
Subject: manifold, normals, strange texture
Posted by [fourdee](#) on Mon, 31 Aug 2009 21:20:47 GMT
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Hello,

I'm having a bunch of trouble with my models... I'm using Cheetah3D.

Here is my process:

- Create type in Illustrator
- Convert to shape
- Put holes at top
- Make compound path to punch holes
- Save as SVG
- Import SVG into Cheetah
- Put SVG path into extrude object
- Save as STL

When I import "fourdee.stl" into Shapeways, it works, but the image and 3d view shows strange lines across the front, but in Cheetah, it's perfectly flat.
See model 49069

When I import "fourdee-linear.stl" into Shapeways, it tells me only manifold objects can be printed.
This is the same as the previous object, except I changed the bevel to linear.
See model 49070

When I import "helvetica2.stl" into Shapeways, it tells me the object has inverted normals.

I've been messing with all of this for a few days now, so I've lost track of everything I've done trying to get things to work...

File Attachments

1) [fourdee.zip](#), downloaded 176 times

Subject: Re: manifold, normals, strange texture
Posted by [fourdee](#) on Thu, 03 Sep 2009 15:00:14 GMT
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Shapeways guys? Anyone?

Subject: Re: manifold, normals, strange texture
Posted by [Youknowwho4eva](#) on Thu, 03 Sep 2009 17:23:31 GMT
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as far as the lines on the surface, all of them show that. The best way is to open your stl in meshlabs. thats how it will look

Subject: Re: manifold, normals, strange texture
Posted by [afrodri](#) on Sat, 05 Sep 2009 03:32:19 GMT
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There might be something wrong with the STL file, As MiniMagics won't open it, though MeshLab did. Perhaps try a different format?

Subject: Re: manifold, normals, strange texture
Posted by [bartv](#) on Sun, 06 Sep 2009 12:55:53 GMT
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Hi,

the striping you see after uploading 'fourdee.stl' is due to the rendering algorithm that we use - it'll try to smooth the surface of your object. The printed result will follow the exact geometry though, so it will print out just fine.

I also inspected the beveled object and I'm sorry to say that Cheetah made quite a mess out of that one. I tried to fix it for you but couldn't clean out all the self-intersections and open faces it had left behind

Cheers,

Bart

Subject: Re: manifold, normals, strange texture
Posted by [fourdee](#) on Sun, 06 Sep 2009 16:49:21 GMT
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Can you suggest an easy 3D app I could use that is like Cheetah but does things correctly? I've tried Blender but it makes no sense to me

Subject: Re: manifold, normals, strange texture
Posted by [iguffick](#) on Sun, 06 Sep 2009 18:09:36 GMT
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I know where you are coming from with Blender.
I first looked at Blender years ago, found I could do nothing with it, because I couldn't understand the interface, and give up.
I had another try about a year ago, ran through a few tutorials, bought a few books. Now I love Blender and find I can be quite productive. I've probably got a lot to learn still, but I know I can get things done and if I have problems with something - there will be a tutorial or forum I can turn to.

So it is worth sticking with to give it a go.

For a total beginner I would recommend "Blender for dummies" by Jason van Gumster. You can also learn the basics from the many text or video tutorials around.

Subject: Re: manifold, normals, strange texture
Posted by [WiKKiDWidgets](#) on Mon, 07 Sep 2009 12:24:59 GMT
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You have touched on a common chord with regards to Blender. But i have to jump to its defense simply because it is so much more than a modeling tool. Yes, the interface is cumbersome, and the learning curve is pretty steep. But there is so much documentaion and tutorials out there to help you. In addition to multiple forums (Including this one) where you can ask for assistance for various problems. Folks like me and Bart (Shapeways employee) have a great deal of experience with Blender and are more than willing to assist.

Don't give up!

Here are some great sites to check out learning the basics of Blender:

<http://blenderartists.org/forum/index.php>
http://en.wikibooks.org/wiki/Blender_3D:_Noob_to_Pro
<http://blendernewbies.blogspot.com/>
<http://blenderunderground.com/learning-blender-3d/>

Subject: Re: manifold, normals, strange texture

Posted by [bartv](#) on Tue, 08 Sep 2009 18:19:37 GMT
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I'd also like to shamelessly plug my personal Blender newssite:

<http://www.blendernation.com>

Cheers,

Bart

Subject: Re: manifold, normals, strange texture
Posted by [afrodri](#) on Tue, 08 Sep 2009 19:14:33 GMT
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My biggest complaint with the Blender interface, is that once it becomes second nature, it bleeds over into other applications. Now I keep hitting 'A' to select and unselect things in Word or PowerPoint (well, Pages and Keynote...).

