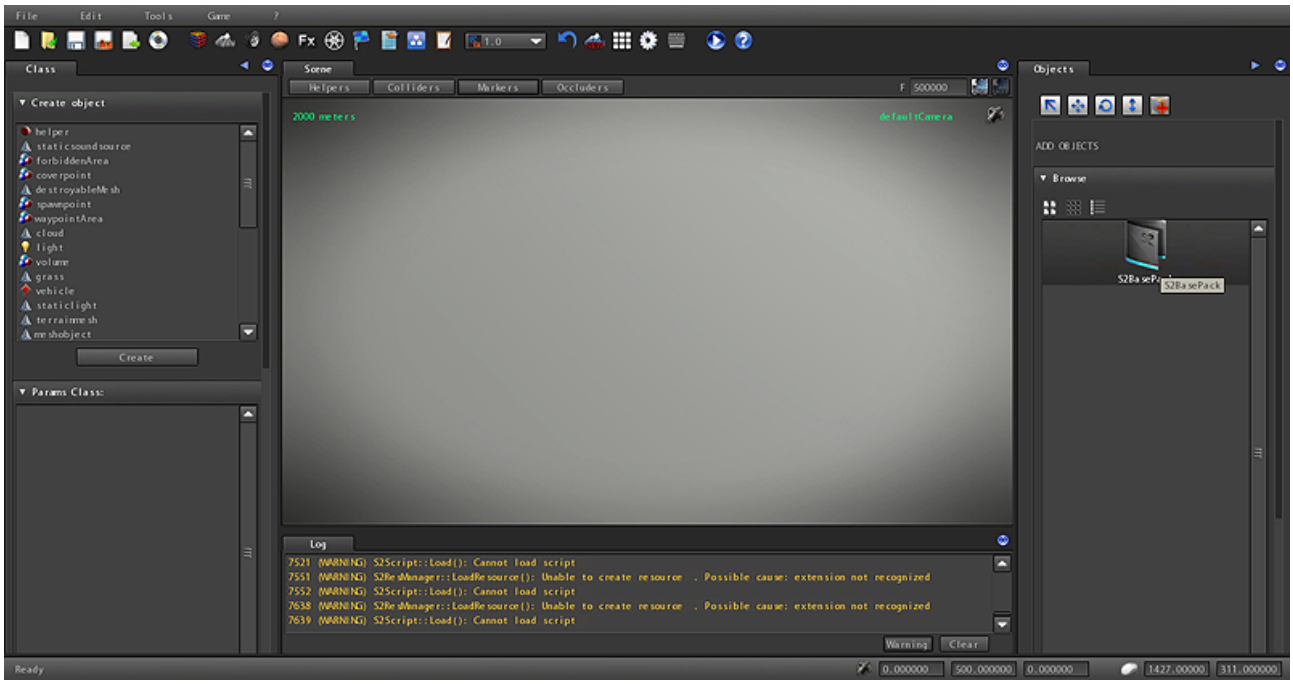
Tutorial

Rigid Body Instancing Script

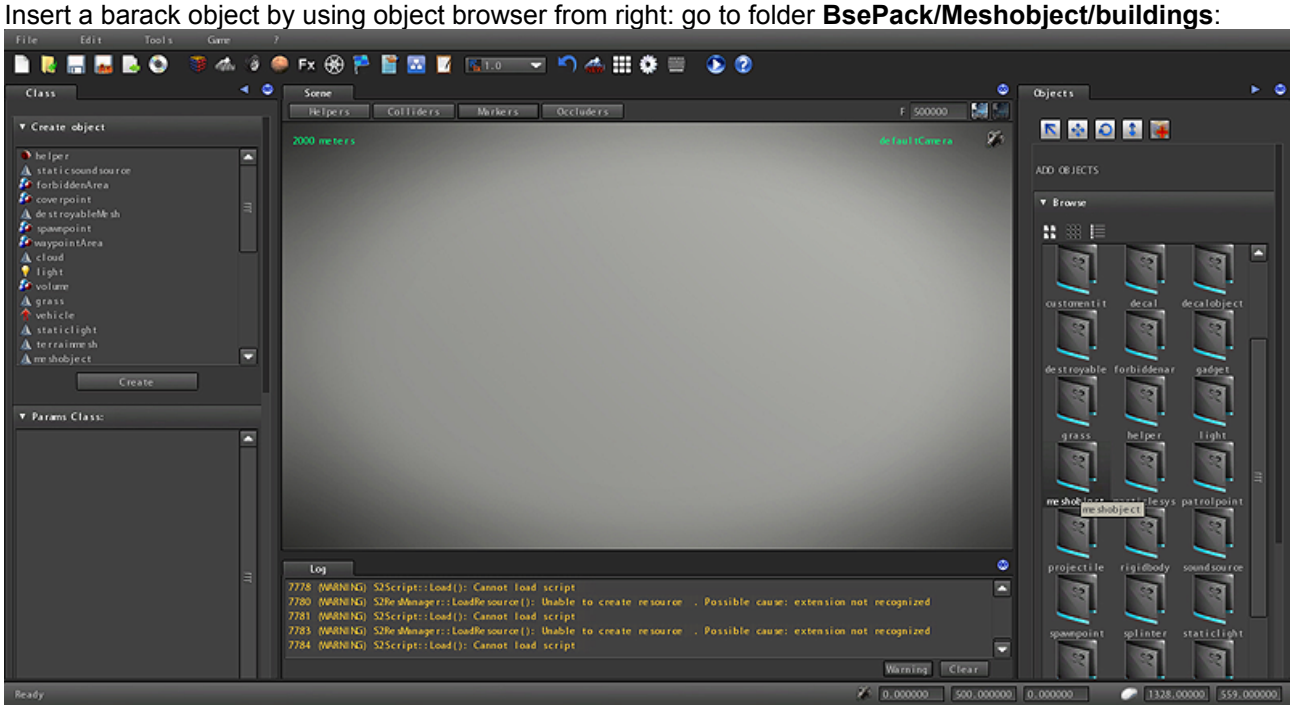
S2ENGINE HD ver. 1.03.00

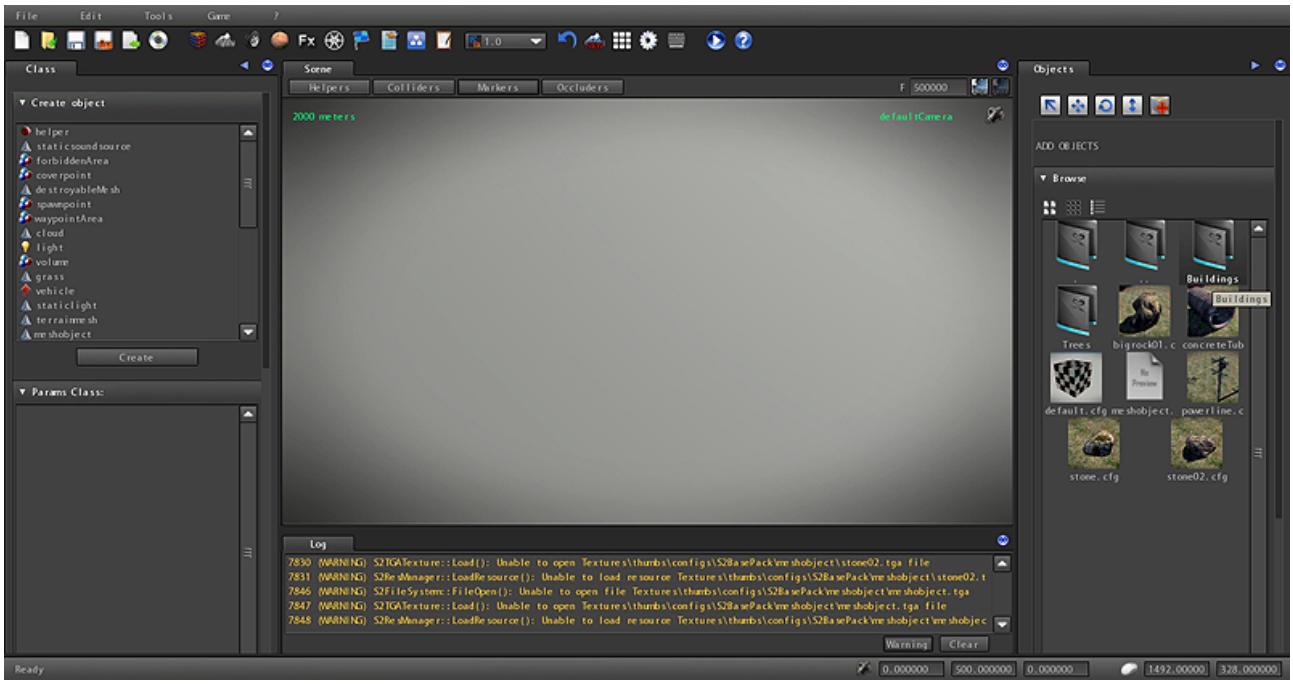
I've written this tutorial to show how to write a script that instantiate objects (in this case a rigid bodies but the sample can be applied to all other types of *Activable* objects) 'on the fly' by pressing a key.

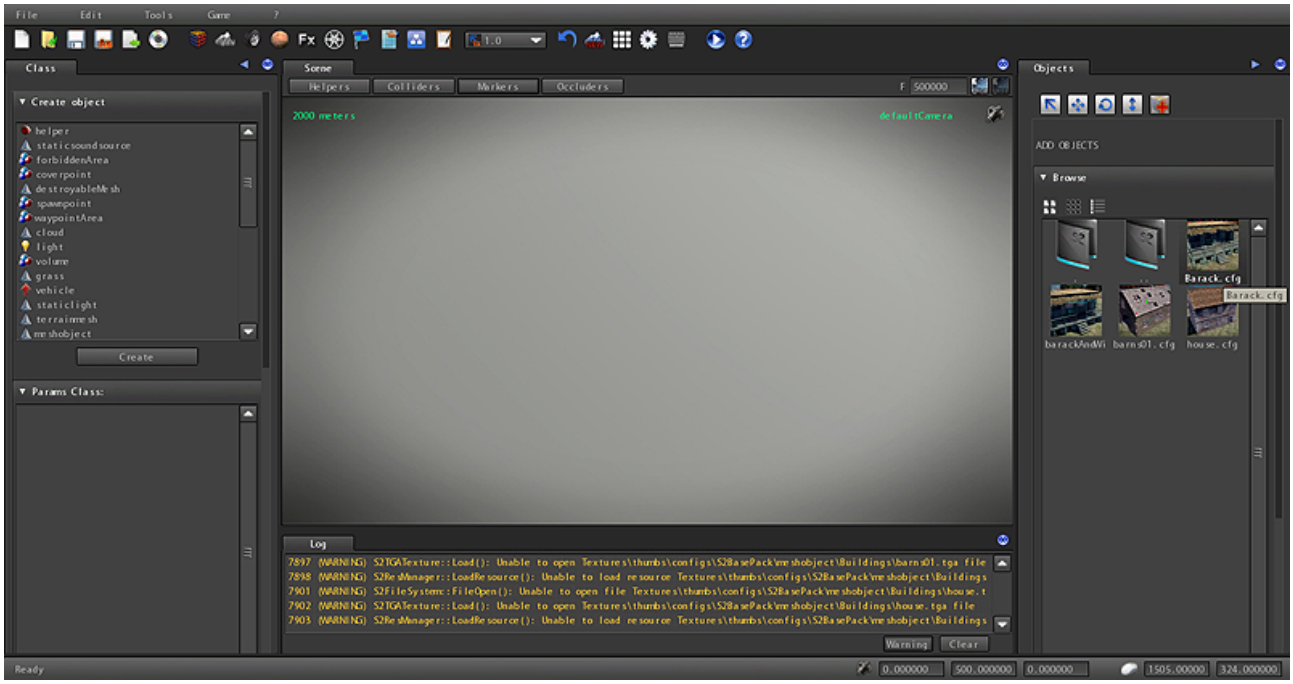
Let's start from editor:



Insert a barack object by using object browser from right: go to folder **BsePack/Meshobject/buildings**:




