

# ParaWorld Leveleditor

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## Introduction

First of all hello and welcome! With this Level Editor we have created all maps and sequences for ParaWorld. This Editor has become a complete tool over the time of development of ParaWorld, as an ever increasing number of functions and features have been added over time. This instruction has the purpose of showing you how to use the Editor so that you can build maps yourself.

This manual is divided into three parts: First it will explain all the menu items and functions separately, then comes the walk through of creating your first 2er map and at the end there is the Q&A.

## The Editor

### *A few opening words*

The level editor uses the PEST-Engine, same as the game does. Objects are seen in the editor just as they look ingame. But in the editor you have no time running in the background, meaning that by particle effects for instance you have to do a little work around to get to see them.

Because of performance and gameplay reasons, there are a few restrictions you have to adhere to:

- We recommend that you do not place more than 1500 Objects in one level (IdiObj don't count, but more to that later)
- Resources like stone or wood should not be placed on non-walkable materials or be surrounded by them. They need to be placed accessible. Fish resources should not be placed within Lakes to small to place a harbour and single trees should not be placed within forest blocks or so far in water that a unit can't get to it.

Other things to watch out for:

- You can only edit the landscape when the camera is set to "Free", not when the camera is set to "Game".
- It is better to start the level editor new when you open a different map, as sometimes it can come to errors if you load one map after the other.
- By all the placed resources you need to set up the amount of the resource it is supposed hold. You can do that in the properties window (p) and with "Update" you can confirm it. If you forget to press the Update button it could happen that ingame the green resource bars are not correctly shown.
- Some objects are invisible, or rather are only seen as a particle effect when the time is running (smoke, waterfalls etc.) To make these objects visible, you need to start the Sequence Editor which you can do over Tools/Sequence Editor. You then click the first tab "New" and change to the third tab "Story". In the bottom left corner is the symbol for continuous play, which you need to check and then press play. After that you can close the Sequence Editor as until you close the Level Editor, all particle effect will be played. No time and no game play is running though, which means that placed units for instance, won't start moving around.
- "Undo" will only reverse landscape changes, not changes made to templates, triggers or other changes.

## Quick Start

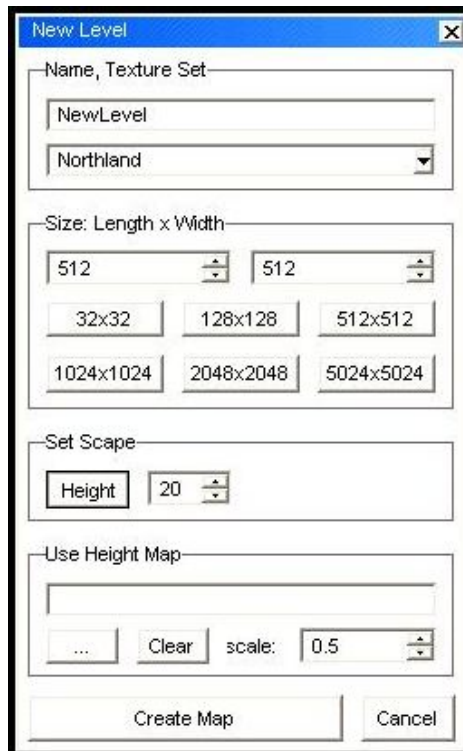
Even though all menu items will be explained separately later on, due to the sheer amount of features it can take a while to get familiar with them. So here is a quick guide on how to get started with a new map.

Many menu items will open up movable sub-windows in the Level Editor. Which ones you will need to get started are listed here:

- Scape / Edit Scape: There you will see all the floor textures & brush commands
- Scape / Mini Map: Shows a scaled down version of the map you are working on
- Objects / Insert: shows a list of objects which can be added to the map
- g: switches through all grids: texture grid – height grid – block grid – off
- b: shows which part of the map are walkable and which are not. Walkability is affected by floor textures and incline of scape
- Personalize Brushes: Scape / Brushes and then with Add/Edit create the wanted brush. With CapsLock+Number you can give your brush a number. While you are editing the scape you can change the size of the brush with “+” or “-“. These changes will not be saved.

## Taskbar

File / New



A new sub menu will open with in which you can set the main attributes how the map will look you are about to create.

In the top edit field you can write the name of the map. You do not need to format the map name like the original SEK maps as all names will be accepted by the game.

By „Setting“ you can define which texture set you want to be using for the map. There are 5 standard sets to choose from.

The settings “Test” and “Cave3” are not functional. You should ignore those settings as they will throw error messages. These settings were purely made for testing purposes. The “Cave1” setting uses the savannah texture set was used in the single player campaign for the holy city. In this setting you will find plenty of textures for roads and pathways, but not many natural textures like earth and ocean floors.

“Cave2” consist of the ash valley texture set from single player level 16. In this setting there are more road and path textures as well and the water textures look like running lava but it still is water, meaning that ships will still be able to move on it and water animals will be able to swim in it.

By „Size“ you will define the size of the map in meters. The buttons give you shortcuts for a few predefined sizes, but any size is possible between 32m and 5024m, so long it is in 32m steps. A few things you should note, is that 32m is the base measure for scape blocks. The outside 4 blocks of a map on each side can be edited, but are inaccessible by units or animals later ingame. A map consisting of 9x9 blocks (288mx288m) would only have one single block which is accessible!

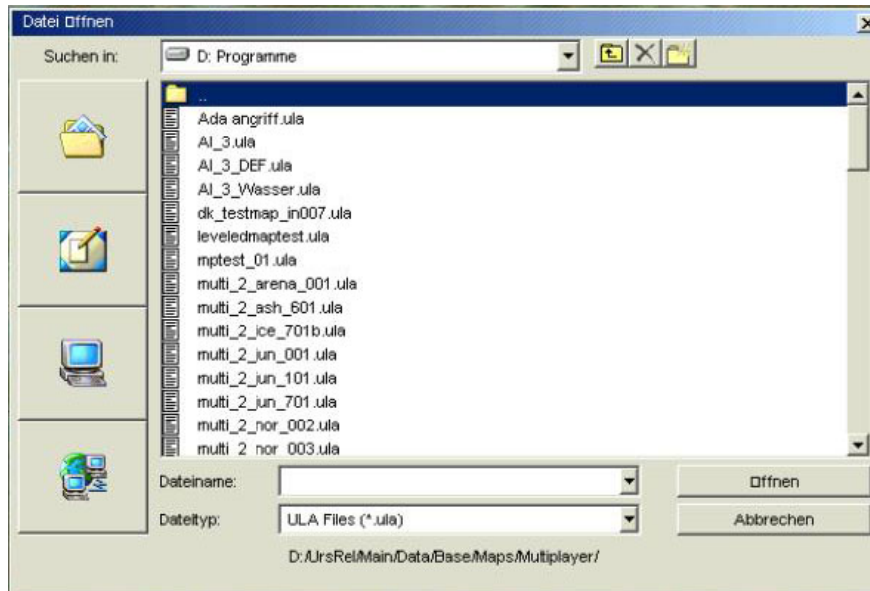
Because this is hard to fathom, here a few map sizes from already existing ParaWorld maps:

- Cold blooded: 960m x 800m (30 x 25 blocks)
- Ashes to Ashes: 1280m x 1216m (40 x 38 blocks)
- Single 01 (Stranded): 1152m x 800m (36 x 25 blocks)
- Single 12 (Ship fight): 1568m x 1376m (49 x 43 blocks)

„Set Scape Height“ defines the base level that the still empty map will have. The Ocean floor is 0m, the water surface is by 16m and units can walk up to 15, 5m.

„Use Height Map“ is only interesting if you want to import a black & white height map. Black is 0m and white is 254m high. The highest scape points in our maps are between 100 and 120m high. Pure white is definitely not recommended.

## File / Open



An explorer will open up where you can choose the map which you want to load

## File / Open Recent

The last 4 loaded map will be there as a quick choice

## File / Save

Save the map with the name it already has

## File / Save as

Opens an explorer window where you can choose the place and name where you want your map to be saved

## Edit / Undo

With this function the last steps of editing the map can be reversed. There is no “Redo”, so be careful what you reverse, it will be lost for good. Actions which cannot be reversed are for instance Templates, Trigger etc. You can only undo the scape height, placed objects, rotations and movements of scape. The amount of steps which you can reverse depends on your RAM.

## Scape / Edit Scape



This function opens a sub window with the most important functions for scape editing which are the 8 scape textures and the editing functions. These 8 scape textures have in all settings the same attributes:

- Texture 1 (alt + 1): walkable
- Texture 2 (alt + 2): under water texture (generate ocean sounds!), walkable
- Texture 3 (alt + 3): grass (generates grassy planes while zooming in), walkable
- Texture 4 (alt + 4): walkable
- Texture 5 (alt + 5): unwalkable (and with that you cannot build on it neither)
- Texture 6 (alt + 6): walkable (path and road texture)
- Texture 7 (alt + 7): walkable
- Texture 8 (alt + 8): unwalkable (and with that you cannot build on it neither)

You can „paint“ the chosen texture with held down left mouse button on to the scape. A right click will switch to the texture underneath the mouse cursor (only while in scape painting mode). Texture brushes are always square, but as soon as you change to another brush like the height or plateau brush for instance, the brush will become round again. Textures are painted on a slightly larger grid as the altitude of a scape. When switching through the grids, the finer grid is the height grid where you can set and move each line crossing. By the larger grids the line crossing is where you can set the texture.

When painting large areas with a texture, slight variations of this are automatically painted in, so that that it doesn't look like the pattern repeating itself. You still should not paint real large areas with only one texture, as it always looks better if you use lots of smaller patches of one texture.

