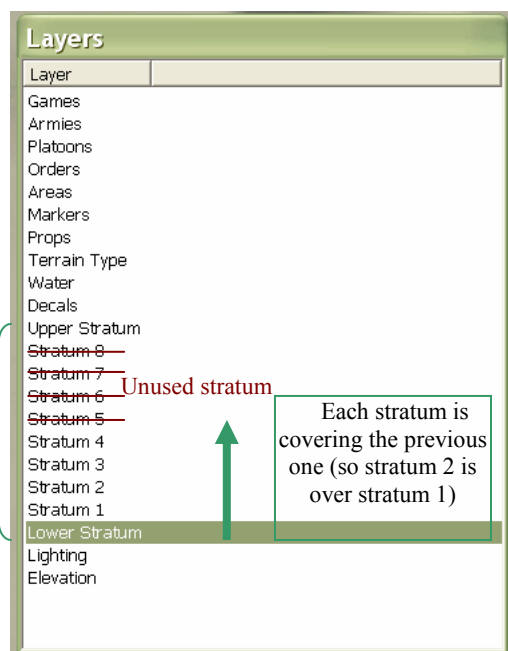
Close and save it.

5.f Check your file appears in supcom

If not, go back and check all the steps. The configuration, should be exactly 'standard', the team in FFA and the script correct with the correct name.
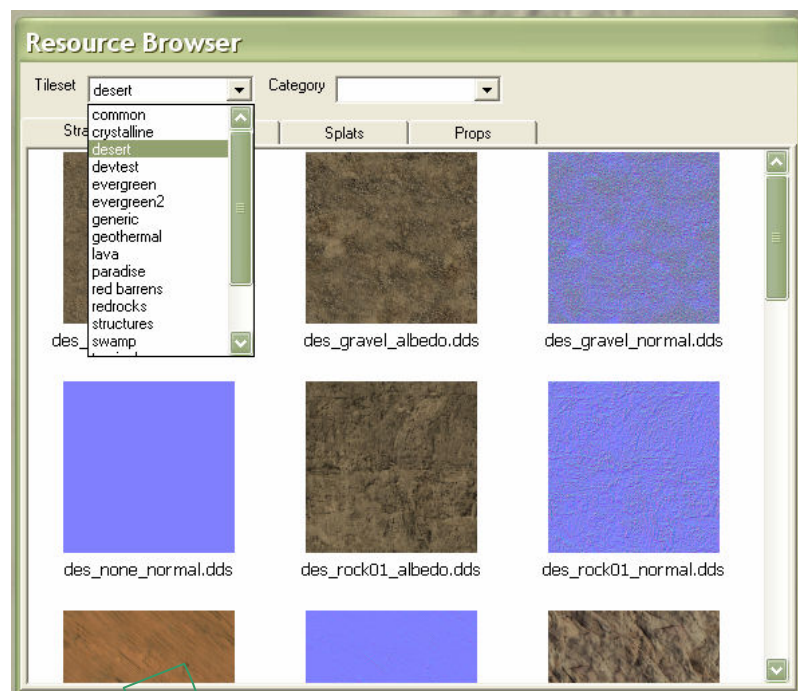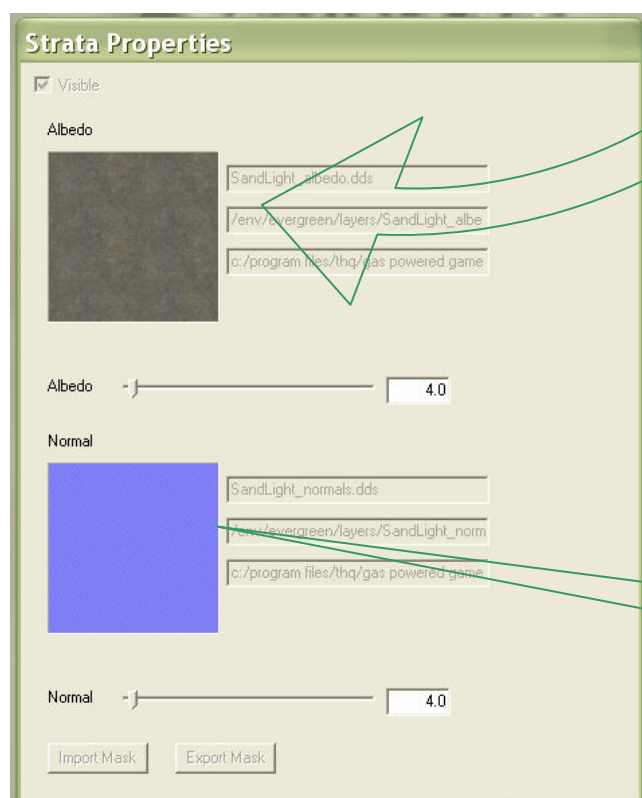
6. Texturing the map

