Subject: MESHLAB Uniform mesh resampling PROBLEM*
Posted by Spacetime on Wed, 06 Mar 2013 02:30:24 GMT
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Hey Yall,

I've been looking for a good way to add thickness to my models for uploading. I'm also trying to teach my students how to hollow models. We have been using Zbrush with good results but there is no way to be precise with this.

I have been trying to use MESHLAB's Uniform Remeshing filter but not with much luck. The settings I am testing I have attached a screenshot of.

After using this function I do have a new layer called offset but there doesn't seem to be anything in it??? No faces or vertices I'm very confused could someone please help.

Thanks
C

File Attachments

1) REmesh.jpg, downloaded 142 times

Subject: Re: MESHLAB Uniform mesh resampling PROBLEM*
Posted by stop4stuff on Wed, 06 Mar 2013 09:16:52 GMT
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The trick is to create and inner and outer offset shells, then remove the outer shell.
Check 'Absolute Distance' and use a positive abs offset value to create the both inner & outer offset shells.
Used the 'select connected components in a region' tool (underlined in red in the image) and just touch the outer shell with the lasso box.
Hit delete and turn off visability for the original mesh to see the inner offset shell.

Paul
stop4stuff Modeller for hireShapeways Shop - Controller PendantTwitterYouTube

File Attachments

1) selecting-mesh.JPG, downloaded 132 times

Subject: Re: MESHLAB Uniform mesh resampling PROBLEM*
Posted by Spacetime on Wed, 06 Mar 2013 19:51:19 GMT
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OK this is very helpful! But I still am a bit confused or curious if there is a way to control the thickness?

What I mean is there a way I can chose exactly how thick the offset mesh is going to be?

The values I'm entering that have been working for me are attached to the image below (which are working). It seems that by changing these just a little I get a really messed up offset mesh?

Do you have recommended settings?

Thanks much
C

File Attachments

1) Screen Shot 2013-03-06 at 2.50.50 PM.png, downloaded 123 times

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Subject: Re: MESHLAB Uniform mesh resampling PROBLEM*
Posted by stop4stuff on Wed, 06 Mar 2013 20:17:38 GMT
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If you know the dimensions of the model, you can specify the offset as the ABS value, otherwise you're stuck to calculating the offset needed. From the numbers for 'Precision' it looks like the model has largest length as 6.39 units, enter the 'world units' value for the wall thickness you need in the offset abs box.

The reccommended settings are those that are right for the size of the model and the material that the model is intended to be printed in.

Paul

Subject: Re: MESHLAB Uniform mesh resampling PROBLEM*
Posted by Spacetime on Wed, 06 Mar 2013 21:12:28 GMT
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Okay great ! So The precision that I have now set at 2 is ok?

It seems to do the same things wether that is 1 or 2

I finally understand the offset abs box but what is the precision box for?

Subject: Re: MESHLAB Uniform mesh resampling PROBLEM*
Posted by stop4stuff on Thu, 07 Mar 2013 07:43:22 GMT
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Presicion is how fine you want the new mesh to be. The smaller the number, the more smaller faces will be generated.

Paul
stop4stuff Modeller for hireShapeways Shop - Controller PendantTwitterYouTube

Subject: Re: MESHLAB Uniform mesh resampling PROBLEM*
Posted by Spacetime on Thu, 07 Mar 2013 17:27:51 GMT
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Thank you everyone!!!!

This is super helpful and I have it working quite well now- such a great community

ALL THE BEST!!!!!

C