

3DS MAX TO CryENGINE3 TUTORIAL:

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This tutorial assumes that the **Crytiff plugin** for Photoshop and **CryENGINE3 Exporter** for 3ds Max 2012 are installed. Find a link to the official Crydev instructions the course web page

http://benv2423.rosamondkember.com/course_info/course_outline.html

1. Choose and download one of the 3 preselected houses from the **BENV2423 Course folder**
2. Save folder within **Objects** folder of your FreeSDK, i.e.



C:\Program Files (x86)\Electronic Arts\Crytek\BENV2423v3_4_0_3696_FreeSDK\Game\Objects\barcelona_pavillion

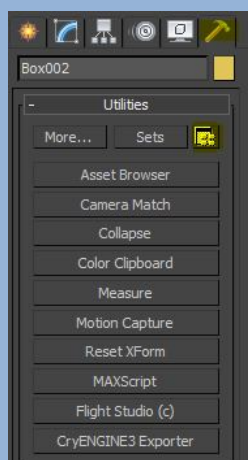
IN 3DS MAX 2012:

3. Open up 3ds Max 2012. A **CryEngine Settings** window should pop up. In here you should check that the exporter is pointing to the correct rc.exe, ie

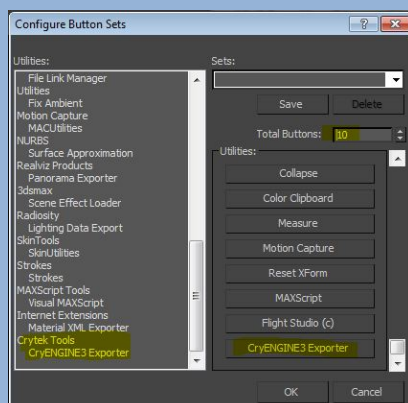
C:\Program Files (x86)\Electronic Arts\Crytek\BENV2423v3_4_0_3696_FreeSDK.

If the Engine State is red your exporter hasn't successfully found the rc.exe. Unlike Sketchup and Playup tools where you navigate to the rc.exe itself within the bin32 folder, here you **only need to navigate to the FreeSDK folder**.

4. Click on Utilities  and press Configure Button Sets .



5. Change the Total buttons to 10, scroll to the bottom and drag the CryENGINE3Exporter onto the new button:



1

6. **File > Open**, navigate to the corresponding 3ds Max file, i.e.

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C:\Program Files (x86)\Electronic

Arts\Crytek\BENV2423v3_4_0_3696_FreeSDK\Game\Objects\barcelona_pavillion.max.


The geometry in this file has been imported from Sketch Up, and needs to be cleaned up and remodelled before it can go into Crysis.

7. Alt + middle mouse button to rotate, middle mouse button to pan.


8. Check that the **Coordinate System** is compatible with Crysis:

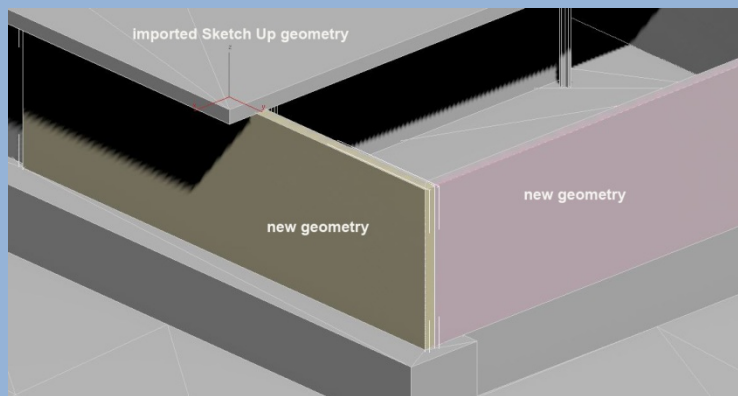
a) go to Customize > Units Setup... > System Unit Setup > **1 Unit = 1.0 Centimetres** > Click OK.

b) under Display Unit Scale choose **Metric and Centimetres**. Click OK.

9. Right-click on Snaps Toggle  Tick Vertex. From time to time other options such as Grid Points and Pivot are handy too.

10. Click on **Snaps Toggle** to toggle snaps on. **S** is the keyboard shortcut.


11. In the Create tab  click on Box. Use the SketchUp geometry's vertices to snap your new max box geometry to, like this:



HELPFUL TIPS:

- F3 will toggle between Realistic and Wireframe rendering, making it easier to fine the correct vertex to snap to.
- Pressing I on the keyboard will centre over wherever your mouse cursor is, making zooming in over a particular detail possible.
- Alt + Q with an object selected will isolate it, making it easier to work with.

12. Repeat 10.

13. Press **H**, or Select By Name  and select your 3 new boxes. (Box001 , Box002, Box003) Press **Alt + Q** to isolate them.

IN PHOTOSHOP:

14. Go to <http://www.cgtextures.com/> and select and download 3 different tiled materials. These will all need to be resized and saved as **CryTiffs** in Photoshop, in order to be compatible with Crysis.