You should now be finished creating the terrain for your map. We just need to make it look nice. It may be one of the more time consuming steps, but also a very fun one! You'll have to use the different texture layers called 'strata', each stratum covers the ones below so don't cover the lower ones as you add more on top. It's just like any photo-editing program that uses layers.

Here is the resources browser, which will give us the texture we need to apply.

Texturing uses all these layers.

Unused stratum

Each stratum is covering the previous one (so stratum 2 is over stratum 1)

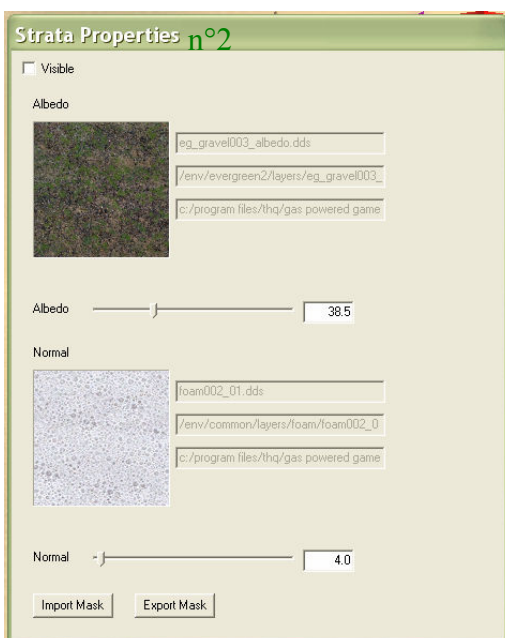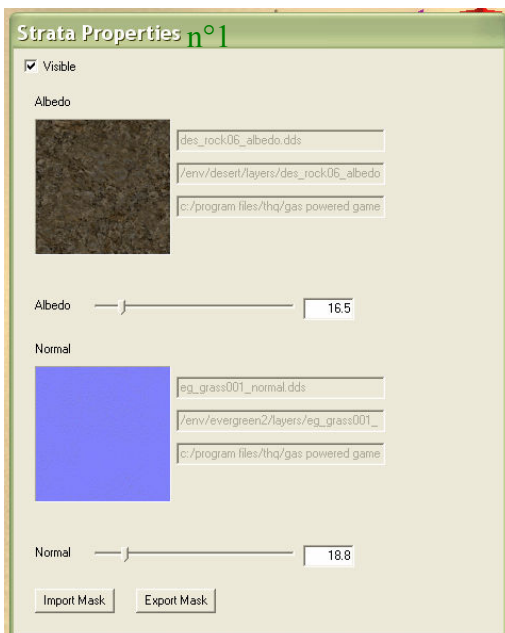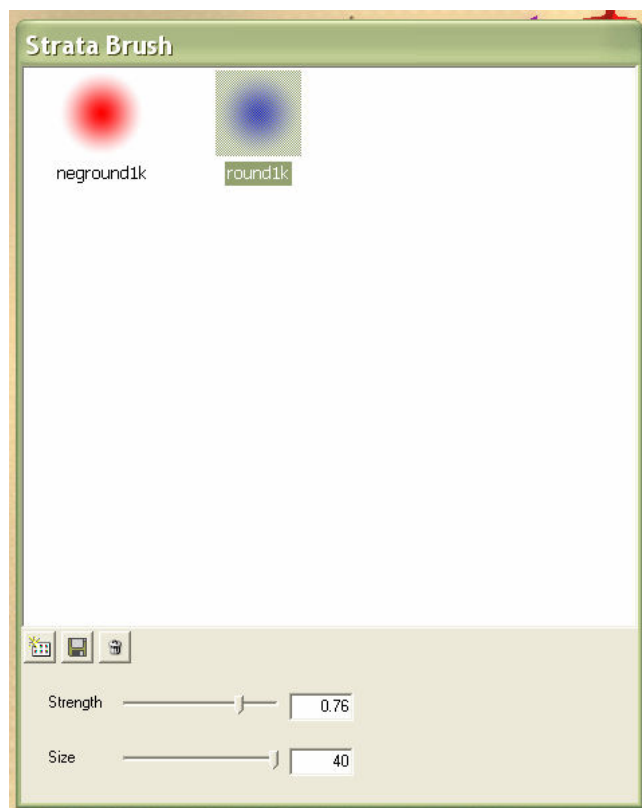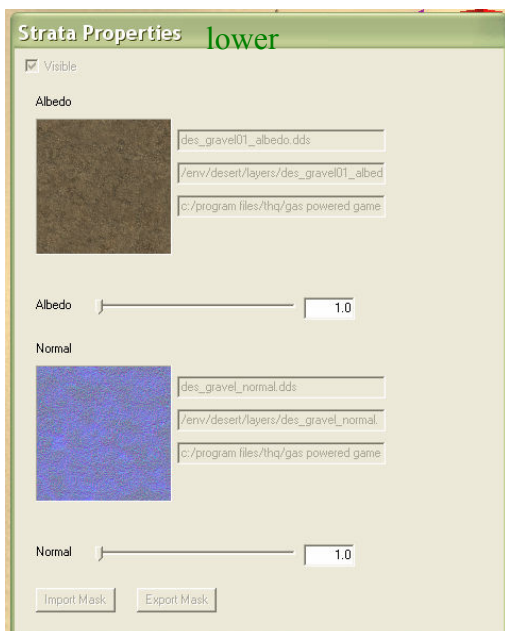For each stratum, you will have this in tool windows…