Subject: Re: manifold, normals, strange texture
Posted by [WiKKiDWidgets](#) on Tue, 08 Sep 2009 22:10:00 GMT
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bartv wrote on Tue, 08 September 2009 18:19 I'd also like to shamelessly plug my personal Blender newssite:

<http://www.blendernation.com>

Cheers,

Bart

DOH! How could I forget that one. Sorry B@rt!

hehe

Subject: Re: manifold, normals, strange texture
Posted by [WiKKiDWidgets](#) on Tue, 08 Sep 2009 23:14:34 GMT
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afrodri wrote on Tue, 08 September 2009 19:14My biggest complaint with the Blender interface, is that once it becomes second nature, it bleeds over into other applications. Now I keep hitting 'A' to select and unselect things in Word or PowerPoint (well, Pages and Keynote...).

I hear ya!

the best advice I can give when it comes to Blender...

Always: One hand on the mouse, one hand on the keyboard. Once you get down the keyboard commands (All 8.7 bazillion of them) Blender is a breeze!

Subject: Re: manifold, normals, strange texture
Posted by [Youknowwho4eva](#) on Wed, 09 Sep 2009 13:12:24 GMT
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I really need to start learning blender, I just don't have the time or patience right now. But what I've seen from it is amazing. I'm wondering though, is it capable of producing precise models? As you can tell from my models I use a very precise modeling program. But if Blender can do precise, maybe I can use learning it as a work thing get paid to learn it.

Subject: Re: manifold, normals, strange texture
Posted by [WiKKiDWidgets](#) on Wed, 09 Sep 2009 14:00:34 GMT
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Sure can mate. I make lotsa hop up parts for RC cars and stuff. Common for me to make bearing slots and all sorts of miniature doo-dads. Blender does not have a real world unit of measurement (like most 3D programs.) so I work under the assumption that one blender unit is equal to 1mm and use STL format. The basics are not that difficult to learn. the interface is confusing to the

uninitiated because it does so much more than just modeling.

You can make a full blown movie with Blender, Games, Physic demonstrations, Jurassic park 5!!
hehe

There are several consortiums out there tight now trying to implement CAD functionality into Blender as well.

Get in there! When you get stuck ask! There are 2 million or so users all over the world.

Here, download the Blender art magazine. That should get you drooling.

<http://blenderart.org/>

Subject: Re: manifold, normals, strange texture
Posted by [Youknowwho4eva](#) on Wed, 09 Sep 2009 14:57:30 GMT
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I'll have to check it out, I may have to export the models to my other software to verify dimensions. I'm American so mm are stupid with their logic of being related to real world things and not the dimensions of some kings foot. As long as it's better able to handle more complicated models. My Mayan pendent took me a few days because my software was struggling.

Subject: Re: manifold, normals, strange texture
Posted by [afrodri](#) on Wed, 09 Sep 2009 16:52:19 GMT
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Youknowwho4eva wrote on Wed, 09 September 2009 14:57 I'll have to check it out, I may have to export the models to my other software to verify dimensions. I'm American so mm are stupid with their logic of being related to real world things and not the dimensions of some kings foot. As long as it's better able to handle more complicated models. My Mayan pendent took me a few days because my software was struggling.

Because Blender is unitless, you can pretend one Blender Unit = 1 inch as well. The Shapeways STL upload allows you to specify 1 unit = 1 mm, 1 meter, or 1 inch.

Blender seems quite speedy, and does a good job of conserving memory.

Subject: Re: manifold, normals, strange texture
Posted by [Youknowwho4eva](#) on Wed, 09 Sep 2009 18:02:46 GMT
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I'm starting the tutorial videos now. Man learning sucks even when you're getting paid to do it.

Subject: Re: manifold, normals, strange texture
Posted by [fourdee](#) on Thu, 10 Sep 2009 05:47:47 GMT
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Can either of you tell me how I can import something from illustrator (arranged type) and extrude it? I suck at learning by reading random stuff... I just need to be nudged in the right direction...

Things seem sooo overly difficult in Blender...

Subject: Re: manifold, normals, strange texture
Posted by [iguffick](#) on Thu, 10 Sep 2009 08:59:48 GMT
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Youknowwho4eva wrote on Wed, 09 September 2009 13:12..... is it capable of producing precise models? As you can tell from my models I use a very precise modeling program. But if Blender can do precise

Check out :-
<http://www.rab3d.com/tutorial.html>

There are a few tutorials on precision mechanical modelling.
Once you figure out how to use the 3d cursor, it is very useful.
You can snap the 3d cursor to one vertice/object and then scale/rotate/etc another set of vertices/faces/objects.
When doing mechanical models my most used key combination is Shift-S to snap the 3d cursor.
Also learn how to use the 'Spin' button.