Edit functions:

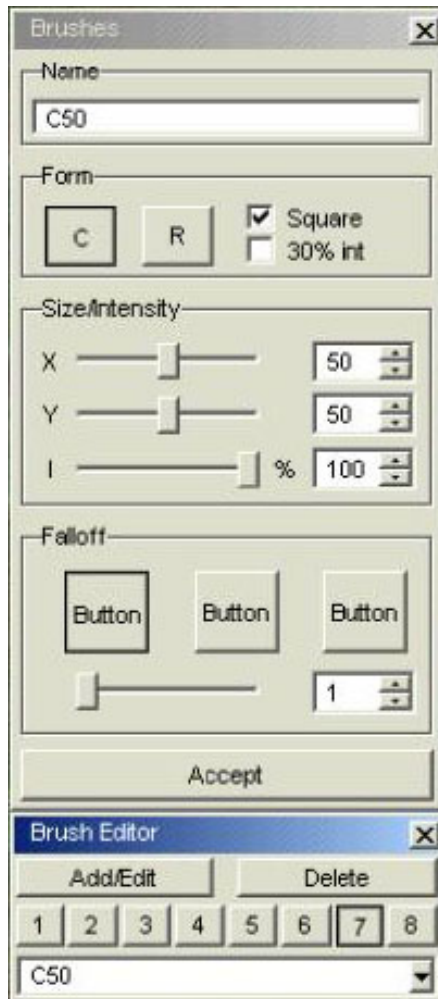
- Alt = Altitude (alt+a): held down left mouse button lifts the scape, held down right mouse button lowers the scape.
- Level: not used anymore and has no functions
- Smooth = smoothing scape (alt+b): levels different scape heights within the area of the brush
- Rough = roughening up (alt+n): does the opposite of the smooth brush by giving the scape different heights. Best to finish of with a small smooth brush so that the different height levels do not look to harsh.
- Det: not used anymore and has no functions.
- Plat = Plateau (alt+p): The scape will be raised/lowered to a predefined height. You can set the height either in the menu itself bottom right, or with right mouse click in the scape via the drop down menu that will pop up. It is good to remember here that the water surface is at 16m and the ocean bottom at 0m.
- For = Forest Mode (alt+f): with a left click a forest block will be added at the position the mouse cursor currently is. Forest blocks are much better for performance as setting single trees and not counted towards the 1500 Object limit for a map. With a

right click you remove the forest block again. Forest blocks should only be placed on walkable texture.

- Cliff: not used anymore and has no functions
- Detail: not used anymore and has no functions

While editing the scape you should always remember to use mainly walkable textures and where the start locations are situated the scape should not have to much of an incline, as otherwise while placing building, the scape will get ugly terraces where units won't be able to walk anymore.

### Scape / Brushes



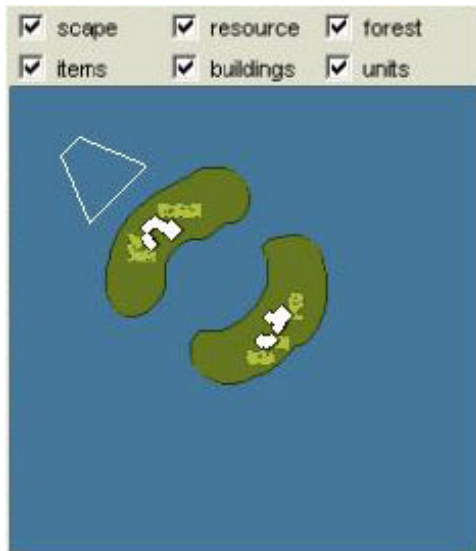
With this menu you can create your own brushes. First you click "Add/Edit" and in a new pop up window you can give that brush a name and define if the brush should be circular or square. The checkbox tells the brush if all sides should have the same length or in the instance of the circle if it should be an eclipse. "30% int" means intensity. Intensity determines the effect the brush will have on the scape and can be adjusted with the slider "I". If the check box "30% int" is checked, the intensity is locked at that. Size defines the size of a brush. You only have to enter the value you want and press enter. The smallest usable brush is 3x3, this is also the smallest textures size you can paint.

The smaller the brush is, the higher should be the intensity, as otherwise you will not see to much difference. "FallOff" is the bleeding of a brush, meaning the intensity is at its highest in the middle of the brush and it's lowest at the edges. This works only by scape editing, not by texture painting.

With clicking "Accept" you will have created and named your brush. Now you can choose your brush via a drop down menu in the icon row. To give your brush a number, you have to hold down CapsLock+Number. Every brush can only have one number. "Delete" will obviously delete your brush.

To change the size of a brush you just need to press „+“ or “-“ while the brush is in use. It will only change the size temporarily, so the saved size of your brush will not be altered.

## Scape / Minimap

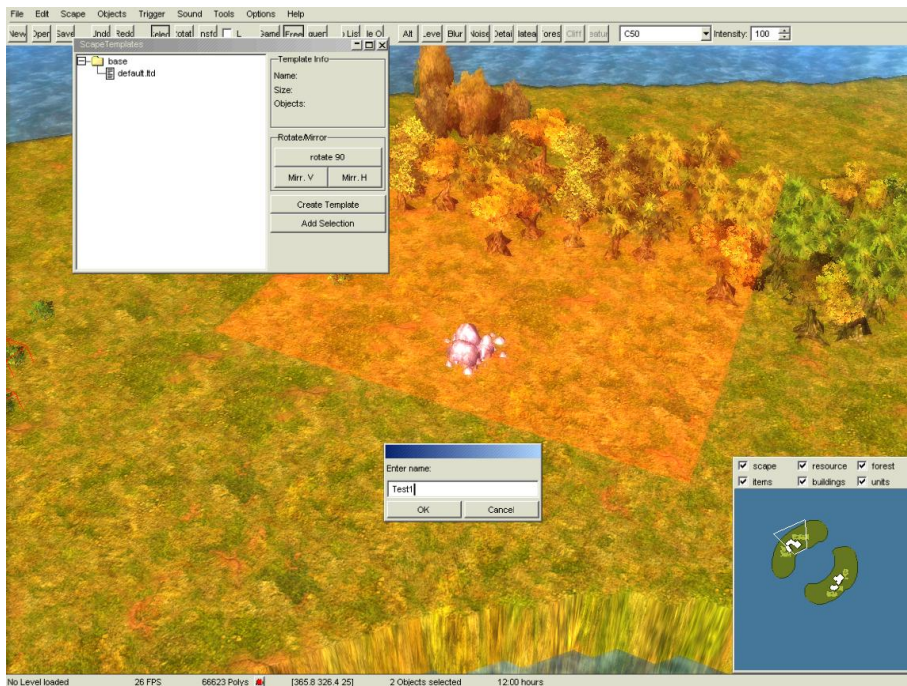


Toggles the mini map on/off. The mini map can be configured in itself as well:

- Scape: switches between a view of only walkable/non-walkable and ground topography
- Resources: toggles between show/hide resources
- Forest: toggles between show/hide forest blocks
- Item: toggles between show/hide items
- Buildings: toggles between show/hide building
- Units: toggles between show/hide units

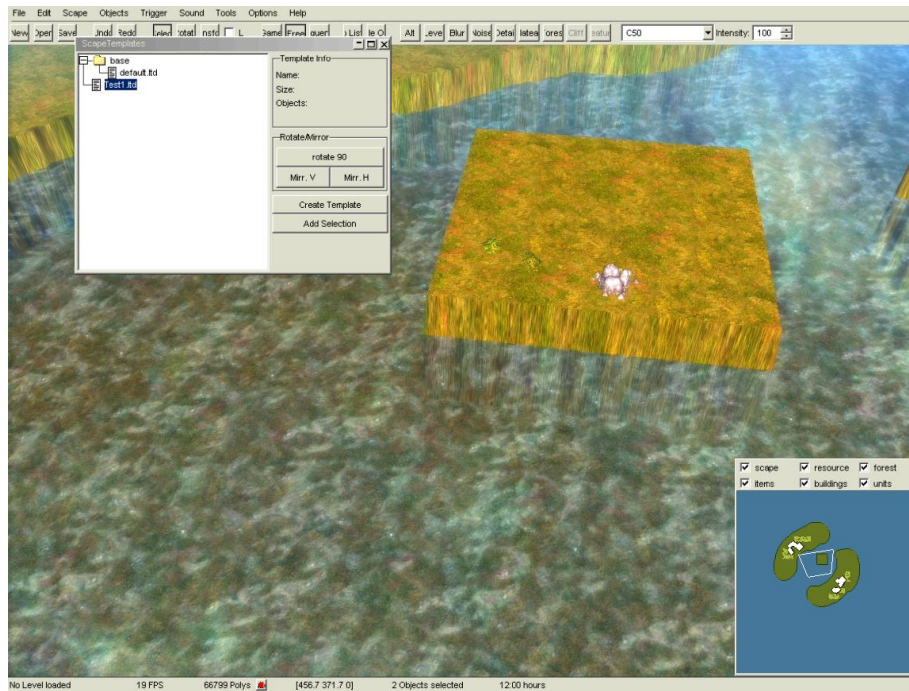


## Scape / Scape Templates



With the Scape templates you can copy whole chunks of scape and insert them, even rotated or mirrored somewhere else. A few points need to be observed though:

- Templates are created per scape block, meaning the smallest template is on block of scape
- Templates are always square (2x5 or 10x10 blocks for instance). So to copy more unusual shapes, you will have to copy them as a few pieces until you get the desired area you want to copy.
- All objects which have their zero-point inside the block will be copied as well. Most objects have their zero-point at the centre. All other object will not be copied
- Inserted scape templates cannot be reverted (Undo). You should always save the map before you insert a scape template. So in case of a mishap just close the map without saving and open the map again
- Scape templates replace everything that is underneath them, so it is better not to place object there before you inserted the template.
- Objects within the scape templates will have after insertion only their default values. That's goes for all resources, nests & regions. So if you altered the value at the original location of the scape template, you will need to adjust the values again at the new location.
- Start locations are copied as well, but the player number (owner) must be set new

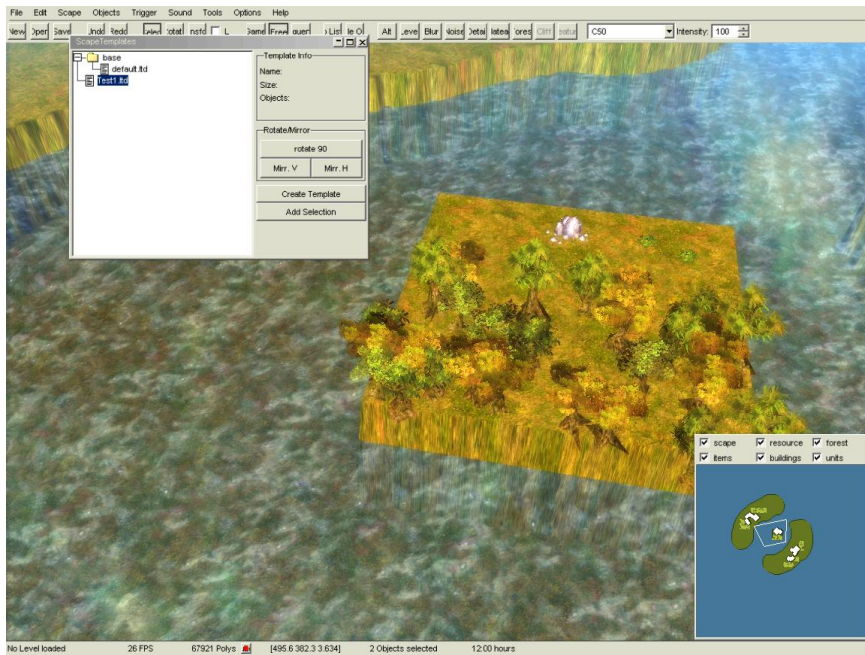


- When you mirror a scape template then all the objects will not automatically be turned the right way around again. This you will have to do yourself. When rotating a scape template the object will be rotated as well, but the fine adjustment will have to be made by yourself still
- While rotating or mirroring a template the textures will be slightly offset, so you need to check if lanes, walls and buildings still fit neatly into the landscape. You will most likely have to do some fine tuning.