Drag the texture you want for each stratum. Keep in mind you have only 5 sorts of it, so spare it !

This is not required, but will improve a stratum's look by imitating small variations in height

Now select your stratum from 1 to 4 and use the brush to paint on the map.

You can also hide any strata you don't want to use. Enjoy !

Strata Properties lower

Visible

Albedo

des_gravel01_albedo.dds
/env/desert/layers/des_gravel01_albed
c:/program files/thq/gas powered game

Albedo   1.0

Normal

des_gravel_normal.dds
/env/desert/layers/des_gravel_normal.
c:/program files/thq/gas powered game

Normal   1.0

Import Mask   Export Mask

SC Editor - Scenario: map

File   Edit   View   Options

Strata Brush

neground1k   round1k

Strength   0.76

Size   40

Strata Properties n°1

Visible

Albedo

des_rock06_albedo.dds
/env/desert/layers/des_rock06_albedo
c:/program files/thq/gas powered game

Albedo   16.5

Normal

eg_grass001_normal.dds
/env/evergreen2/layers/eg_grass001_
c:/program files/thq/gas powered game

Normal   18.8

Import Mask   Export Mask

Strata Properties n°2

Visible

Albedo

eg_gravel003_albedo.dds
/env/evergreen2/layers/eg_gravel003_
c:/program files/thq/gas powered game

Albedo   38.5

Normal

foam002_01.dds
/env/common/layers/foam/foam002_0
c:/program files/thq/gas powered game