File Edit Tools Game ?
Class
Create object
helper
staticsoundsource
forbiddenArea
coverpoint
destroyableMesh
spawnpoint
waypointArea
cloud
light
volume
grass
vehicle
staticlight
terrainmesh
meshobject
Create
Params Class:
Scene
Helpers Colliders Markers Occluders
2000 meters
defaultCamera
Log
7830 (WARNING) S2TGATexture::Load(): Unable to open Textures\thumbs\configs\S2BasePack\meshobject\stone02.tga file
7831 (WARNING) S2ResManager::LoadResource(): Unable to load resource Textures\thumbs\configs\S2BasePack\meshobject\stone02.t
7846 (WARNING) S2FileSystem::FileOpen(): Unable to open file Textures\thumbs\configs\S2BasePack\meshobject\meshobject.tga
7847 (WARNING) S2TGATexture::Load(): Unable to open Textures\thumbs\configs\S2BasePack\meshobject\meshobject.tga file
7848 (WARNING) S2ResManager::LoadResource(): Unable to load resource Textures\thumbs\configs\S2BasePack\meshobject\meshobjec
Warning Clear
Objects
ADD OBJECTS
Browse
Buildings
Trees
bigrock01.c
concreteTub
default.cfg
meshobject.
powerline.c
stone.cfg
stone02.cfg
Ready
