

Welcome by the first edition of 3DGS tutorial!

If you want to keep up to date with new easy tutorials, just send me a mail With the subject I DO, you'll get e-mail when the tutorial book is updated. For now, I leave you with plenty of useful stuff. Any questions, just mail me.

Realspawn

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Make sure you check the monthly magazine.

<http://home.zonnet.nl/mag.html>

Or visit my site for free models links and tips.

<http://home.wanadoo.nl/pol.rene/newbie.html>

Please let me know if this helps you so I keep motivated for a next book.



Special thanks to:
Acid Crow, Marty Bee

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Creating a room.

- Start 3dGamestudio
- Click file and then new
- Now build a room by clicking Object -add primitive -Large cube
- Scale the cube by clicking the 12th button from the upper left, Make it bigger.
- Now click edit-Hollow block. The cube is now a room with a ceiling.
- Now click Object, scope, scope down, the room will be highlighted red.
- No click on the ceiling and press delete. Now your room has no roof.
- You can delete walls if you want or the floor the same way.
- When you're done press scope up
- You now build your first room
- To see what your room looks like click the BUILD button make sure level map is selected.
- Press go!
- You can now see your room. Notice that you can walk through rooms at this point. Don't worry, it works this way for now.



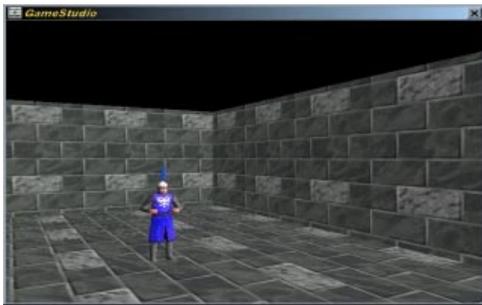
Creating a room.

- You can use the wads that are already on screen or you can add new wads (Textures)
- To add a new wad click texture, texture manager.
- Choose add wad. Find the wad click on it the wad will be shown on the right side of the screen. Now exit this texture manager.
- To add texture to you're whole room, select the room. (Red highlighted)
- Now click with the right mouse button on a texture and choose apply
- If you want to texture different walls use the scope function as mentioned before by creating a room
- To see what your texture looks like click the BUILD button make sure level map is selected.
- Press go!
- You can now see your room. Notice that you can walk trough rooms at this point. Don't worry, it works this way for now.



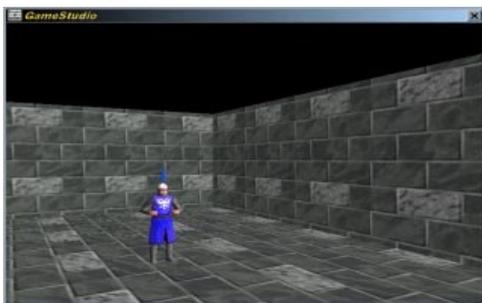
Adding an entity to the room.

- Click object load entity
- find the entity named guard.mdl in your 3D Gamestudio directory and open it.
- In the viewing screens you can see your entity appear.
- Place it in the middle of the room with his feet on the ground
- To see your entity in the room press the built button and make sure the update entities is selected.
- Now you can walk trough the room and you see the guard standing (Moving on one place)
- Now save your textured room with guard as lets say practice.



Make the player walk your way.

- Click file en open practice
- Click file, Map properties
- Change the script by pressing new. When you do this a new name comes as script. In this case it will be practice
- Select the guard and right-click on it, choose properties.
- Set skill 1 to 1 and press button next to action.
- Choose player walk, OK and close this window
- Press the built button and make sure level map is selected.
- After you've seen the level (You still walk through rooms) press run
- Now you have your first level press F7 to switch between first person view or 2th person..
- Use the arrow keys to move the guard around in your room.
- Save your file as practice



Create enemies that shoot on you.

- Place a new entity like you learned before. Open the warloc.mdl
- Now right-click the warloc entity and choose robot 2 as action.
- Now first save your level and then built it.
- Press the run button.
- No walk in front of the warlock and see what's happening.
- Wow the bastard is shooting on you



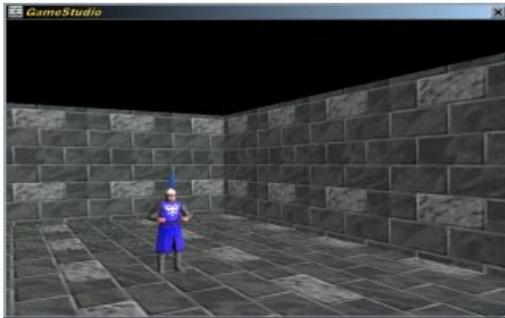
Pick up a gun and shoot back.