Normal   4.0

Import Mask   Export Mask

The same map as before, with the texture applied. I used mainly the rock and sand. Only I used the evergreen for the bottom-right and the oasis. Not really visible at the height.
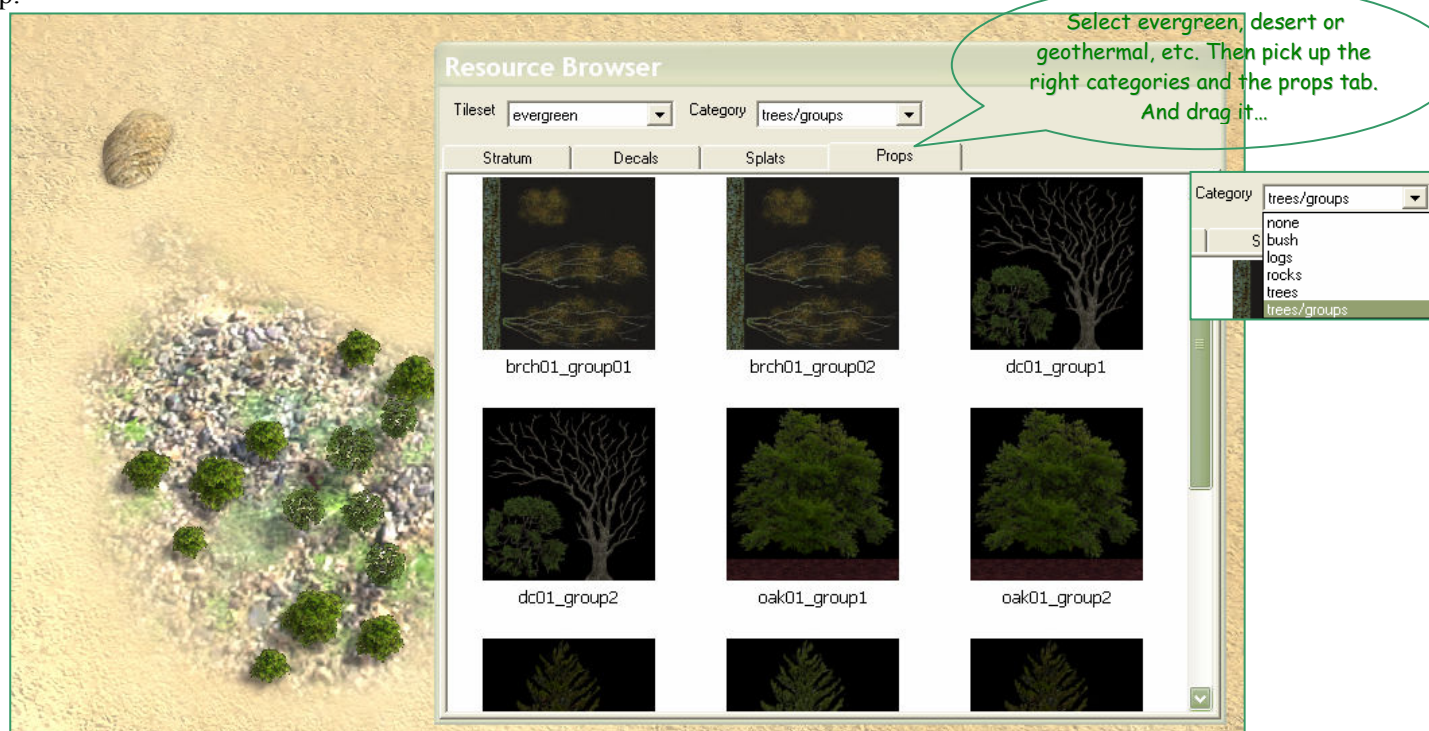
7. Placing the resources and the AI guides
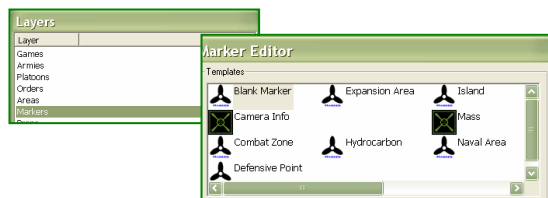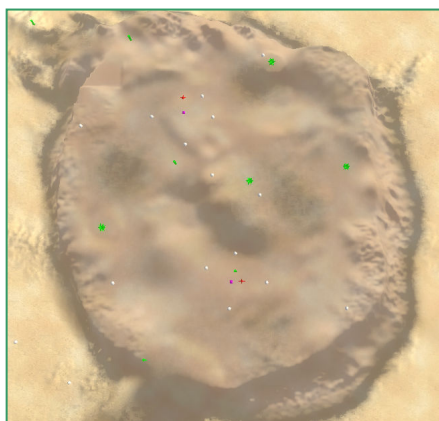
