
Subject: Preventing Rejections - Update on Project Caterpillar
Posted by [Roy_Stevens](#) on Fri, 22 Feb 2013 01:56:03 GMT
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So a typical product cycle goes like this: I design and refine a new product, print it, occasionally refine it more, print it again, post-process the print including paint, take good photos, upload them, spend some time getting the word out on my new product on message boards, and then the customers start purchasing it and Shapeways REJECTS THE PRINTS!. So all my time is wasted, my name is mud, and I look like a fool. And this has happened more than once. I'm well aware of the design rules and follow them, (thus the I get the prints first time around) but it doesn't seem to matter. So what can I do to prevent this? Are there other services available that don't seem bent on making their designers look like idiots?

Subject: Re: Preventing Rejections
Posted by [Dragoman](#) on Fri, 22 Feb 2013 12:24:07 GMT
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Unfortunately, this happens to a lot of designers - including me . Major nuisance.
But Shapeways are working to reduce this problem by marking models as "Successfully printed" to make sure they ae not rejected later.

This usually happens when items are designed close to the limits of the design rules. For each print, the item is checked by an operator and some are a bit stricter than others.

Keep complaining about this! Hopefully, Shapeways will end up developing consistent processes.

In the meantime, there's nothing left but repairing the problem item quickly, put up an apology note as comment for the model and explain things to the customer (if you know who she/he is).

Greetings
Dragoman

Subject: Re: Preventing Rejections
Posted by [CGNScale](#) on Thu, 28 Feb 2013 14:47:54 GMT
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Dragoman wrote on Fri, 22 February 2013 12:24...Shapeways are working to reduce this problem

by marking models as "Successfully printed" to make sure they are not rejected later.

I sincerely hope this is true. My process is similar to Roy Stevens and it gets very frustrating when, after several dozen successful prints you receive the "Could not be printed" notice.

I've not been able to offer anything new because all my time is spent maintaining what has already been proven printable, yet keeps getting rejected.

Come on Shapeways! Let's move forward, not backward!

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Thu, 28 Feb 2013 14:52:57 GMT

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I can tell you that we are progressing to a solution. I can't tell you when or what to expect. From what I have seen, it'll be up to your expectations and maybe even beyond.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Thu, 28 Feb 2013 15:24:22 GMT

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I hope that 'when' is soon. It would be nice to be able to request that a new or existing design be subjected to a validation process, and then not have to worry about it ever again.

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Fri, 01 Mar 2013 12:19:20 GMT

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Currently, the prduction team willnot/cannot print my Twin Rail Mobius Pendant - small in silver, although before the Christams rush, many had been printed with no reported issues. Since then every one has been rejected for a variety of reasons, it was only last week that Joost conveyed to me the real reason as to why - the production team want me to add bars to the model to aid the silver flow... hang on isn't that what part of the handling fee is for? I have no knowledge about adding sprues or vents to aid the silver flow

Anyhow since then another rejection has come through

Reason: Can not be cleaned

Additional information: to fragile, will bend

What can't be cleaned? The wax print or the silver model?

And if the silver wires bend, it's no big deal as they are 1.3mm diameter and will bend back easily.

So, in addition to a 'printed before' or whatever flag, the communication about a reason for rejection needs to be clear and not change every time (the model hasn't changed since the day I uploaded the original),

Cheers,
Paul

Subject: Re: Preventing Rejections

Posted by [Nathan2012](#) on Sat, 02 Mar 2013 14:11:52 GMT

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I have also had a similar problem to everyone else here. A customer who bought 2 prints of a model ordered a third, but received the message that it could not be printed, even though he received the first two no problem. I then received an email saying the model could not be printed because of thin walls. the diagram attached to the email showing the problem parts points to a section of the model, highlighting it as 0.8 mm. This is incorrect. It measures 1mm on all faces, so it is Shapeways who have made a mistake on a part which is perfectly printable.

File Attachments

1) [Iron Bride faut.aspx](#), downloaded 110 times

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Sat, 02 Mar 2013 16:37:17 GMT

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Nathan2012, do you the rejection image you can share?

I have had a similar rejection in the past, however the operator used the wrong tool for the measurement, they measured point to point rather than wall thickness. That was a simple mistake, which was rectified and the model printed.

Paul

Subject: Re: Preventing Rejections
Posted by [Nathan2012](#) on Sat, 02 Mar 2013 19:43:11 GMT
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I am having problems uploading the image. Looking at a larger version of the image I can now see the highlighted figure is actually 1mm. What is wrong with this? This is the minimum thickness they go on to suggest in the email!

File Attachments

1) [You've sold models which could not be 3D printed.zip](#),
downloaded 87 times

Subject: Re: Preventing Rejections
Posted by [CGNScale](#) on Sat, 02 Mar 2013 19:50:51 GMT
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I had another model rejected yesterday. Again, a model that has printed successfully at least 30 times.

The rejection is based on wire minimums. According to the design guidelines:

How to design thin, unsupported wires:

"0.3mm-0.6mm wire thickness: keep under 6mm wire length"

<http://www.shapeways.com/materials/frosted-detail-design-guidelines>

Here I have .44mm wires supported at multiple points. True, the supporting points are closer to 6.6mm apart, however this should still be well within the acceptable tolerance, ESPECIALLY for a model with a numerous printable history.

(At least I would consider about 30 prints to be numerous)

Here are some photos of one of my successful prints. The same photos that accompany the model on the product page:

<http://www.shapeways.com/model/651286/n-scale-42-dry-bulk-trailer-2-pack-kit.html>

Careful observers will notice the railing for the ladder is broken. More careful observers will notice the thickness for the railing parts are thinner than the ladder. And further yet, clever observers will notice that in the rejection photo above I had thickened the railings to match the ladder. Finally, I'll admit that it was me that broke those railings during cleaning. But notice that the overall ladder

assembly is printed PERFECTLY.

I think the best test should be, does the product have accompanying photos of a successful print?

Then why perform the manual check? Shouldn't that be sufficient proof?

Additionally, this model was ordered and printed more than a dozen times! THAT, should be definitive proof.

Subject: Re: Preventing Rejections
Posted by [CGNScale](#) on Sat, 02 Mar 2013 22:00:25 GMT
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Youknowwho4eva wrote on Thu, 28 February 2013 14:52 I can tell you that we are progressing to a solution. I can't tell you when or what to expect. From what I have seen, it'll be up to your expectations and maybe even beyond.

Great to hear Youknowwho.

This is a rough outline, but it closely models my suggestion for this process.

The standing question would be what is considered "Tolerable". I would suggest to have the checkers error on the side of pass, and deliver the resulting model. As a serious designer, once I see and hold the model in hand and can physically observe the tolerance areas identified by the checker, I would be MUCH more motivated to refine appropriately and ultimately produce a quality design that would profit both me and Shapeways. (Win-Win)

When the design is rejected based on virtual dimensions, I am given the ability to doubt, scoff, and never return. We usually call this a Lose-Lose situation.

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Mon, 04 Mar 2013 14:37:43 GMT
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The problem with your chart is the mildly successful prints. A failure can cause a whole tray of production to be lost, can cost hours, and can damage the printer. Problem 2, which is part of our thinking on the solution to some issues, is what you might find acceptable, another customer may not. So if you have a piece with thin rails that ships to you ok, we also have to be able to ship it across the world to arrive ok. And you may accept a broken rail, but a customer may want a reprint.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Mon, 04 Mar 2013 16:41:12 GMT
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And today's rejection is...

Twin Rail Mobius Pendant - small in Silver
Reason: Can not be cleaned
Additional information: has to be more connected

Same model different reason... Additional information: has to be more connected ... The model is a single shell, it cannot be more connected!!!

Paul

Subject: Re: Preventing Rejections
Posted by [CactusBones](#) on Mon, 04 Mar 2013 21:59:27 GMT
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I unfortunately have also had this same issue with customers having prints rejected after I successfully printed and took pictures. It is a bit embarrassing and hope that there is at least a message being sent to the customer relieving designers of responsibility if the print had been successfully completed before and suddenly becomes unprintable. I even went as far as to re-upload files....but now that seems like that was completely unnecessary and that this issue happens to many people and is unpredictable.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Tue, 05 Mar 2013 04:27:41 GMT
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OK, I'm going to have to call BS on the idea that a broken wire can cause an entire tray of prints to

fail. Gravity, at least where I live, only works in the down direction. The problem that I have found is not a failure of the wire, but a failure of the support material. I have one model where I had a number of wires, which were designed to be printed in the X-Y axis, but the operator in his infinite wisdom oriented the model vertically, causing some wires attempting to be supported at the top of 6 cm of 0.6mm thick wax walls. I added 'plates' near the wires to cause the support material to be solid throughout the print and the next print came out perfect. But this wouldn't be an issue if orientation could be specified.

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Tue, 05 Mar 2013 05:08:21 GMT
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The mobius pendant should try to connect with its inner self.

The tray reference is probably to the box used in SLS, full of nylon dust. The box is filled a bit each time, with a blade moving over it, so if a block of material becomes loose, it could disturb the smoothness of the dust. Imagine a small rock falls while flattening a pile of very fine sand.

In any case, the recurrent issue is that problems are reported with new orders, and rarely along the fulfillment of current order, and with cryptic descriptions, no photos (that's different than renders), or just contradicting past prints experience. Last one was a 0.02mm difference, and after fixing that, claims that final customers would prefer it even thicker (final customers depend on the flexibility and "invisibility") for a part that has printed hundreds of times (it repeats many times per item, just in case anybody wants to guess which one it is).

To make it worse, as you have no way to contact customers of failed prints, you & SW lose face and sales, specially with impulse buys.

