Subject: "Parts is parts or intertwined parts" - Sandstone Model Question + Wall Thickness Question
Posted by senshi on Sat, 04 Dec 2010 16:08:35 GMT
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Hello everyone,

I'd like to print some 3D Elf figures for this year's Christmas, but something in the Sandstone information page has me confused:

"Parts in parts or intertwined parts are not possible in general. They require extensive manual labor and have high risk of failing our quality requirements."

Does this mean my object can't consist of multiple meshes intersecting each other or does it mean something else?

I'd also like to ask a question regarding the minimum wall thickness. Is there an easy way to hollow out a model in my modeling program (Blender)? For my last model I simply put in some spheres with inverted normals due to time constraints, but this still left me with a lot of printed material that would not have been needed. It would be nice if I could hollow it out to exactly 0.4mm. (I've been thinking of using the Solidify modifier for this, but I'm worried that'll mess up some intersecting edges.)
Any help would be much appreciated!

Thanks in advance,
Patrick

Subject: Re: "Parts is parts or intertwined parts" - Sandstone Model Question + Wall Thickness Ques
Posted by TurtlesAreCool on Sat, 04 Dec 2010 18:14:13 GMT
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In Blender, the solidify modifier works pretty well for hollowing objects. Just be sure to leave at least a small hole so the hollow area inside is recognized by the software (so you will not be charged for the hollow area). From what I see on the forum, you don't have to actually have a hole physically large enough to remove the support material, although if you want it to be actually hollow, you do need a large enough hole. I do not know how large that hole would need to be for sandstone.

Regarding intersecting edges, perhaps you could post an image of your model? I have had the solidify modifier fail miserably under certain circumstances, such as a wall that is thinner than the

solidify thickness. Very sharp angles tend to work poorly as well.

Subject: Re: "Parts is parts or intertwined parts" - Sandstone Model Question + Wall Thickness Ques
Posted by senshi on Sat, 04 Dec 2010 20:41:26 GMT
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Hey, thanks for your reply! Glad to know the Solidify Modifier can help in hollowing out the figure. I just tested it and it seemed to work pretty well, though I'm not sure at which point I've reached the needed 3 mm. I also can't clearly see how the inside portion of the mesh is behaving. I have a WIP of the model online here: http://fav.me/d3384bv.
Would you also happen to be able to confirm whether or not multi-mesh objects are accepted for Sandstone printing? =)

Thanks for your help so far!
Patrick

Subject: Re: "Parts is parts or intertwined parts" - Sandstone Model Question + Wall Thickness Ques
Posted by TomZ on Sat, 04 Dec 2010 21:52:28 GMT
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Yes, you can have intersecting meshes without problem. They're referring to printing assemblies and the like, like having a ball in a cage or making a chain in one go. They can't make objects in sandstone that have loose, moving parts.

Subject: Re: "Parts is parts or intertwined parts" - Sandstone Model Question + Wall Thickness Ques
Posted by senshi on Sat, 04 Dec 2010 22:00:21 GMT
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Whew, that's a major relief, thanks! =)

Subject: Re: "Parts is parts or intertwined parts" - Sandstone Model Question + Wall Thickness Ques
Posted by TurtlesAreCool on Sat, 04 Dec 2010 23:03:49 GMT

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Ok. Your model looks pretty good. The issues I had with a model I just printed was the thickness of the fingers (and toes). So, I would be careful about using the solidify modifier on those items. I ended up manually duplicating a portion of the body and hollowing only the main part of the core body, leaving appendages whole.

Also, you might consider attaching the model to a small base for stability. I don't know how large you're printing it, but do consider the physics of the actual figure.

Concerning size of your model, I have started using Netfabb Basic to measure my models. You can also use the analysis to calculate the volume of your model.

Subject: Re: "Parts is parts or intertwined parts" - Sandstone Model Question + Wall Thickness Ques
Posted by senshi on Sat, 04 Dec 2010 23:12:45 GMT
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Thanks for your tips! =) I'll see about adding a small snowscape as a base, as well as paying extra attention to the limbs and the jacket. I'm hoping to have it printed at ~8-12 cm so I'll have to be quite cost-efficient with this model to make it happen.