
Subject: Why are my meshes not smooth?

Posted by [naailnaseer](#) on Sat, 09 Jul 2011 01:29:04 GMT

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http://www.shapeways.com/model/291354/bead___spherical___1cm.html?gid=ug

all the polygons are seen...

i'm using Cinema4d.. and exporting to COLLADA .dae format...

does my model need more subdivision or how do i do this?

< emoticon unrelated

File Attachments

1) [sogly.jpg](#), downloaded 106 times

Subject: Re: Why are my meshes not smooth?

Posted by [stop4stuff](#) on Sat, 09 Jul 2011 10:00:10 GMT

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Hi naailnaseer,

Welcome to Shapeways!

When building your models, on screen, turn off all smoothing. Smoothing is a visual enhancement and does nothing to the underlying mesh. 3D printers can't see and print only the mesh that's given. The model preview image shows the model as it would be printed.

As a rule of thumb, I aim for face sizes that are smaller than the print resolution, 0.05mm for FUD and 0.1mm for the rest of the materials. I find this also helps to keep terracing or stepping on the printed model to a minimum.

Subdivide and physically smooth your model as much as you can, but don't forget there's a limit of 1,000,000 triangles.

Paul

Subject: Re: Why are my meshes not smooth?

Posted by Scout_II@hotmail.com on Mon, 22 Aug 2011 03:15:06 GMT
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Quote:but don't forget there's a limit of 1,000,000 triangles.

An evil limit, and one that I really think they should reexamine with the edition of FUD.

Just to give you an idea though - for your sphere, you will want roughly 600 divisions around the circumference and 300 divisions tall. That will put each triangle in the ball park of 0.05 mm on the a side. Unfortunately, that also will burn through 350,000+ triangles of your budget.

Bigger beads will need more faces. And of course, that doesn't even start to get into the other details (or the hole for the string).

Subject: Re: Why are my meshes not smooth?
Posted by [duann](#) on Mon, 22 Aug 2011 04:23:58 GMT
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Hey there,

You can get more polygons if you like via a workaround we have in place.

<http://www.shapeways.com/blog/archives/564-How-To-3D-Print-High-Polygon-Models-with-Shapeways.html>

Good Luck

Subject: Re: Why are my meshes not smooth?
Posted by Scout_II@hotmail.com on Mon, 22 Aug 2011 05:48:45 GMT
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Hadn't scene that one.

Most of my problems would probably be printable using a simpler work around though.

For example, if I am building a car...I have 4 wheels. Each wheel might have a few hundred thousand polygons by the time everything is said and done. The body is probably another few hundred thousand...and if there is any interior work or mechanical detailing, I am looking at 1.5-2 million polygons.

If I could upload model 1 (which is the tires) and model 2 (which is everything else) and have them merged on the server side before printing...everything should print fine.

Other issues are for customers who are interested in say a dozen or more tires. With the FUD set up cost, that adds \$60 bucks to an order that could be done for \$15 or so. Something that would combine multiple of the same object into the same order as opposed to pricing them as separate jobs would be great.

Subject: Re: Why are my meshes not smooth?

Posted by [aegidian](#) on Mon, 22 Aug 2011 08:34:24 GMT

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Scout_II@hotmail.com wrote on Mon, 22 August 2011 05:48 Most of my problems would probably be printable using a simpler work around though.

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If I could upload model 1 (which is the tires) and model 2 (which is everything else) and have them merged on the server side before printing...everything should print fine.

Perhaps if Shapeways accepted a zipped folder of .stl files and an OpenSCAD script?

Although actually some 3d printer driver software that could compile OpenSCAD would probably need to be created first - there's a hobby project for somebody.
