Subject: I need help with the solids in Sketchup
Posted by Kyle772 on Mon, 23 Jan 2012 06:29:50 GMT
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Ok well earlier today I made a cell phone case for my phone and I spent about 6 hours on it. Everything was fine until the final build of it and now when I upload it I get missing pieces everywhere and the flat areas are making odd shadow changes. I haven't made much differences since the one before it but they were precise measurements that I would rather not start over again. Is there a way to make all the problems show up in sketchup? As far as I can see it is perfect but Shapeways doesn't agree.

I attached the design below can someone help?

Also this is what is coming up in shapeways
http://www.shapeways.com/model/448498/htc_mytouch_4g_cell_ph
one_cover___untested.html?gid=ug

Subject: Re: I need help with the solids in Sketchup
Posted by underitall on Mon, 23 Jan 2012 12:08:47 GMT
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Hi Kyle772.
I've just had a quick look at your model, and first thing I notice is that there's alot of reversed faces, I quickly sorted these but it shows a few more problems.

One view is this, it has multiple faces overlapping:

There is also alot of faces inside the shell that don't need to be there, you need to look inside every part of the model to get rid of unwanted parts, otherwise it will either not print, or may fall apart when printed.

This is what I'm talking about, the face marked in red should not be there, or any reversed face inside a shell like that, and I think the yellow faces should either not be there, or must be reversed:

For reference, the view above is just inside here:

The model would IMO need some time spent on it to get it ready for printing, it's just a time consuming process removing unwanted faces/lines and making sure the faces are all facing the

right way.

All I did to your model was reversed the faces that needed to be, other than the ones which overlap with others.

Hope this helps,
Tom.

File Attachments

1) HTC Mytouch4g full cover (UnderItAll Reversed face).skp, downloaded 43 times

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Subject: Re: I need help with the solids in Sketchup
Posted by denali3ddesign on Mon, 23 Jan 2012 13:54:09 GMT
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Hi Kyle,

You can use this tool to help you find other problems:

Solid inspector

Subject: Re: I need help with the solids in Sketchup
Posted by aeron203 on Mon, 23 Jan 2012 16:15:57 GMT
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denali, I wanted to give Solid Inspector a try, but it doesn't work so far. I'm using SketchUp8, TT_lib2 is installed. Any ideas?

Subject: Re: I need help with the solids in Sketchup
Posted by denali3ddesign on Mon, 23 Jan 2012 16:25:50 GMT
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Aaron, did you make the geometry into a group or component?

Subject: Re: I need help with the solids in Sketchup
Posted by aeron203 on Mon, 23 Jan 2012 16:28:02 GMT
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No, just sketched out some basic shapes and gave it a shot. I also tried it on an imported model after exploding the elements.

Subject: Re: I need help with the solids in Sketchup
Posted by denali3ddesign on Mon, 23 Jan 2012 16:39:41 GMT
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Ok, it only works with groups or components, so that's an easy fix!

Subject: Re: I need help with the solids in Sketchup
Posted by aeron203 on Mon, 23 Jan 2012 16:43:46 GMT
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Ah, well there we go!

Thanks.

Subject: Re: I need help with the solids in Sketchup
Posted by denali3ddesign on Mon, 23 Jan 2012 17:03:19 GMT
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Sure, glad to help!

Subject: Re: I need help with the solids in Sketchup
Posted by Kyle772 on Mon, 23 Jan 2012 23:19:14 GMT
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Thank you so much Tom!

Is there a simple way to reverse faces in Sketchup? I usually don't use Sketchup for being read by anything other than me so I never really thought reverse faces would be a problem. Is there a good tutorial on the details of Sketchup that would make things like this easier? Thanks!

Also Can the inside of all the walls be completely hollow? From what I understood those had to be put into complete pieces then connected for it to work. :\

Subject: Re: I need help with the solids in Sketchup
Posted by denali3ddesign on Mon, 23 Jan 2012 23:23:14 GMT
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To reverse faces, just right click -> Reverse faces.

Yeah, you want the interior of the model to be completely hollow. Think of it as a container for the 3D printed material - any geometry inside will interfere with the printing.

Subject: Re: I need help with the solids in Sketchup
Posted by Kyle772 on Mon, 23 Jan 2012 23:44:00 GMT
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Oh that was simple enough...
Thanks ;P

Subject: Re: I need help with the solids in Sketchup
Posted by Kyle772 on Mon, 23 Jan 2012 23:47:51 GMT
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I have a lot of these lines within the walls do I have to erase every single one or will those not interfere?

Subject: Re: I need help with the solids in Sketchup

Posted by denali3ddesign on Tue, 24 Jan 2012 01:40:35 GMT
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Those should be deleted...its easy with this plugin: Cleanup