Wizardry 8 Builder's Guide v1.1

by Kaucukovnik VI.

This should help you make your landscape or architecture work in Wizardry 8. I'm only covering very basic functionality in Cosmic Forge, there are wizards who know much better... When we are at it, thanks to mad god, townltu and Qusari for heaps of advice.

Besides CF I'm describing specific tasks with other programs. All the software mentioned is free to download and use.

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Cosmic Forge has very limited mesh editing and texturing capabilities. Thanks to its importing options, this is not really an issue. There are enough tutorials for using Blender, but let's have look at its interaction with Cosmic Forge.

There is also the option to model in Google SketchUp and use Blender as converter. A tutorial for GSU->Blender can be found here.

Exporting fom Cosmic Forge to Blender 2.6

* in Cosmic Forge
Open the location you want to export and use the terrain export function in the Tools menu. Create an extra directory for each exported .obj, because all texture files will be saved alongside the .obj and .mtl files.

* in Blender
File - Import - Wavefront .Obj
-Set Y Forward and Z Up, import

Texture coordinates get vertically flipped during import, you will need to manually correct that.
Textures are there, but invisible by default. Just enable Color influence in texture properties.

Exporting from Blender 2.6 to Cosmic Forge

* in Blender
The key to comfortable interacton of these two programs is exporting your complex geometry in pieces. If you export your whole 10-level dungeon in one piece, enjoy the hell of defining textures, collisions and dynamics almost polygon by polygon. On the other hand, clever separation can make finalizing textures and creation of dynamic objects and physical walls a breeze.

You can also go back and forth, add/remodel stuff in Blender, then export the changes alone and integrate them in CF.

It is a good practice not to have many overlapping polygons and/or transparent textures together, as Wiz8 has some difficulties drawing them. This doesn't matter much in small, simple areas, but becomes more of an issue with complex ones or with tiny details.
Even if it takes using much more polygons, it is often safer to connect and properly weld objects and not let them just dive into each other.

The left example is not really such a horrible thing to do, but you know what to change when objects clip and overlap.

Cosmic Forge sometimes subdivides big polygons as the engine seems to like smaller ones more (probably lighting reasons). So don't bother too much about optimizing your geometry in this regard.

You should prepare simplified collision meshes for exceptionally detailed geometry. And you can create planar walkmeshes for stairs if you want movement on them to be smooth and not "jumpy".
Remove any geometry that won't be visible or have any other function, as it would only eat up performance. Delete inaccessible tops and bottoms of objects and parts hidden inside other objects.

Before exporting you need to triangulate your geometry, for Wizardry 8 cannot handle anything beyond triangles. To do that, select your mesh, go to edit mode, select all and press Ctrl+T. Avoid the triangulation offered by Obj exporter, it tends to mess up texture UV mapping.

Ready to export. Select all meshes for your first batch of geometry and go to File - Export - Wavefront .Obj and use settings as shown on the picture here ->

You can also set Scale here. If you have exported terrain from CF and now you are importing it back, the proper scale is 500. Starting from scratch and using the basic Blender cube as corridor width resulted in scale of 1300.
You can also set the scale during import to CF. Don't forget to enter the same scale for all meshes you export from a single scene.

If you enable "Write Materials", CF will import them, but I have encountered crashes when using such exported materials (some too advanced property seems to sneak in), so I suggest creating them anew directly in CF. It also feels somewhat "cleaner" and doesn't take that much more work. You can also export the materials, use them in CF only for easier mesh selection and replace them with CF-made ones.
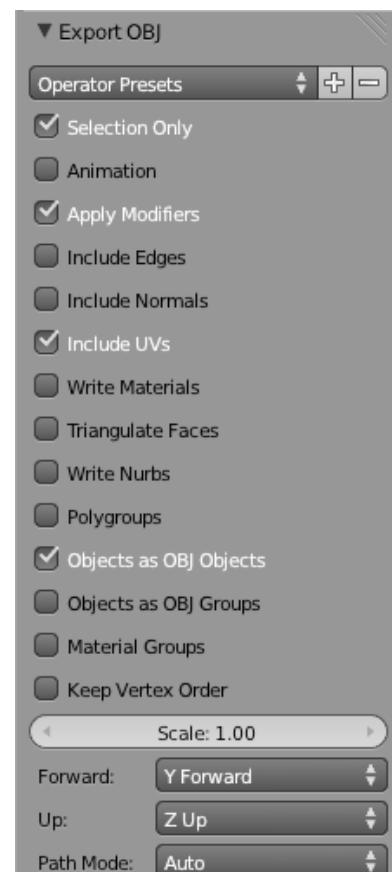
Open the location you want to import your creations into.
Select Terrain tab.
Click the green "+" button under the mesh list and select
"From .Obj Wavefront"