Subject: Re: Preventing Rejections
Posted by [Innovo](#) on Tue, 05 Mar 2013 11:05:46 GMT
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stannum wrote on Tue, 05 March 2013 05:08

To make it worse, as you have no way to contact customers of failed prints, you & SW lose face and sales, specially with impulse buys.

I agree. At least 90% of my clients with a failed print never re-order it.

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Tue, 05 Mar 2013 14:10:19 GMT

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Roy_Stevens wrote on Tue, 05 March 2013 04:27OK, I'm going to have to call BS on the idea that a broken wire can cause an entire tray of prints to fail.

I take your call of BS and tell you that for WSF, the pieces are built by putting a layer of powder that is synthered with a laser. If the powder sinks or shifts, it can alter the entire layer, and once the powder isn't level, it won't be level the rest of the print. And I think if FUD sinks, and the printer tries to add another layer, that material has to go somewhere, and it's not going where it's supposed to. I don't know if FUD can be as catastrophic as WSF.

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Tue, 05 Mar 2013 14:44:08 GMT

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It took me a long time to understand the "destroying a batch" comment.

I finally came to understand: A small piece of material has significantly less mass than the printhead (or the wiper) does. As the printhead passes over it, it is possible that some friction is generated between the small peice and the printhead. That small piece of material could then be shifted laterally by the print head (or wiper).. causing that peice to "surf" for some distance, possibly even landing on somebody else's model. Then, as small as it is, that sliver can cause the print head to "bump" upwards, causing a gap or irregularity on other people's models...
"destroying the batch"

Subject: Re: Preventing Rejections

Posted by [stannum](#) on Wed, 06 Mar 2013 00:49:34 GMT

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If the mass of the wiper is big enough to push things, why would it bump next time instead of pushing them again? And the laser is above the box, plastic melts "itself" with nothing moving near it (invisible laser beam).

Based in one print with a defect (broken and bent tube, like if slices had been pushed) the issue seems to be that it makes a mess of dust instead of perfectly flat surface, layers don't match with ones above and below, and soft parts deform. Given enough deformations, the items are useless.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Thu, 07 Mar 2013 01:47:57 GMT
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If a wiper or printhead could really move small items, whenever an overhang on a model starts it would ruin the batch. For a time that portion of the model isn't connected to anything except itself.

Subject: Re: Preventing Rejections
Posted by [FabMeJewelry](#) on Thu, 07 Mar 2013 18:26:49 GMT
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When a model is rejected after a customer has bought it from my shop i would really like to get one day for fixing the problem and to upload the fixed file, it would save me a really nasty feeling and the customer wouldn't have to pay for the shipping cost again if they ever are considering to reorder .

At least give the customer the choice to 1 : wait one more day for the designer to fix the problem or 2 : Accept a refund.

I think most problems can be resolved within a few minutes/hours, my problem did in 10min.

Even if there are al lot of models that can't be fixed within that day for any reason a bunch of them would.

Let's say we win 30% of the lost sales/customers back, i say give us the chance please.

Everybody including shapeways is fairly new at this and except for a few guidelines i still can't find a course :

designing X for 3Dprinting in X Material @ X company.
(X = could be anything)

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Thu, 07 Mar 2013 19:47:41 GMT
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I agree, in the majority of cases a fix is easy enough.

But I'm maybe not so unique in that the Twin Rail pendant I mentioned earlier was printed many times before without any reported issues, but (to me) suddenly the model is not printable any more. The reasons vary, and it took 2 months for the real reason (poor silver flow) to be conveyed - I just designed the thing, it passed the checks and was printed many times, I don't have a clue

about silver flow.

So, yeah, some stuff is simple to fix, but other stuff is a tad more complicated, and its the complicated stuff that really needs to be looked into and how a successfully printed model can be made printable again.

Paul

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Fri, 08 Mar 2013 07:34:07 GMT
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FabMeJewelry wrote on Thu, 07 March 2013 18:26When a model is rejected after a customer has bought it from my shop i would really like to get one day for fixing the problem and to upload the fixed file

There is one huge problem with this request. If the repaired model is larger than the original, who pays the difference? There is nothing stopping you during your "fix" to doubling, tripling , the size of the model, thereby creating significant extra cost that the consumer didn't agree to in the first place, and may not be willing to pay. Shapeways can't afford to take on that risk themselves, the difference needs to be paid for. Shapeways can't "pull" extra money from the buyer's Paypal - it will require the customers specific interaction. That's why (currently) the orders are just outright cancelled - because a change in price requires interaction from the buyer.

Yes, I know.. there could be some allowance made for "negligible" changes, but this is one of the reasons why this is more complicated than just simply "placing the order on hold". Note: I'm with you.. I have often goofed on a model, had a buyer's order rejected, and wanted to tell Customer Service.. "I'll pay the difference.. just let this new copy go thru".

But putting that set of processes in place will take time and careful thought.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Fri, 08 Mar 2013 10:29:38 GMT
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So I've been conversing with a customer about the pendant, he asked if he could give the

premium silver a shot, expecting rejection.

It was. And again, a slightly different reason than before (no mention of silver flow)

Twin Rail Mobius Pendant - small in Premium Silver

Reason: Other (do not use)

Additional information: due to such design type high glossy finish is not possible. it will not give a same finished look in all over the design. it will vary. also wire will get deformed.

So now comes another question, if the finish is not possible, why is there no mention of the model not being printable/castable?

Time to try another service with this model, 2 1/2 months of faffing about trying to get an understanding of how to make the model printable without altering the design (i.e. adding bars to somewhere that aids silver flow that I haven't got a clue about) has done my head in.

Paul

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Fri, 08 Mar 2013 19:10:29 GMT

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Two meaningless emails about the same model.

Hi Paul,

I have asked my colleague from production if he has a different approach to get this model printed in silver glossy

I will get back to you as soon as possible.

Regards,

Kind Regards,

Joost Denissen

Customer Service Agent

www.Shapeways.com

Hi Paul,

I see that somehow the rejection reason is not ended up in your rejection mail. I will report this to our development team.

This is the reason that your model can not be produced in Premium Silver:

"due to such design type high glossy finish is not possible. it will not give a same finished look in all over the design. it will vary. also the wire will get deformed".

See also the attachment: file.jpg

Hope this was helpful.

Kindly,
Maartje

Kind regards,

Mrs. Maartje Vijn
Customer Service Agent
www.Shapeways.com

ffs,,,,, does anybody read anything????

Just print the thing in ordinary Silver like what was done last year before your producton partners flaked!!!!!!

nuff sed

Subject: Re: Preventing Rejections
Posted by [FabMeJewelry](#) on Fri, 08 Mar 2013 23:20:27 GMT
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I see your point stonysmith, most of the time a fix will definety increse the pricing (fill up holes , add wall thickness, increse strength, add sprues etc..) maybe it's not so bad being only a designer and not having to solve this complicated matter

Maybe some 3D print* simulation software can be developed or already exist somewhere for checking if a model can be printed?

*including every part of the process (somehow that seems impossible)

Subject: Re: Preventing Rejections

Posted by [stevecim](#) on Sat, 09 Mar 2013 06:24:31 GMT

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If your looking to only get parts made in silver, then you might get better results with a casting company that service the jewellery industry .

Shapeways provide a great service , but because of the volume and many different materials they use, they can't experts at every type of material .

I've had pendants rejected from shapeways for having to fine text engraved, or extruded , I.e has fine has 0.18 mm.

I then sent the exact same file to a local caster, no problems, looks great and only 3 days for delivery .

It's not shapeways fault , it just that , when it comes to casting silver, a caster that's been doing it for 20+ years is just going to have a better idea on what will and will not work (they know where to place sprues to get he best silver flow)and they know how to get the best out of their equipment .

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Sat, 09 Mar 2013 07:53:11 GMT

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Shapeways don't do the silver themselves, they use a production partner.

The pendant was produced many times, then suddenly the production partner decided they couldn't produce it.

Yes, I could go the route of having the pendant produced undependantly, but the big point is with Shapeways, items are made on demand, I carry no stock and I don't need to get anything hallmarked.

Paul

Subject: Re: Preventing Rejections
Posted by [CGNScale](#) on Sat, 09 Mar 2013 22:52:49 GMT
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Youknowwho4eva wrote on Mon, 04 March 2013 14:37 Problem 2, which is part of our thinking on the solution to some issues, is what you might find acceptable, another customer may not. So if you have a piece with thin rails that ships to you ok, we also have to be able to ship it across the world to arrive ok. And you may accept a broken rail, but a customer may want a reprint.

So if a model is ordered, successfully printed, and survives shipping dozens of times previously, the fear of one customer wanting a re-print because of a fluke breakage in shipping is enough reason to start rejecting models left and right?

I apologize that my frustration is beginning to leak into anger, but that is ridiculous!

Here is my shop: <http://www.shapeways.com/shops/cgnscale>

Notice how every major model has multiple photographs of the successful print?
As someone who works here, please look at the record of how many times these prints have been ordered, successfully printed, and shipped. Based on the mark-up payments I've received, I think you'll see indisputable evidence that these designs are successful.

So why are we moving backwards and rejecting these??? Nearly EVERY SINGLE ORDER I receive in recent months is rejected. A year ago, a rejection was a rare occurrence and meant there really was a design flaw. Now, I can only believe a rejection means you have a disgruntled employee who's trying to sabotage your, and my, profits.

Again, I apologize for venting my frustration, but THIS HAS BECOME RIDICULOUS!

Subject: Re: Preventing Rejections
Posted by [pezhetairoi](#) on Mon, 11 Mar 2013 17:53:33 GMT
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Thanks, to the MOD who redirected me.
I've had this problem too. I didn't realize there were others.
It certainly looks pretty stupid when you've sold five copies but the sixth is rejected as unprintable.

One case I had was "multiple shells". In CAD, the solids were actually separate shells (my mistake), but by less than 0.001" away from each other. So when they were printed it didn't matter -- the distance was so small that the machine bound them together anyway.