- Place a new entity We have no standard gun so we use a lampe instead
- Open the lampe.mdl and place it in the middle of the room on the floor
 - Now right click the lampe and give it the GUN action.
 - Save your level en built
 - Now press run
 - Walk to the lampe and you pick it up as you touched it.
 - Use the control key to fire... Wow you can shoot the warlock.....
 - The warlock will explode after its hit several times this is because we gave it the robot 2 action
 - When you change the view you'll see the lampe it shows not right but for now we learned how to create a simple shooting level.



Make an entity patrol along a path.

- Create a new level (Room). You should know by now how.
- Load the guard.mdl entity
- Right click the guard and give it the action : Patrol_path
- Now we have to create a path that the guard will follow
- Click Object, Add path
- A starting point will appear. (Cube with dot in it.)
- Place it where you want the path to start.
- Now click vertex move (13th button from the upper left.)
- Hold down the ctrl key and click on the starting point. Now you can drag another patrol path point to wherever you want. Repeat this and make the circle complete.
- Built your level and run it and you will see the guard patrolling along the path we just created



The hero can die

- Open with notepad the practice.wdl file (remember you made this level)
- Now after the last line copy the following code :

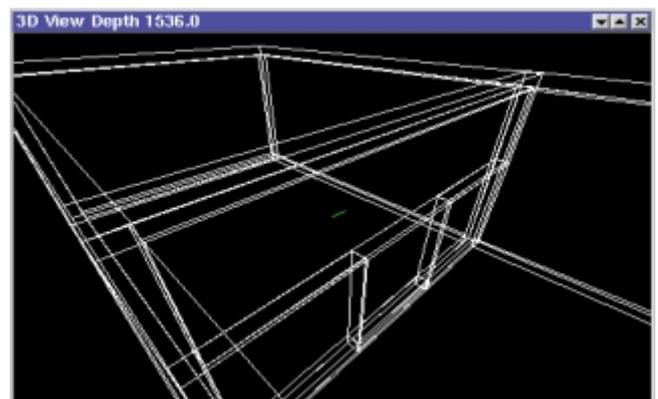
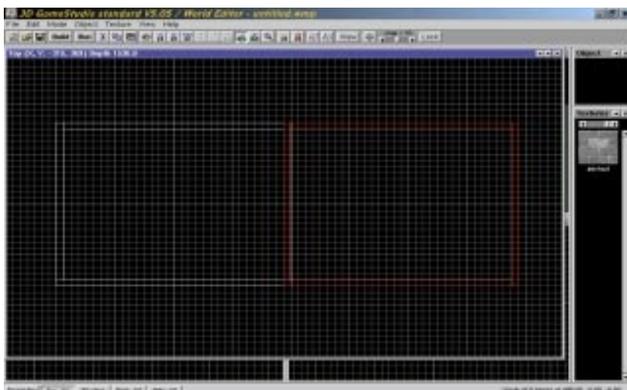
```
ACTION player_prog
{
MY.NARROW = ON; // use narrow hull!
MY.FAT = OFF;
MY.TRIGGER_RANGE = 5;
MY._MOVEMODE = _MODE_WALKING;
MY._FORCE = 0.75;
MY._BANKING = -0.1;
SET MY.__STRAFE,ON;
SET MY.__BOB,ON;
SET MY.__TRIGGER,ON;
CALL player_walk;
CALL player_fight;
CALL drop_shadow;
}
```

- Now save it as practice.wdl
- Open 3D Gamestudio, file, open practice
- Right-click the guard and give him the Player_Prog action. (Hey, this is what we changed in the wdl file isn't it ? Yes, we're coding now.)
- Now build and run and look after you've been hit several times you die. The warlock can kill you now.



Connecting rooms with doors.