If you are ever asked to edit physical walls along with
terrain, refuse!

Select all faces and press the "V-Mirror" button to flip
texture coordinates. This is really noticeable only with
irregular textures.

Some polygons may be facing the wrong direction,
transparent from the side supposed to be visible. Select
those and click "Reverse".
Static meshes cannot have 2-sided textures - if you want
those, just duplicate the desired polygons ("Create from
Selected Faces" - "New Terrain Mesh") and reverse the
duplicates.

Sometimes you can get what I call "funky polygon rays":
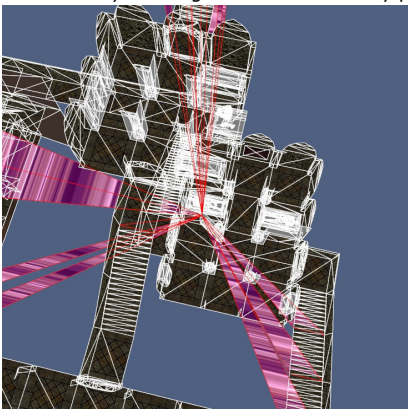
If you want to solve this the clean way, split the mesh and import
it by smaller pieces. You can as well just delete the buggers.
Didn't notice any impact after doing so.
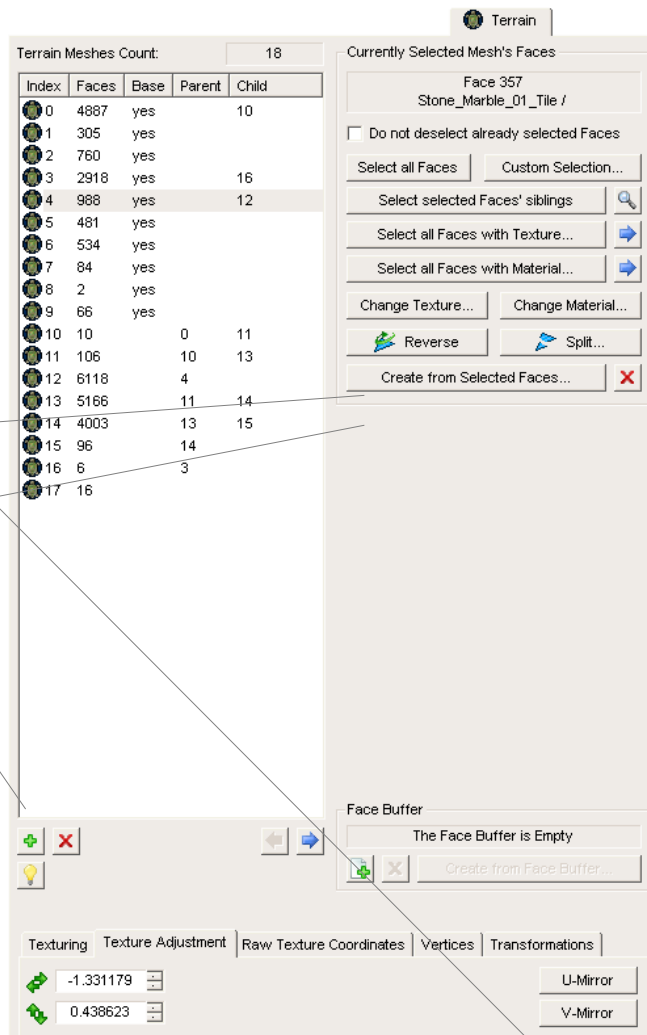
Textures and materials

For textures with transparency, just use the .tga files that come out of your graphics editing program, those will be 32-
bit TGAs. On the other hand, textures without transparency are not supposed to have the transparency alpha channel
at all - those are known as 24-bit TGA.
My 2D weapon of choice is GIMP. To 'fix' the alpha channel using
GIMP, open your finished texture and go to Layer - Transparency -
Remove alpha channel. Export the tga and overwrite the old one.