Second problem was wall thickness on a very tiny gun barrel. Technically the "wall thickness" if that's what you can call it was too thin at 0.020", but the depth of the gun barrel hole was only 0.031". Does this still count as a "wall"? On a tiny little barrel? It supports nothing. More like just an indentation or depression, really. Would this same logic apply to a reversed panel line that sticks out from a surface?

It seems like like the operators are using a set of rules instead of experience to make decisions on what to print. Companies like to set hard and fast rules to train new people easily, but silly things like this happen as a side-effect when people stop using their own judgement.

To check my designs I print them out on my own 3D printer here in my own workshop ... so I know they work. The small Shapeways shop I have has photos of everything printed-out and painted as proof.

I realize every machine is different and has it's own quirks, but with the examples above we are literally splitting human hairs.

Other than this, my Shapeways experience has been quite good. However a consistent problem like this would definitely make me rethink these services. It's just not practical to have designs rejected so randomly.

Subject: Re: Preventing Rejections

Posted by [MichaelMueller](#) on Tue, 12 Mar 2013 13:05:11 GMT

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Hi,

I got the same problem with one of my designs. I've posted this today on another thread... sorry for the double post.

I was very pleased when a customer ordered one of my designs in Silver Glossy. It was the "Amour Fou Pendant" which was printed in stainless steel a couple of times before. The next day I've got a message from shapeways service that the design is "not printable" ...

Amour Fou Pendant in Silver Glossy

Reason: Thin walls

Additional information: too fragile too handle

It is always frustrating if a model gets rejected but in this case I find no violation against the design rules. The wall thickness is above 0.8 mm and the depth is even 3 mm. It looks fragile but it is in fact pretty stable.

I wrote to the always friendly service and got the answer that "the walls indeed are thicker than 0.8mm but it seems that this model is too fragile like this" and that this issue will be forwarded to the production facility. This was on thurstday and I got no further infos about that.

I'm really upset especially cause this was a customer order.

As far as I know 3d printing is not an automated process. Instead every design will be proved by the people in the production facility during the preparation of the printing process. OK, everyone makes mistakes sometimes. I think this means to admit that this can happen the guys in the production facility, too. Maybe I've missed something in the design rules. I'm looking forward to get some useful feedback from the service.

If it was in fact a mistake by the production facility, I like to see a prompt and customer-friendly solution here.

Does anyone else got an issue like that?

Cheers!
Michael

Subject: Re: Preventing Rejections
Posted by [Calistotash](#) on Tue, 12 Mar 2013 13:06:51 GMT
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I don't know if this will help anyone else, but I may as well post it anyway, considering I'm the one who started a rejections thread before Christmas I believe.

I'd spent the last few months working on a model that I definitely wanted to put up for sale, and that I definitely knew would sell a few of. I ordered a prototype before Christmas, and to my surprise, it actually printed. I emailed support to ask if any part of it was a problem during printing, and found out that they had to reprint it once; and I still can't believe they printed it after discovering some parts under the minimum specifications. (Very much appreciated though.)

I made up my second prototype, and test customer of mine and myself both ordered one, so I'd have two prints to ensure it could be printed again. After checking with support after receiving the model, both models were perfectly fine, and I was told it was be ok to have it for sale for multiple

prints.

I think in this case, I was incredibly lucky, and I am kind of waiting for the day where it all backfires. The support team has been absolutely amazing in the time I've been printing here, and I'm sure if that day comes again, they'll be helpful then.

In the thread I made about this topic, we were told that a printing tag was being implemented; which may explain why more previously alright prints are now being rejected, especially those with thin rails. However, if those files have never caused a problem before, it shouldn't now, unless the shipping constantly breaks the model (which I know was the cause of one of my models refusal reasons). The printer may be fully capable, but transporting it halfway across the world can take it's toll. Maybe you could email support and ask how many customers complained of broken items they bought from your store? I know that without talking to support, my models would probably never have sold.

Subject: Re: Preventing Rejections

Posted by [MichaelMueller](#) on Tue, 12 Mar 2013 13:11:10 GMT

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Hi,

this is the feedback I got from the service a hour ago:

I have received a feedback about your model from my colleague from the Production Facility. This model should be okay with a thickness of 1.5mm in those letters. The problem we are facing is that the wax material is so brittle after printing that a structure likes this needs to be more thick.

Could you maybe make your model around 2.5mm thick so we can print the wax model and have this casted in Silver?

Thanks!

Kind Regards,

Needless to say, I'm not happy with this.

The design already has a wall thickness (depth) of 3 mm but the line strengh of the calligraphy is approximately 1.2 mm. This can't be increased to 2.5 mm without killing the design.

I don't understand why this shouldn't be printable though it is conform to the design rules. Let's face it, it was even printed in Stainless Steel which has much stricter design rules about wall thickness.

I would suppose someone at the production facility classified it as not printable without really

checking the wall thickness. Instead of an apology there are suggestions way beyond the existing design rules. Maybe I'm wrong.
What if I order it in silver and it gets printed this time... just to make my point?

Cheers!
Michael

Subject: Re: Preventing Rejections
Posted by [numarul7](#) on Tue, 12 Mar 2013 16:22:09 GMT
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Michael

They use different "wax material" for the other metal.

Still I don't understand why they use a different wax instead of one harder ? Even hard wax melts at the temperature needed to do the cast.

To fix the pendant form the Designer perspective it is like making the pendant be "from 7cm" to "8-9 cm" that makes it look so big that I wonder who will wear it ? A second fix will be to put the letters on a plate of 1.5 mm cut around the letters but still this ruins a bit the Design.

So why not use different wax dear Shapeways ?

Or better make that the automation process when you upload the design to have it checked for these problems and instruct the designer that "material X" is not available for printing the design.

Or buy a better wax!

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Tue, 12 Mar 2013 17:04:32 GMT
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Regarding the wax and design rules, Michael's issue has brought this to light. So we are examining how to prevent these rejections in the future.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Tue, 12 Mar 2013 18:16:20 GMT
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So here's a prime example of a rejection for a phantom issue. Someone took a screen shot of my model and pasted 0.25 mm onto it in several places with no indication of what or where it is being measured at. I shelled this model at 0.32 mm, I also have a print of this model done previously.

File Attachments

1) [Capture \(2\).JPG](#), downloaded 1428 times

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Tue, 12 Mar 2013 19:19:55 GMT
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Can you share the file with us, or email it to me?

Subject: Re: Preventing Rejections
Posted by [NickHawkins](#) on Tue, 12 Mar 2013 19:21:53 GMT
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Although I'm a fairly new designer of 1/200 scale aircraft models on Shapeways I thought I was getting the hand of checking my models for minimum wall thickness and avoiding over-thin aerofoil sections.

Now I've facing a new reason for rejection, my WSF models can't be cleaned because the holes aren't big enough.

Yes, I've watched the video of WSF models being fine cleaned with an air hose in a dust-proof booth but I can't believe that it's intended to recover every last grain of unfused material.

4mm is larger than the fuselage diameter of several of my models and 2mm is larger than the internal diameter of the hollow in most of them, trying to place the required holes so that they are relatively unobtrusive on a model that may be viewed from any angle is not always possible (designers of land and sea models have an advantage here!).

Are the cleaning holes for WSF required for a practical (not theoretical) production benefit or is this simply a case of over-literal interpretation of the rules please?

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Wed, 13 Mar 2013 00:48:29 GMT
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While I rarely repeat Shapeways official rules, they will charge you full price for any captive material, ie material that can't be removed. I can't see why such a rule is necessary, but you have to figure out price somehow and volume is as good as any to keep everything simple. In your case I might recommend making your airplanes solid, based on the size the price won't change much and it would solve such issues.

Subject: Re: Preventing Rejections
Posted by [NickHawkins](#) on Wed, 13 Mar 2013 06:16:06 GMT
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Before I discovered this thread I had posted on another and have since got some useful feedback on why models that can't be cleaned may be rejected:

<http://www.shapeways.com/forum/index.php?t=msg&th=13299&start=0>

It would appear that the reason is primarily to avoid customer complaints due to retained powder rather than to try and re-use every last bit of material.

The saving I can achieve by making a 1/200 scale model varies widely but I'm guessing that it is typically 25% to 33%, maybe not a lot in absolute terms compared to the costs of printing in other materials but significant in relative terms. The largest saving I have achieved is 80%, but that was exceptional. As well as reducing the cost making models hollow has the advantage of making them lighter which is of practical benefit when they are mounted on tall flight stands. EG (sorry, these models aren't 3D prints, they're OOP CLIX models for Crimson Skies):

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Wed, 13 Mar 2013 15:40:11 GMT
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Roy_Stevens wrote on Wed, 13 March 2013 00:48 While I rarely repeat Shapeways official rules, they will charge you full price for any captive material, ie material that can't be removed. I can't see why such a rule is necessary, but you have to figure out price somehow and volume is as good as any to keep everything simple. In your case I might recommend making your airplanes solid, based on the size the price won't change much and it would solve such issues.

Shapeways doesn't charge for trapped material. If you have an item that is hollow, but with no hole at all connecting it to the outside shell, the software automatically removes internal geometry.

This was implemented years ago to prevent double charging for overlapping geometry.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Wed, 13 Mar 2013 16:11:54 GMT

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This is why I try not to do what I just did, because it just makes me look stupid. So maybe you can explain to us designers why it's so important to have such a large hole if Shapeways isn't concerned about trapped material. Wouldn't a 1mm hole effectively be sealed in WSF, without the need for fusing the internal material, and solve the whole overlapping geometry issue?

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Wed, 13 Mar 2013 16:38:38 GMT

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My take on this is;

1. You are charged for the printed material by volume.
2. The support powder for WSF is the same powder that is used to make the model
3. Unused powder is recovered.
4. Shapeways are a business, their whole point of existence is to make money.
5. It is not good business practice to give away money.