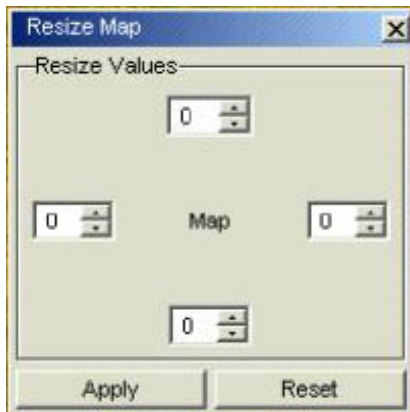
#### Handling of Templates:

First you need to create a template. With a right click on a folder you get a drop down menu with which you can create a new folder or delete templates. To create a template you need to click the "Create" button. With held down left mouse button you can now mark the area which you want in your template. To save the template you click the button "Add Selection" and choose a name for it.

You insert a template by double clicking in the explorer window the template of your choice. This template will now be seen as a ghost on your mouse cursor and can be inserted with a left mouse click. With "Rotate 90" you can rotate the template before insertion. Click twice and it will be rotated 180° and so on. The buttons "Mirr. V." and "Mir. H" mirrors a template vertically or horizontally respectively.

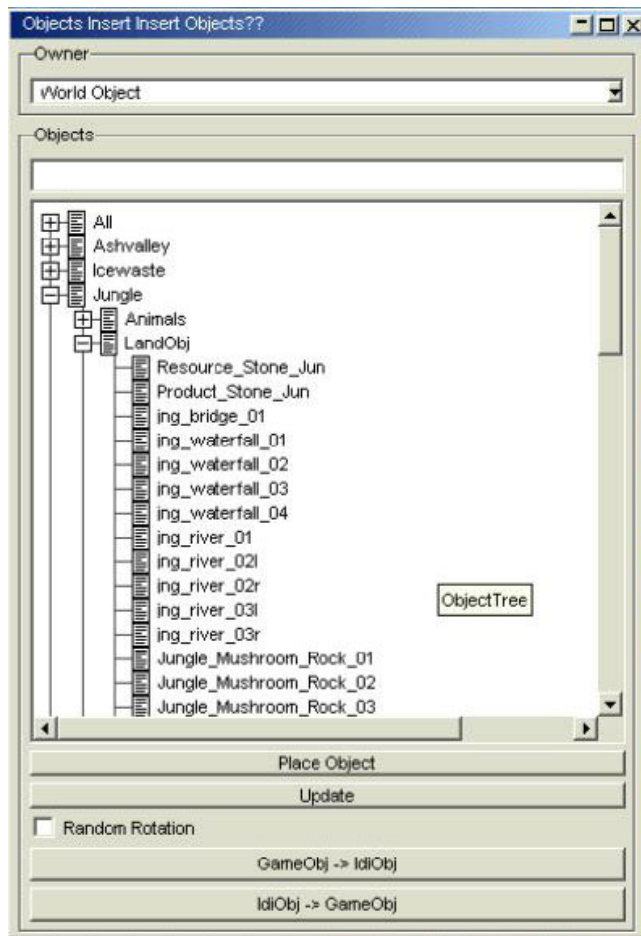


## Scape / Resize Map



We advise you to not use this function as it does not work to properly. Better to start a new map and copy the parts that you want from this map in the new map.

## Objects / Insert



A sub window will open with all available objects which can be inserted in your map. On the top of this window you see a drop down menu which will set the owner of the next object that is going to be placed. You can also change the owner of an object in its "Property" (p) menu.

To every scape setting are associated objects which are suited to their setting in colour and atmosphere. On top of that, there are number of special location objects. All other objects you should use sparingly, as with more objects from different folders, the performance of the map will go down as more texture pages need to be loaded.

Otherwise you need to remember that tribe specific objects have the tribe name in front of it and are the development names, i.e. Dustriders are called Aje. Also all the hero's have their original names, which we had to change because of copyright reason. Some of the objects do not exist anymore, as there where only used for testing purpose.

### All

Here are objects which can be used in all graphic settings.

In the folder "Animal" you will find all available animals. In ParaWorld's original maps we do not place single animals as such. We place nests from which they will spawn over and over again. These nests have a "Property" window (p) where you can set the spawn rate, which animal you want it to spawn, the max amount of animals living at the same time and the age of the nest, meaning hatching age of the first spawned animals. You can place separate animals though and allocate them to a nest by using the right side of the "Property" window (p) of a nest. Hotspots are the regions where the animal should be walking around at a certain time of day. Food Objects should not be placed in a level.

In the folder "Building" are two special decorative buildings which were only used in the single player campaign.

The folder "Character" contains all heroes. Heroes cannot be placed as a world object (owner -1), they need to have a valid player owner (0-7). The Stina in this folder should not be used as she is not sitting on her eusmilus.

The folder "Effects" contains a few things which were needed for single player maps: Question Marks are set without colour; the colour will be set later by a trigger to the correct state. The objects within the folder are particle effects and the like. The "fx\_holy\_forest" and the "Schneewehe02" could be of interest to you. How to see a particle effect was already explained earlier on.

The folder "Items" should not be set as the items itself in the map, it is better to use the generic treasure chest (Misc/ItemSpawn). Under Options/Info/Items you can choose which objects are allowed in the map and in the property window of the treasure chest itself you can choose which item the chest should have.

The folder "Misc" contains very important objects. Next to the treasure chests are the start locations. For every player you need to place a start location. In the "Info" window you can only set the amount of players for this map based on how many start locations you have placed. In this folder are also the Domination Flags & Defender Objects and also some very interesting deco objects like the campfire for instance. Most of the objects in this folder are special sequence objects and not really usable.

"Products" is a very small folder with only one object which is Stina on her eusmilus (special\_eusmilus).

The folder "Special\_Weapons" contains only weapons which the units ingame will be holding automatically.

The "Vehicle" folder contains a few special objects from the single player campaign. The flying\_trader needs a walk action to get it to fly around, just like in Level 3 & 4 of the campaign. The scorpion is the final boss out of level 16. This also contains three stations which will be automatically placed as well. Ingame you will have to destroy the three stations to kill the scorpion. The station objects alone, will only function as deco objects. If you want the scorpion to move you have to make a trigger which uses the "JumpOffWall-Action". Babage's mobile\_suit is in this folder as well. Should only be set at level 5 otherwise it won't fight. All other objects are only there for deco purpose.

## **Ashvalley**

The Ashvalley Settings is broken into the three folders "Animals", "Landscape" and "Vegetation".

The folder "Animals" contains animals as single objects which are native to this setting and are not part of the tribe specific tech tree. Again it is advised not to place animals without a nest.

In the folder "Landscape" are all objects which are not vegetation, like stone for instance. When placing a resource stone you will need to enter the quantity how much the stone should have as a resource. You do that in the "Property" (p) window. Not forgetting to click "Update" when finished so that the resource bars ingame will show the proper amount. River objects can be tricky as well. To get them to look good, first place all river objects you want in the map and then start adjusting them to fit. The "Random-Rotate-Function" should be turned

off. Good trick is to first raise them a little of the floor, fit them together and then when happy with the result, lower them back down again while having multi selected all pieces first. In this way you can then rotate and place the whole river all at once to exactly where you want it to. When you are creating a very long river, it is advised to make sure there are a few bridges (Bridge-in/Bridge-out objects) or other crossings put in like we did in single player level 7. Ashvalley has no such objects, but all other settings do. All not so good looking part of your river you can nicely conceal with stones or water squirt particles, like lava in Ashvalley. To see if your river works as wanted, you need to start the Sequence Editor (new-infinite loop) to see the particle effects. This will show you if all your river objects are flowing in the right direction. Otherwise there are lots of other decorative objects in this folder to use. Stones are always blockers by the way.

Another special group of objects are the plateaus. Those can be used to make pretty plateaus in your map and have to be especially good adjusted to the terrain. You should raise the scape around the plateau a little bit, so that it blends nicely together and don't look stuck on. The best way to use plateaus is make a straight edge, which can be fine tuned to make it look not as harsh. The grid lays a fraction over the scape, so that you can carefully raise or lower those grid points until they are a bit over the plateau, with the scape still not showing though. If not done properly, it will reflect itself in the shadow progression when going from night to day and visa versa. It is best to test the map ingame. Playing over an ingame 24 hour period. You also have lava squirt objects, smoke and the like. Once again, you will need to go into the Sequence Editor and make an infinite loop to see those particle effects in action.

The folder "Vegetation" consist of all trees, bushes, flowers etc. First are the fruit bushes which are a resource and give you food. Just like with the resource stones, you will need to adjust quantity of food each bush has available. You do this in the "Property" window (p). The trees in the beginning of the list are single trees and also a resource. Use them to soften the hard edges of a forest block. Timber objects are not for placing in a map by itself, same as the stump objects. These are generated by the game itself when a worker is felling a tree for wood. Stump object can look good though when well placed in a map as deco. Then there are Underwood und shrub objects. Some will look like they are the same, but the difference is that some have particle effects on them. They smoke a little. When placing the object with particle effects, you need to start the Sequence Editor again as described before. At the end of the list you will find the same trees again, but this time they are only deco trees, they hold no resource at all, have no collision and can't be felled. Those trees you need to use when you want to place trees on non walkable terrain.