0.000000 500.000000 0.000000 1492.00000 328.000000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2000 meters
defaultCamera
Log
7897 (WARNING) S2TGATexture::Load(): Unable to open Textures\thumbs\configs\S2BasePack\meshobject\Buildings\barns01.tga file
7898 (WARNING) S2ResManager::LoadResource(): Unable to load resource Textures\thumbs\configs\S2BasePack\meshobject\Buildings
7901 (WARNING) S2FileSystem::FileOpen(): Unable to open file Textures\thumbs\configs\S2BasePack\meshobject\Buildings\house.t
7902 (WARNING) S2TGATexture::Load(): Unable to open Textures\thumbs\configs\S2BasePack\meshobject\Buildings\house.tga file
7903 (WARNING) S2ResManager::LoadResource(): Unable to load resource Textures\thumbs\configs\S2BasePack\meshobject\Buildings
Warning Clear
Objects
ADD OBJECTS
Browse
Barack.cfg
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barns01.cfg
house.cfg
Ready
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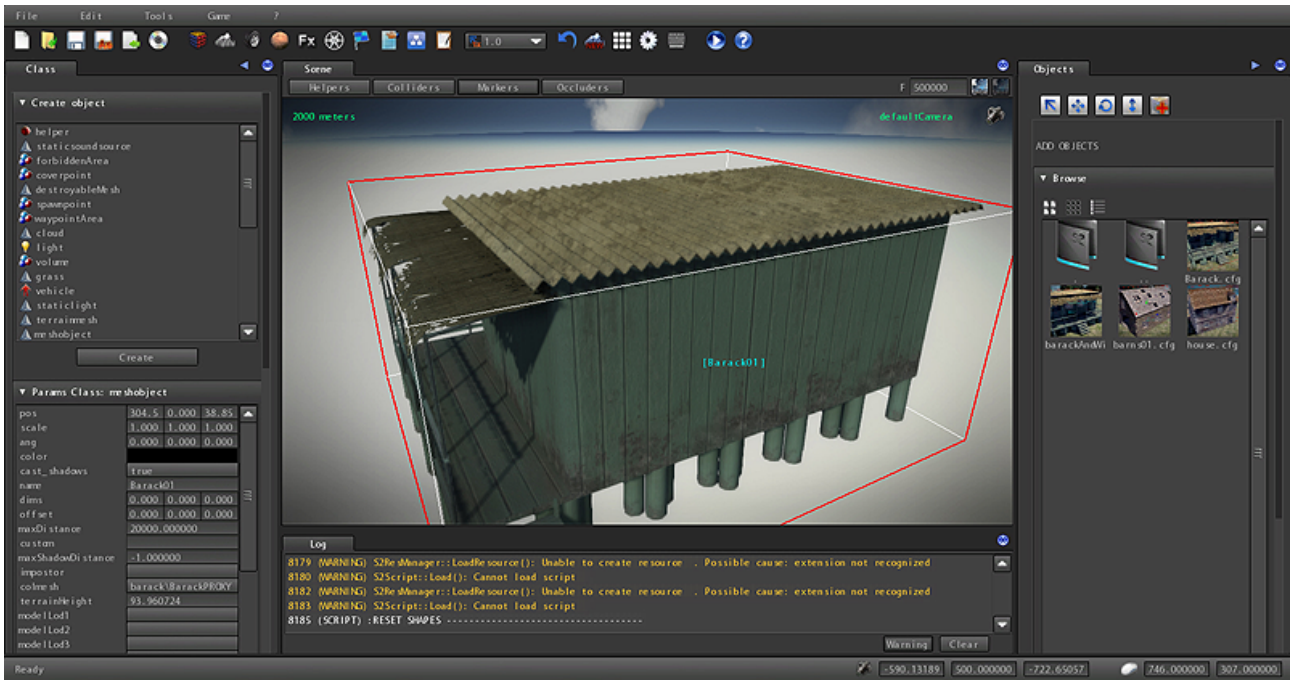
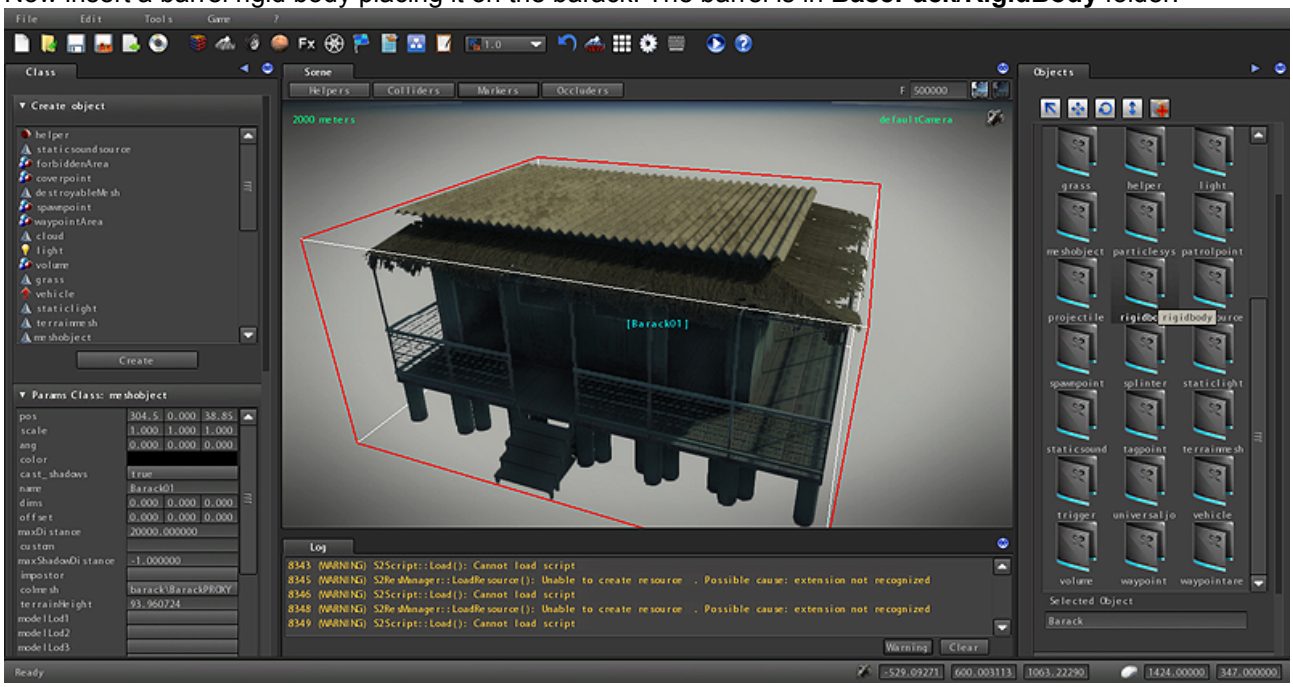
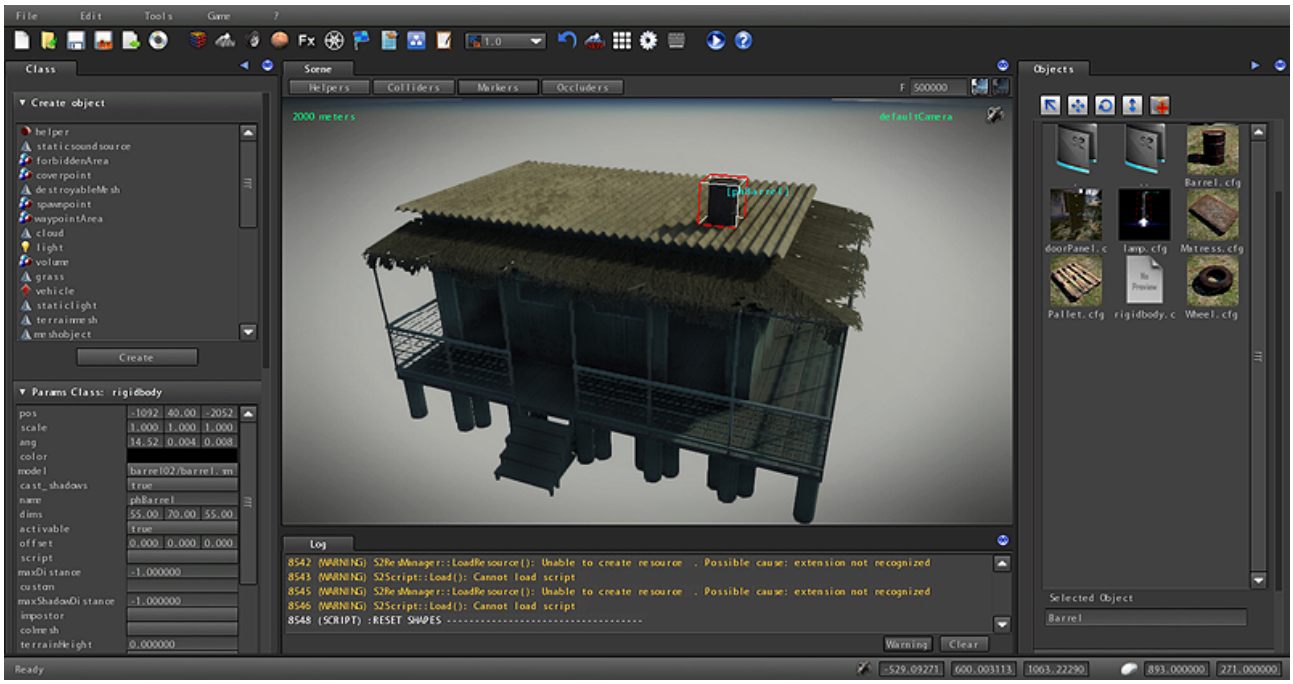
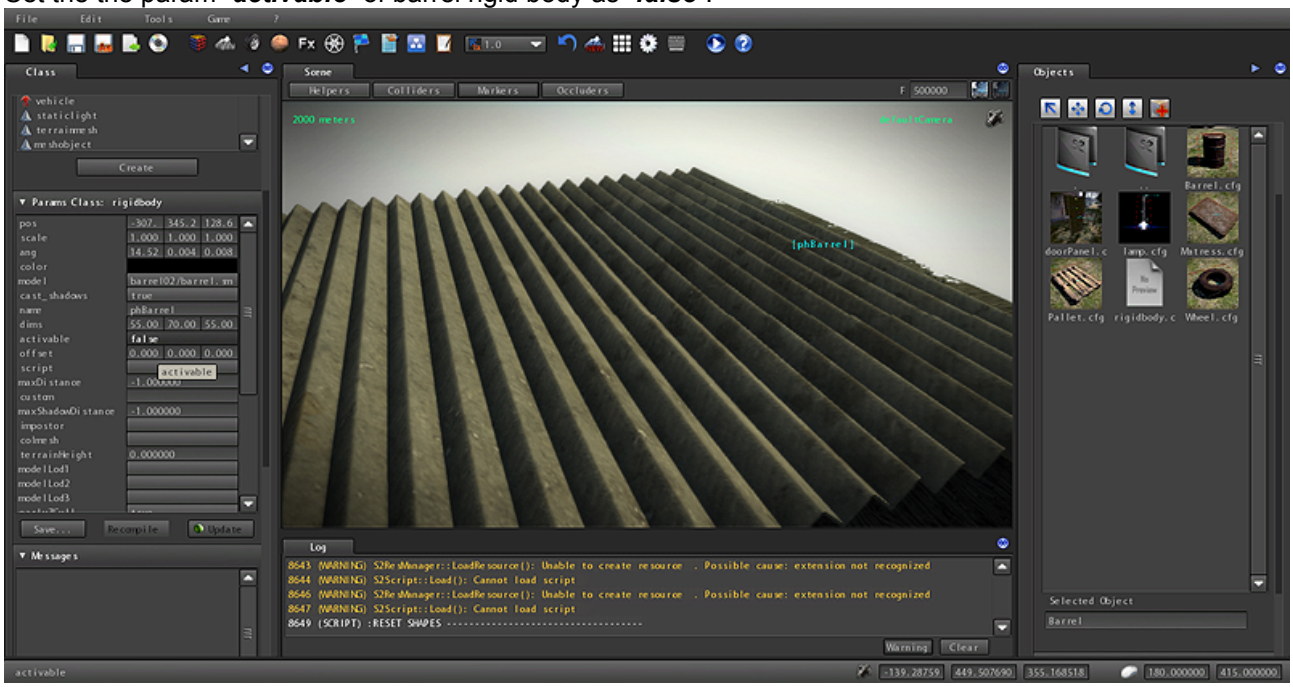