Why not argue that it takes less man hours to empty a solid object so that we all get a cheaper printed build?

Paul

Subject: Re: Preventing Rejections

Posted by [NickHawkins](#) on Wed, 13 Mar 2013 16:45:13 GMT

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My guess is that one rule is simpler.

WSF is its own support material and so anything reclaimed from a hollow model can be reused. This means that Shapeways has an interest in cleaning our models when the unfused volume is significant, for small models the key concern appears to be avoiding loose powder.

It might be a difficult call for an inspector to make:

- This model is small, the escape/topology hole must be small enough to ensure it is sealed.
- This model is large, it must have adequate cleaning vents.

An additional complication might be caused by the weight of unfused powder causing structural failure in some cases.

Personally I would like a 'self sealing' small model option for hollow strong flexible materials, just not sure how Shapeways could specify it.

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Wed, 13 Mar 2013 17:18:20 GMT

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Roy_Stevens wrote on Wed, 13 March 2013 16:11 This is why I try not to do what I just did, because it just makes me look stupid. So maybe you can explain to us designers why it's so important to have such a large hole if Shapeways isn't concerned about trapped material. Wouldn't a 1mm hole effectively be sealed in WSF, without the need for fusing the internal material, and solve the whole overlapping geometry issue?

No need to feel stupid. There is a lot to learn, and many confusing rules. Shapeways is learning as we are. Not only the demands of the community, and the market, but also the limitations of the machines and processes. I've been here for years, and I still had a model rejected in my last order.

Currently trapped material is allowed in FD, FUD, and at least transparent detail, as these materials can visually benefit from having trapped build material in their translucent print. I used to offer a cube with messages inside that could be viewed when you held the cube up to a light.

The only reasons I'm seeing for allowing trapped WSF is to make the print less expensive. To try to counter this, there is a density discount for WSF prints. For models that are greater than 10% dense (material volume divided by bounding box volume), after the first 20cm³, the remaining volume is calculated with a 50% discount. We try to offer a finished product to customers, and having trapped material (that has no purpose to the product) or products that leak powder, is not a finished product. There is also the point that the left over powder can be reused, but that is not as much of a driving point as the powder isn't 100% reusable. The unused material is still effected by the processes of printing.

So what you can do to save some \$ on your prints, is put multiple pieces in one file. For smaller items it is recommended to either join them with sprues or to build a cage to hold them together so they aren't loose in the build.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Wed, 13 Mar 2013 17:43:49 GMT
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As a by-the-by and sort of on topic

Shapeways have now said that my previously-unprintable-due-to-flow-issues small mobius pendant may be printable in premium silver as long as the production team are careful when they polish it

paul

Subject: Re: Preventing Rejections
Posted by [MichaelMueller](#) on Mon, 25 Mar 2013 16:33:52 GMT
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Hi,

another customer order was canceled today.

Crown Ring (US Size 12) in Silver Glossy

Reason: Thin walls

Additional information: 0,2 mm

0,2 mm will be gone after polishing

The design rule says: "Min Embossed Detail: 0.3mm (Regular & Glossy)"

In the screenshot the support provided you can see that it is 2.83 mm. I would round this to 3 mm not to 2 mm.

This order was canceled cause an embossed detail was 0.017 mm too thin?

Most of all I dislike that customer orders get cancelled without the chance to fix the issue. This customers are mostly lost and they don't buy again.

Guess this was suggested before, but it should really be a feature that allows the designer to send a new model within 24 hours, otherwise it might be cancelled.

With the "personalize" technique, there is already a similar message and upload feature implemented which I suppose could be enhanced.

Michael

File Attachments

1) [reject 561180_0,2 mm will be gone after polishing.jpg](#), downloaded 677 times

Subject: Re: Preventing Rejections

Posted by [pfeiffer stylez](#) on Mon, 25 Mar 2013 18:24:37 GMT

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Roy_Stevens wrote on Tue, 12 March 2013 18:16(...)

So here's a prime example of a rejection for a phantom issue. Someone took a screen shot of my model and pasted 0.25 mm onto it in several places with no indication of what or where it is being measured at. I shelled this model at 0.32 mm, I also have a print of this model done previously. Funny, but not true.

That's netfabb Studio, wall thickness measuring.
The indicators are the blue dots right behind the values.

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Mon, 25 Mar 2013 18:45:05 GMT

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Michael Mueller wrote on Mon, 25 March 2013 16:33

The design rule says: "Min Embossed Detail: 0.3mm (Regular & Glossy)"

In the screenshot the support provided you can see that it is 2.83 mm. I would round this to 3 mm not to 2 mm.

This order was canceled because an embossed detail was 0.017 mm too thin?

Most of all I dislike that customer orders get cancelled without the chance to fix the issue. This customers are mostly lost and they don't buy again.

Guess this was suggested before, but it should really be a feature that allows the designer to send a new model within 24 hours, otherwise it might be cancelled.

With the "personalize" technique, there is already a similar message and upload feature implemented which I suppose could be enhanced.

Michael

To your first part, the line is .3mm. Even .299 would fail.
To your second part, I'll make sure it's brought up in discussion again.

Subject: Re: Preventing Rejections
Posted by [JohnC](#) on Tue, 26 Mar 2013 16:25:37 GMT
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I'm glad I am not alone. I have a part which I have successfully printed over 40 copies in FUD over the last year or so which has now been rejected in my last batch file which contained several copies to minimise costs. To be fair it also contained a test design which did have valid rejection issues.

The item concerned has a 1/16" square shaft about 20mm long which has a fine hole down the centre. The item is not sold directly as I clean out the hole to take a steel pin for both strength and provide a point - it is a height gauge which I sell on my own website (see here). The rejection image showed the wall between the shaft edge and the hole was too thin. I suppose it technically it is but I've printed 40+ without it ever being a problem.

My big dilemma is I can't change the shaft dimensions and there is no way I could drill the hole out if it were solid. As it stands I will probably have to redesign the whole thing to include a separately manufactured metal square rod which will substantially change my cost basis and prices.

As noted by others why can't the fact that a model has successfully printed before allow it to proceed. Unfortunately this time it was a seemingly new model containing several copies of previously successful parts. Otherwise at least allow the designer to add an appropriate comment to that effect.

This has really dented my confidence in Shapeways.

John

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Wed, 27 Mar 2013 00:12:40 GMT
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I'm not familiar with the output of Netfab. But there were small areas under there that I would classify as detail as they were about 0.3mm square and 0.23mm thick. Easily fixed but not obvious, and this particular model had been successfully printed before the rejection.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 29 Mar 2013 04:30:53 GMT
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So it happened again. Someone discovered my store, got all excited about my designs, ordered a whole bunch of stuff, several of which have been there since the dawn of time (Shapeways Beta) and received a whole bunch of rejection messages. All of the items had been previously printed several dozen times, but that doesn't seem to matter. Shapeways seems to be relying exclusively on NetFab instead of their own brains. Oh look! There's a 4mm long encased feature that isn't a full 1mm in diameter! Reject! Reject!

Subject: Re: Preventing Rejections
Posted by [MichaelMueller](#) on Fri, 29 Mar 2013 09:05:12 GMT
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Hi Roy,

this really sucks. Even if you've made a testprint, you can not make sure that it will be printed for customers again. This rejections are killing all the fun.
I can't imagine that it is cost-efficient for shapeways to check a design every time it gets printed. A model that was printed hundred times will be checked same as a model that was never printed before!? Why not flag it as "printed before" and skip all tests on it. Of course it should loose the "printed before" state, the first time it causes trouble during the print process. I would pay gladly more for printing generally to prevent that customer orders get canceled.

Michael

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 29 Mar 2013 16:08:27 GMT
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I would pay good money, say \$20-\$40 to put a model through a full validation and NEVER have to worry about it again. As it stands I don't dare take out magazine ads, send models to bloggers or other professional reviewers, or anything else that takes time and money for fear that Shapeways will take all my work and throw it out the window as soon as somebody orders it, regardless of how many times I test print it. I have no idea how some people are making their living doing this.

Subject: Re: Preventing Rejections
Posted by [CactusBones](#) on Fri, 29 Mar 2013 19:11:46 GMT
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Is there a standard time frame for alerting us of rejections? I have had everywhere between next day to up to five days before my order is cancelled and I am notified that my files are not in production. I think it would be really helpful if we were able to expect notification within a shorter time period so we can attempt to rectify the situation and still be able to meet our own deadlines.

Subject: Re: Preventing Rejections
Posted by [uncommented](#) on Mon, 01 Apr 2013 21:31:27 GMT
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Hi, I have the same problem, was directed to repost here to underline the seriousness of this issue.

Quote:About an hour ago, I logged in to check the status of my pending sales, only to find that eight of them had simply disappeared from my sales page. On a whim, I decided to download my sales summary document from the shop overview page, and found that seven of them - for two different models, both of which have been printed successfully previously - have been marked as rejected.

The fact that this occurred, and that I did not receive any notification of it happening greatly concerns me. What's worse, I don't know if Shapeways sent the usual "your model could not be printed" email to whoever ordered them. The idea that Shapeways would communicate this to an artist's customers without informing said artist so that he or she could fix whatever is wrong does not sit well with me at all.

Has anyone experienced a similar issue?

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Tue, 02 Apr 2013 13:04:40 GMT
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CactusBones wrote on Fri, 29 March 2013 19:11Is there a standard time frame for alerting us of rejections? I have had everywhere between next day to up to five days before my order is cancelled and I am notified that my files are not in production. I think it would be really helpful if we were able to expect notification within a shorter time period so we can attempt to rectify the situation and still be able to meet our own deadlines.