Exactly as for the marker for the army starting point(cf. step 5.d), just add your mass extractors, power plant and AI defence and attack point.
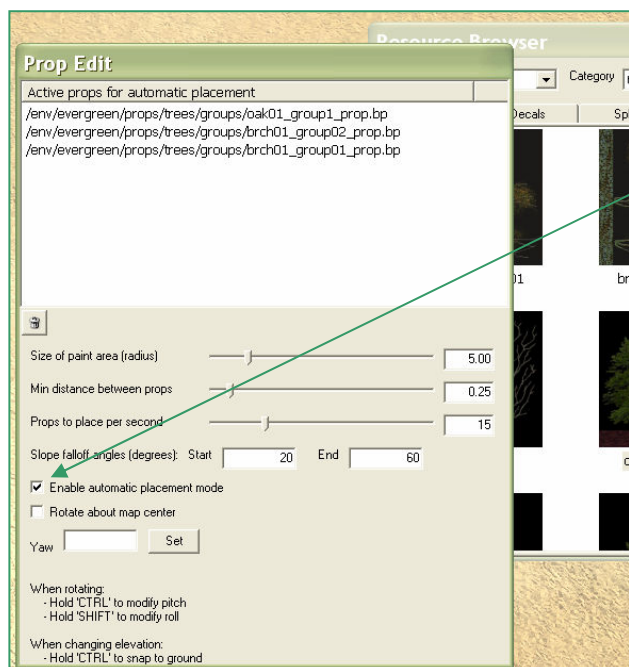
Some remarks:
- use the AutoSnap to o-grid to have the mass points correctly placed
- check the buildability for the power plant, the ground must be very flat.
- to have a nice preview without the markers, check 'Hide All Markers' before leaving.