Textures must be square, and the size has to be a power of two
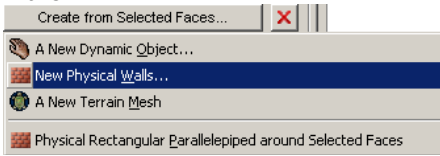(32x32, 128x128, 256x256 etc.) Over 512x512 not recommended.
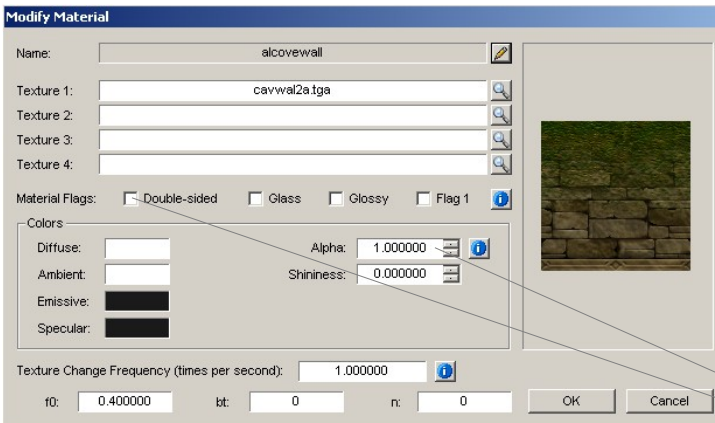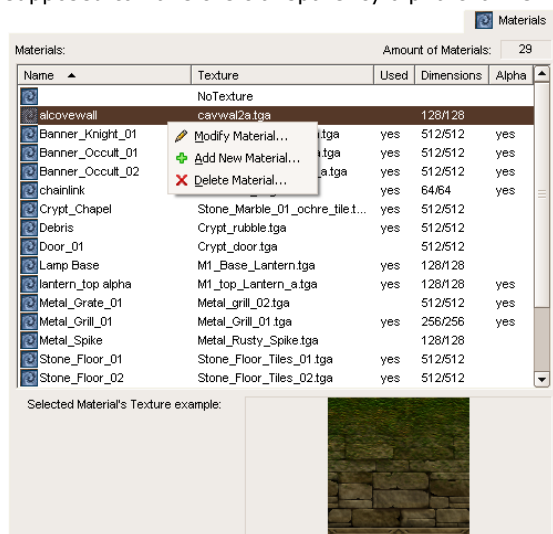
Alpha 0.0 = 100% transparent, 1.0 = 100% opaque
Double-sided - doesn't work for terrain

Assign materials back in the Terrain tab by selecting all the desired polygons and using first the "Change material" button, followed by
"Change texture".

Physical walls

Still in the Terrain tab, select a group of polygons that are going to have common physical properties (slope, walkability, footsteps sound and its environmental effect) and click the "Create from Selected Faces" - "New Physical Walls."

Modify Location's Physical Face(s)

Face(s): Multiple Faces (amount is 305)

Slope
1.0 - level surface (floor)
0.0 - vertical surface (wall)
-1.0 - level surface (ceiling)
☐ Calculate Automatically
0.000000

Footsteps Sound
Substance Type: Creaky Wood
Environment: Medium Room

☐ Walkable (floor-like)

When 'Walkable' flag is set it is recommended to set 'Pathfinding Database' flag if it is possible for Monsters to walk over the Face(s)

☐ Generate Pathfinding Database over the Face(s)

Other Parameters (unknown)
☐ Flag6   ff1: 500.000000   sh2:   0
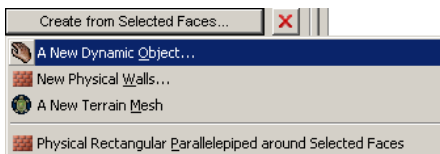   ff2:   0.000000   n1:   0

OK   Cancel

Pretty straightforward step.