Now insert a barrel rigid body placing it on the barack. The barrel is in **BasePack/RigidBody** folder:

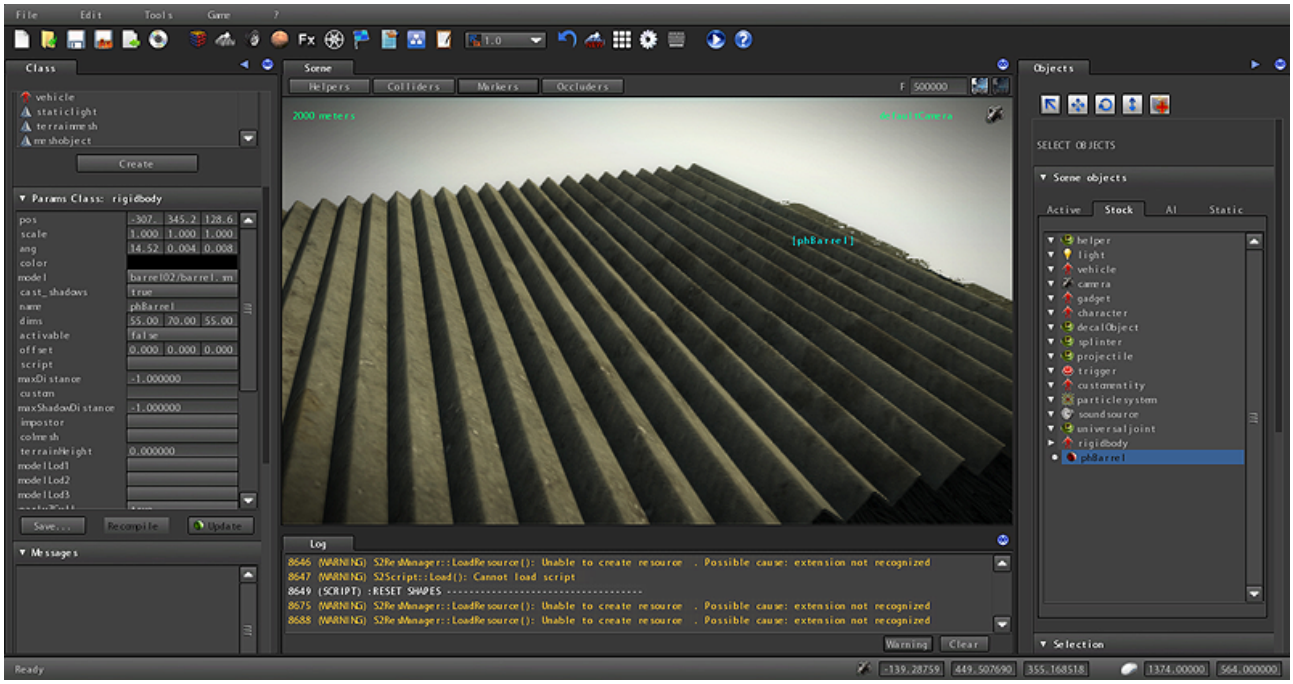




Set the the param “***activable***” of barrel rigid body as “***false***”.



