Subject: Bad Preview Image
Posted by ttoinou on Fri, 08 Mar 2013 18:04:39 GMT
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Hi.

I've just uploaded a new model which is a Sierpinski Tetrahedron.
But in the preview image there is a lot of edges missing !

It should look more like this :
.

I don't understand what I've done wrong.
Please enlighten me .
Thanks in advance.

Subject: Re: Bad Preview Image
Posted by Youknowwho4eva on Fri, 08 Mar 2013 18:18:32 GMT
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Missing geometry is usually the resulted of inverted or overlapping faces. Check out Netfabb, it has a check and a repair feature, and the basic version is free.

Subject: Re: Bad Preview Image
Posted by ttoinou on Fri, 08 Mar 2013 18:34:28 GMT
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Oooh that was obvious I'm a noob.
It works! But how come this process actually adds up volume ?

Subject: Re: Bad Preview Image
Posted by Youknowwho4eva on Fri, 08 Mar 2013 18:45:44 GMT
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Inverted geometry has no volume. So when you make proper manifold geometry, it'll add that volume.

Subject: Re: Bad Preview Image
Posted by stop4stuff on Fri, 08 Mar 2013 19:16:18 GMT
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What Mike said.

Basically, the missing parts are missing volume, put the missing parts back and the volume is not missing

Paul

Subject: Re: Bad Preview Image
Posted by AmLachDesigns on Sat, 09 Mar 2013 08:26:23 GMT
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What the guys above said.

But unless it's not obvious:

Shapeways get files in different formats, and even within the same formats people create models in different ways (single shell, multiple shell overlapping, multiple shell boolean'ed), so SW has to try and resolve these different models into a form that the printers can handle.

With your model you saw that this process decided that part of your model did not work, so ignored it, and calculated the volume of the part that was ok. When you fixed your model, it recognised the extra geometry and recalculated the volume.

And in case your actual question is why is it calculating the volume at all (which it probably wasn't, I know) it is in order to calculate the price, as except for ceramics the price of an object = handling charge + volume x unit volume price. Ceramics charge by surface area.

Subject: Re: Bad Preview Image
Posted by ttoinou on Sat, 09 Mar 2013 11:11:53 GMT
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Hi all. Thanks for your answers.
My model (before being repaired by netfabb) is just prism and "spheres" (discretized) that are colliding.

@Youknowwho4eva : I don't see the link with inversion. My object is just in a thousands of little

pieces ("multiple shell overlapping" just like AmLachDesigns said).

@stop4stuff & AmLachDesigns : No !
Shapeways compute the right price, according to netfabb volume, and even more (I don't know the doll / eur conversion but there is 1 euro more).
The missing parts on the image are counted in the price (otherwise it would be like a third cheaper).

Volume before repairing : 4.4 cm^3
Volume after repairing : 5.9 cm^3

That's weird because linking prisms (discretized cylinders) together should take back volume.

And netfabb repairing is destroying my object (some edges are missing) !

Subject: Re: Bad Preview Image
Posted by stop4stuff on Sat, 09 Mar 2013 12:21:14 GMT
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NetFabb calculates the volume in the same manner as Shapeways, if parts are missing in NetFabb the missing parts are not counted in the volume calculation.

Paul

Subject: Re: Bad Preview Image
Posted by Youknowwho4eva on Tue, 12 Mar 2013 13:09:33 GMT
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ttoinou wrote on Sat, 09 March 2013 11:11
My model (before being repaired by netfabb) is just prism and "spheres" (discretized) that are colliding.
The collision is most likely the problem. If your prisms sit face to face, this will result in 2 faces exiting in the same location. Netfabb (and shapeways repair software) will delete one face, and then try to make sense of the left over face. Make it so your faces don't exist in the same location. either shorten your prisms so they are still in the spheres, but not touching each other, or join them all together into one geometry before exporting and uploading.

Subject: Re: Bad Preview Image
Posted by ttoinou on Tue, 12 Mar 2013 15:12:11 GMT
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Quote:NetFabb calculates the volume in the same manner as Shapeways, if parts are missing in NetFabb the missing parts are not counted in the volume calculation.

Paul
Interesting ! (but netfabb displays well the object there is no part missing unlike with the Shapeways preview image.)

@Youknowwho4eva : I forgot to draw the prisms' faces .

However I used the netfabb "simple repair" and this time it worked !
My objects are "en route to the 3D printers" .
Thank you all for the explanations.

Subject: Re: Bad Preview Image
Posted by ttoinou on Sun, 05 May 2013 13:58:28 GMT
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Okay that issue is BACK !
I'm creating a big object made of little cubes cutted by planes. The whole object is made of little plane-cutted tetrahedron AND a big object with only squares face. Theses objects touches each other and create an object in one piece at the end.
The preview image sometimes doesn't render little tetrahedrons !
On the left the meshlab preview and on the right the bad SW preview..

File Attachments

1) shapewaysissuebadpreview.png, downloaded 61 times

Subject: Re: Bad Preview Image
Posted by stonysmith on Sun, 05 May 2013 15:05:24 GMT
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My suspicion is that your original model is not a single shell.
The Shapeways import processes removes small shells that are below a certain size limit.
It appears that you stacked a bunch of independent cubes and then sliced across them, leaving some of the shells very tiny.
As was said before ... " join them all together into one geometry" ... you need to Boolean all your

shells together into a single shell. Doing so would also drastically cut your triangle count and file size.

You could try cloud.netfabb.com to see if that will fix it for you.

Subject: Re: Bad Preview Image
Posted by ttoinou on Mon, 13 May 2013 16:05:42 GMT
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Quote:It appears that you stacked a bunch of independent cubes and then sliced across them, leaving some of the shells very tiny.
As was said before ... " join them all together into one geometry" ... you need to Boolean all your shells together into a single shell
netfabb cloud doesn't work and netfabb software destroys my object.
I'll end up by changing my cube-slicing algorithm...

Quote:The Shapeways import processes removes small shells that are below a certain size limit.
Interesting.. Is this just for the preview or also for the printing process ?

Subject: Re: Bad Preview Image
Posted by stonysmith on Mon, 13 May 2013 22:05:44 GMT
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Generally, if it's missing from the preview, it will be missing from the final print also.

Subject: Re: Bad Preview Image
Posted by ttoinou on Wed, 15 May 2013 16:16:24 GMT
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Ok I hope so otherwise there would be a fail in SW : you culd tear up your object into a lot of littles pieces to reduce the price .
Do you know the volume of the smallest shell accepted by Shapeways in the STL import process ? Thanks.