Now you can also utilize simplified collision meshes I suggested earlier.

In the case you need to alter existing physical walls, do not use the function to move them togther with terrain. Instead, delete the obsolete physical walls and create new ones.
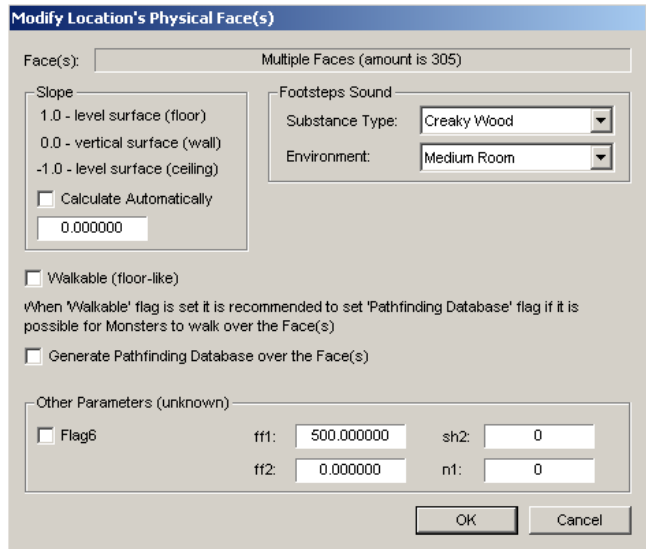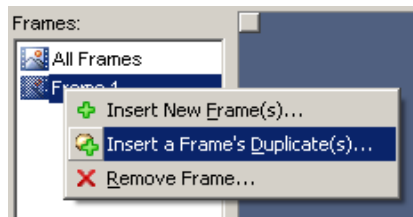
Animating objects

The usual way to create dynamic objects is out of terrain meshes. Select the polygons you want to become your new dynamic object. Click "Create from Selected Faces" - "A New Dynamic Object."

Object properties will pop up. In the "Dynamic Object" tab, for now just give the object a name.

Switch to the "3D Object" tab. Right click Frame 1 and create frame's duplicate. First you will be asked which frame to duplicate (since the frame you clicked determines *where* to insert, not which frame). There is not really a choice right now. Next comes how many duplicate frames you want. One will do. Click OK to close object properties.

Move the object or move/delete the source terrain mesh, since they overlap right now.
Then make sure you have the dynamic object selected and look at the bottom left. You will see the following:

Show and apply Positioning, Rotation and Scaling to the following Frame(s) only: All (2)   2
☑ Also apply Rotation to Frames' Shifts

"All frames" means manipulating the whole object. Switch to Frame 2 now and position the object in the desired destination of the animation. Double click the object in the list to the left to visit its properties again.

Right click Frame 1 and insert new frames. Cosmic forge will create a continouous transition between the two keyframes. The more frames you add, the smoother the animation will be.
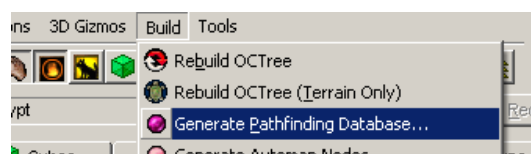
You can repeat the process to build up a more complex animation.