## **Icewaist**

Most objects found here are the same as in Ashvalley.

In the folder "Landscape" you find floe-Objects (ice floes). Those are obviously placed on the water surface. When you place them they are usually not at the right height, so you will need to adjust them. Water lilies tend to do the same. Seaweed should really be placed under water so that in all camera perspectives they will not show through the water surface. That can be quiet tricky sometimes as with some LOD-stages they tend to still stick out. Just lower them a bit more until they don't do that anymore.

## **Jungle**

Here we encounter for the first time water falls. These consist out of two objects. The particle effect what makes the water fall down and the particle effect that shows the water sprays which occur when the water falls onto the waters surface. These objects are difficult to select, so best use the "ObjFinder" (explained further down). When combining these two items, you can build water falls at different heights. River-transitions object are there to

loosen up river banks and to conceal not so good looking transitions from one river plane to another.

### **Northland**

In the Northland setting you will find also a few very nice ruins of ancient buildings which can break up the map a little and create interest points. The difference between northland\_stones and northland\_underwater\_stones is that the underwater variety has no collision so that ships may swim over them. You can place them on land as well, but best only place them on non walkable terrain as otherwise it will not look good when units just walk straight through them.

### **Savannah**

In this setting you have apart from the normal plateaus, also terraced plateaus. These can be quiet tricky to fit neatly into the landscape. Best used on mountain sides. To fine tune those you can then use the sav\_rock\_terrace\_stone objects. Those will cover up any not so good looking areas. They have no collision and should only be used on non walkable terrain also.

### **Cave**

There are no objects in this setting which are not in other settings, so you can just ignore this folder.

### **Aje (aka Dustriders)**

Aje is the working name for this tribe. Here you find all buildings and units of the Dustriders. When placing any of these objects, you should not forget to set the owner of each one of them to a valid player number (-1 is the owner of world objects and not a valid player number). If you forgot to set the owner before you placed the object, you can still do it afterwards by opening the "Property" window (p) of that object and setting it there.

The Aje buildings have a characteristic feature that most of them can be upgraded. Even if you place a building as an already upgraded building into the map, it won't show until you see them ingame. You can set the upgrade stage of the building placed in the "Property" window (p) under TTFilter/Aje/Upgrades/ and then the upgrade stage of the placed building which you want it to be. Press "Apply" and your ready.

You place walls in the Level Editor just as you would ingame. With Aje you can place Clay Walls, but when you want to place a gate into the wall, you need to use the Palisade version of the gate. Ingame it will be seen as the clay wall gate. In the "Property" window (p) you can set the gate to open, shut or automatic. Together with setting the right owner of the walls, you can have the desired effect of who can go in and out of that walled up area. A gate that is placed for an AI player always has to be set to automatic as the AI will not change the state of gates.

When placing units (Characters) you can set the level of the units again in the "Property" window (p). You can also set the hit points of that unit. Sometimes you maybe want that placed units don't have their full hit points, like in single player level 1 at the end, the titan triceratops. Here are also some objects which should not really be placed in a map, like the body parts, riders, or the Amazon queen.

By (Products) really it is the same thing. Objects with a real name can placed, but objects which have appendages behind their name like \_a or troop\_carrier, should not be placed at all. Aje also have upgradeable animals. To change to the desired upgrade stage, simply do the same thing as you would for buildings.

### **Hu (aka Norsemen)**

Objects of the Hu tribe work just the same as they do with the Aje tribe. Here you can change the upgrade stages as well. In the "Misc" folder are a few decorative objects. You should

note though that the fence objects in this folder cannot be destroyed ingame. Most of the other objects in this folder cannot be placed meaningful in the map though.

### **Ninigi (aka Dragonclan)**

All object are functioning just the same here as with the other tribes.

### **Special Locations**

Here you find all the special objects which have been used in the single player campaign separated into each setting. You should use them very sparingly, because of performance reason and best only use those which belong to the setting of the map you are currently working on as otherwise the objects will not really blend in and look natural.

The Ashvalley folder is empty, as their objects really belong to the SEAS tribe.

In the Icewaist folder you will find all Valhalla-Objects. The undead\_warrior und Schliemann (Kleeman) need to be activated by trigger and will not work if only set in the map without it. The rest are more or less only decorative objects apart from the gate, where you will have to set the passable stage again (open, closed, automatic).

In the Jungle folder are few objects which also need a trigger to be functional. These are ship\_chain and PT\_Headquarters01. In the sub folder "Carrier" you will find the glider from single player level 9 and parts which can be used as decorative objects.

The Northland folder contains the entire decorative objects for the barbarians, the mammoth place and the Viking Park from the tutorial.

The most objects you will find in the Savannah folder. There are an enormous amount of objects pertaining to the holy city, the water temple from single player level 7, loads of Amazon decoration and the house belonging to Tesla (Taslow).

### **SEAS**

You not only find all the buildings and units from the SEAS here, you will also find all the decorative and gameplay objects of the SEAS from the single player level 14 – 16. In the sub folder "Buildings" you will find over 50 objects like seas\_hq\_house\_addon which can be assembled in a modular construction system. These building are indestructible and have absolute no gameplay functions at all. By temple\_ruins you will find all the decorative objects from level 10 which you may have already been looking for under the Jungle setting folder. The "WWI" folder contains an object called seas\_blocker which can be used to block certain areas off. This object will block the whole area it covers. In the "Property" window (p) of this object you can toggle the visibility on or off. If you want that area to become passable after a while, you can remove it with a trigger action. In the folder Sequence Objects you will find all the highly detailed objects for the main sequences of ParaWorld. You should not place these objects in your map for performance reason. The map will become quiet unplayable if you do. The objects in the folder Test Objects should not be placed as well.

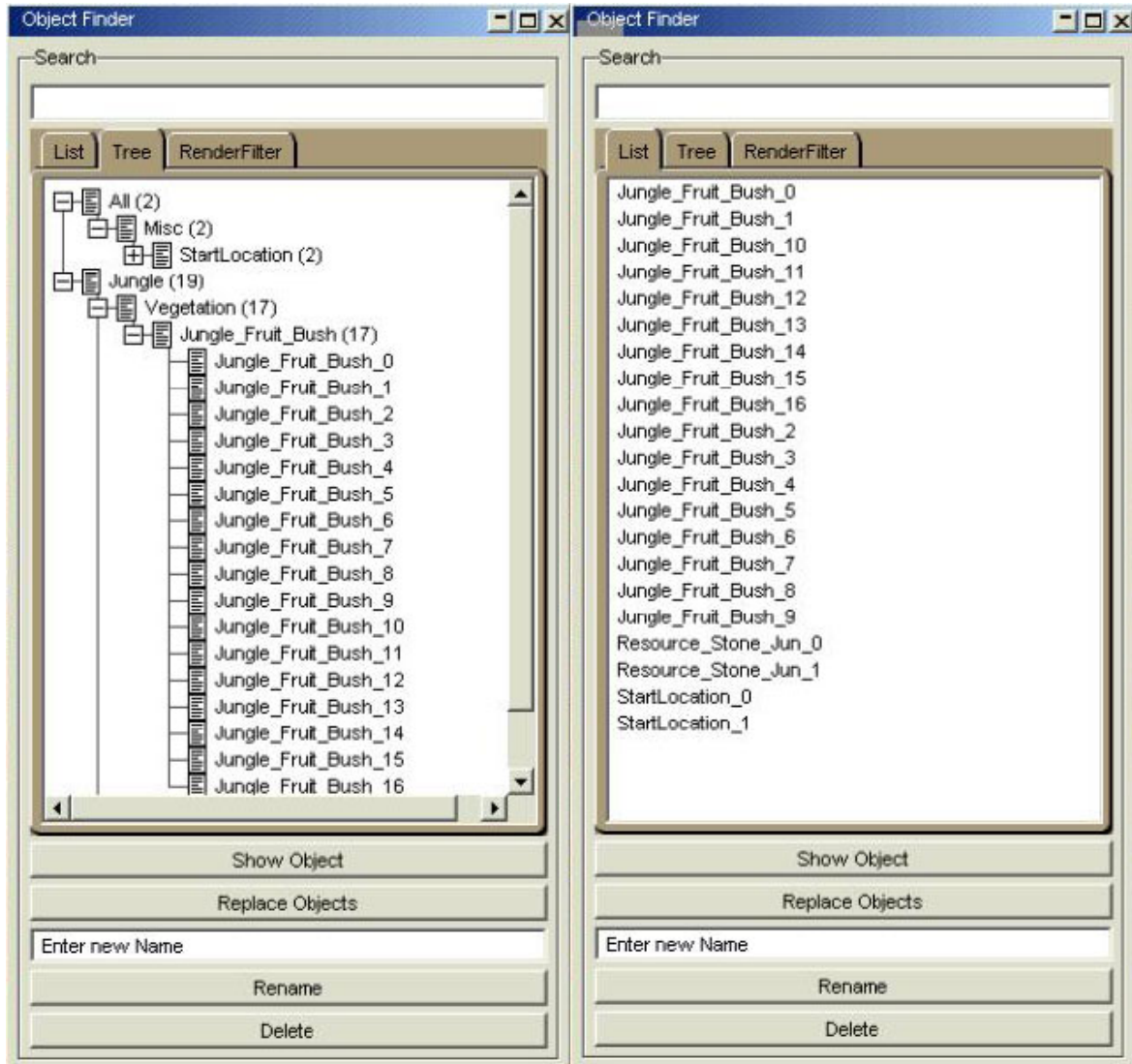
### **More Control Elements from the Objects/Insert Window**

With "Place Object" you will get the chosen object, which is marked blue, as a ghost on your mouse pointer. "Update" is a not used function and can cause crashes. It is best not to try that one out. "Random Rotate" will give on object a random rotation when placed in your map and will make the map look more natural and also saves time as you do not have to rotate each object by yourself. "GameObj->IdiObj" converts a gameplay object to a decorative object. All objects which you have placed in your map which are only there for decorative purpose and have no particle effect or collision, should be transformed, if not already, to a decorative object. This will raise the performance level of your map. IdiObj cannot be selected or moved and will not be listed in the "Object Finder" window. They don't count towards the 1500 objects limit neither. So that is a good thing. Use this function at the end of



creating a map, when you are sure what is supposed to be a gameplay object or a decorative object. If you have forgotten to convert one object, then before you are adding the new object, you will have to transform back all the IdiObj first to gameplay object, then add the forgotten object and transform again all to IdiObj. If you do not do that, all other IdiObj will be lost. You will be reminded of that by a pop window though.

