Subject: Non Manifold... but no non-manifold found in Blender
Posted by winglessbuzzard@gmail.com on Mon, 21 Sep 2009 03:33:08 GMT
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In the attached file, I cannot find a non-manifold area in the object Cube.003. I've exported it as x3d and attempted to upload it to shapeways twice. Each time I get an error back saying the object is non-manifold. Is the .blend --> .x3d format conversion causing it to be non-manifold?

File Attachments

1) IR_Casing_Final4.blend, downloaded 97 times

Subject: Re: Non Manifold... but no non-manifold found in Blender
Posted by crsdfr on Mon, 21 Sep 2009 04:31:15 GMT
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Some of the bottom facing normals are around the wrong way

File Attachments

1) normals.JPG, downloaded 337 times

Subject: Re: Non Manifold... but no non-manifold found in Blender
Posted by winglessbuzzard@gmail.com on Mon, 21 Sep 2009 12:13:03 GMT
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How do I find the inverted normals and fix them? I couldn't find any 'inverted normals' tutorial on this site. I cannot identify any inverted normals in Blender (unless I'm doing something wrong, which is very likely).

Subject: Re: Non Manifold... but no non-manifold found in Blender
Posted by afrodri on Mon, 21 Sep 2009 16:06:34 GMT
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I'd recommend checking out MiniMagics - its a free program which does a good job of finding inverted normals and non-manifold edges.

Subject: Re: Non Manifold... but no non-manifold found in Blender
Posted by winglessbuzzard@gmail.com on Mon, 21 Sep 2009 16:58:12 GMT
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Are you sure that MiniMagics still allows editing? I downloaded and installed the program and it refers me to "Magic RP" to do all my editing/fixing. Or should I use minimagics just for finding the problems and edit the objects in Blender.

Subject: Re: Non Manifold... but no non-manifold found in Blender
Posted by afrodri on Mon, 21 Sep 2009 17:20:54 GMT
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MiniMagics doesn't do any fixing itself, but it does a good job of displaying where the inverted normals or bad edges are.

Subject: Re: Non Manifold... but no non-manifold found in Blender
Posted by winglessbuzzard@gmail.com on Thu, 24 Sep 2009 18:20:53 GMT
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Thanks guys! Minimagics is awesome!!!.. I wish they could build a Minimagics type script into Blender. Anyway, I got it fixed and uploaded, thanks!

Subject: Re: Non Manifold... but no non-manifold found in Blender
Posted by Tommy_2Tall on Thu, 24 Sep 2009 21:03:53 GMT
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Another useful tip:
configure Blender to draw the face normals when editing the file.
That way you can see them in blender and in this case you would probably have to load/import the x3d file and check the results as well.

Go to Editing mode and open up the mesh editing buttons panel.
In the Mesh Tools More section there's a button labeled "Draw normals". Make sure it's selected/active.
The normals should point out from the "solid material area".

I use it all the time to make sure that the model won't spaz out when/if I add the SubSurf modifier.
(If you see a face normal where there should just be a face edge you have a face that is not

visible to the eye but it effects the subsurf division quite clearly.. a common problem when a noob like me tries to extrude a face/edge and forgets to move it away from its original location)

The "Draw Vnormals" button does the same for the vertice normals, which may or may not be useful...

Subject: Re: Non Manifold... but no non-manifold found in Blender
Posted by clintbellanger on Thu, 24 Sep 2009 23:25:27 GMT
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(in Blender)

With some meshes, the option "Recalculate Outside Normals" cleans up these flipped faces.

Select the mesh, [tab] to enter Edit mode. Click the "Mesh" menu on the 3D viewport, then Normals -> Recalculate Outside.

Doesn't work for all meshes, but manifold meshes should work most of the time.