The animation is not tied to the object's current position. You can move and copy objects around and they will perform their animation anywhere.
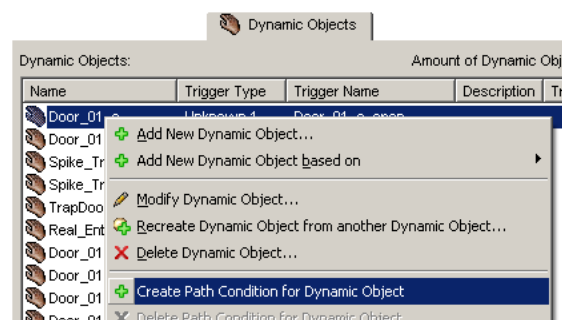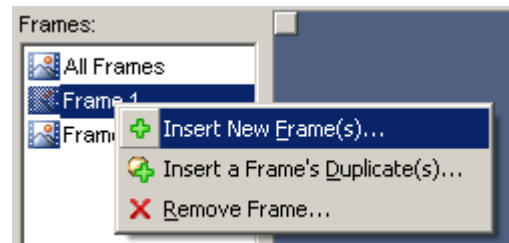
Some objects like doors will require creating Path Conditions. Right click the dynamic object in the DO list and do so.

For newly created or (re)moved Path Conditions to take effect, always rebuild pathfinding database (in the Build menu).

Teleporter

Name:	CT704	
Type:	Teleporter	☑ Palpable ☐ Works only once
Type2:	Generic	Type3: Generic

☐ Position and Shape are inherited from containing Dynamic Object or aren't required

Positioning & Shape
◉ Sphere

◉ Teleports to
MO202
Upper Monastery   at
◯ Place of Arrival

Trigger of "Teleporter" type. You need two pairs of "Teleports to" and "Place of Arrival" for a two-way transition.

Door

Dynamic object tab:

-Blocks passage

-both Movement control parameters (Start moving... and Stop moving...)

Interaction of objects

The "Affects the following entities" list can be used to directly trigger other dynamic objects and/or triggers. Location variables can be used to add prerequisites before a trigger or dynamic object can be activated.

Sounds for events

Quite straightforward, but there are some odd limitations of what sound files can be played under different circumstances. Some parameters have quite unexpected results.

- Spherical triggers play given sound effect all the time the player is in specified area.
- Plane triggers play the sound every time the player *enters* the area.
- Dynamic objects have trouble playing imported sounds. As a workaround you can create a non-palpable plane trigger, assign the desired sound effect to that trigger and set your dynamic object to affect that trigger.

Still, some wav sounds will be refused even by a dedicated trigger. Files over 800kb in size seem to be always the case. Try to save your wav with lower/different parameters.

Generating the minimap

Sometimes you will want the minimap not to display exactly what you placed there. Ignored textures in the Map Layers tab are a good start, but won't filter out dynamic objects and don't offer too much customization.

Place dummy floor or "darkness" object above things you don't want displayed on minimap. You can delete them when the map is finished.
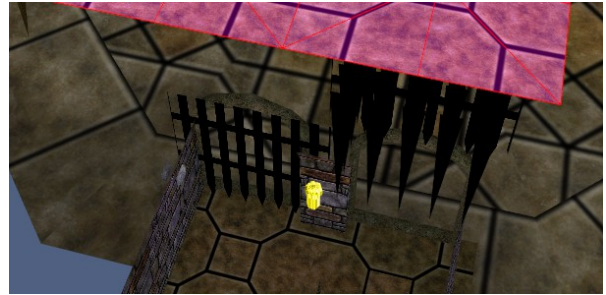
Particle effects

Beware of particle effects getting "hidden", like torch flames origin being placed inside the torch, an thus perceived as invisible by CF.

Look for "Yes" in the column *Unseen*.

Original Wiz 8 has a bug of not displaying the last placed particle effect. Cosmic Forge currently takes care of that automatically by creating a dummy particle.

Name	Unseen	Orientation	Coordinates
Torch_Flame_01	yes	SOUTH (-11), Pitch 87	{-10.4225, 4.4033, 28.6413}
Torch_Flame_02		SOUTH (-11), Pitch 87	{-0.0530, 1.9621, 28.6170}
Torch_Flame_03		SOUTH (-11), Pitch 87	{-5.2329, 14.7261, 14.9164}
Torch_Flame_04		SOUTH (-11), Pitch 87	{-5.3327, -2.0137, 14.6495}
Torch_Flame_05		NORTH (-11), Pitch 87	{-5.0084, 12.4487, 14.6925}