8. Placing the props

Every decent map should contain a lot of props: like trees, rocks and many others. That's part of the richness of the map.

Select evergreen, desert or geothermal, etc. Then pick up the right categories and the props tab. And drag it…

Placing lots of props together:

There is a way which allows you to create a forest in a very short time. That's in the props edit windows. Just *drag the props* you want, tweak it a bit and click '*Enable automatic placement mode*'.
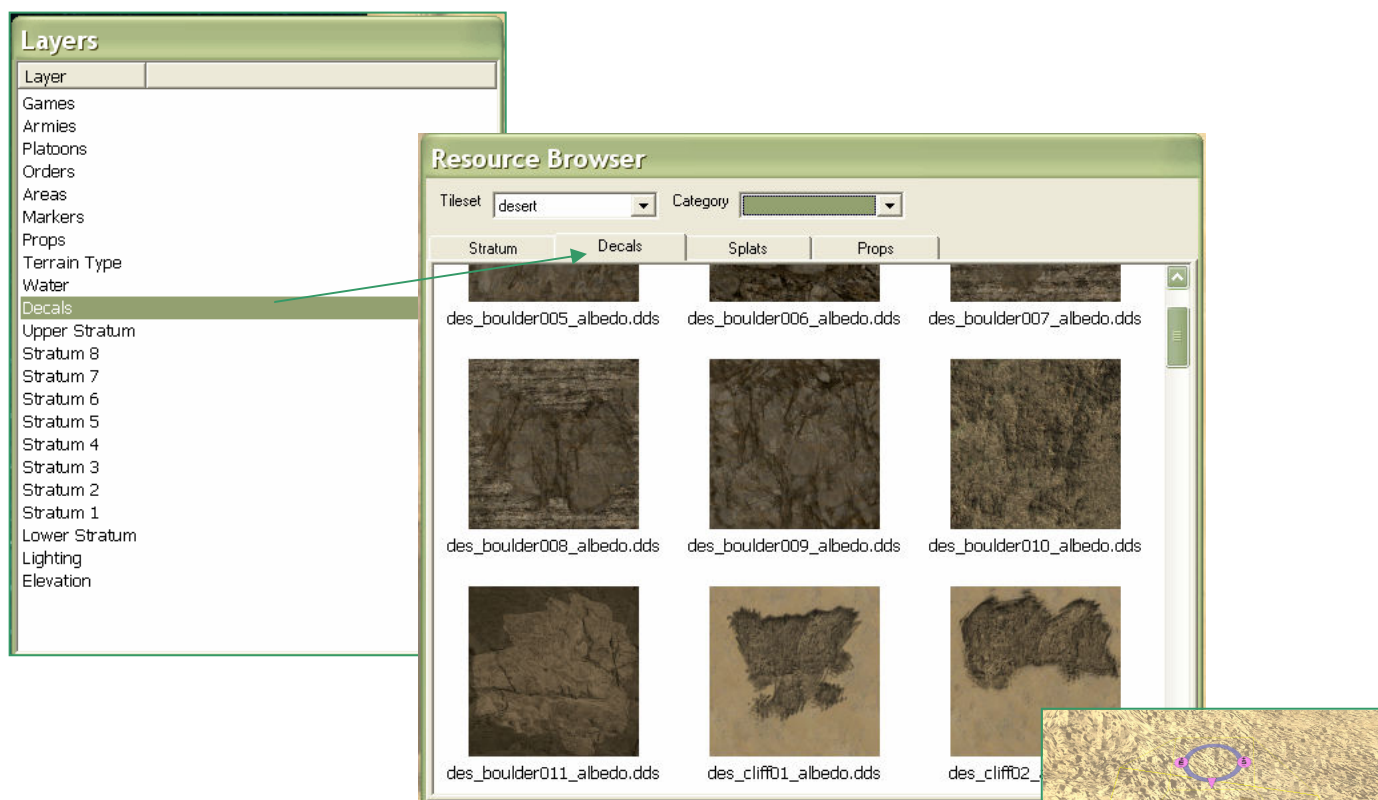
Then paint the map as with a brush…

Very useful !

9. Adding the decals

Now is the time to give a professional touch to our map. A very important part is the decals. It's a very time consuming process, but is the difference between a poor and a pro map. Take the time to adjust all of it.


The decals are kind of texture you can apply on all element, you can rotate it with the circle, move it and resize it. Until you find the right place.

Some tips:
- use the R key to rotate it
- use the S to scale it
- and use the CTRL key to select a decal hidden under another one…

One last important thing, you also have to adjust the zoom levels where your decals will be shown. Too low and your map will look ugly as you zoom out. Too high and you will be hurting game performance.

A very important factor that will directly impact if the decal is seen in strat view or not.
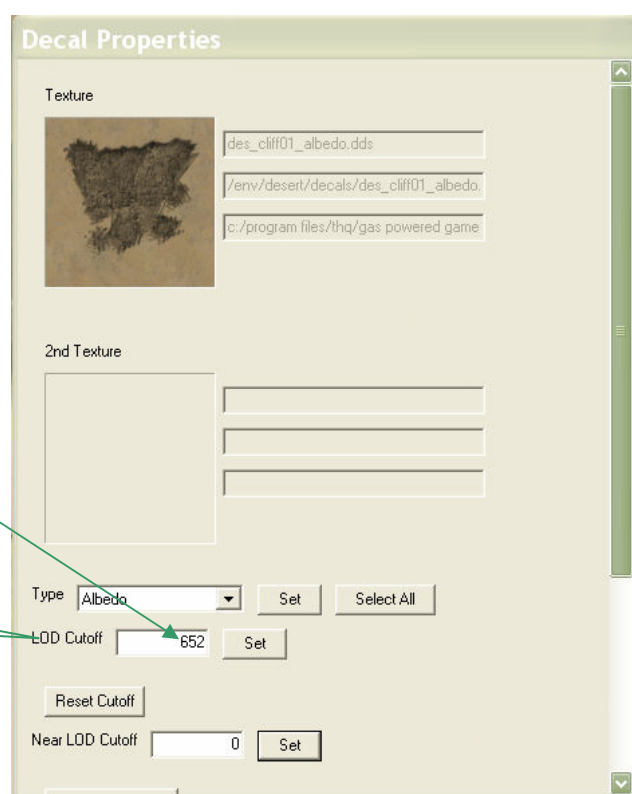
10. Scripting a map