## Objects / Finder



With this window you will be able to find single objects placed in your map. Like said before, IdiObj will not be listed here. Under the tab "List" you will find all objects which your map contains unsorted. Under the tab "Tree" the objects have been sorted into folders like you find in the "Object / Insert" window. With a double click of an object in the list, the camera will jump to its location in the map. The button "Show Object" does the same with all objects which are marked blue.

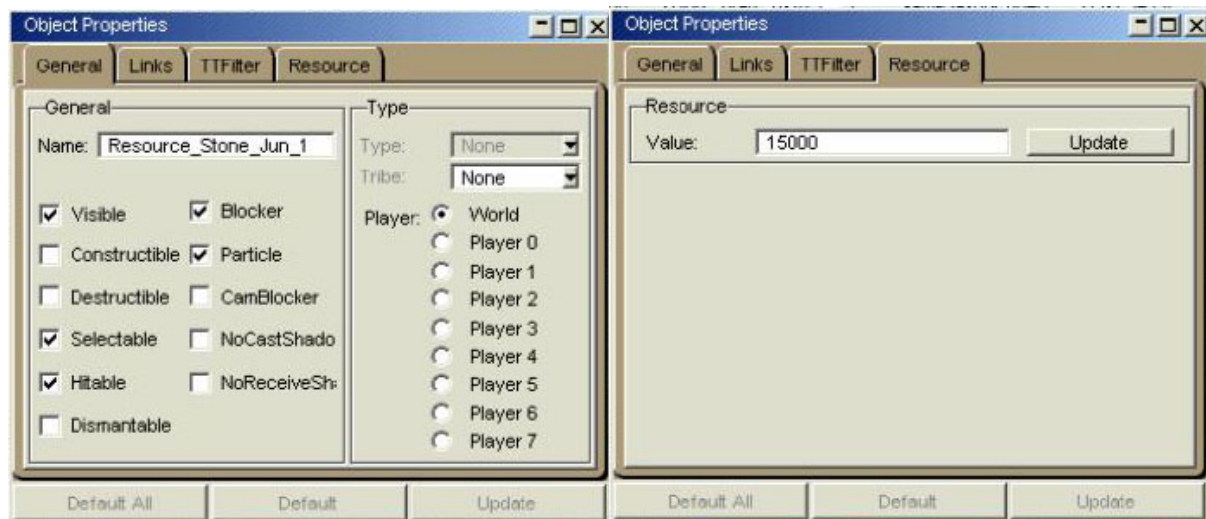
The last tab "Render Filter" shows a list of marked class objects which are shown in the Level Editor. With Ctrl+LeftMouseButtonClick you can take a class out of this marking and all the objects belonging to this class will become invisible in the map. You can toggle this visibility with (Alt+s).

With the “Replace-Object-Function” you can replace one object for another in the same location.

“Rename” changes the name of an object, but is best left alone because many of the gameplay function are working only with the correct object name.

“Delete” will of course delete the object from your map.

## Objects / Properties



This is one the most practical of all windows. Here you can change all the attributes and properties of a selected object. There are a few general and some more specific properties which one can set for a selected object, like all the nest settings, or gate settings for instance.

Under the tab “General” you will find the name of the object and a few general properties like visibility, selectable etc. The default settings are usually just what you want from the object, so no often would you need to change something here. Important is of course the owner selection, to be found on the right side. Start locations should all have different owners and placed buildings belonging to that start location should have the same owner as that of the start location of course.

In the second tab “Link” you find the functions to link objects to one another. You really don’t need that at all and can safely ignore this tab.

The tab “TTFilter” has the option to upgrades objects. With objects that do not have the possibility to upgrade, you can ignore this tab.

The tabs “Nest” & “Resource” have already been explained earlier.

## Objects / Transform

Here you can change in value what you also can do with the shortcut (t) and a selected object with a mouse. You can determine the exact position and a rotation of the selected object.

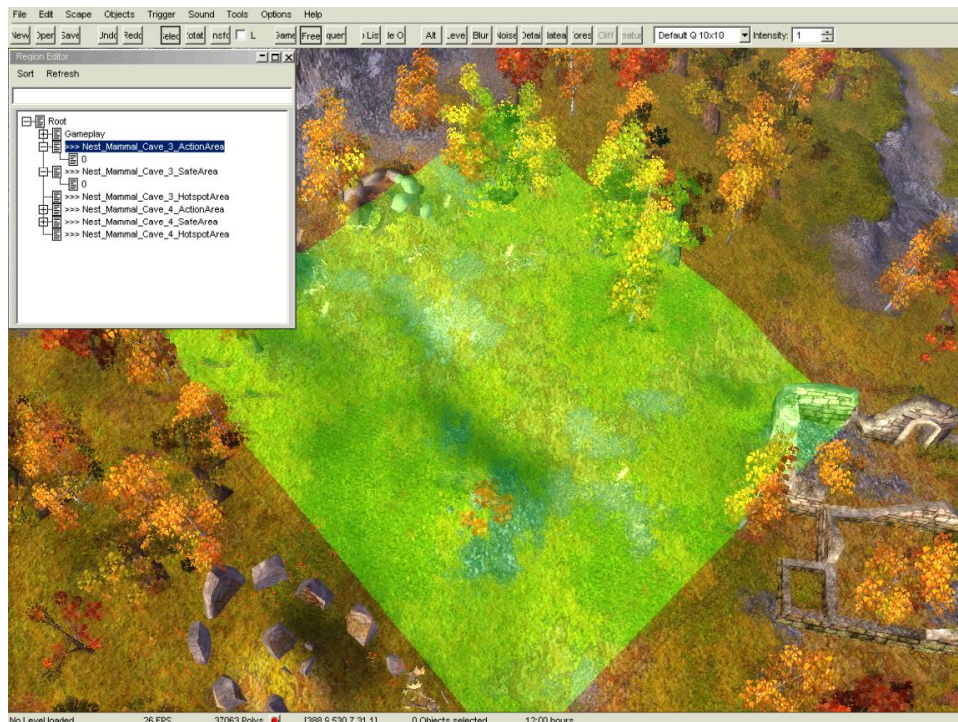
## Objects / Show invisible Objects

With this function you can make objects visible which are in the „Property“ window set to invisible. These are for instance underwater nest from water animals. Invisible objects can't be directly selected. Only by double clicking in the “Object Finder” window can they be selected which will come in handy when adjusting the properties of an underwater nest. Particle effects will not become visible with this function. For these you will always need the Sequence Editor

## Trigger

Temporarily not supported.

## Regions



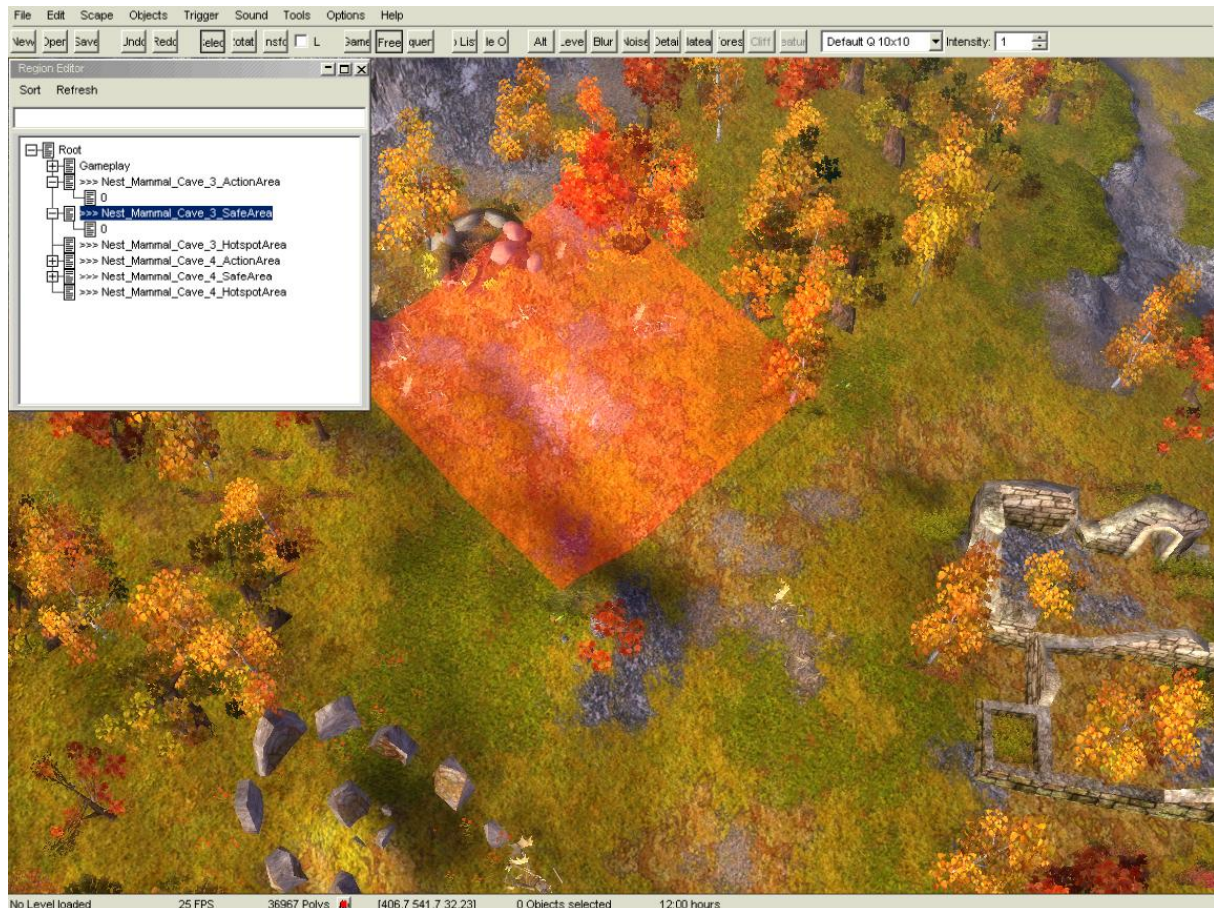
Regions are created to be used by triggers. The Dominations-Flags have regions also, just as nests have. Those you can't use in triggers because of performance reasons.