It all depends at what step the item fails. The file is manually checked in the first few days. When it's sent to production, it can fail while printing, or, depending on the material, when being removed from the print tray. After that, the prints have to be cleaned, and in some cases finished. Some items are printed at Shapeways, but some still have to be shipped to Shapeways, where they are checked, packaged with your other pieces, and sent to you. So a rejection could happen a day before it's supposed to ship if it arrives at the factory broken.

Subject: Re: Preventing Rejections
Posted by [MichaelMueller](#) on Thu, 04 Apr 2013 07:45:02 GMT
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Again a customer order was rejected cause of an issue which is (as far as I know) not part of the design rules!
And again I had no chance to "fix" it before the order was canceled.

Snake Ring (Size US 9) in Silver Glossy
Reason: Can not be cleaned
Additional information: will bend
will bend. Has to be more connected.

File Attachments

1) [reject 567317_will bend. Has to be more connected.jpg](#),
downloaded 530 times

Subject: Re: Preventing Rejections
Posted by [UniverseBecoming](#) on Fri, 05 Apr 2013 19:44:59 GMT
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This is so profound that it appears to be sabotage to me. Compared to the masses there are only a handful of designers in the world highly familiar with the use of 3D design software as it pertains to 3D printing. Consequently, it would be very easy to perturb this small group so much that they simply move on. If I were Shapeways I would have everyone drop what they are doing and work to come up with a solution to this ongoing problem.

Also, I hate to say it, but in connection with these rejections is making people ask for their money

back. NOT GOOD! I don't know how it is in Holland, but I know I myself was highly perturbed by this! It causes people to think things along with the being upset about the rejection. I haven't looked lately, but I have well over \$100 that has been sitting in Shapeways' bank account and not mine for well over a month. And yes I know why Shapeways does it that way. And no, I don't need my money back, if I did I would have asked for it back, I'm simply telling you people don't like that when it is in connection with a rejection. It will cause them to think all kinds of negative things in conjunction with the rejection.

Why can't Shapeways simply tell everyone that a new item is in research and development and what is involved with the development? And then once the item has been printed successfully 25 times it would then attain a full production status with no restrictions.

Another thing Shapeways should be doing is sponsoring designers. Wherein, Shapeways would help with R&D of new products, photography and marketing. One idea might be to print a number of items of select products using unused space in the printers to have on hand an inventory. This would allow for more optimized shipping times!

Also, price wise, Shapeways needs to decide whether they are a retailer working for itself or a wholesaler working for the designers who are the retailers. And shouldn't there at least be more robust marketing research available?

Have there been any attempts to develop a relationship with any of major retailers? Wouldn't it be awesome if Shapeways shops could directly connect to Amazon or eBay?

I've been reading the forum since the very beginning. I know everyone here. It's only recently that I have started participating. I'm on Shapeways' side and I'm rooting for Shapeways to succeed! So lets make a better future!

Subject: Re: Preventing Rejections
Posted by [MichaelMueller](#) on Fri, 05 Apr 2013 23:15:46 GMT
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Hi James,

great posting. I really agree that customer-orders shouldn't be canceled this way. Also a cooperation with companies like ebay, amazon, etsy or dawanda would be a great benefit. I'm always astonished that shapeways is not doing much conventional advertisement like similar companies. Shapeways relies to the community and their personal marketing power in the social network. Being part of such a strong community makes you feel that you can actual change things. It's easy to forget that shapeways is a company with a management so it's up to them how to run the business.

I like to think that there is always a way to communicate and that feedback might help to improve weak procedures.

Cheers!
Michael

Subject: Re: Preventing Rejections
Posted by [uncommented](#) on Fri, 05 Apr 2013 23:20:45 GMT
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Do you think that Shapeways as an entity actually cares about its 3d modelers and their ability to reliably produce works? I'm starting to have serious doubts.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 05 Apr 2013 23:31:05 GMT
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I wouldn't be rich, but I could turn this into a nice side income stream IF I dared spend the money to advertise my products in related magazines, send items to bloggers and product reviewers, and other things that cost money but bring in customers. But I don't dare because it could be the first, it could be the fiftieth customer and then wham - my product is shut down due to someone not liking what they see in Netfab. And then all my advert money is wasted at best, and noone will ever look at my products again at worst.

Subject: Re: Preventing Rejections
Posted by [UniverseBecoming](#) on Sat, 06 Apr 2013 17:48:37 GMT
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Hi Michael,

Thanks for the compliment.

Yeah, we'll just have sit back see what management does this year. I hope they keep in mind that when it comes to online related businesses they can go from thriving community to ghost town overnight. Case in point, Myspace! Hopefully they stop and take a good look at the core foundations stones (the designers) and make sure everything is sound in this area. Are the designers being fairly compensated for their innovation? Yes or no? Is the competition doing a better job at providing this compensation? Are the designers happy; yes or no?

Maybe Shapeways should replace the word beta next to their logo. At least until the New York facility is completed.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sat, 06 Apr 2013 20:57:34 GMT
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Quote:Maybe Shapeways should replace the word beta next to their logo. At least until the New York facility is completed.
Sure seems hard to hire new engineers with 5+ years in the 3d printing industry. I wonder why that is ?

Subject: Re: Preventing Rejections
Posted by [NickHawkins](#) on Thu, 11 Apr 2013 13:29:36 GMT
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I've just got a rejection:

Quote:The following models have been rejected by our production team:

1/300 Westland P12 Wendover in White Strong & Flexible

Reason: Bad file

Additional information: There are some empty triangles

I can accept dimensioning issues not being caught until an attempt is made to print a model but how come a file can be OK on upload but 'bad' by the time it is submitted for printing?

I have 'freshened up' the model (with cleaner topology) and hopefully it won't have 'gone bad' on Shapeways servers by the time someone next tries to buy a print

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Fri, 19 Apr 2013 03:37:38 GMT
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This is the one area where Shapeways really, soundly, and unfortunately falls flat, on its face, hard. The prices are good, the interface - while occasionally buggy - is easy enough to use, and the customer service is friendly and helpful. There's just so much internal confusion and turmoil

that nothing seems to get done in a timely manner, if at all. We've been promised a 'successfully printed' flag, which I have yet to wrest a straight answer out of the forums on whether or not it's actually been implemented (internally) or if its even still 'in the works'. And if it IS 'in the works', it has been for many months now. I simply don't see how it can take that much time to implement. Slap a sticky note on a USB drive if you have to, there are ways to make it happen, I'm sure. There is zero accountability or reasoning to rejections of models - one person will inspect a model and approve it, and the next day his co-worker will reject it. There seems to be very little or no communication within the different Shapeways teams and between Shapeways and the various printers it contracts to. One would think that if Jim comes in to work today and approves a model, tomorrow Josh could receive that same model, see that Jim approved it, and let it through. There needs to be communication and explanation, not just internally, but to us, the sellers, as well. If one of my models is approved once, but even though they made it work, it was troublesome to print and they make a mental note to reject it next time, you have no idea how happy I would be to have that information relayed to me so I can fix those problems before I make it public, people try to buy it, and I make an ass of both myself and Shapeways.

In summary, Shapeways has a lot of issues to work out. Here at the storefront, things are generally fine. The website can be buggy and we all know my issues with the UPS situation, but generally it's all good. Internally though, I think Shapeways has a LOT of work to do, establishing a line of communication between the sellers, the customers, Shapeways service, and most importantly, the folks on the factory floor making these things happen. Consistency and communication need a very serious overhaul, very, very badly.

Subject: Re: Preventing Rejections
Posted by [NickHawkins](#) on Fri, 19 Apr 2013 05:44:11 GMT
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PeregrineStudios wrote on Fri, 19 April 2013 03:37<snip>

In summary, Shapeways has a lot of issues to work out. Here at the storefront, things are generally fine. The website can be buggy and we all know my issues with the UPS situation, but generally it's all good. Internally though, I think Shapeways has a LOT of work to do, establishing a line of communication between the sellers, the customers, Shapeways service, and most importantly, the folks on the factory floor making these things happen. Consistency and communication need a very serious overhaul, very, very badly.

I don't completely agree with PeregrineStudios on this although I and (more importantly) purchasers of my models, have been burnt by inconsistent pre-print QA.

I've been involved with helping companies migrate from an 'evolved' process to a 'rigorously engineered' one and I know that it:

- Is very expensive
- Is time consuming

- Negatively impacts on the core business whilst the change is happening
- May transform staff from thinking people into 'wetware' robots' (who no longer bother to think)

I don't want to pay for Shapeways to do this.

It probably won't be as friendly a company at the end of it, maybe more like Canadian UPS

A complicating issue you have to deal with is what happens in the Christmas rush?

(Note, this is NOT specific to Shapeways, it's a more general issue.)

- The website guarantees Christmas delivery if you order by X
- Many orders are placed at the last minute
- QA gets rushed (in Shapeways case this might result in borderline models being marked OK)
- After the rush QA settles down again...

Shapeways need to get better and a bit more joined up but I'm not expecting perfection, I'd far rather deal with people committed to doing their job well than an anonymous business process.

Nick H.

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Tue, 23 Apr 2013 07:51:57 GMT

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If this hasn't the potential if losing sales, I would find this very funny.

Quote:The following models have been rejected by our production team:

K6 - 7mm (1:43.5) Scale in Frosted Ultra Detail

Reason: Bad file

Additional information: The file contains shells which aren't attached correctly, printing it will result in them not being attached and lost in the printer. For more information about the design specifications for this material please visit:

<http://www.shapeways.com/materials/frosted-detail-design-gui> delines

Why should this be funny - it is a 7 part model, none of the parts are attached to each other, all of the parts meet the requirement for the minimum size - but it is not funny. IMO this rejection is as a result of an operator not understanding the basics of their job, so instead of a happy customer, there are now messages and emails flying about to get the situation resolved.