- Build two rooms like you learned before the way the picture shows >
- Now create a door like cube and place it between the rooms. Make sure it sticks out on both sides and stands on the floor.
- Now with the door cube selected press edit, CSG subtract.
- Now press delete you have now made an opening between 2 rooms.
- Load the entity porta.wmb and place it in the door site.
(It's too small but we only learn how to make the door work.)
- Save your level as testdoor
- Click file, map properties and press new script. The name Test door will appear.
- Now give the porta the door action and place an entity with the player Walk action.
- Now build and run it... When you walk to the door and you're there press space. The door will open.
Press space again and the door will close
- In med you can create your own made door as long as you give it the door action it will work.



Some music in your level:

- Open the office.wdl file in notepad. Then save it as office2.wdl
- Now open in notepad office2.wdl
- Search the line that says : MUSIC testsong = <ribanna.mid>;
- Change the name ribanna.mid into your midi file.
- Make sure the midi file is in your work directory
- No save it
- Open 3D Gamestudio file new
- File, map properties open the script you called office2.wdl
- Now build and run level.
- You now hear the music you just inserted

Your opening screen:

- Open the office2.wdl file in notepad.
- Search the line that says : bmap splashmap = <logodark.bmp>; // the default A5 logo in templates
- Don't make any changes it shows only that it uses the picture logodark.bmp which is in the template map.
- Close notepad and open logodark.bmp in any paint program.
- Add your own picture and text and save it again as logodark.bmp in the template map.
- Open 3D Gamestudio file new
- File, map properties open the script you called office2.wdl
- Now build and run level.
- The game will start with your opening screen. Easy, ain't it ?

This is a simple example if you want to add your own pictures make sure it is saved in the template map and that the name is called in the wdl instead of logodark.bmp

Using the start position.

Well I'm not sure how to use it the right way but here is what I know so far.

- You can add a start position by clicking object, add position
- Now you will see a camera. Place it in your level (without entities) and point it the way you want it
- Build level
- you can walk throughout the level and you begin where you placed the camera

Of course, I'll update as soon as I know the answers

This way its easy to make a virtual gallery were you can walk through

I think the start position is also used to change the view of your entity but I don't know yet how to use it.

Your first real assignment:

- Go to [wbwilson's web](#) page and download the complete idiot's guide to AI.
- Make a new file in notepad to put the code into call it "enemies.wdl"
- Save it to your work folder
- Find a wav sound to rename "killer.wav" and put it in the work folder
- Now you will need a model to fight you with the gun in place. I recommend the Held model from the first Mission game. He's the easiest. Move him to the work folder also.
- Open the model in MED and use "select vertice" to find the vertex that you want him to shoot from.
Highlight it and the vertex number should show up on the bottom menu.
- in the enemies.wdl for killbot you will see where to type in the new muzzle vertex.
- Make a new level and name it test (one room one entity one lamb to shoot with
- Open your test.wdl and at the bottom of the script type this in:
include <enemies.wdl>;
- open your test now in WED and add the Held model and assign him the killbot action. Should be hard to kill.

Now try to make more out of it.

make some more killbots (killbot1, killbot2, etc.) only give them new sounds and different amounts of armor and health from weakest to boss enemy. Just copy and paste the killbot code and name the killbot1,killbot2

Oh men were in wdl programming already ? Yep at this point it must be clear to you that adding the line <include...wdl> to your main wdl file combines all kinds of wdl's together



Your second real assignment:

To test new effects try the following FIREMODE with your weapon:

```
// MY._FIREMODE = DAMAGE_SHOOT + HIT_FLASH    + HIT_HOLE + 0.50  
// + HIT_SMOKE + HIT_SPARKS + 0.50  
// + FIRE_LASER + GUNFX_BRASS + 0.50;
```

(these are all right out of the templates and many thanks to Doug Also a forum user)
Now here's your assignment for your own learning experience:

- 1) Try the above firemodes on 3 of your robots by changing their scripts
- 2) now make about 5 more robots (use the control key and drag out from one of your existing bots)
- 3) try using the number combinations from the weapons.wdl (open up the weapons wdl and print it out so you can see what numbers you combine) So a rocket launching robot would have a firemode that looks like this:

```
MY._FIREMODE = 16;
```

There is an EASIER way to do this if you DON'T want to script each bot is take the one bot you have and assign this firemode in the SKILL8 slot in the properties. But this should give you a good start on adding variety to your enemies. Also try the damage points after a decimal in that slot.