When you are opening the “Regions” window you will find a tree view under the folder “Root” of all existing regions. Right click on “Root” will open up a “Context” window with which you can create new regions which can be elliptic or square in shape. You can also change the name of existing regions or delete them. Once you have a new region, you can add sub regions to it. These will be square or round in shape. In this way you can cover any area you would like to have.

A new Region is always centred in the middle. To move a region, move your mouse cursor to the arrow along the axes until they light up yellow. With held down left mouse button you can now move the region to your desired location. To change the size of a region hold down the Ctrl key while moving the mouse with the left mouse button it held down.

With every placed Domination-Flag a round region is placed automatically surrounding it. If you move the flag after you have placed it, you will have to manually move the region as well. If you delete the flag, the region will be deleted automatically with it.

Nests work in the same way, only that you have 2 regions plus a potential region as well. The Action-Area from a nest is the allowed area where animals can walk about. This region should be large enough so that the animal can flee from an attack from a long range weapon. Otherwise they would just stand there and be killed with nowhere to go and hide. All parts of this Action-Area have to join up together, as otherwise the animals will not behave how they are supposed to.



Now all you have to make sure of within the Action-Area, is that all other regions from this nest are completely included as well, that means the Save-Area and the Hotspot-Areas. The nest of course must lie within that area as well. If another nest is added to this area, the animals will think of themselves as one large herd and behave accordingly. Meaning they will not attack one another if you placed a friendly with an aggressive animal nest in the same area. Hotspot-Areas are areas where you can tell the animals to be at a predefined time of day for a certain amount of time. You only need to create a Hotspot-Area and then in the “Property” window (p) put in the time and place that the animals are supposed to be. “Sort” will sort all the regions which you have placed, but not the nest regions. “Refresh” will refresh the list of regions; normally you do not need to do this though.

## Sound

### Atmo Material Settings

Temporarily not supported.

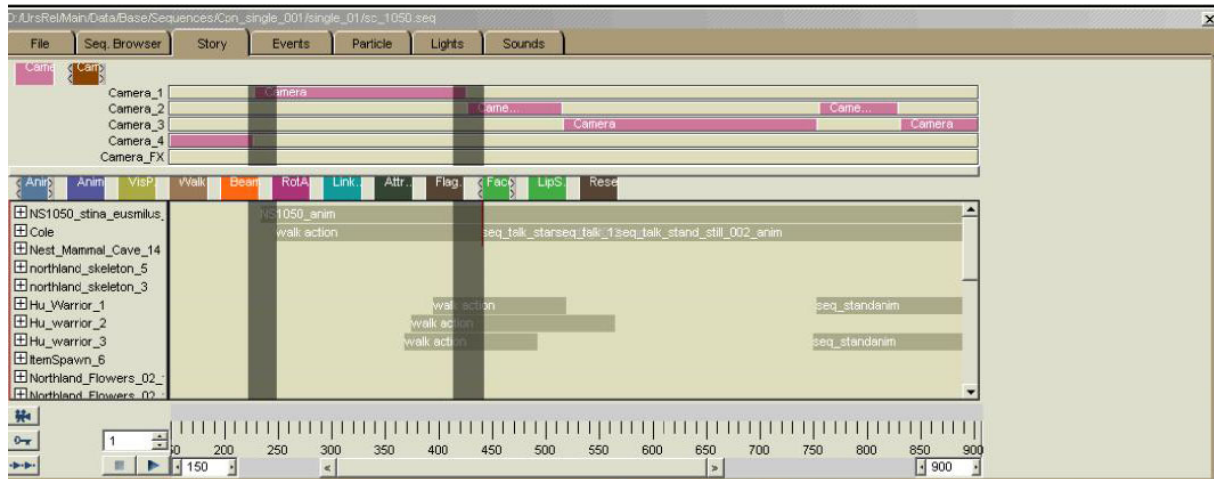
## EAX Environments

Temporarily not supported.

## Show Audio-Listener

Temporarily not supported.

## Tools / Sequence Editor



The Sequence Editor is a very complex tool and all sequences in ParaWorld, from ingame-camera moves to the rendered level transitions, have been created with it.

## Tools / Control Panel

This small tool belongs to the Sequence Editor.

## Tools / Dialog scene editor

To create new dialog scenes, you will have to first create the corresponding text file containing all spoken sentences including the speaker of them. After that you can create the new dialog scene. Set the speakers (actors) and then define the itemized frames (text contributions) to the associated actor and sound files.

## Tools / Level Check

This is a very useful tool that you should use when finished with your map. Make sure you saved the map and then open up the menu point "Checker". Click the button and in the edit field you will see all warnings and errors your map contains. These warnings and errors could be stuff like objects which are accidentally under or outside of the map, or an object of which is only too little showing of them or single resource trees which is top of non walkable terrain etc. With a double click you can select the offending objects and with (t) you will get to see all their axes with which you can move the objects until their do not cause warnings or errors anymore. Alternatively you can just delete them as well of course.

## **Tools / Level Pic**

This tool will create a mini map picture of your map and saves it in the same directory as your map.

## **Tools / Dump Trigger Info**

With this tool you can print all the trigger info of your map into a text file.

## **Options / Info**

In this window you will set the base properties and attributes of your map.

## **General Level Info**

Here you will name your map and write a description for it. The level description should not be longer than 300 characters. The reason why our names look a bit strange, is because we are using a localisation key, so that the names of our maps and the description can be translated into all the languages where ParaWorld will be sold. You can just write plain text in there of course.

Recommended players are the amount of players that can play your map. Author is of course your name. Version is basically how often you have changed your map after you finished and played it for the first time.

## **Game Settings**

Here the basic settings of your map are defined. "Max Players" can be set here. If it doesn't let you set the max players to what you want, check if you got enough start locations in your level and that they all have a different player number, i.e. owner. You can have up to 8 players. You also have to define the map as single or multiplayer map. If you choose multiplayer map, you need to also set in which mode the map can be played. You can choose between "Death Match", "Defender" and "Domination". Make sure you have the proper objects in defender and domination mode in your map, as otherwise these modes will not function properly.

For defender mode you need the defender objects plus you need to set the time for the defender and for domination mode you need at least domination flag. The domination flag is invisible when playing the map in death match mode. The setting "Tutorial Level" is most probably not interesting for you and "Black Start" is used only in single player level to stop the map showing before the time is right, used when the level starts with a sequence.

"Start Time" sets the day/night time the map has when you start the game. "Default Camera Position" sets the view you have when starting the map by rotating the map. The "AI Options" define certain aspects of the map for the AI player. If you intend to test or play your map with AI players, it is really important that you set these attribute. When "Walls" is turned off, the AI will not build any walls not matter the behaviour she runs on. With "Marketplace Outpost" off she will not build one no matter what behaviour. You need to deactivate "Harbour" if have build a map that has no place to build a harbour. If you made a very small map with no place to build the village and a "Warpgate", you need to deactivate this as well. "Hunt Animals" should be activated when you have creeps on your map and "Watermap" you have to activate when the AI can reach all other player bases over water as well as over land. If this is checked, make sure "Harbour" is checked also!

## **Weather Settings**

Here you can set the weather conditions of your map.

## **Items**

This menu sets how many and which items can be placed in your map. Only items selected here can spawn from a treasure chest (item\_spawn\_objects) later ingame. You move an item to the allowed list by selecting the item and using the arrow button.

## **Options / Quest-Editor**

In the Quest Editor you can create Quests which then you can activate via the corresponding triggers.

For each Quest you can define if it is a main or side quest. This is only for the quest log, so players know what they are currently doing and know if they can decide not to do the quest at all or not. That needs to be manually scripted with triggers. You can also write the name, group name and description of the quests here. The field "Information" is only for yourself to make some notes and "Bonus Points" is the setting for how many points a player gets when finishing the quest successfully.

## **Options / Preferences**

### **General**

"UI Skins" is not implemented, so you can't choose anything there. "Autosave" will save the map and a predefined interval. "Tooltips" should be checked on because you will most definitely need them with our Level Editor. By "Misc" you can toggle certain tool bars on or off. "Snap back" means that with a double click your camera view will be the same as it would be ingame. "Rotate free camera around selection" rotates the camera around a selected object.

### **Graphics**

"Full Colour Clear" means screen is painted new. "Render Water" (W) toggles the water on or off. "Render Clouds" does the same for clouds as does "Render Grass" for grass. You can also toggle the flat shades of units and animals on or off with "Render Flat Shades". The "Grid" (G) you can switch from none, Mat (texture grid), Height or Block (32m). Below that, you can change the colour of the grid. Values between 0 – 255 are possible (RGB). "Show passable Areas" (b) and "Show non passable areas" (v) do really the same thing. They make a green spot for passable and a red spot for not passable. Blockable objects are not incorporated in this view, only textures and incline of the scape. "Show Wallmap" (Shift+w) shows the wall grid. To make a good map you have to make sure that the player will be able to build walls that are flush with surrounding mountains and other blockable objects. "Show Object Name" (shift+o) shows the names of all objects which have a tech tree.

### **Sound**

Temporary not supported.

### **Keys**

Shows an overview of all shortcuts and allows you to change them as well.

## Options / Quickstart

Causes a crash, do not use!

## Options / FX-Settings

Unused setting

## Options / TT-Editor

Opens the Tech Tree Editor. This is a very complex tool and will change the value of all gameplay objects not only for your map, but for the entire game. Before you change anything in this Editor make a safe copy of the techtree.txt as otherwise it could be that you have difficulty joining a LAN or Internet multiplayer game. To be used with extreme caution.

## Options / Level Settings

This window defines the setting of your map. You have 7 to choose from: Northland, Savannah, Jungle, Icewaste, Holy City (Cave 1) and SEAS-Ashvalley (Cave 2). The other two settings will cause crashes. So no need to use them.