The barrel will disappear: it is deactivated and insert into the stock list as you can see from the image below.
Note: To access *Select Objects* dialog click on the icon



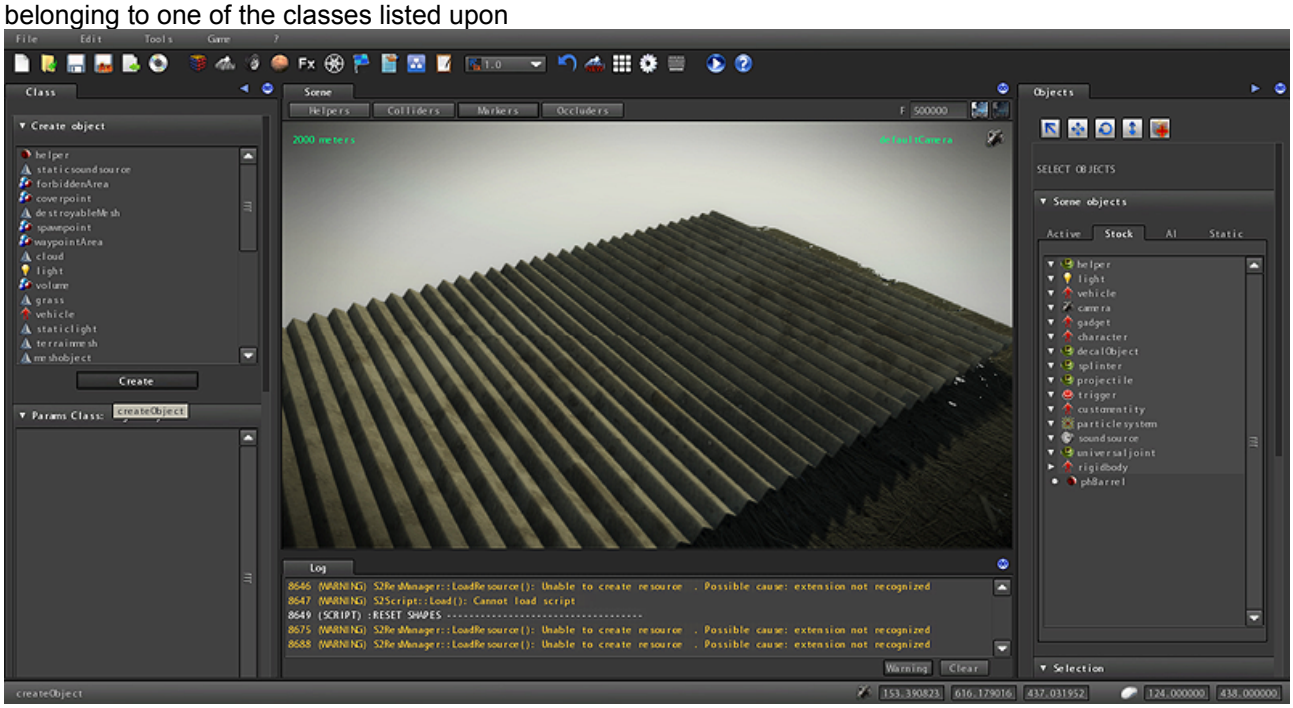
Now let's start with script. Create a file named ***Instance.sc2*** inside S2EngineHD *Scripts* folder and edit it with a text editor.

```
function void Update()
{
	/* check if "e" key is pressed. parameter 1 means "only one click mode" */
	if(IsKeyPressed("e",1))
	{
		/* declare a vector3 variable */
		var vec3 myPos;

		/* get position from this object */
		myPos=GetObjectWorldPos(this);

		/* active barrel at stored position and default orientation (0,0,0) */
		ActiveObject("phBarrel", myPos, vec3(0.0, 0.0, 0.0));
	}
}
```

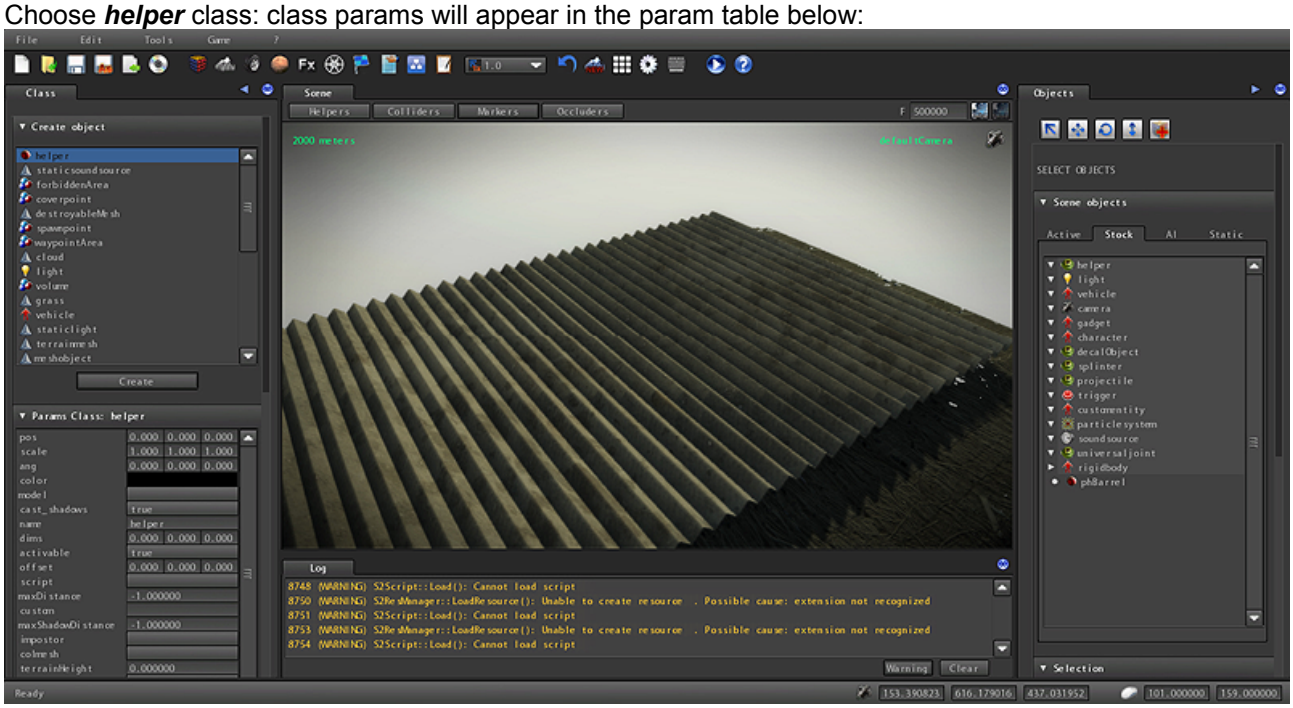
Note: phBarrel is the name of barrel object to instantiate.