Paul

p.s. my pendant from earlier in this thread is now printable with no changes - nothing to do with silver flow, just a few issues buffing up the silver due to the thin wires.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Tue, 23 Apr 2013 09:08:10 GMT
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The "be lost in the printer" part makes me suspect that your parts are very small and the operator in question wants you to sprue them together ?

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Tue, 23 Apr 2013 09:20:26 GMT
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stop4stuff wrote on Tue, 23 April 2013 07:51

... all of the parts meet the requirement for the minimum size ...

The [smallest] part in question is 4.89 x 9.35 x 3.49 mm, these sides add upto 17.73mm = bigger than the minimum 12mm

If they wanted me to sprue the parts up together, that would have been conveyed in one way or another.

Paul

Subject: Re: Preventing Rejections
Posted by [uncommented](#) on Tue, 23 Apr 2013 11:54:23 GMT
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Ok, now I've had it.

A month ago, Shapeways cancelled multiple orders and told me my model could not be printed. I went through multiple slow, painful rounds of iteration - during which I specifically requested they

tell me if there was something wrong with it - until they sent me a test print. Upon receiving my test print, I put my model back on sale. Now they have declared it unprintable again.

Last night, I received the following email:

Quote: Thank you for writing.

I'm really sorry to hear that your model got rejected after several months of prototyping.

I checked both rejected models and spotted this rejection reason:

"Reason: We have tried printing this part several times, there is too much pressure on the protruding parts and it breaks everytime. It needs more support to be printable."

"Reason: Within tolerance, however, we have tried printing this part and it breaks every time. There is just too much leverage on thin parts to successfully print it. Also, next to impossible to ship without breaking."

In short this means that we have had several attempts of printing the model but according to our production team there is only a 1 out of 3 chance that it will survive the process.

After this we are having difficulties making sure it will be shipped without breaking it.

Right now the main difficulties are the protruding parts like the beard and the horns which break really easily.

The 2 new orders have not been made by Shapeways and are in fact 2 new customers.

Again our sincere apologies for the inconvenience and we hope you will be able to make these parts a bit thicker to ensure that the parts will be printable and able to be shipped without breaking them.

I however do agree that we should have communicated this earlier to let you know that we were having issues printing this model without breaking it.

So in short, they have apologetically fucked me over, and have provided very little information about how to "fix" the model. Meanwhile, its two months since I initially put the model up, I've wasted a lot of time and money on test prints, and everyone who wanted the model (aside from the three who got theirs first) is SOL.

I'm honestly not sure whether I should even keep trying at this point. Shapeways offers some nice prints, but if they are going to do this again, I'd rather get someone with a consumer-grade extrusion printer - who at least won't screw me - to produce an inferior quality product.

Subject: Re: Preventing Rejections

Posted by [UniverseBecoming](#) on Tue, 23 Apr 2013 18:24:08 GMT

How about this. How about a research and development phase for products. Rather than trying to get the machines to perfectly match what the designers are instructing them to do with their CAD/CAM instructions, why not just make it clear to everyone what's to be expected until the ultimate design goal is finally achieved?

For example. Lets say an item prints successfully 5 times and then a problem occurs. Well, why not just document the problem with a description and maybe even photographs and then put that information right on the pertinent shop page? Make it so customers are informed of what may happen and that returns are not allowed for the product in its research and development stage.

Then, once a product has been printed numerous times successfully it can then be bumped up in status where it can have the benefit of allowing returns if not 100% satisfied. Yet, should it ever be found to have a problem, it would simply be demoted back down to research and development status.

That's how to deal with the customer aspect, but what about the designers? How do we keep everyone happy, including Shapeways employees, throughout the entire process? Simple, we just let everyone know what the machines will do and not do. A design rule checker that spots an error would simply inform the designer that for reasons A, B and C the machine will not print correctly and consequently there will be no returns or money back guarantee. The design would be put into research and development status. So if a designer for example wanted to order a box of polyamide dust that is supposed to be their 3D printed design, then so be it, just give them whatever comes out of the machine.

You could even have it set up where designers could pay a premium to have their model checked for errors. Or, if they felt confident with the design they could wave the check and pay for whatever came out of the machine regardless of what the machine turned out.

Design rule checkers would still check designs coming in, so as to hopefully spot anything that could compromise other designs, but they would only contact the designer if the a design would be suspected of possibly contaminating other orders, in which case the design would be given a possible contamination status and not printable until revised.

It would seem to me that a business model something like this would be a lot less stressful for everyone. The work load on the design rule checkers would be drastically reduced and therefore they could spend more time investigating each order that was specifically paid to have detailed checking. The designers would be happy because they would be operating the machines almost as if they owned the machines and were operating the machines themselves. They would be free to push the envelope if they wanted and most importantly, they'd only rarely be confronted because they would only be shown their design flaws when they either paid for it or it could possibly corrupt other orders.

Keep in mind too that under the current system design checkers can be spending time on checking designs that aren't even REAL! I know it's a stretch, but it is entirely possible that a competitor or even multiple competitors could be uploading fake purposely erroneous designs just to throw a monkey wrench into Shapeways' core operating system. However, under a business model like I am proposing competitors wouldn't be able to cause artificial disruptions.

Finally, try to envision the future. Look at how things are developing. As the whole 3D printing movement exponentially gains more and more momentum we are going to see more people who know nothing about 3D modeling and design in how it intimately relates to 3D printing. Currently, I feel by taking in a sampling of the forums, that Shapeways is mostly getting highly talented designers who know quite a bit about what they are doing as it relates to 3D printing, however, what about when the masses start getting involved. Even though nerves are being tweaked between the design rule checkers and the designers we are all competent enough to keep under control enough to keep working it out as can be seen in this thread, though discussions have been a little heated we are still moving forward to a degree, yet the masses aren't going to be so understanding.

Changes are most definitely going to be made, but what kind of changes? Lets see!

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Tue, 23 Apr 2013 18:32:52 GMT
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Messed up formatting of the forum messed my ability to read your lengthy reply.
(and your reply does not show in the stuff below as I am trying to respond so I do hope it is good stuff that helps Shapeways and their partners understand that clear, open, language barrier free communication (as I've said all along) can help us all stop getting models rejected on the first order let alone to 20th.

UB, I do take it that you have 1st hand experience of order rejections whether the rejecton be true or false?

Paul

Subject: Re: Preventing Rejections
Posted by [NickHawkins](#) on Tue, 23 Apr 2013 19:37:49 GMT

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If I had to pay for my models to be checked I would stop using Shapeways.

3D modelling is a hobby for me, my models are available to others so I can give something back to the community.

I am prepared to put up with the occasional model rejection because an earlier QA had passed it in error.

I donate my 'profits' to a local charity.

Nick H.

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Tue, 23 Apr 2013 19:53:51 GMT

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Remember that shapeways does not print everything in-house (yet ?), so at least for some materials they are at the mercy

of their production partners themselves. (Who may even be reluctant to communicate that they needed several tries to print

a particular order, lest they be considered too clumsy ?)

And I assume they are already considering increased feedback between their own production and service teams - but

creating a feedback mechanism that allows the machine operators to log how many "hidden" reprints were necessary

(and for what reason) may be a non-trivial task when it must also not increase the workload, i.e. not reduce throughput.

Collaborative tinkering between the designer, checkers and print operators - which is what your R&D phase boils down to -

does not seem to fit in too well with the speed and efficiency requirements of shapeways' business model (as I understand it).

So for truly marginal models you may still be better off with some traditional, local rapid prototyping business, unless your

model is so spectacular or raises such fundamental questions that the shapeways crew can justify putting in extra hours to

make it work.

That said, i still assume and hope that most of the recent rash of rejections is just due to the inexperience of new hires and/or

increased workload (less time per part for checking) - unfortunately it is quite easy in netfabb (and

probably competing systems as well)
to pick a wrong point while measuring.

And finally, the grand disclaimer - as I do not have a shop, I hardly know what I am talking about.
(And as English is not my
first language, I may not even be putting it in the right words)

Subject: Re: Preventing Rejections

Posted by [UniverseBecoming](#) on Thu, 25 Apr 2013 14:43:07 GMT

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Yep! Plenty of rejections, Paul. I argued against every one of them too! None that had already been printed though, that's got to be even more aggravating!

I don't know how helpful my reply is to Shapeways, I'm just trying to brainstorm up some possible solutions. I'd like to see a solution developed for this ongoing problem since I'm interested in doing further development with some of the designs I have up such as photography and advertising and so forth.

Good point Nick. Scratch that then, can't have a solution that causes more problems in another area. As a side, I think it's wonderful that you're donating to charity with your hobby.

Mk, you're doing great with English. I would have never known. Then again, I taught myself how to read and write in English so I'm not that great at it myself and I don't really know for certain if you're doing great with English. Looks good to me though!

Subject: Re: Preventing Rejections

Posted by [NickHawkins](#) on Thu, 02 May 2013 08:04:44 GMT

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As a designer it would be useful to be able to flag an order as a test print, this might have two effects:

- 1) Pre-print QA might take more care to check the model and could send a response back showing where the model is only just within material specs.
- 2) So long as the model is safe to print it should be printed even if the result might be imperfect, this would allow the designer to see if it looked right even if some parts were not quite thick enough for general sale.

These changes could save time (money) for both Shapeways and the designers in the long term by avoiding rejections of previously printed models that had been passed in error.

Nick H.

Subject: Re: Preventing Rejections
Posted by [matt_atknsn](#) on Thu, 02 May 2013 19:59:05 GMT
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Good day ladies and gents,

I'm curious though: had the nuance rules for FD/FUD material gone out of favor?

Cheers!