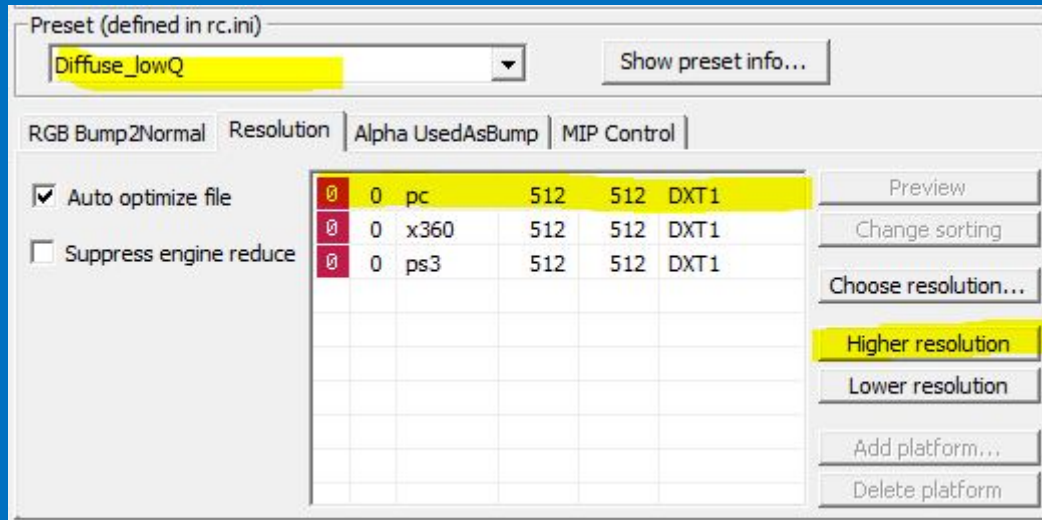
15. Open up Photoshop. Drag and drop in the cgtextures jpegs.

16. To resize press **Ctrl + Alt + I** or go to Image > Image Size...

17. Make the width and height to be either 512 x 512, or 1024 x 1024 or 2048 x 2048 (powers of 2) for each texture.

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18. **Ctrl + Shift + S** or File > Save As, navigate to ...Objects**barcelona_pavillion**,
19. save the file with no gaps or symbols in the name ie **marble001**
20. Select **CryTIFFPlugin** within the **Format** drop-down options and hit Save.
21. Select **Diffuse_lowQ** as the Preset. Highlight the top line where it says 0 pc 512 512 DXT1 and click **Higher resolution** *twice*:



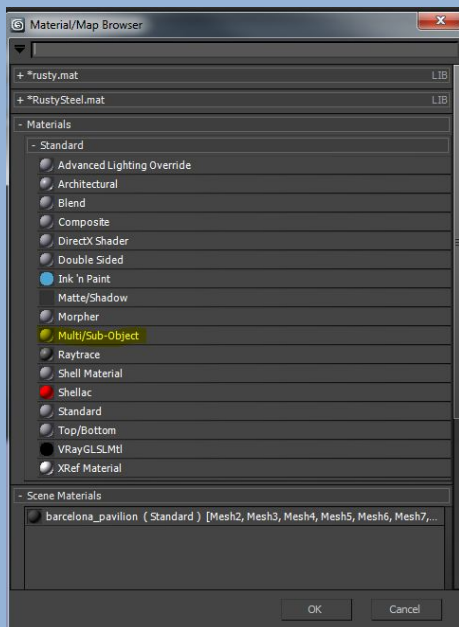
22. Repeat Steps 19 – 21 for each texture.

IN 3DS MAX:

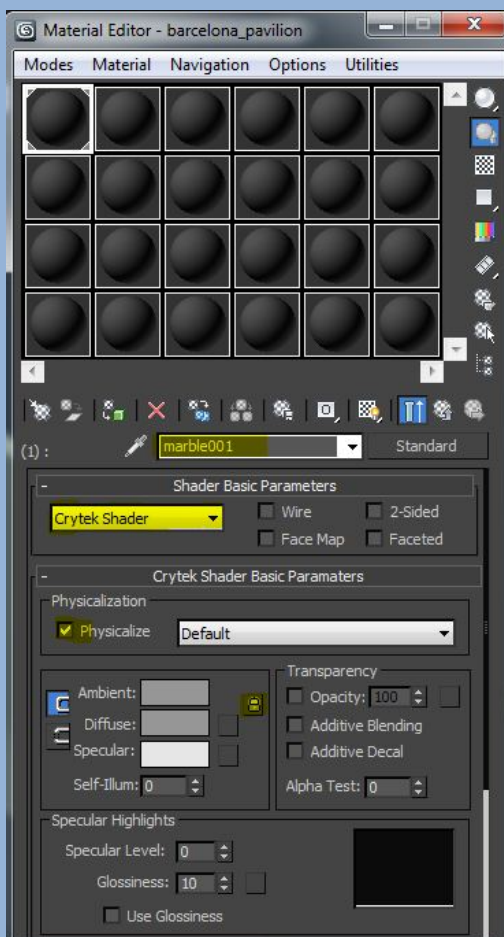
23. Press **M** to bring up the Material Editor.
24. I use the **Compact Material Editor** (Modes > Compact Material Editor)
25. Here we need to create **one material file** that will store all our different textures together. A material file can have up to 32 different texture slots. You can use this material file on all your models (as opposed to Sketch Up where Play Up tools exports one material file per geometry.) To do this, our material needs to be a **Multi/Sub-Object** material