With this script an object can instantiate another object placed in itself position by pressing “e” key.
Now we will create an helper object that will instatiate barrels using this script.

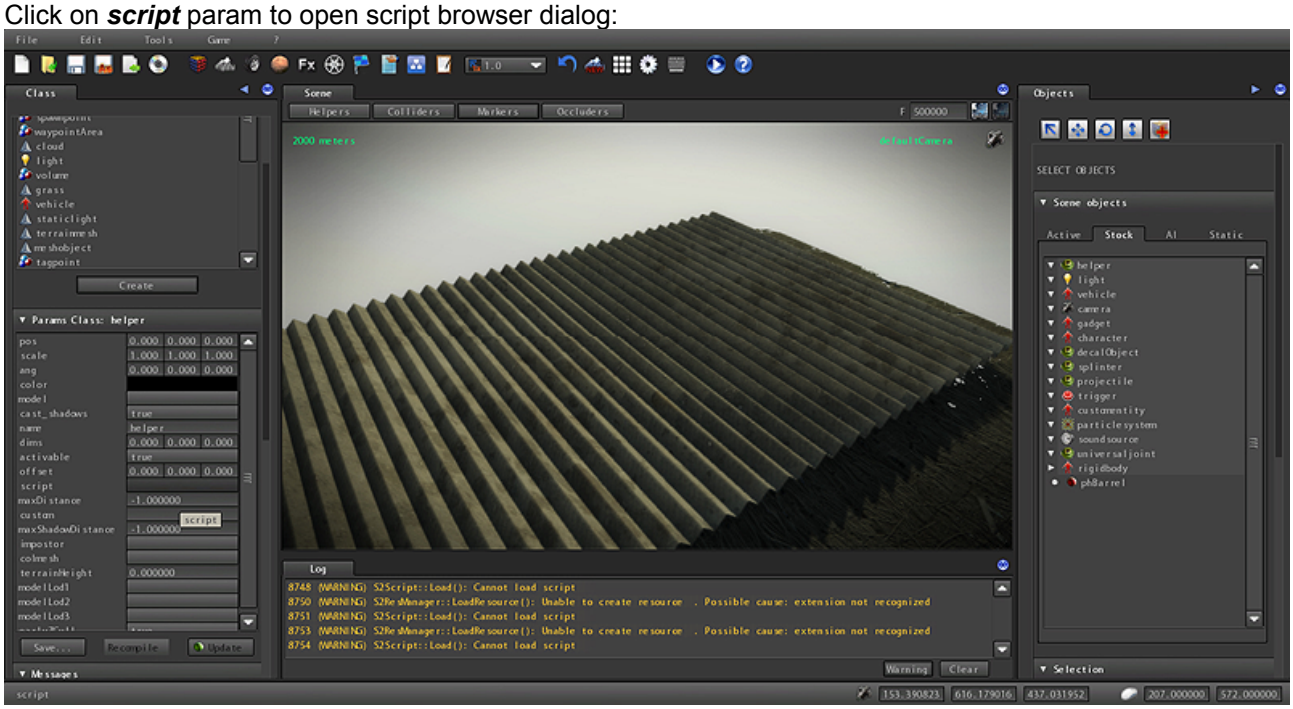
Click on **Create** (“*createObject”*) button: This will let you to enter the “create mode”, i.e. create a new object belonging to one of the classes listed upon



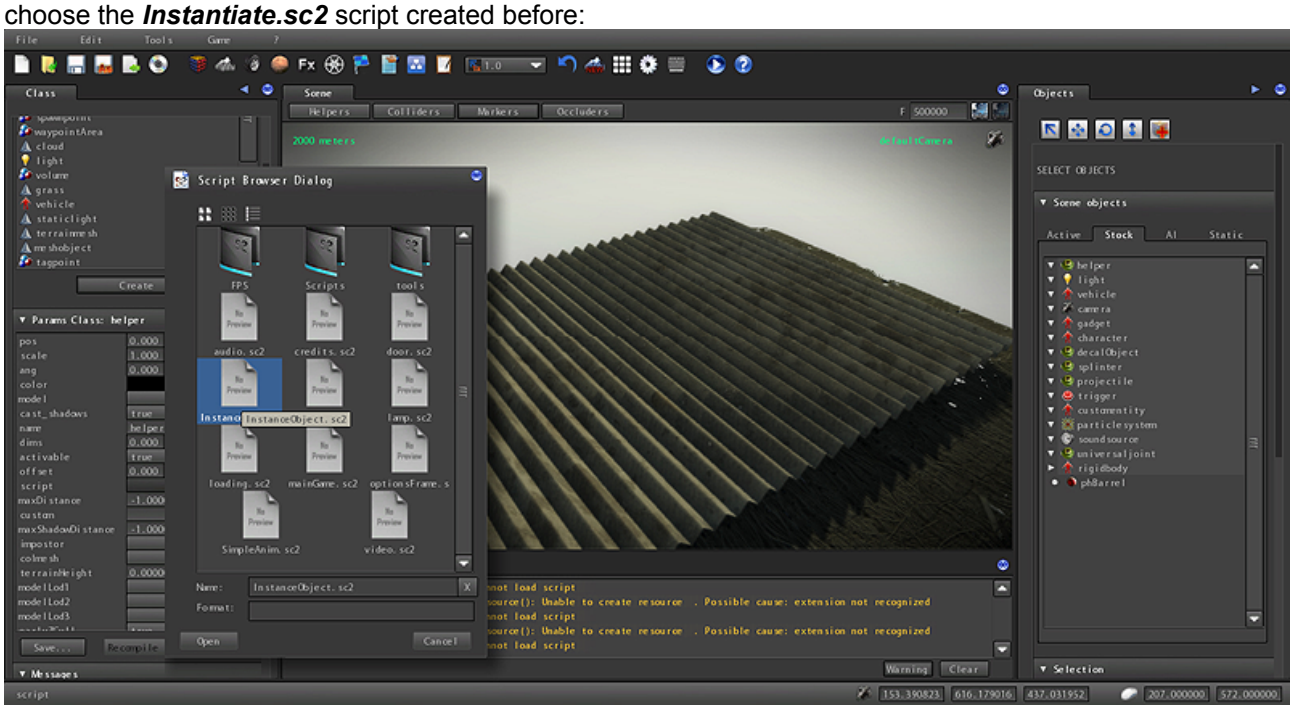
Choose ***helper*** class: class params will appear in the param table below:



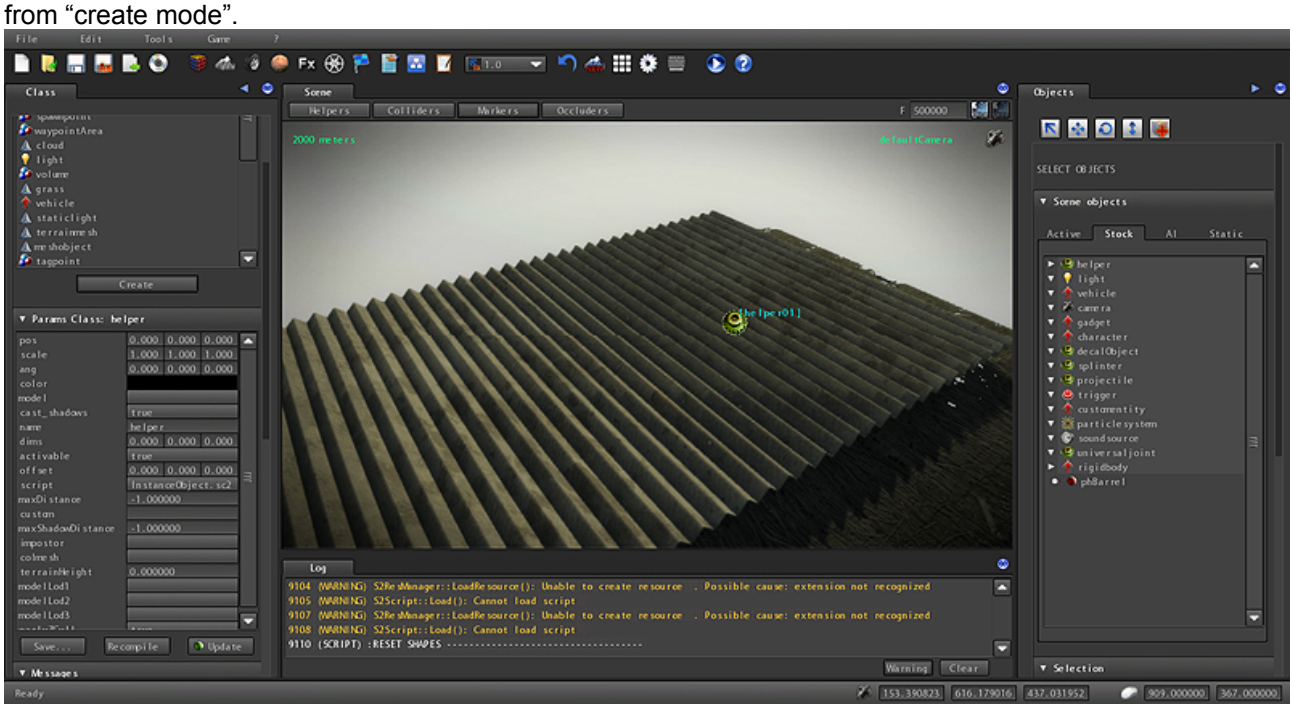
Click on ***script*** param to open script browser dialog:



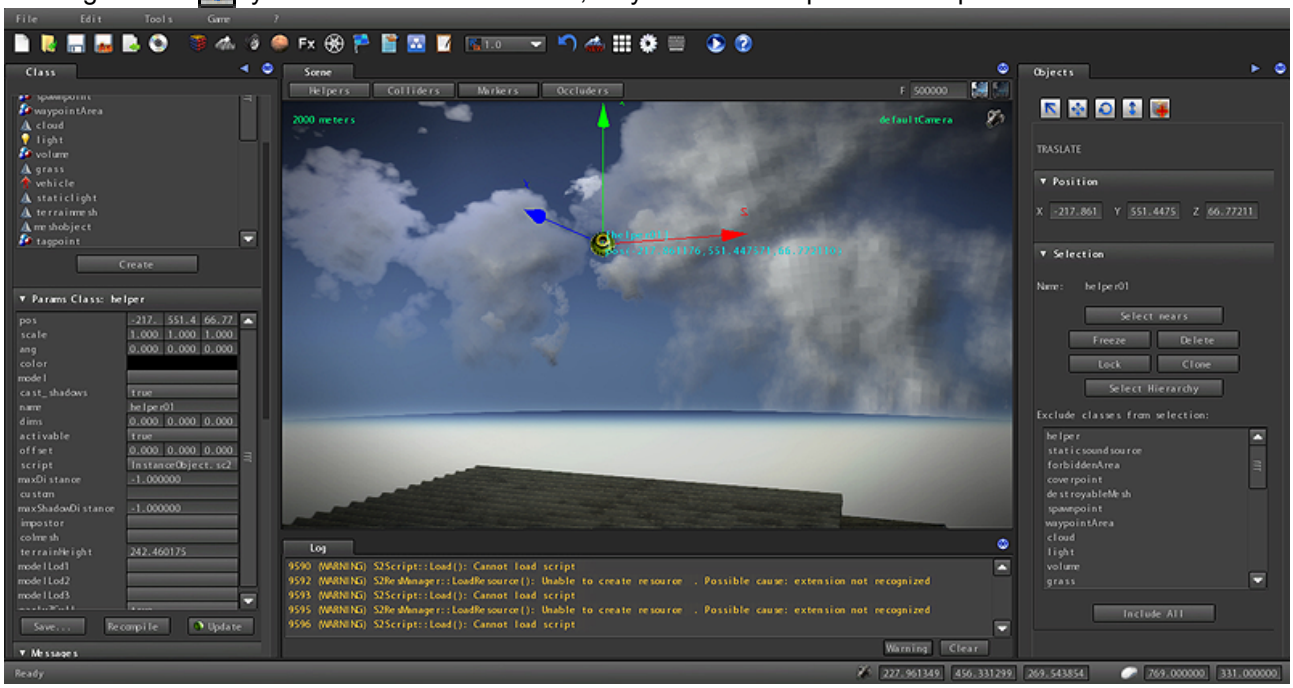
choose the ***Instantiate.sc2*** script created before:



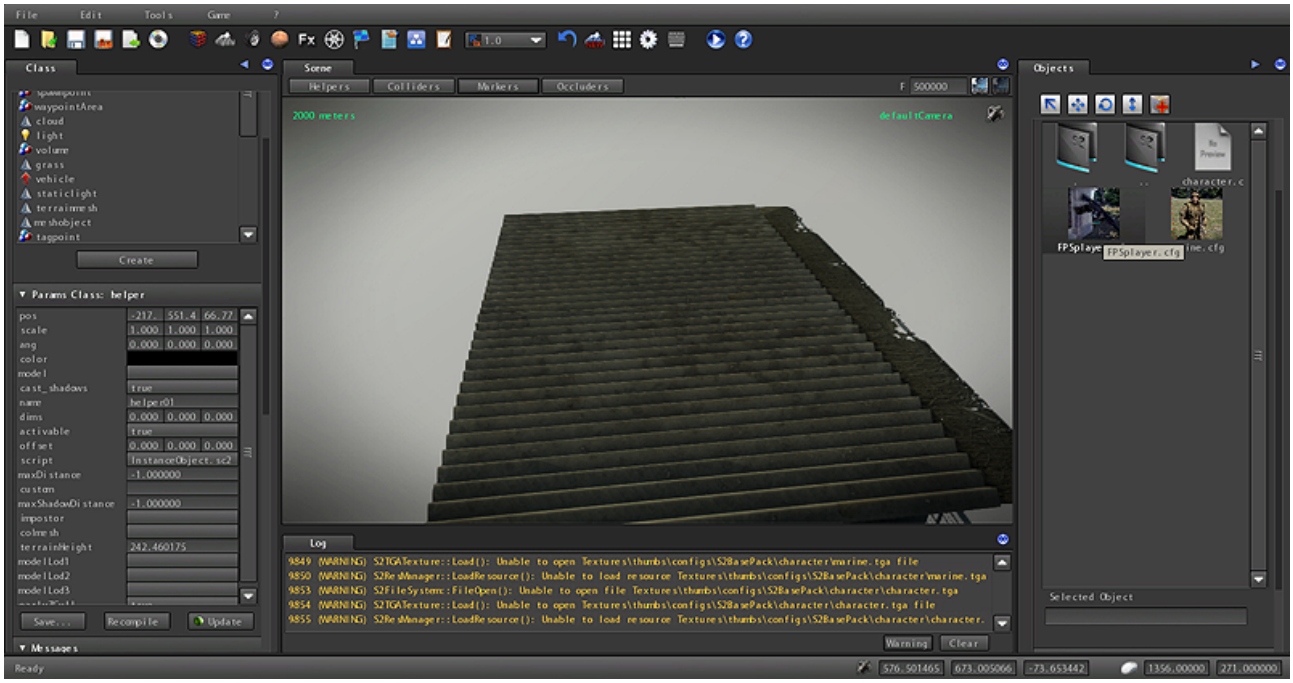
Click on a point into the scene to insert the helper. Then click again to "**Create**" (*CreateObject*) button to exit from "create mode".