If you want, you can do whatever you want with a map. As an example we will just launch lots of xp gunship after a set time. Just modify the file C:\Program Files\THQ\Gas Powered Games\Supreme Commander\maps*name_of_your_map\ name_of_your_map_*script.lua we created before and replace everything with:

```
--scenario utilities
local ScenarioUtils = import('/lua/sim/ScenarioUtilities.lua')
local ScenarioFramework = import('/lua/ScenarioFramework.lua')
local Utilities = import('/lua/utilities.lua')

local endGameTime = 20 --end time in second before the reinforcement, here 20s !!

scnPrint = function(text,army,playeronly)

        local colorIndex = ScenarioInfo.ArmySetup[army].PlayerColor
        local color = import('/lua/GameColors.lua').GameColors.ArmyColors[colorIndex]


        if not playeronly then
                playerspecific = false
        else
                playerspecific = playeronly
        end


        if playerspecific == true then
                if army == indexToArmy(GetFocusArmy()) then
                        PrintText(text,20,color,10,'center')
                end
        else
                PrintText(text,20,color,10,'center')
        end
end

--returns the username of the army
username = function(army)
        return GetArmyBrain(army).Nickname
end

--*********************************************************************************

function OnPopulate()
        ScenarioUtils.InitializeArmies()
        initialiseAlliances()
end

--the defender is alone against the attackers
function initialiseAlliances()
        for index,army in ListArmies() do
                if army != 'ARMY_1' and army != 'ARMY_2' then
                        SetAlliance( 'ARMY_1', army, 'Enemy')
                else
                        SetAlliance( 'ARMY_1', 'ARMY_2', 'Ally')
                end
        end
end


function OnStart(self)

        --victory condition thread
        local endThread = ForkThread(function(self)
                WaitSeconds(endGameTime)
                --defenderWin()
                reinforcements()
                KillThread(self)
    end)

end

--defender wins
--all attackers lose
function defenderWin()
        for index,army in ListArmies() do
                if army == 'ARMY_1' then
                        GetArmyBrain('ARMY_1'):OnVictory()
                else
                        GetArmyBrain(army):OnDefeat()
                end
        end
end

--final reinforcements for defender
function reinforcements()
        scnPrint( username('ARMY_1') .. "reinforcements have arrived!",'ARMY_1',false)
        local x = 50
        local y = 50
        local i = 0
        local units = {}
        while i < 400 do
                local unit = false
                if i < 200 then
                        unit = CreateUnitHPR( 'ura0401', 'ARMY_1', x+i,50,y, 0,0,0)
                else
                        unit = CreateUnitHPR( 'ura0401', 'ARMY_2', x+i,50,y, 0,0,0)
                end
                table.insert(units,unit)
                i = i + 10
                IssueAttack( {unit}, {x+i,25,500} )
        end
        --IssueMove( units, {200,25,200} )
        --spawn units
        --issue orders
end
```

Links

- Just found support at the gpgnet forum :
  http://forums.gaspowered.com/viewforum.php?f=27&sid=a9d1ca140108e3561bd9748962ced5cd
- Specials thanks to the gpgnet team, and also to AnrgyZealot
- You can also find the Bethesda Fortress map used in example in the vault