RoeT

Subject: Re: Preventing Rejections
Posted by [Dragoman](#) on Fri, 03 May 2013 13:46:48 GMT
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NickHawkins wrote on Thu, 02 May 2013 08:04As a designer it would be useful to be able to flag an order as a test print, this might have two effects:

.

Good suggestions!

Greetings
Dragoman

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Fri, 03 May 2013 14:16:30 GMT
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It is a good suggestion, and I believe may even have been suggested before in one of these myriad threads - what is missing from these discussions is any meaningful, official, response from Shapeways ... imo.

Subject: Re: Preventing Rejections
Posted by [Dragoman](#) on Fri, 03 May 2013 14:23:03 GMT
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matt_atknsn wrote on Thu, 02 May 2013 19:59 Good day ladies and gents,
I'm curious though: had the nuance rules for FD/FUD material gone out of favor?

Apparently, yes. The text has been changed, there no longer is a detailed discussion about thin wires.

They could have announced it more prominently, though.

Greetings
Dragoman

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Fri, 03 May 2013 14:40:03 GMT
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Yes indeedy, wires or bars are no longer considered walls, and therefore do not have the same 'rules' as walls - or is someone made a blanket decision for FUD that should be applied to FD?

Hey ho, once again what worked without any reported issues now does not work due to whatever issues weren't reported
Had it myself with customers FUD models recently

Paul

Subject: Re: Preventing Rejections
Posted by [matt_atknsn](#) on Fri, 03 May 2013 14:58:04 GMT
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Dragoman wrote on Fri, 03 May 2013 14:23
Apparently, yes. The text has been changed, there no longer is a detailed discussion about thin wires.

They could have announced it more prominently, though.

Greetings
Dragoman

Cheers mate!

Wish they'd update the page <http://www.shapeways.com/design-rules/frosted-detail> (like with some explicit ones ex. 1:3 wire thickness:length ratio; or where should they start measuring them structures... unless I missed it somewhere)

Chalk more tiny ships unavailable :/

Best regards,
RoeT

Subject: Re: Preventing Rejections
Posted by [FabMeJewelry](#) on Fri, 03 May 2013 15:19:07 GMT
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.....

1: All communications between shapeways and customers should be anonymously forwarded to the shop owner so that he or she is aware of everything, it is not only shapeways shop and reputation that's on the line !

2: When there are problems with a model ordered by a customer shapeways will put the order on hold with consent of the customer to give the designer the chance to fix the problem (rapid prototyping)

= Customer happy, Shop owner happy and Shapeways happy

Just do it

Subject: Re: Preventing Rejections
Posted by [MichaelMueller](#) on Mon, 03 Jun 2013 16:07:09 GMT
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Hi,

I'm really tired of getting mails saying "You've sold models which could not be 3D printed". Especially the silver material seems to be very complicated.

It's fine for me that a design has to go along with the material rules... but today I've got a rejection which says "minimal 1,5 mm for this particular model", instead of the usual 0.6 / 0.8 mm.

This way rules make no sense and you never know if your design will be printed or not. I think I'll no longer offer the silver material option in my shop.

Michael

Subject: Re: Preventing Rejections

Posted by [FabMeJewelry](#) on Mon, 03 Jun 2013 17:34:20 GMT

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Seeing your beautiful designed products this could happen to anyone

With both shops I'm running i didn't have a lot rejections overall but still I'm scared every time someone places an order.

Maybe it's a good suggestion to leave the "Yippee!" from the "you've sold models" notification ?

Just some more ideas that would help to dissolve these issues a little bit :

3: There should be an option to thoroughly check prototypes i order for sale in my shops to ensure they can be (mass) produced in the material i choose, i would even pay a fee for that !

4: When the design rules change the material should be locked and the shop owner should be notified to check if the design rules are affecting the producability of the model.

Subject: Re: Preventing Rejections

Posted by [stevecim](#) on Tue, 04 Jun 2013 02:05:08 GMT

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Hi all

Have not read every post in this thread, but have had rejects with a few designs lately , first I want to make clear that my rejections were valid.

I mainly sell models in silver, well when I do sell any , Not being a expert in design, looking at some of the rejects posted some are valid, You need to remember with silver , it,s a 3 step process, designs are first printed in wax , then loss wax cast in silver, then finished . And the fishing can be a mixture to mass finishing and hand finishing.

Some points.

1 . Mass finishing means a machine does the finishing , I.e the piece get placed in a machine, turned on , then removed ... No control over what gets material gets removed . Hand finishing is a little more selective The thing to keep in mind is .2mm or more can be removed from all surfaces at each stage If you have a surface detail that's only .283, you can end up with no detail left... You need to allow for finishing in your design The problem is you either have to design a different model for each version of silver or just accept that the each type of silver will look a little different and design in and extra .2 mm I.e if I want detail to end up .3mm I'll design it at .5mm , then I know the final piece will be some where between .51 and .28mm. ..

And it not so straight forward sometimes small details can be protected by other details, so you can get a way with detail .283

I guess the main thing is to allow for polishing, it will remove material every where....

2. Your design needs to allow for sprue placement, this is the biggest problem I've seen with some of the designs I've seen post here.

If you have a design that has detail over every surface you don't leave any where for the sprue to be attached .

Also The pressure of the investment will bend the wax if there is not enough support. .

Having worked directly with casters, 90% casters will only place 1 sprue on a design, if your design needs " runners" to support the design that's upto the designer. This is where the process falls over because there is not a method of telling shapeways what is part of the final design and what is sprue / runner which can be removed.

Just recently I had a caster make a bangle from 4.1 mm round wax, 60mm diameter , now I only had 1 x 4mm sprue and no runners and the final cast bent out of shape. No big issue nothing a hammer can't fix. For me. But for shapeways it would eat into profit for the 1 piece. And the wax I used is a lot stronger then wax used in 3d printers

My guess, it it could be way off and not being able to see the back of the above ring, is there might not be enough area to attach a sprue, the more silver that needs to flow into the design the larger the sprue needs to be.the design has lots of changes from thick to thin which could have flow issue Just a guess

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Sat, 08 Jun 2013 19:53:25 GMT
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I GIVE UP. Seriously. I am taking every single model that I have in FUD and setting it as not for sale. I admit, this is probably what Shapeways wants. I don't think they want to support that material any more. They find new 'problems' in every single model that has been sold in the past four months and I'm tired of it. If there is a new material with 'better' detail later, I may come back. Hasta la Vista Shapeways.

Subject: Re: Preventing Rejections
Posted by [matt_atknsn](#) on Mon, 17 Jun 2013 12:48:11 GMT
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matt_atknsn wrote on Fri, 03 May 2013 14:58
Wish they'd update the page <http://www.shapeways.com/design-rules/frosted-detail> (like with some explicit ones ex. 1:3 wire thickness:length ratio; or where should they start measuring them structures... unless I missed it somewhere)

Hmmm... seems they've taken down that particular page... quite alarming as it'll mean rejection for all my FUD-exclusive models... (0.8mm FUD wires seriously?)

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Mon, 17 Jun 2013 18:43:55 GMT
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Yep. If I want to put mullions into a window through a wall they need to be three times the thickness of the wall. Oh, and they have to be 0.8mm in all three dimensions. I had some L-braces that worked for a while by being 0.8mm on each leg with 0.3mm walls, then they started rejecting them by measuring them from arbitrary points inside the corner.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Mon, 17 Jun 2013 19:06:58 GMT
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with you there Roy, previously printed models with small walls now rejected due to someone's arbitrary interpretaion of 'the rules' = sucks for us trying to explain to CS that the model has been printed already without any reported issues....

Maybe I'll sign in again next month if there's been any changes to Shapeways policy of arrogance.

Paul

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Mon, 24 Jun 2013 14:11:39 GMT

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For those who are interested, this thread complaints has been locked and re-directed here.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Mon, 24 Jun 2013 20:45:17 GMT

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I originally posted this on another thread. It was pointed out that it was more appropriate on this thread:

It's become a wack-a-mole game. A model printed successfully, you make it available, a customer orders it, it won't print and you fix the error and re-upload it. Another customer orders it, and it won't print for another reason. You fix it, and there's another problem. It's the mole jumping up in another hole and you keep bashing. [I see this has been expressed previously in this thread]

I cannot say Shapeways is wrong. Unfortunately by printing these designs in the past they "lured" me into some sloppy habits and enabled me to push the design limits a little too hard. I am in the process of going through all my designs and reworking them.

Lately I get a new rejection- shells that aren't attached. However they are (except one that was my oops). My understanding was that intersecting shells were OK (and they printed OK in the past). Now I am no longer sure, and the topic doesn't seem covered in the materials guidelines. I have just ordered some new models that have intersecting shells- we will see what happens.

My thoughts at this point is to only order prints myself, and after I have the physical model in my hands sell it on ebay. It totally defeats the zero inventory, just in time production process that shapeways makes possible, but I just look like an idiot when a customer orders a model and gets an email that it can't be printed.

I also pointed out to customer service that a "square" wire that measures .88 has an equal cross

section to a 1 mm round "wire." No luck.

And no one can tell me when a wall is too narrow and becomes a wire. With FUD that can make a huge difference.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Mon, 24 Jun 2013 21:06:09 GMT
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And another thing- as long as we are complaining- breakage during shipping should be a non-issue. As part of my intent to sell my models on ebay I ordered cotton filled cardboard jewelry boxes. About .40 each by the case.

This is an example of some rolltop desk and chair models I have produced in FUD (and have been trying to get to print again ever since) in a jewelry box. Yes, some are painted, others are half painted- these were tests.

But I think the production model will get to the customer OK when they are sold on Ebay, and have this box put into a flat rate box.

I suggested to Shapeways that they could offer packaging like this for \$1, prevent breakage, and make a little bit extra on the mark up in response to the survey they sent around a while ago, but didn't hear anything back.