FOR EXTRA FUN (and it may even entice you to try JCL's wdl in seven days). Open the tutorial that comes with the game (not the online one but the learn it seven days one). Find the robot enemy you are supposed to make and copy the firemode script for it to YOUR robot. This makes a truly vicious enemy that is very tough. Couple of shots from him with the fireball and you are dead. (Hint, it's in the Wednesday part...) The numbers in the skill8 is the simplest way to add weapon variety to your robots. The most certain method though is to go in and change their scripts using the firemode scripts.



Make it snow.

- First download the snow.wdl and the snow.pcx you can find it in the "downloads" section. Save it to your work map.
- Now make a room built it and save it as snowfalls
- Now change map properties, new, it will be called snowfalls now.
- Again save it
- Open up the snowfalls WDL and add the next line at the end of it
include<snow.wdl>;
Yes, you're right we added the snow wdl to our main wdl.
Save it.
- Open your level and add an entity it doesn't mind what kind of because we gonna make it invisible. We only need it to drop snow.
- Add the action snowfall, Make sure invisible is selected.
- Now drag the entity to the roof of you room.
- Build and run and wow it's snowing



Adding sounds to objects.

- Make a room with one entity and a cylinder 6 sided
- Now add the texture water to the cylinder
- Click object add sound and choose water.wav
- You will see a sound icon appear in your screen (Red cone shape)
- Place it on the cylinder
- save your level as water
- build and run
- When you walk to the water the closer you get the better you hear the sound of water running.



Restart the game when you're dead.

- Make a copy of the war.wdl and call it war2.wdl
- Delete the war.wdl in the script file and include the war2.wdl just type this at the end of your script. include <war2.wdl>;
- in the player_fight portion of war2.wdl modify it so it looks like this:

```
function player_fight()
{
if(MY._HEALTH == 0) { MY._HEALTH = 100; }
```

```
MY.ENABLE_SCAN = ON;
MY.ENABLE_SHOOT = ON;
MY.EVENT = fight_event;
```

```
while(MY._HEALTH > 0)
{
if(MY._SIGNAL == _DETECTED) { // Hit received?
MY._SIGNAL = 0; // reset the _signal skill
if(person_3rd == 0) {
player_shake(); }
}
wait(1);
}
```

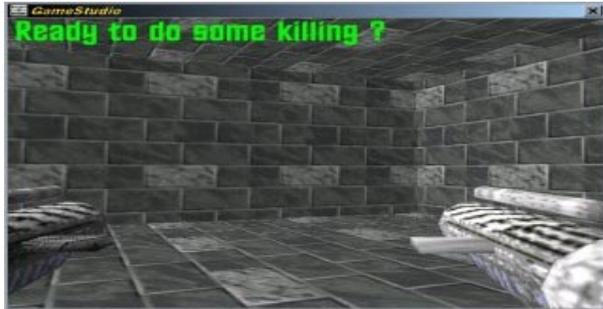
```
// Dead
MY._HEALTH = 0;
if(person_3rd == 0)
{ // 1st person die action
MY._MOVEMODE = 0; // don't move anymore
MY.EVENT = NULL; // prevent health counting down
player_tip();
waitt(8);
weapon_remove(); // let weapon disappear
wait (80);//change this to vary the time/////
load_level(<monitor.WMB>);//////////change monitor into
you're level name
}
else
{
weapon_remove(); // prevent dead player firing
BRANCH state_die;
}
```

now build and run. When you die the level starts all over again..



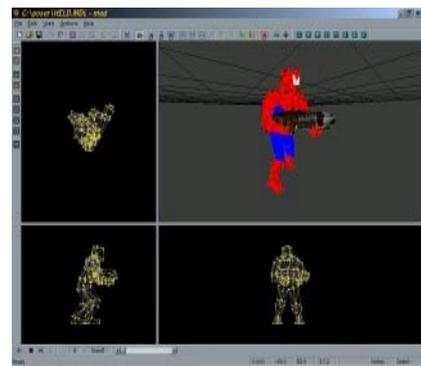
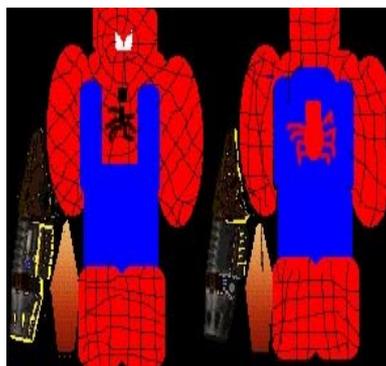
Changing the comment when you pick up a gun.