## Options / Player Info

Here you define the players, give them names and other attributes. On the left is the "Player-ID" which is the owner. Starting by 0 and going up to 7. Next to that is the name (not important if you are creating a multi player map). Do not use our localization keys, as you are not able to write in our localization files. Just use plain text. If there are not enough players shown, check if you have got enough start locations with different owners in your map and if in the info / game setting shows the right amount of player also. When you copy a map, you need to set all the setting and attribute new, as those are not copied to the new map.

"Startpoints" can be left empty. In multiplayer maps you have the point buy menu where you can set the start points, and in a single player level are the start points set by the level before hand. "Team" is next. Here you can define if certain players have to play as a team, meaning you can set certain start locations/owners to friendly. "Player" can be set to human or AI and is also just important for a single player map. All Ai's start as a microbe, which is shown as passive and have to have straight away a triggered behaviour change. "Colour" is also only used in single player levels, as in multiplayer maps every one can choose their own colour. Behind that you see "Diplomacy". Left click with the mouse button will switch through all the options. H=hostile, N=neutral, F=friendly. The button „Limits“ opens a new window.

There you can choose for each playerslot which tribes can be played. By "Chars" you can block certain units or change the maximum allowed units. You can't choose more then 52 units, that is the max. "Resources" allows you to give a player some start resources and should only be used in single player levels for the AI players. "Tech Tree Filters" allows you to manipulate the tech tree and either activates certain upgrades by clicking on the upgrade until you see a check mark next to the item, or to disallow certain parts of the tech tree by double clicking it until the check mark is gone. Be careful by disallowing parts of the tech tree, as it sometimes blocks more than you wanted it to and when doing so for an AI player, it can totally stop the Ai from doing anything at all.

With "Point Buy" you can define for a single player level, which units can be bought in the ingame point buy menu (Army Builder) and which units are already placed in the map. Top left you choose the tribe. On the right in the overview you left mouse click the units which you want to be able to be bought in the point buy menu. When they change colour they are

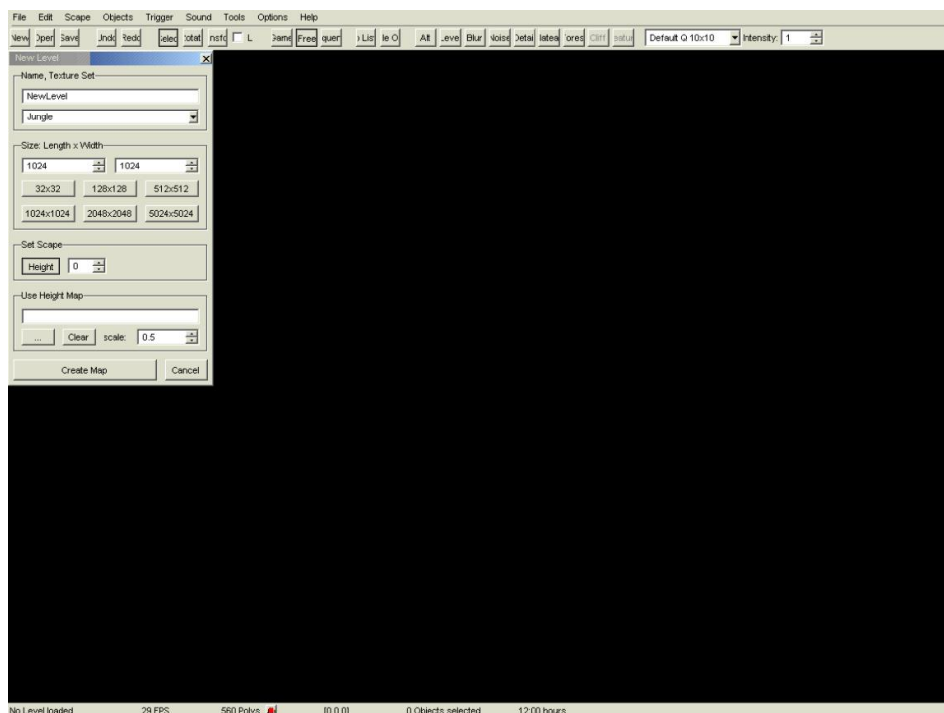


selected (Ctrl held down!). Units you want to be placed straight away in your single player level on start up, you create when you right click a slot in the Army Controller. A drop down field will appear with all units which you can place in that slot. Now you can also adjust the amount of resources there which can be found at the bottom of that window.

By button “SL” you have to select for each player a start location number/owner. All players must have a different start location/owner number. “EASY”, “MED” and “HARD” is also only for single player levels and is the difficulty setting for the AI players. 0 being the easiest and 9 being the hardest. „Show Stats“ toggled on means that for this player the statistics will be shown at the end of the game in the statistics screen. “Incl. Bldg” means that this player will start with a fireplace. If you are making a commando or arena level where there is no eco, you will not need the building.

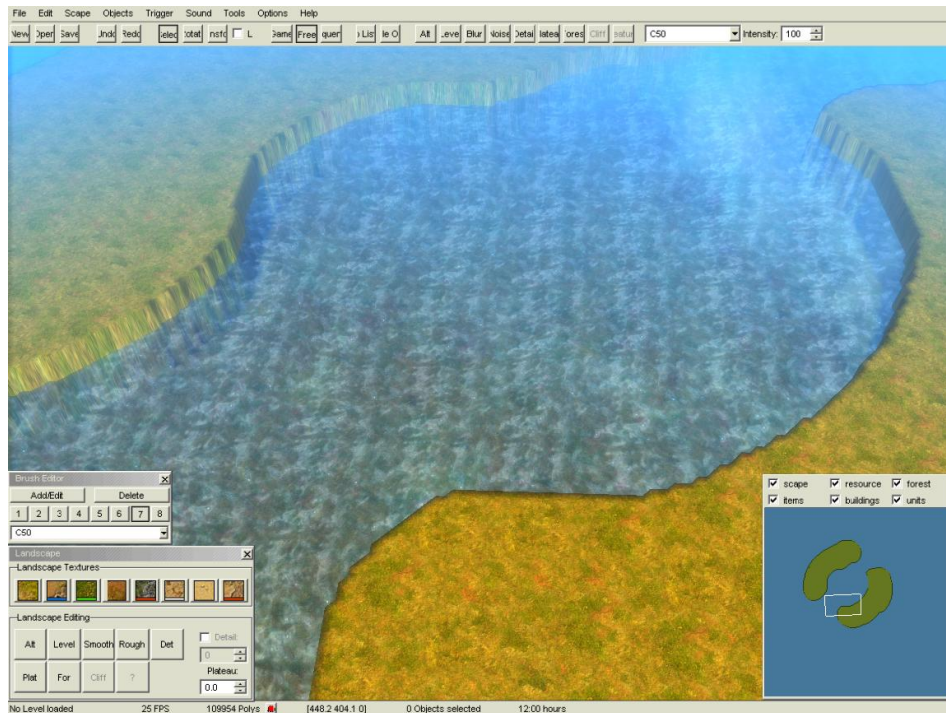
## Walktrought

### 2 Player Multiplayer Map

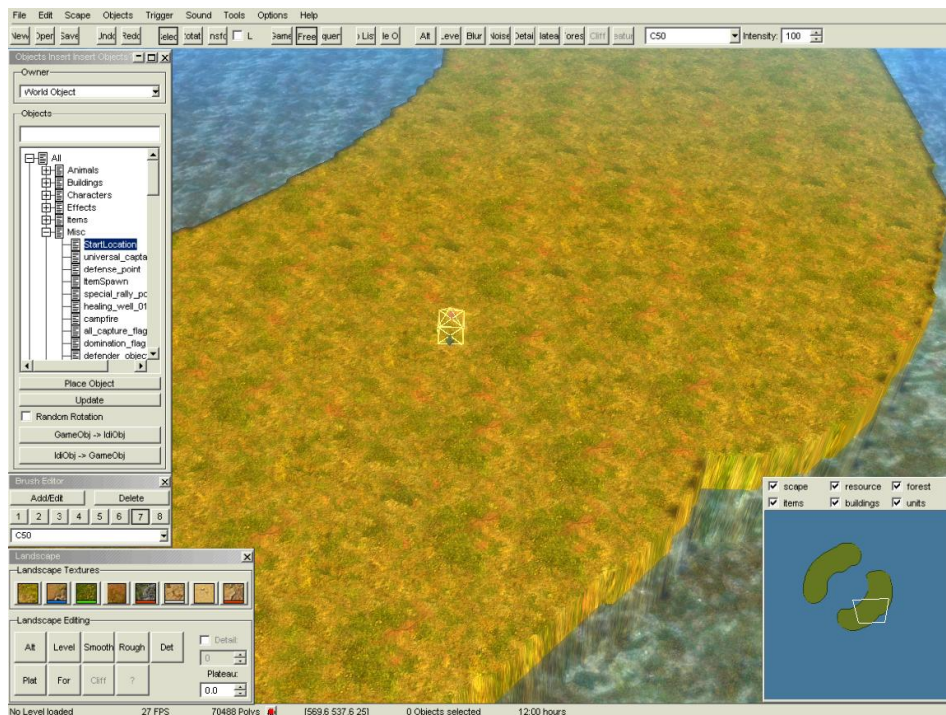


When you want to create a new map, think about the size of the map first and if the map should have more water or more land. By water map the height should be 0 and by land map the height should be between 20 – 32m. Then you choose the setting. For this example we are taking the jungle setting.

