
Subject: Help Modifying an STL file

Posted by [allenrockwell](#) on Thu, 18 Jul 2013 21:01:21 GMT

[View Forum Message](#) <> [Reply to Message](#)

I have a design that the file format I have for it is the STL file and I'm having a hell of a time getting Shapeways to make the part for me. Several of the details on the model were too small to print so I was able to figure out how to delete those details using Meshlab but now I am left one last "error" that I cannot get past; The trailing edge of the wing is too thin,,, of course it comes to a sharp point as all wings should ... but Shapeways refuses to run the part as long as that's the case.

I am out of solutions as to how to make the wing thicker at the trailing edge. Any ideas?

If the trailing edge of the wing was thicker I could get it printed and then sand the wing back to it's proper shape after I get the part.

STL file is attached, the file is in inches.

PS, I know if this was a part that I designed from scratch I could simply edit the solids file in Autodesk Inventor ... but obviously that's not the case. ... and I'd rather not recreate it from scratch if possible.

Thanks.

Allen
GameCraft Miniatures
www.gcmmini.com

File Attachments

- 1) [shapeways.JPG](#), downloaded 214 times
 - 2) [BAe_Hawk_285th V2.stl](#), downloaded 35 times
-

Subject: Re: Help Modifying an STL file

Posted by [MrNib](#) on Thu, 18 Jul 2013 21:20:53 GMT

[View Forum Message](#) <> [Reply to Message](#)

I've been wondering about this kind of thing myself. Is there an angle value for a taper that will lead to rejection? Shapeways will print things with 90 degree corners (like boxes). I believe I

have had things with 45 degree tapers printed so the cut-off point must be for some angle less than 45. Or is the number also dependent on several other ethereal factors?

Subject: Re: Help Modifying an STL file
Posted by [mkroeker](#) on Thu, 18 Jul 2013 21:50:24 GMT
[View Forum Message](#) <> [Reply to Message](#)

This thread probably...
but we should not distract from the original question - how to edit an existing STL file to fix this ?

Subject: Re: Help Modifying an STL file
Posted by [stonysmith](#) on Thu, 18 Jul 2013 23:21:45 GMT
[View Forum Message](#) <> [Reply to Message](#)

What editor are you using?

One example is that Truespace 7.6.0 can open, edit and save STL files. I am sure that there are others.

Subject: Re: Help Modifying an STL file
Posted by [allenrockwell](#) on Fri, 19 Jul 2013 00:14:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

I just had a thought ... is there such a think as a program that will take an STL file and convert it to a solid like a STEP file? If that was the case I could bring that STEP file in Autodesk Inventor and do anything I want to it.

Subject: Re: Help Modifying an STL file
Posted by [allenrockwell](#) on Fri, 19 Jul 2013 00:16:57 GMT
[View Forum Message](#) <> [Reply to Message](#)

stonysmith wrote on Thu, 18 July 2013 23:21What editor are you using?

One example is that Truespace 7.6.0 can open, edit and save STL files. I am sure that there are others.

I use Autodesk Inventor as my 3D creation tool ... but it does not import STL files, only outputs STL files.

I'll have a look at Truespace.. But the idea of learning one more program...

Subject: Re: Help Modifying an STL file
Posted by [MrNib](#) on Fri, 19 Jul 2013 01:37:17 GMT
[View Forum Message](#) <> [Reply to Message](#)

Tinkercad will import an stl file and you can get a free account right now. It's easy to use and you should be able to modify the file by adding and or subtracting material at those trailing edges and adjusting the taper profile. In the one case I tried it I had to first clean up the stl file using netfabb . It might take a while for Tinkercad to load it in and process it before you see it on the screen.

Subject: Re: Help Modifying an STL file
Posted by [MrNib](#) on Fri, 19 Jul 2013 02:23:47 GMT
[View Forum Message](#) <> [Reply to Message](#)

Yeah, that seems to work. Here's a flock of planes in the editor. No file repair required and it loaded up quickly.

Happy editing!

File Attachments

1) [bae_plane.jpg](#), downloaded 182 times

Subject: Re: Help Modifying an STL file
Posted by [Youknowwho4eva](#) on Fri, 19 Jul 2013 14:19:11 GMT
[View Forum Message](#) <> [Reply to Message](#)

allenrockwell wrote on Fri, 19 July 2013 00:14I just had a thought ... is there such a think as a program that will take an STL file and convert it to a solid like a STEP file? If that was the case I could bring that STEP file in Autodesk Inventor and do anything I want to it.

There is an expensive software that I have access to that can. It hates larger STL files, but yours

was fairly light.

File Attachments

1) [BAe_Hawk_285th V2.stp](#), downloaded 48 times

Subject: Re: Help Modifying an STL file

Posted by [allenrockwell](#) on Fri, 19 Jul 2013 14:25:11 GMT

[View Forum Message](#) <> [Reply to Message](#)

Youknowwho4eva wrote on Fri, 19 July 2013 14:19allenrockwell wrote on Fri, 19 July 2013 00:14I just had a thought ... is there such a think as a program that will take an STL file and convert it to a solid like a STEP file? If that was the case I could bring that STEP file in Autodesk Inventor and do anything I want to it.

There is an expensive software that I have access to that can. It hates larger STL files, but yours was fairly light.

Thank you very much ... I'm literally on my way out the door right now so I'll have to look at this later tonight but I'm very excited to see what it's done.

Thanks

Subject: Re: Help Modifying an STL file

Posted by [MrNib](#) on Fri, 19 Jul 2013 15:05:49 GMT

[View Forum Message](#) <> [Reply to Message](#)

In that model the flaps are actually drawn with small gaps on the wing side and it looks like they tried to draw in the actual hinges to attach the flaps. It would be best to fill that gap and just leave small ridges to define the fins. But you will still need to keep minimum thickness numbers in mind when you do that. Does that plane really not have elevator flaps in the tail section? That is one strange bird.

Subject: Re: Help Modifying an STL file

Posted by [allenrockwell](#) on Sat, 20 Jul 2013 05:08:35 GMT

[View Forum Message](#) <> [Reply to Message](#)

MrNib wrote on Fri, 19 July 2013 15:05In that model the flaps are actually drawn with small gaps on the wing side and it looks like they tried to draw in the actual hinges to attach the flaps. It would be best to fill that gap and just leave small ridges to define the fins. But you will still need to keep minimum thickness numbers in mind when you do that. Does that plane really not have elevator flaps in the tail section? That is one strange bird.

I took the horizontal stabilizers off completely because there is no way to make them thick enough to print using Shapeways ... I'll make them from scratch before making the mold of the entire plane.