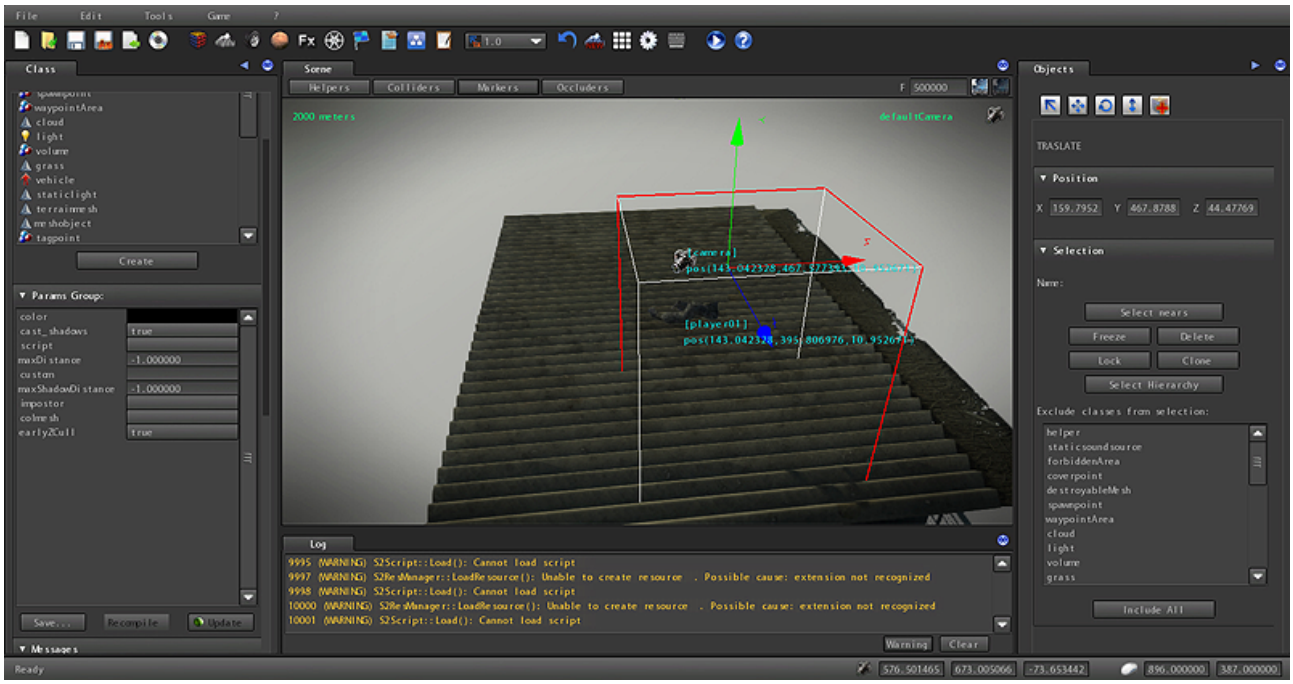
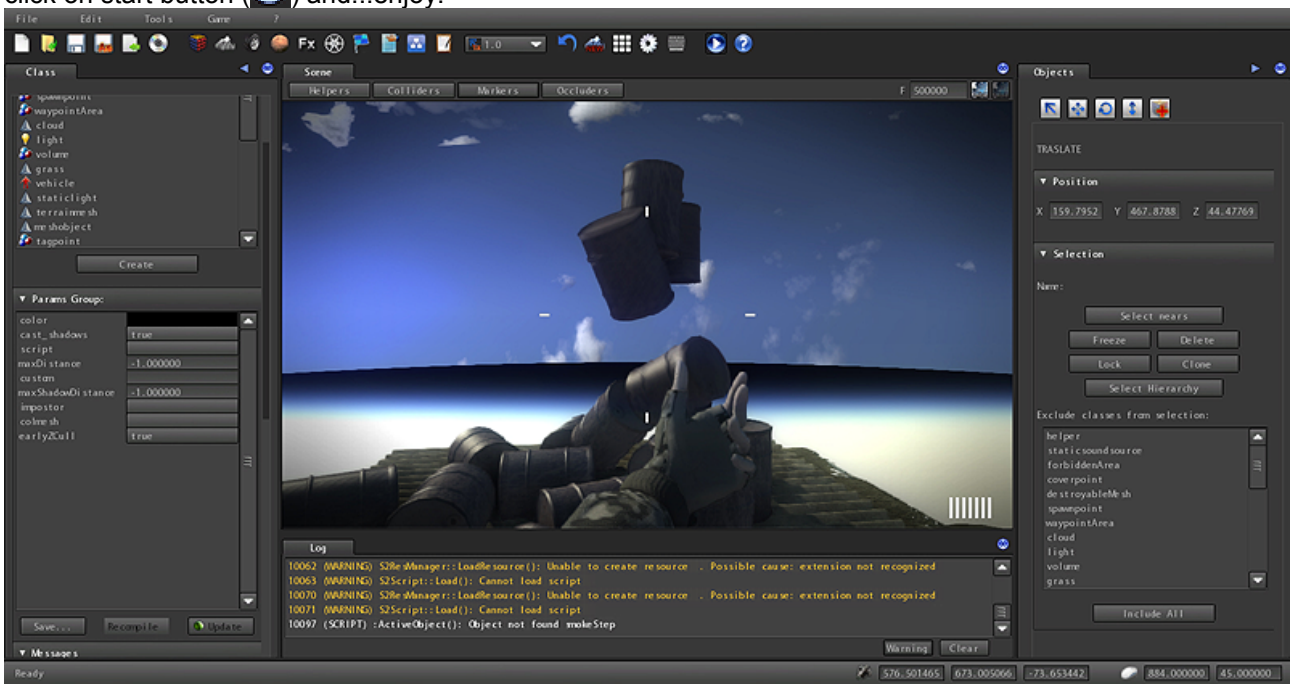


Clicking on icon you can access traslate tool, so you can better place the helper:



Now insert player character to start the game and view the effects of the script (player character will insert automatically the camera that will let you to “view” during the game simulation):





click on start button ( ) and...enjoy!