- in the weapons.wdl you will see some strings for gun pickup:
STRING got_gun1_str,"Got a small gun!";
- Just change this and add it to the bottom of your wdl script:
(STRING got_gun1_str,"Ready to do some killing?"
- no include this into you game and when you pick up the gun
the line will appear.



Making Spiderman with a gun out of an existing model.

- Open 3DGS modelling program.
- Open up the model HELD from the mission 1 game
- Click View skins
- You'll see the texture of the model (Picture 1.)
- Click File, Export, BMP save it as test.bmp
- Now open test bmp up in any photo-editing program.
(even windows paint will do)
- Now paint over the texture your own design. (pic 2,)
- When your finished save it as test2.bmp
- Open 3DGS-modelling program.
- Open up the model HELD from the mission 1 game
- Click View skins
- Click file import and open your test2.bmp
- Click edit, add new skin
- In the modeller you model is shown (Pic 3.)
- Now save your model with a new name like Spidey with a
gun.
- For more examples go to the download section



Creating a sky.

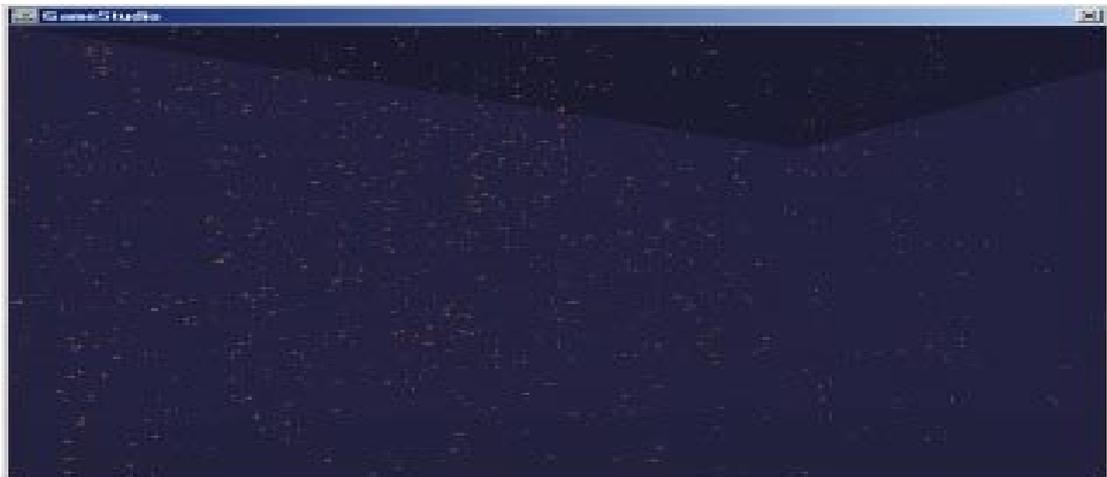
- Create a room
- Use the scope function to remove the top (Roof.)
- No add a cube that's bigger then your room
- Ad a sky texture to the cube
- Now build your level and see the sky outside



Create the weather (Snow,rain,hail)

- Download the snowmap and the snow pcx from the download section
- Now open the Snow pcx in any photo editor.
- Change the picture into a red and yellow mixture
- Save it into your work folder as fire.pcx
- Now open with notepad the snow wdl.
- Change all the word snow into fire and save it as fire.wdl
- Include the fire wdl into your main wdl
- Give an object the firefall action and make it invisible.
- Built and run the level and see fire is falling from the sky

You can create all kinds of weather this way or make soap bubbles falling from the sky



Making things explode.

- Download the exploder.wdl from the download section
- Just make sure you include it in your main WDL
- Now select an object and give it the exploder action
- Built and run.
- When you shoot the object the object explodes

It can kill you so don't get too close but make sure the enemies are



Create elevators the right way.