26. Select any material slot and click on the **Standard** button

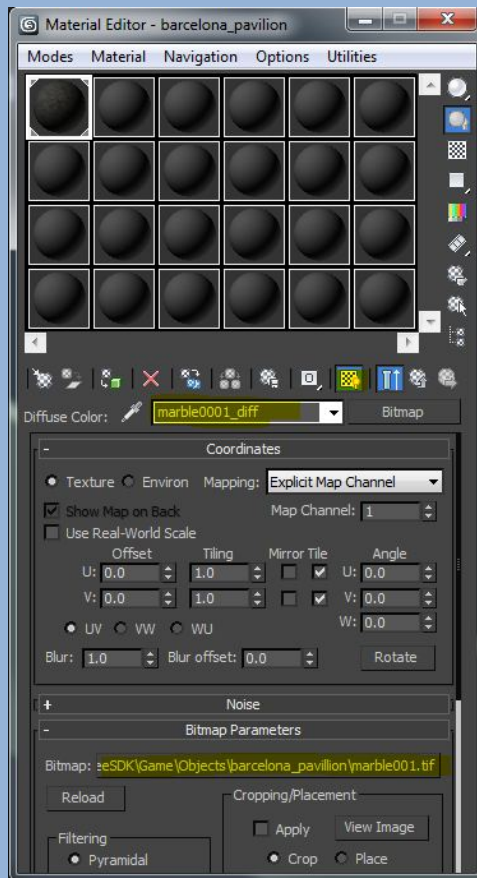
27. Choose **Multi/Sub-Object** and hit OK:




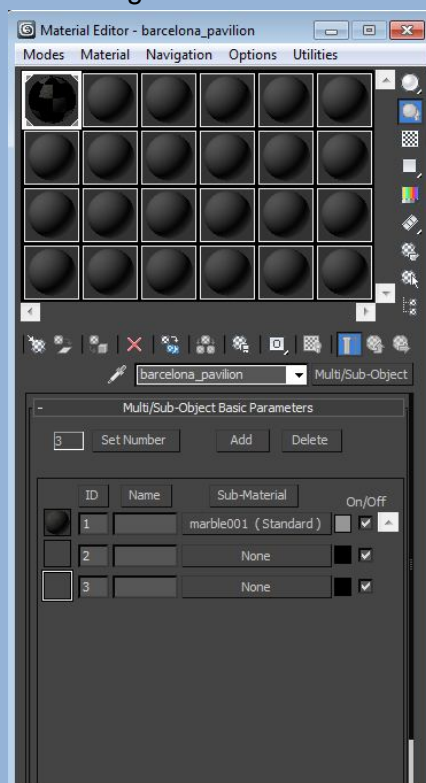
28. Choose Discard old material
29. Rename your material file to **barcelona_pavillion** - no spaces or symbols
30. The number of texture slots is set to 10 as default. We only need 3 for now, we can add more later as we need them. **Set Number** and change to 3.
31. Under the first material ID press **NONE**. This time choose **Standard**
32. By default 3ds Max's naming convention adds spaces and hashtags into your material names. Rename appropriately, i.e. marble001
33. Under **Shader Basic Parameters** choose Crytek Shader
34. Tick **Physicalize** so you won't be falling through your geometry in Crysis.
35. Toggle the lock off in order to edit the Diffuse map – your Material Editor window should look something like this:



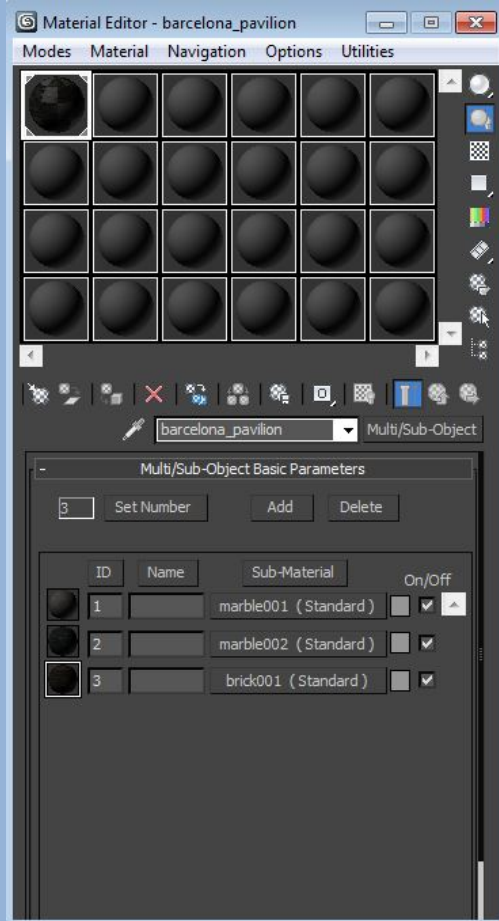
36. Click on the box next to the Diffuse slot and select **Bitmap**
37. Navigate to your Objects\barcelona_pavillion folder and choose one of your tiff 3 textures.
38. Rename your diffuse texture slot ie **marble0001_diff**
39. Click on **Show Shaded Material** in Viewport so the material will be visible in Max. your Material Editor should look like this:



40. Press Go to Parent  to go to the top level of your material – your Material Editor should look something like this:



41. We need to add the other 3 textures – repeat steps 31 – 40.
42. Your finished multi/sub object material should look something like this:

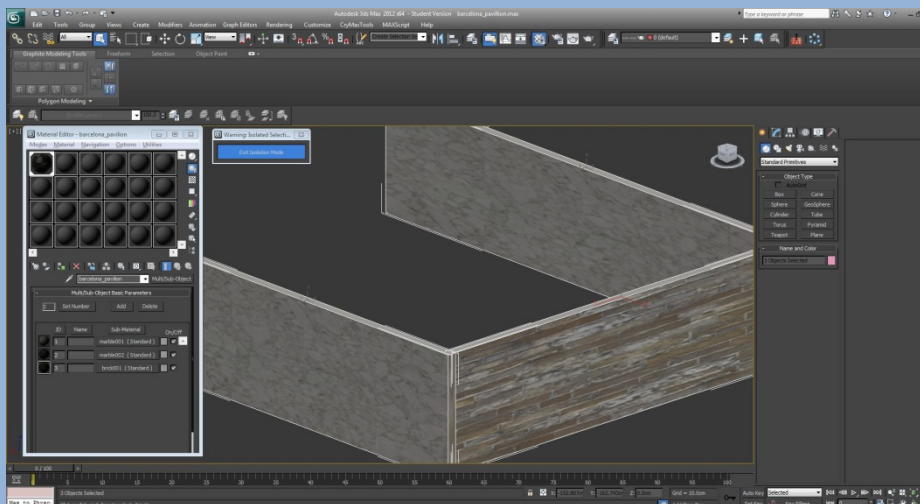


43. Select your 3 boxes in your viewport.

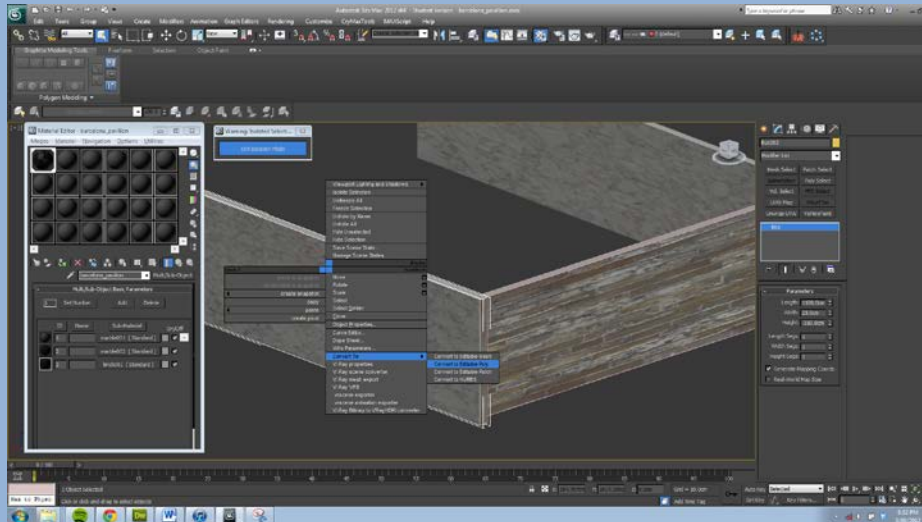


44. In the Material Editor click **Assign Material to Selection**

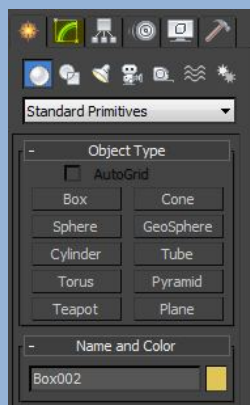
45. Your boxes should have the 3 materials randomly assigned to them, with the textures stretched across each face.



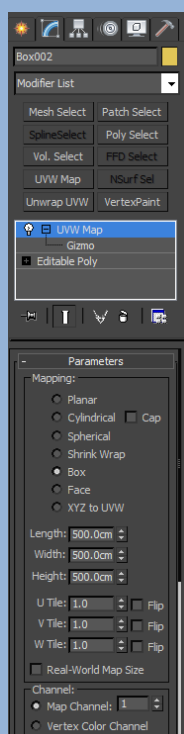
46. They need to be **UVW Mapped**, and the correct textures need to be assigned to the right faces.
Select one of the boxes and right-click anywhere in the Viewport and select **Convert to Editable Poly**:



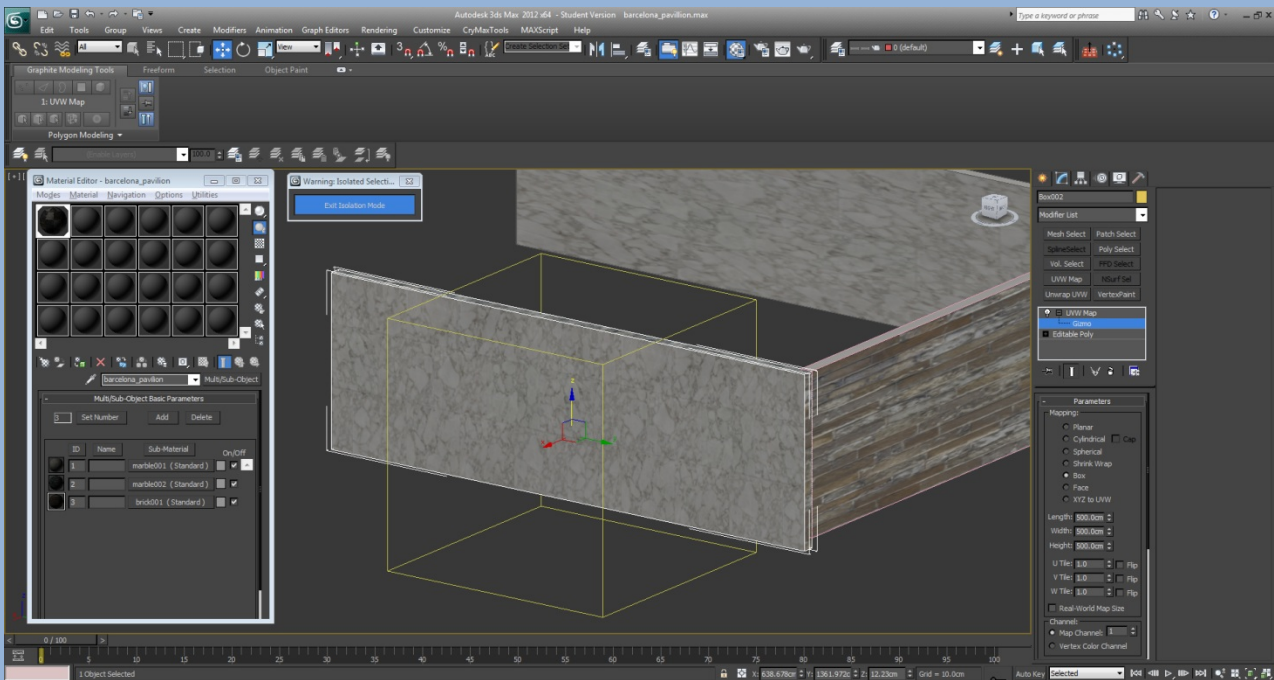
47. Click on the Modify Tab



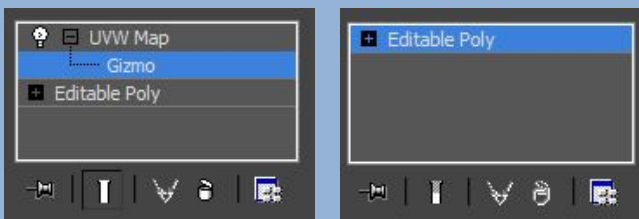
48. Add a **UVW Map** modifier
49. Choose box mapping, test an appropriate tiling size:



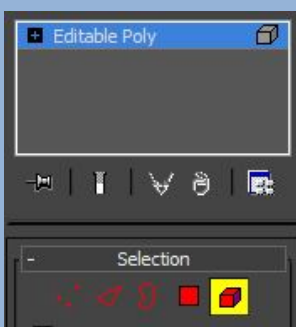
50. With the **Move** tool selected, use the **Gizmo** to play around with the positioning of your texture⁸ on the box's faces:



51. When you're happy with the mapping, with the box object selected, **right-click and Convert to Editable Poly** to collapse the Modifier stack. The UVW Map modifier should now have been collapsed down into the Editable Poly:

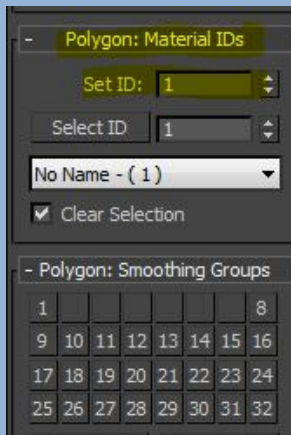


52. To make the box mapped in just one of the three textures, we need to tell its faces which Material ID to assign to each face. With the box selected, press **Element**.

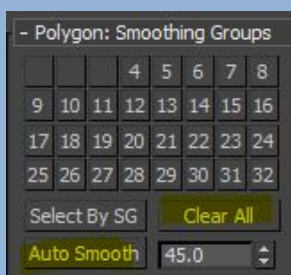


53. The box should be highlighted in red, indicating that all its faces have been selected. You can press **F2** to toggle off and on the red highlight – helpful when aligning textures on faces.

54. Under Polygon: Material IDs, type in 1, 2 or 3 into the **Set ID:** box, depending on which texture⁹ you want to use:

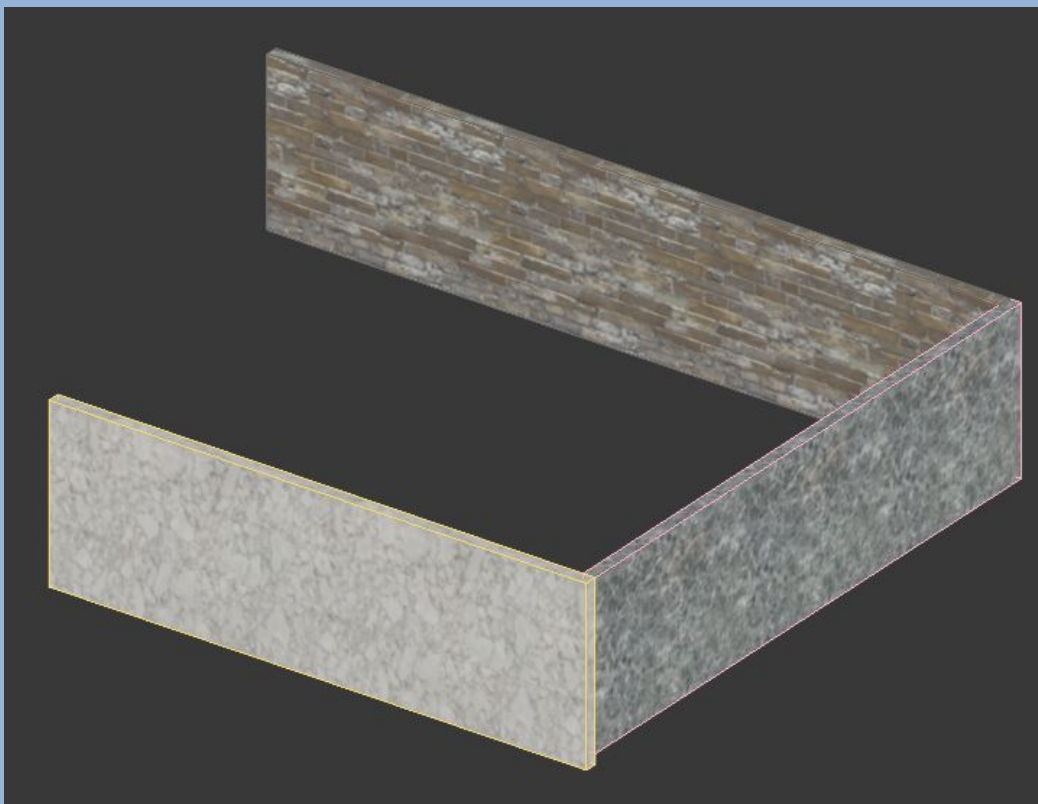


55. Under Polygon: Smoothing Groups, press **Clear All**, and then **Auto Smooth**:




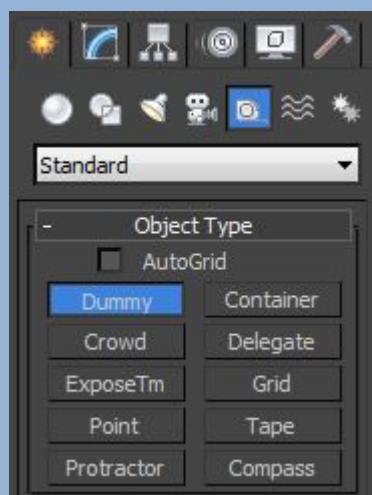
56. This box is now ready to export. Repeat steps 48 – 57 on the other two boxes

57. Your 3 boxes should now look like this:



58. To make it easier to align these 3 boxes correctly in Crysis we can link all 3 boxes to a **dummy helper**. The 3 boxes will then all use one axis – based on the location of the dummy helper.


59. To add a dummy, go to the create tab , and under helpers, select **Dummy**:



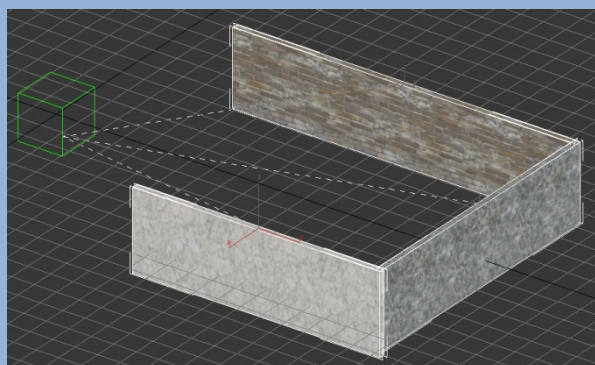
60. Create a dummy anywhere in the Viewport. Right-click to finish. Reposition using the world coordinates at the bottom of the 3ds Max window to be at **0,0,0**:



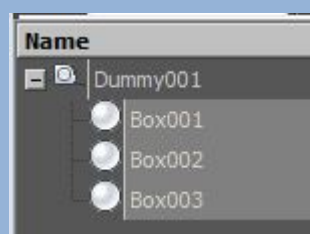
61. Select all 3 boxes by holding down **CTRL** and clicking on each one.

62. Press Select and Link , hover over one of the 3 boxes and while holding down the left mouse button move your mouse over the dummy.

63. Three white dotted lines should appear between the 3 boxes and the dummy. The dummy should turn white to indicate the boxes have been successfully linked:



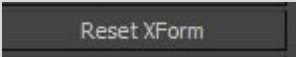
64. To check, Press H. If your boxes are linked to the dummy, they should appear like this in the list:



65. To stop linking, press **Select Object**, or **Select and Move**:



66. Select the dummy in the viewport and rename it to something sensible i.e. **barcelona_pavillion**

67. **Only select the 3 boxes**, and in Utilities, press **Reset XForm**  Right-click in the Viewport and convert to Editable Poly.

If you don't Reset the Xform and you have been rotating and scaling your objects in 3ds Max, you will run into all sorts of problems in Crysis.

68. In Material Editor, select and copy your material's name, i.e. barcelona_pavillion

69. In the **CryENGINE3 Exporter**, click **Create Material**.

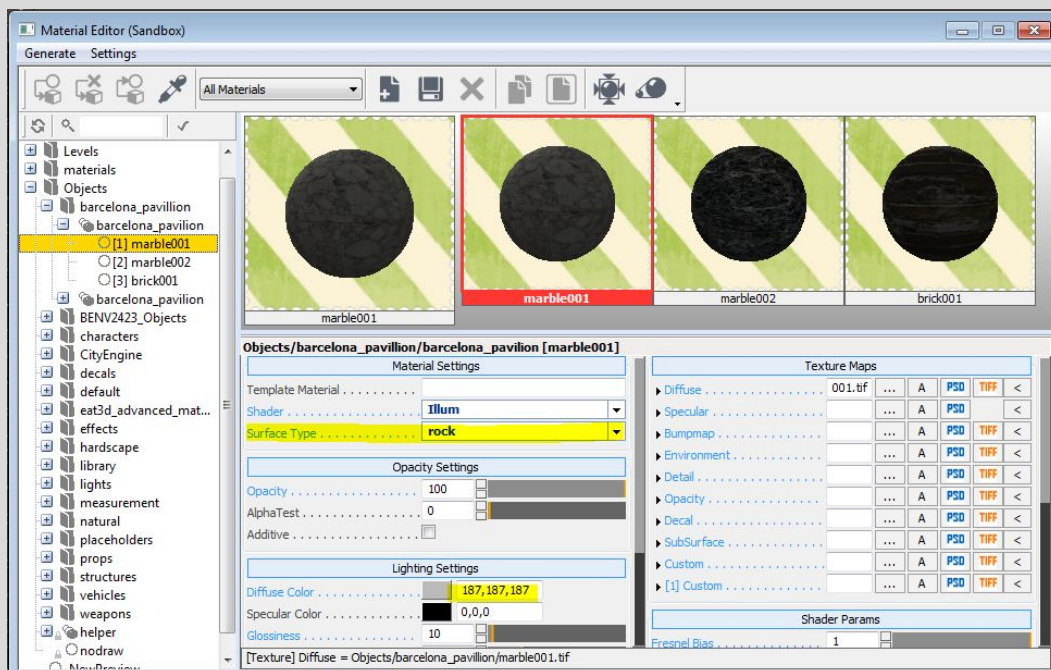
70. If Crysis is not already open you will have to log in and press **Create Material** again.