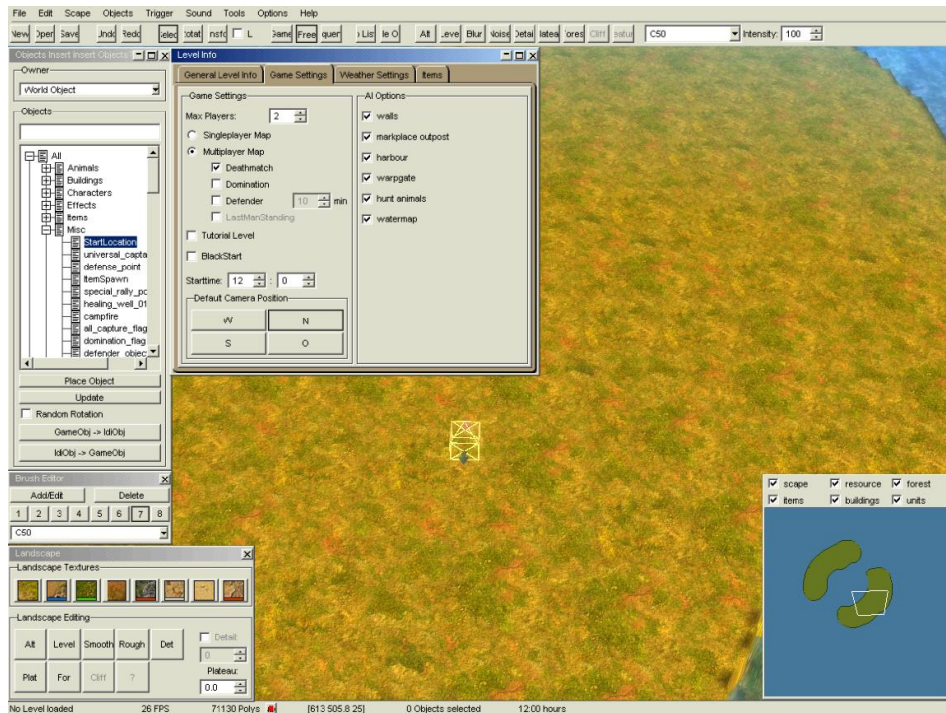
This still empty map has been created with lots of water.



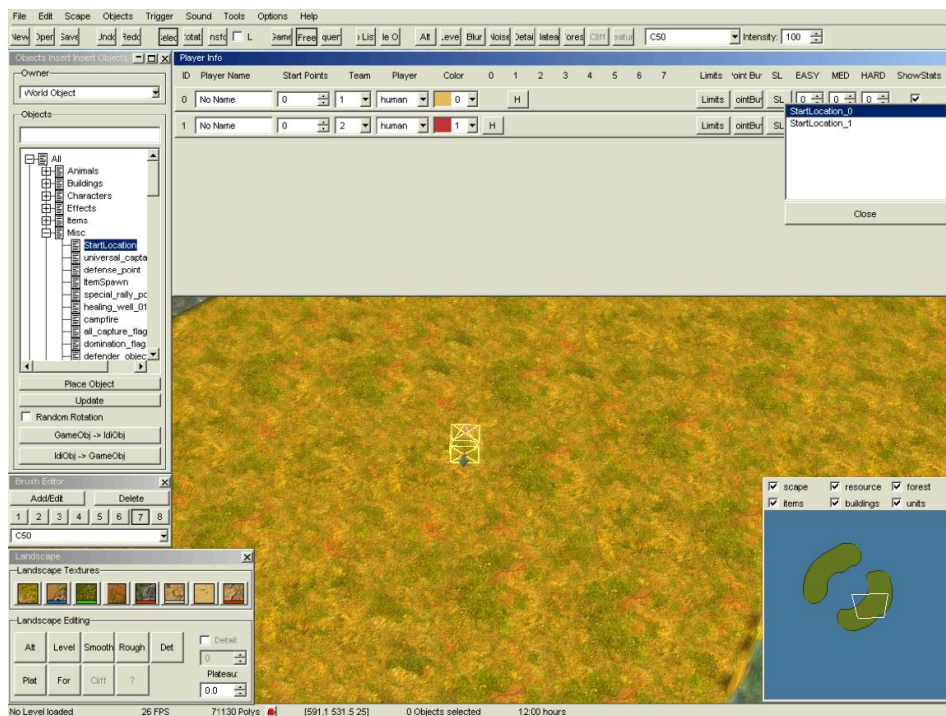
With a large brush you form the land scape.



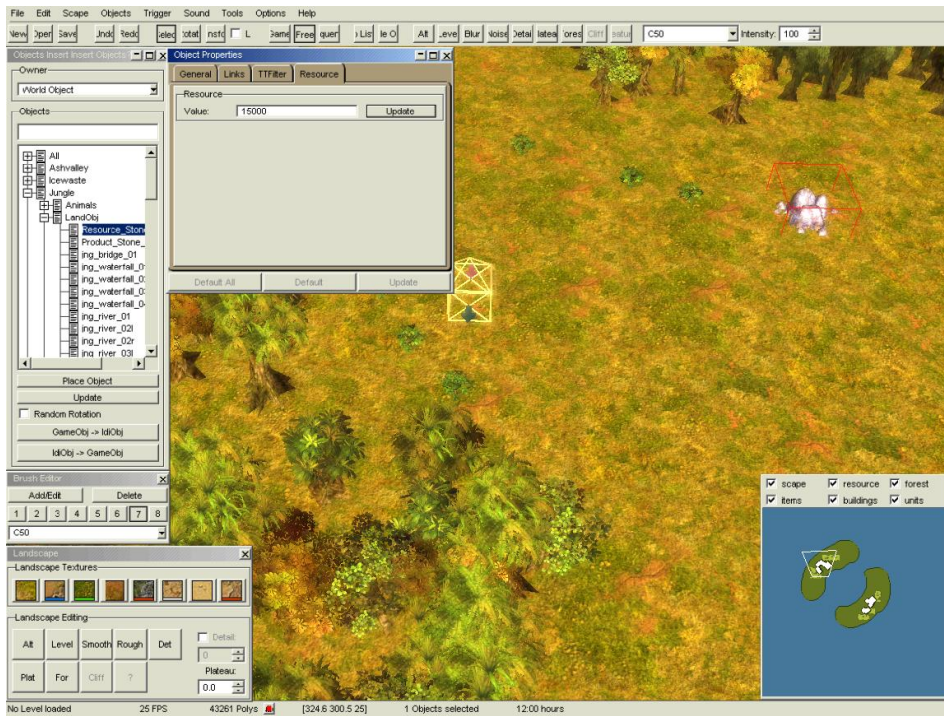
The one most important factor of a proper functioning map are the start locations of the players.



After that you set in the Options/LevelInfo window the game modes and the maximum allowed players.



Here we can now add the players and can make all the other settings as well for this window.



To test the level you need to put the resources in as well. A few trees, fruit bushes and stones are enough for testing purpose.



Save the map under Maps/Multiplayer so that when you start the game it will be shown in the map list.



Now that we are ingame we can test if there is enough building space for the whole village and if there are enough resources.



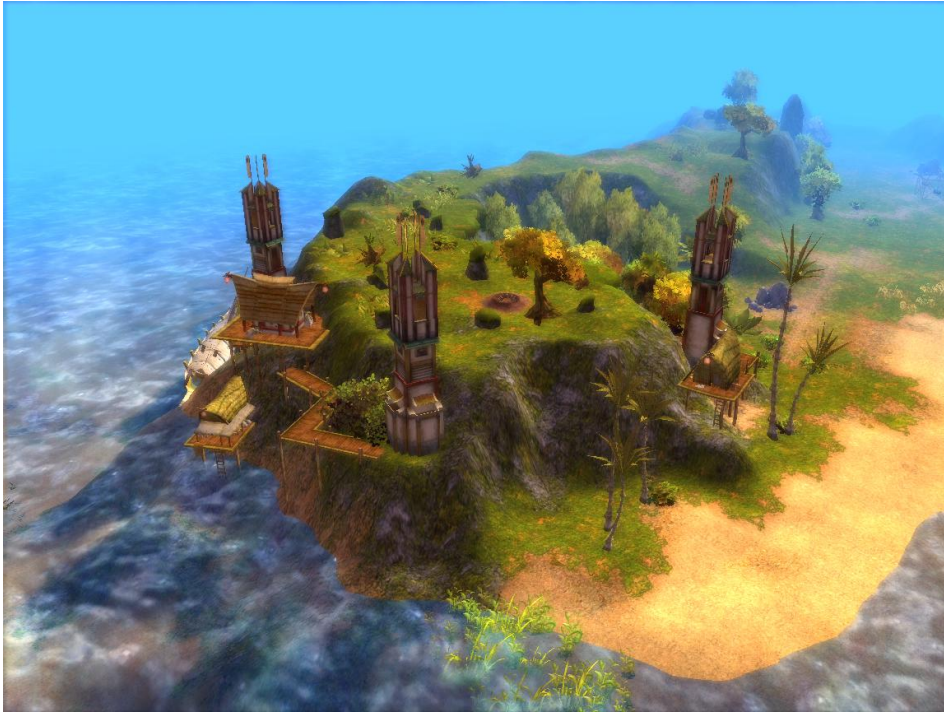
If the first test was successful, we go back to loading the map in the Level Editor and start to make the landscape more detailed like with a Plateau Brush for instance.



Then you should put in a few nests with their regions.



With textures and vegetation you make the map look more natural.



At the very end you then place all the decorative objects and the map is finished.



Finished map.

## Key assignment

- \* 0-9: calls self defined brushes
- \* shift+Number: sets the brush into the respective number
- \* q: copy selected object. Functions only with single selected object and is shown on mouse
- \* w: toggles water on/off
- \* r: switches the selected object into the rotate mode. Move mouse over wanted axes until highlighted yellow, hold left mouse button and move mouse to rotate.
- \* t: switches the selected object into transform mode. Move mouse over wanted axes until highlighted yellow, hold left mouse button and move mouse to rotate.
- \* i: opens/shuts Object Insert window
- \* p: opens/shuts Object Property window
- \* f: opens/shuts the Object Finder window
- \* m: opens/shuts the mini map
- \* g: switches through most of the available grids: Texture grid->Height grid->Block grid->No grid
- \* v: opens/shuts the not passable grid. If both are switched one you will see nothing.
- \* b: opens/shuts the passable grid. If both are switched one you will see nothing.
- \* ,+ :puts the time one hour forwards or back. In this way you can see your map at all times of the day and see where your map still needs some work to do.
- \* Space: toggles to the selection function.
- \* Alt+Number: activate the corresponding texture
- \* Alt+a: activates altitude mode
- \* Alt+b: activates smoothing mode (blur)
- \* Alt+n: activates rough mode (noise)
- \* Alt+p: activate plateau mode
- \* Alt+f: activates forest mode
- \* Alt+s: toggles visibility of all object on/off
- \* Ctrl+s: saves the map
- \* Ctrl+Shift+s: saves under chosen path
- \* Ctrl+o: opens map



\*Ctrl+n: creates new level

\* Del: deletes the selected object

\* Shift+w: toggles wall grid on/off

\* Shift+o: shows object names off all objects with a tech tree

\* Shift+f: toggles visibility of forests block on/off

\* Backspace: toggles the interface on/off

\* Entf: deletes all selected objects