- Start a new file in WED save it as "lift2.wmp"
- make your model in WED out of an eight-sided cylinder and CSG subtract the place where the guy stands -
- texture the whole thing with "heavymetal"
- scope down and you can start texturing the inside with "wood"
- add a couple of lights
- adjust the up and down distance so the platform of the model is just beneath the horizontal "0" axis in WED (thick line)
- build as a "map entity"
- go back to your main level and go to object "place map-entity"
- assign it the elevator action and the height you need to go (from WED) in the Skill3 slot



Fire sparks.

Remember the snow tutorial ? This works the same so try it out on your own.

You can download the firesparks.zip from the download section.

good luck



Make an entity speaking to you.

- We're going to add a code to let an entity speak to you when you get close to it.
- Add the following code at the end of your WDL

```
}  
SOUND whammy <nothing.wav>;//instead of nothing enter your wave file name.//  
//////////nothing  
function speech_event()  
{  
IF (YOU == PLAYER)  
{  
MY.EVENT = NULL;  
PLAY_SOUND, whammy, 70;  
WAIT 1;  
}  
}  
ACTION detect_entity  
{  
MY.ENABLE_TRIGGER = ON;  
MY.TRIGGER_RANGE = 400; // talk range  
MY.EVENT = speech_event;  
}  
}
```

- Save it
- Open up your level and place an object or entity.
- Give it the Detect_entity action (This code we just inserted in the wdl)
- Build and run. When you get close to the object or entity it will speak out your wave file
- MY.EVENT = NULL; plays the line only once.

If you delete this line the sound will repeat continuously.

Add, Create your own textures. WADS

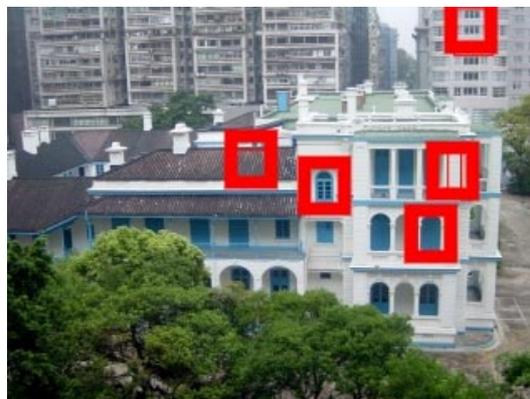
Wads use bmp and pcx format.

- Best size is 128X128
- So convert your jpg to bmp or pcx with any paint program.
- No open wed.
- click texture > texture manager
- Click built wad so there is a name for your wad collection.
- Now add wad and choose yours
- With your wad selected click edit wad
- Now you can add your bmp and pcx textures to it. save it and your ready to use your new texture



Make a building with your own textures.

- Open in any paint program a picture of a building.
 - Now take out the peaces you would like to use (1)
 - Best size for texture is 128 X 128 it has to be in pcx or bmp format.
 - Make sure you're texture is mirrored at the half of it so there wont be any lines interfering with your texture. (2)
- Open Med click new. Click texture > Texture manager.
 - Click built wad. Now give your wad a name.
 - Click edit wad, and add your own textures to it, Then save it (3)
- Now create some cubes scale them and texture them with your made textures.
- Built your level to see if your texture is fit right. It's taking a while and is a bit puzzling but at the end you can create a nice looking building (4,5,6)



If you like the textures I used you can download them at the download section under the name building wad. It's free to use.



Easy panel creation.

- Create a panel in any paint program. (1)
- Make sure the size is 640 X 480
- Use pure black on those part you want to make transparent.
- Now save it into your work folder as test.bmp
- Add this to the top of your wdl, after the includes;

////////////////////////////////////

```
BMAP test_map <test.bmp>;
```

```
PANEL test_panel
{
  BMAP test_map;
  LAYER 2;
  FLAGS OVERLAY, REFRESH, VISIBLE;
}
```

- then add this line to your main wdl;
- test_panel.visible = on;
- Now built and run and your panel is in the game

you just have to make sure that the window in the middle is 0,0,0 RGB or pure black to be transparent and that it is the 800 x 600 size you need and any of the other "blacks" are lighter (like 5,5,5).

Add a second panel

- copy the code and change the bmp file into your bmp file name in my case spawn.bmp
- Change all the word test into something else, Let's say "doh".
- Built and run and you have 2 panels active. (3)



Create terrains with BRYCE.

Download the tutorial. it's in html format.