Regards,
Ian.

Subject: Re: manifold, normals, strange texture
Posted by [WiKKiDWidgets](#) on Thu, 10 Sep 2009 19:46:46 GMT

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fourdee wrote on Thu, 10 September 2009 05:47 Can either of you tell me how I can import something from illustrator (arranged type) and extrude it? I suck at learning by reading random stuff... I just need to be nudged in the right direction...

Things seem sooo overly difficult in Blender...

Nah, once you know its a breeze.

To import from illustrator, you use Import --> Path

this import supports several different file formats, so export from Illustrator accordingly.

Once you have it in Blender, if it is just an outline, then you will need to fill in the void. You can use {Shift+F} to add faces (A surface) to the outline.

Then, to extrude Blender uses {E} on your keyboard to accomplish extrusions.

Give that a go and let me know.

Subject: Re: manifold, normals, strange texture
Posted by [stannum](#) on Fri, 11 Sep 2009 02:01:40 GMT
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Or use the Extrude control of Blender curves (under F9 key panels). This also let's you control bevel and other things. You'll probably have to convert to mesh object type once done, via Alt+C.

Subject: Re: manifold, normals, strange texture
Posted by [fourdee](#) on Wed, 16 Sep 2009 05:15:47 GMT
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Quote:
To import from illustrator, you use Import --> Path

I imported an AI version 8 file of a path with no fill or outline and I couldn't see anything when imported... so the rest of this is for when I had a fill on the path...

Quote:
Once you have it in Blender, if it is just an outline, then you will need to fill in the void. You can use

{Shift+F} to add faces (A surface) to the outline.

Shift+F just made my object move around... nothing happened to my object

Quote:

Then, to extrude Blender uses {E} on your keyboard to accomplish extrusions.

E didn't do anything...

Quote:

Or use the Extrude control of Blender curves (under F9 key panels). This also let's you control bevel and other things. You'll probably have to convert to mesh object type once done, via Alt+C. F9 didn't do anything...

Ahhhh, this is so frustrating... what am I doing wrong?

File Attachments

- 1) [helvetica-path.ai](#), downloaded 116 times
 - 2) [helvetica.svg](#), downloaded 175 times
-

Subject: Re: manifold, normals, strange texture
Posted by [stannum](#) on Wed, 16 Sep 2009 22:46:54 GMT
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F9 changes the panels to Editing mode. If the object is of curve type, and you have it selected, then you will see the button to control Extrude setting (in Curve and Surface panel).

The exact steps are:

1. Import the svg with File > Import > Paths, select svg when asked (and default settings).
 2. The curve is already selected, so just go to Editing (click in header or press F9).
 3. Set Extrude to get a thick text (rotate the view to confirm).
-

Subject: Re: manifold, normals, strange texture
Posted by [fourdee](#) on Wed, 16 Sep 2009 22:50:48 GMT
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Should I be using the version with or without fill color? Do I still need to add a face?

Subject: Re: manifold, normals, strange texture
Posted by [fourdee](#) on Sat, 19 Sep 2009 17:44:51 GMT
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When I import just the path with no fill, I can't see anything or any effects I do.

When I import the path with the fill, attached is what I get. Not sure what to do about it...

File Attachments

1) [2009-09-19_1043.png](#), downloaded 125 times

Subject: Re: manifold, normals, strange texture
Posted by [stannum](#) on Sun, 20 Sep 2009 02:07:47 GMT
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I just used the helvetica.svg you attached above and it gave a good solid text. I tried again to be sure, and I see the problem, here it looked poorly filled too, but fixed itself once extrude was different than 0.0. Even 0.001 fixed it.

Subject: Re: manifold, normals, strange texture
Posted by [fourdee](#) on Sun, 20 Sep 2009 05:51:42 GMT
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I think I got it working... I don't know what I did different in that file...

Thanks people

For the record, I'm still not a fan of Blender!

Subject: Re: manifold, normals, strange texture
Posted by [fourdee](#) on Sun, 20 Sep 2009 16:04:33 GMT
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So... I imported this into shapeways and it gave errors...

"We could not determine the size and/or volume of your model due to an invalid model structure. Please investigate the problem and try again. "

Every time I import into blender, I seem to get a different result and I'm not sure why... it's very strange. The "helvetica.svg" that you said worked, didn't work for me at first, but trying again it was fine, but now again it's not... when I extrude it only extrudes the outline. When I DID get it to work, I exported this STL and imported into Shapeways to get the error above.

So confused...

File Attachments

1) [helvetica3.stl](#), downloaded 80 times