71. A Save as window should appear. Navigate to where your 3ds Max file is saved to, i.e.

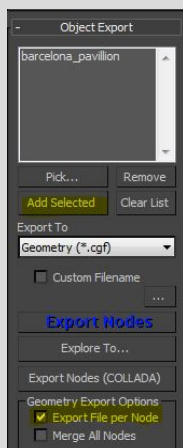
C:\Program Files (x86)\Electronic

Arts\Crytek\BENV2423v3_4_0_3696_FreeSDK\Game\Objects\barcelona_pavillion

72. In the Sandbox Material Editor, assign a Surface Type to each texture, and change the Diffuse amount of each to **187,187,187**:



73. Back in 3ds Max, select the dummy and press **Add Selected** under **Object Export** in the CryENGINE3 Exporter:

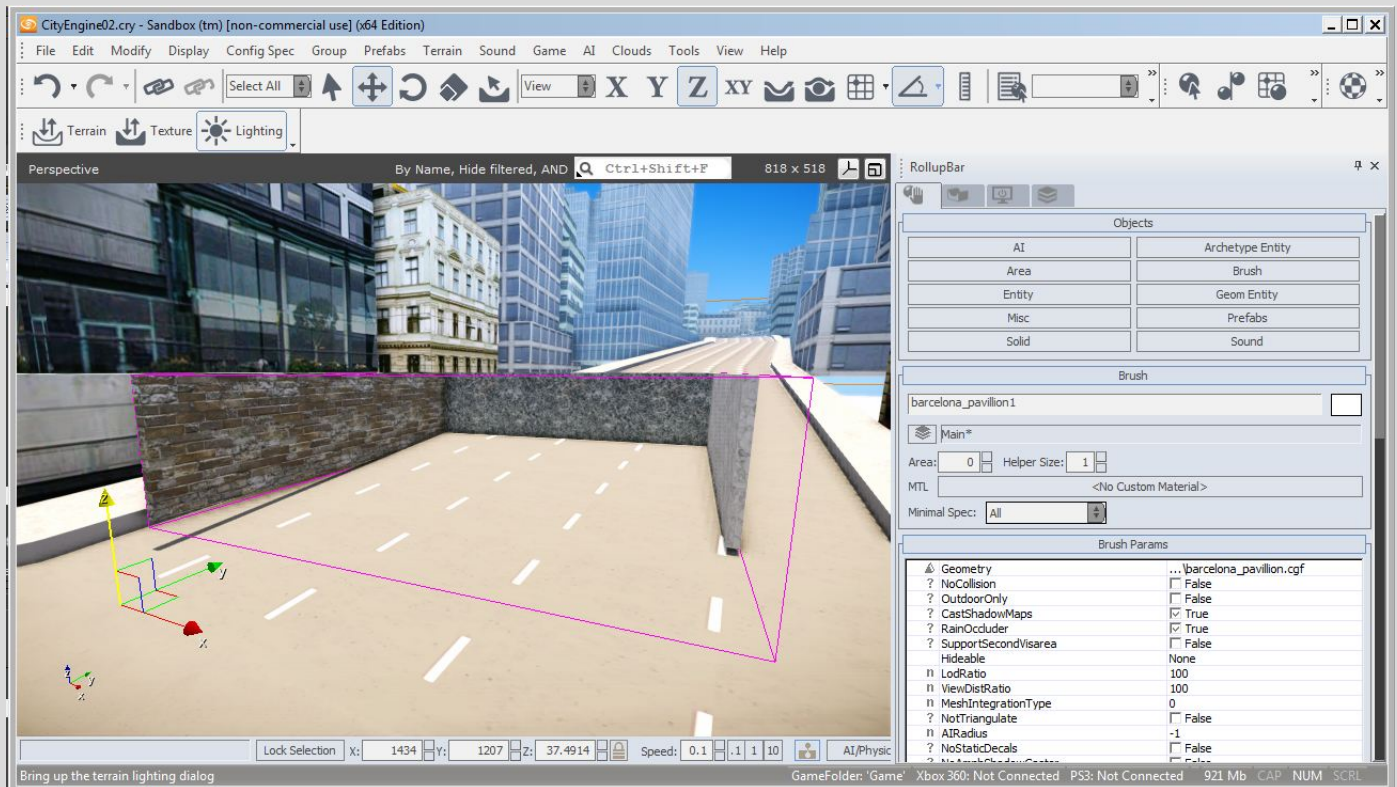


74. Tick **Export File per Node**

75. Press **Export Nodes**.

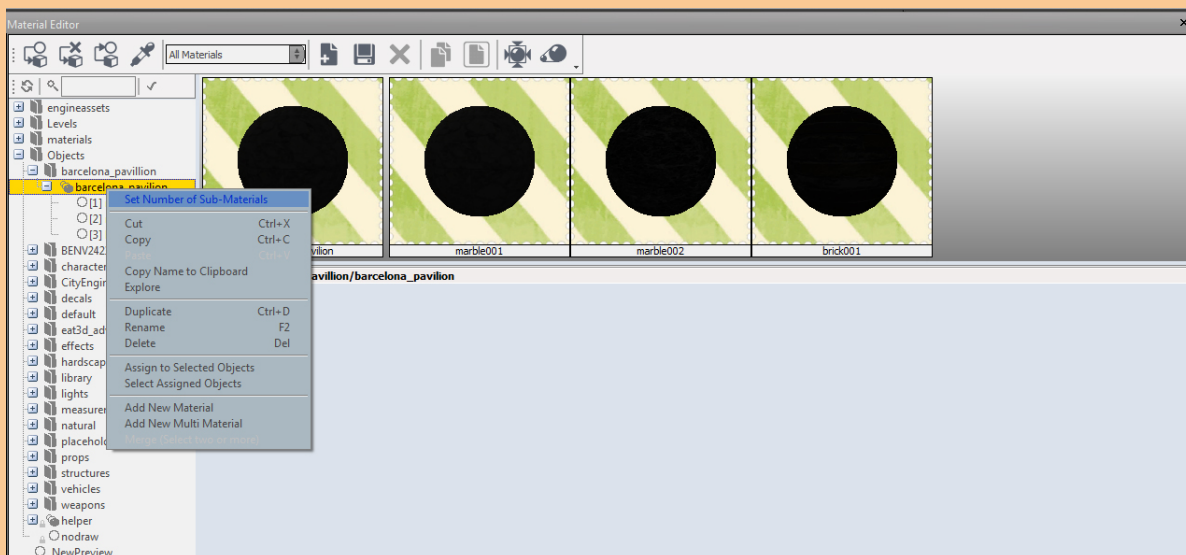
Your 3 boxes should show up in Crysis at the correct scale:

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EXTRA:

1. To add more textures to your material file, right click on the top level of your material in Sandbox's material Editor and click on **Set Number of Sub Materials**



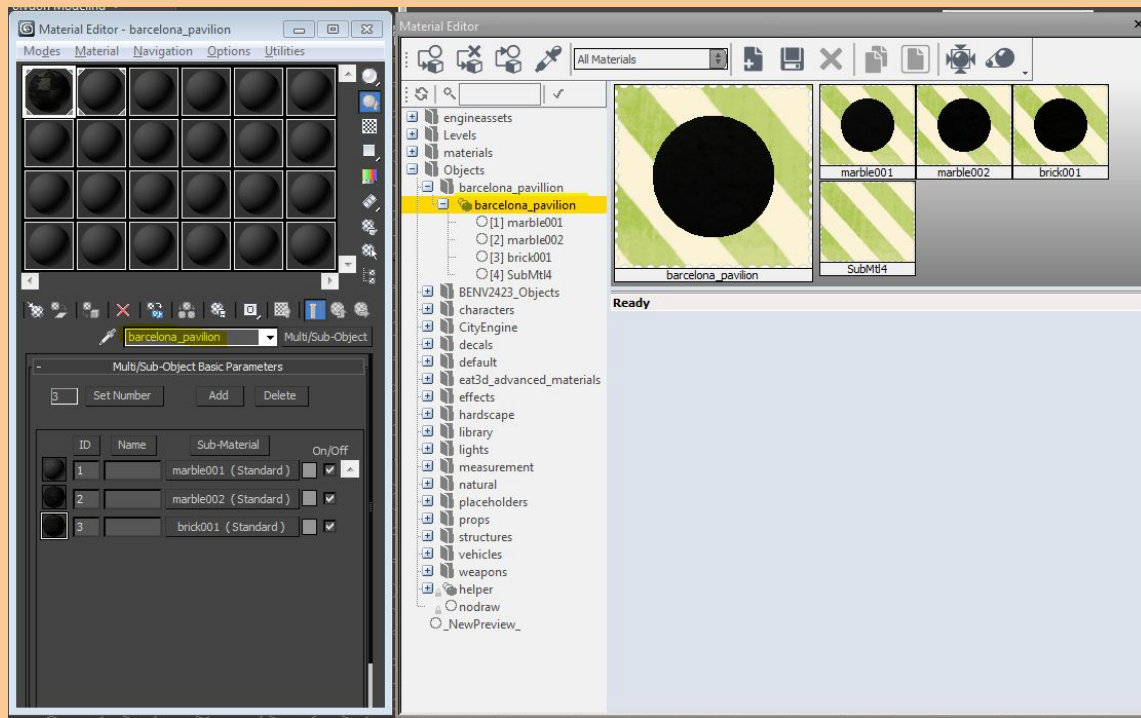
This is where you should now assign new textures as you need them.

2. To work with your new textures in 3ds Max, you need to use the Sync Material

Sync Material

function of the CryENGINE Exporter.

3. With the top level of your material selected in 3ds Max, and in Sandbox:



Press Sync Material

Sync Material

4. When this window pops up, press Yes. You should now see your new sub material.

