
Subject: inverse normals

Posted by [cmcmorel](#) on Wed, 01 May 2013 15:01:28 GMT

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I'm a student in architecture and the attached file is an attempt to create part of my physical model - the part I would have a hard time building with sticks or wire or chipboard.

Using Netfabb, I've worked manually to reverse the normals of the red faces. Now I'm left with the red faces on the helical truss, but the amount of work to reverse all these tiny faces is tremendous and I was wondering if you knew of a software that can do that for me. Netfabb identifies all these faces and colors them red, why can't it reverse them as well?

The trick on that helical truss is that it's made of hollow tubes so there might be inverse normals within the truss itself but I can't see them.

I'm happy to turn that truss into a filled tube (or rod) if that helps with the 3d printing (although I realize it would be more expensive).

I appreciate your help and advice on this matter!

File Attachments

1) [PhysicalModel3.stl](#), downloaded 33 times

Subject: Re: inverse normals

Posted by [Youknowwho4eva](#) on Wed, 01 May 2013 15:12:27 GMT

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Have you tried Meshlab? Also here's a good read for fixing your model.

http://www.shapeways.com/tutorials/how_to_use_meshlab_and_netfabb

Subject: Re: inverse normals

Posted by [cmcmorel](#) on Wed, 01 May 2013 18:17:42 GMT

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I did use the link and followed the steps, but Netfabb doesn't fix the "invalid orientation". It only colors the faces red. and since my model isn't totally red, it's not helpful.

I used Meshlab in the first step (to convert to stl), but not to fix the model. will try if it's helpfull.

Youknowwho4eva wrote on Wed, 01 May 2013 15:12Have you tried Meshlab? Also here's a good read for fixing your model. http://www.shapeways.com/tutorials/how_to_use_meshlab_and_netfabb

Subject: Re: inverse normals
Posted by [JACANT](#) on Wed, 01 May 2013 19:04:14 GMT
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What software did you use to create the original?
It may be easier to fix by someone if you upload the original file.

Subject: Re: inverse normals
Posted by [Youknowwho4eva](#) on Wed, 01 May 2013 19:11:03 GMT
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Are you sure it's invalid orientation and not self intersections? It doesn't turn red for me till I detect self intersections.

Subject: Re: inverse normals
Posted by [stonysmith](#) on Wed, 01 May 2013 19:43:10 GMT
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Try also running it thru <http://cloud.netfabb.com>

Subject: Re: inverse normals
Posted by [cmcmorel](#) on Thu, 02 May 2013 20:23:40 GMT
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I used ArchiCAD.
But I think I figured out what the problems were. I replaced a couple of objects by solid morphs and I think it took care of the problem.

Subject: Re: inverse normals
Posted by [cmcmorel](#) on Thu, 02 May 2013 20:31:22 GMT
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I just did that after looking for the solution to having too many shells.
I'm finally good with:
-0 Holes
- 0 Border edges

- 0 Invalid orientations
- length of within tolerance
- Closed Surface

However, I'm not sure where to check that I have a Positive Volume.
And I have 108 shells.

I still have many degenerated faces based on the Netfabb view settings.
but it doesn't seem to be a problem from what I read in the tutorial.

thank you all for your help!
I hope it's the end of manipulating that file!

Subject: Re: inverse normals
Posted by [stop4stuff](#) on Sat, 04 May 2013 22:42:51 GMT
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Sorry, a bit late here. Accutrans3D has a simple 'Preset All' normals function and fixes exactly your original issue in a click, providing there's no other integrity issues,

Paul