I understand we want everything fixed today, and that is is not that easy when you are not only growing a buisness, you are growing a technology. But the Shapeways to designer communications could be better.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Mon, 24 Jun 2013 21:29:53 GMT
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The real problem is, that ShapeWays doesn't seem to care about communicating their intents until you have ordered something that they then decide to reject. I've had Mrs Hagens do a manual check of models. She said they checked fine. But once someone, other than myself ordered them. ShapeWays kicks it out. Locks the model for NO SALE, turns off the materials selection and markup section. Then has the nerve to come to me and say,

"As at this moment we haven't got the possibility (yet) to put a model on private while doing the rejections, this hasn't been done automatically. This is something we are looking in to, that as soon as we are doing the rejections all the models which can't be printed will automatically get a restriction for the material we can't print it in. For now, the designer needs to put his model on private or a restriction on the materials and make the changes to the models and offer them for sale again. Of course I understand that this is something we have to provide and we are going to do this in the nearby future."

As if they haven't done it, But I watched as they did it. ShapeWays doesn't communicate it's intentions, or it's motives to others very well. It's as if we don't matter to them. Then when something happens, they expect you to just KNOW what they did and why. They dance around a simple answer as well as a seasoned politician in congress. They are experts at giving answers, without actually answering the question. And frankly it's starting to wear a bit THIN-walled.

This was the answer I got today about printable to now rejected models. Your going to love it, God knows I did.

"The Production Facility who checked the model in 2012 and printed this model as well unfortunately didn't check this model as strict as our own Production Facility does check them. We saw the notification that this model was printed before and if the model does meet the design rules or almost meets them, we always discuss this rejection with our Production Facility, but because the walls are really too thin this rejection was a valid one and we continued."

They've tightened up their guidelines so much, you couldn't breath thru a straw as they are now. You NOW have to design something for WSF for it to pass for FUD. And God help you if your designing for WSF material and want to use the dye feature. Used to be the same material as WSF. BUT, without telling a single soul in the universe. ShapeWays dumps that program to make dye now a POLISHED material. Again, CHANGING the guidelines without telling anyone.

I wouldn't mind some of what they have done. But dammit, COMMUNICATE that fact to me first. Just don't do it and then expect everyone to know what ShapeWays is thinking, and way. I ain't a mind reader. I got PMS, not ESP! ShapeWays has lost it's way. They are trying to so hard to top everyone else. They are changing their guidelines around. But yet THEY DON'T TELL ANYONE!

All of this, because I had a model that printed just fine last yr. Printed it several times. And WHAM! One day ShapeWays decides that my model no long works, shouldn't have been printed in the first place. I make corrections, upload the new model, it gets rejected, I make more corrections, it gets rejected, and I get so damm mad, I upload the last updated file, AS A NEW MODEL THAT NOW PRINTS! Turns out every rejection I got, was still using the original model to reject from. But the page showed that the updated file uploaded correctly and everything. And what is even more stupid. That first file of that model. I ordered 3 of them. They refunded all 3.

But in the package was a set, IN WSF MATERIAL! The same material they kept rejecting it under. And not one person at ShapeWays has the guts to tell me "HOW A MODEL GETS PRINTED IN WSF, BUT REJECTED IN FUD, FD AND EVERYTHING ELSE!".

ShapeWays, YOU FAIL!

Or as Ann on "the Weakest Link" would say,

"Who's one Froot Loop shy of a full bowl?",

or

"You would be out of your depth in a car park puddle."

or

"Whose brain will be donated to science and rejected?"

Your's truly,

Samantha
aka Mechanoid

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Tue, 25 Jun 2013 02:26:08 GMT
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I think the words of the day should be the ones we hear at work daily:

ISO 9001
Total Quality Management
Six Sigma
Process Control
William Edwards Deming

I get the feeling Shapeways my have "winged" things early on and is now trying to get things under control. It might have been better to start with tighter design rules and loosen them up over time based on experience. But that's bridge under the water. I now try to design everything with the polished alumide rules to cover all plastics yet still seem to run into problems...

<http://www.shapeways.com/forum/index.php?t=msg&th=14874&start=0>

Last week I had some pens come back with flat tops even though they had rounded tops in the design file. I don't know if it was something in the design file (the shell issue I keep reading about?) or something bad that happened during manufacture. Instead of wading through customer service I just redesigned the pens to have a flat top and sent out for revised parts since I

also had another change adjustment I needed to make.

The nexus of thorough design rule checks needs to be at Shapeways for all processes, either in the form of online checking as part of the upload process or an open source rule check deck that can be utilized in various programs to do the checks before upload. .You shouldn't have to buy a part or have someone else buy a part to flag a design or manufacture issue. There should also be a good way to appeal flagged rule checks to improve the rule check deck when possible or a way to permanently sign off on an error to allow manufacture with the error if the designer feels it is a non-issue. However having a decent rule check process right from the get-go would pre-empt many of these problems!

Subject: Re: Preventing Rejections

Posted by [PeregrineStudios](#) on Tue, 25 Jun 2013 21:47:30 GMT

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Had a lovely couple of emails today that made very little sense. Rejections for new models (not old, already-printed ones, thankfully).

It's high time Shapeways began differentiating between a 'wall' and a 'detail'. The Stainless Steel page tells us that 3.0 mm is the minimum wall thickness for stainless steel; details can be smaller than that. Most of my models have small details and have printed fine several time. Today, however, two rejections:

If those are 'walls' as opposed to 'details', I'll eat my beret.

What's more, the e-mail included this little gem:

"Increase wall thickness to at least 0.03" / 0.762mm in all areas."

So..... is it 3.0mm, or 0.762mm?

In any case, I have had plenty of models print successfully with similar designs and 'wall' (detail) thicknesses; what makes today's rejections different? Hell, my Forever ring has even thinner 'text' on it, and it prints just fine, and has done so probably over 20 - 25 times now!

In any event, it is absolutely impossible, given the design of the ring, to thicken any of these walls to the magnitude requested - more than tripling the thickness of each one, essentially ruining the

design. There's no reason this shouldn't print. If the following can print:

<http://shpws.me/mVZV>

<http://shpws.me/nwgx>

<http://shpws.me/nFfC>

<http://shpws.me/nBTX>

ALL of which have detail-walls MUCH thinner than both 3.0mm and 0.762mm, then there is NO reason the above model cannot print.

File Attachments

1) [ol663011-1171027-v1-689785-663011-1.jpg](#), downloaded 522 times

Subject: Re: Preventing Rejections

Posted by [dycyale](#) on Tue, 25 Jun 2013 23:45:33 GMT

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I haven't tried stainless steel yet, but the data sheet says that embossed details require .1mm, or about .04". It looks like you fell in the same trap I did. Because you had models print previously, you designed based upon experience, not strict adherence to the material specifications.

It would be nice if Shapeways had communicated that they were going to be applying the design guidelines more strictly, instead of simply rejecting models.

The problem now is how do we have any confidence that models will print successfully in the future. That is why I pay for a test print- I want to make sure it will print before offering a model for sale- to make sure I didn't mess it up, and I mess up a lot!

And your particular problem is that all the past ring designs you listed might be rejected in the future at any time if they don't adhere to the materials guidelines.

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Wed, 26 Jun 2013 00:40:10 GMT

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The issue appears that your details are too tall. For it to be considered a detail, they must be no taller than they are thick. It appears yours are taller than they are thick.

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Wed, 26 Jun 2013 05:22:50 GMT
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PeregrineStudios wrote on Tue, 25 June 2013 21:47

"Increase wall thickness to at least 0.03" / 0.762mm in all areas."

So..... is it 3.0mm, or 0.762mm?

.

0.03" means 0.03 inches...

Whether or not that equates to 0.762mm I cannot say as I avoid the Imperial system like the plague.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 26 Jun 2013 17:08:38 GMT
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Just a follow up to my prior comments about intersecting shells- although the order hasn't shipped yet, the ORDERS page indicates the models that had intersecting shells printed- so they weren't rejected.

It seems that adjacent shells, even when there is no space between them, will get a rejection. I will test further on my next order.

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Wed, 26 Jun 2013 17:15:17 GMT
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Shells that sit face to face will cause issues with Meshmedic when you upload. Faces can not exist in the same space. the software will try to fix it, and most of the time it will not come out well.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 26 Jun 2013 17:50:47 GMT

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when you say faces cannot exist in the same space, do you mean faces that intersect at an angle or faces that duplicate each other- well, at least for a portion of their area? I assume there is a term to define this, but I don't know it.

I think that one of my more recent rejections has a face of one shell in the same area as another. I don't think I designed it that way, but I had run it through netfab online and think it may have split it up into multiple shells. Hopefully that model is fully fixed. It is in production at this time.

The model that just printed has one portion of the model that is a separate shell that I connected by locating it with a flat portion slightly inside another shell. Here is a picture from the outside (yes, it's a miniature port-a-pot):

And here's a view that shows the inside of the main shell and the other shell protruding:

This has worked in the past. Is it another issue that may lead to future rejections?

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Wed, 26 Jun 2013 17:56:25 GMT
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Quote: I assume there is a term to define this, but I don't know it.

I believe the term is non-manifold.

As long as your shells intersect you should be ok. The problems arise when the faces of two separate shells are in exactly the same plane at the same co-ordinates with no intersection. The same is true of edges, and for all I know individual vertices too.

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Wed, 26 Jun 2013 22:26:51 GMT
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Coplanarity.

Subject: Re: Preventing Rejections

Posted by [hunterseeker5](#) on Thu, 27 Jun 2013 15:39:36 GMT

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Wow, what do you know, it seems that I'm not even close to the only one who is becoming sincerely aggravated by inane model rejections.

So back at the end of February this was posted:

Youknowwho4eva wrote on Thu, 28 February 2013 14:52I can tell you that we are progressing to a solution. I can't tell you when or what to expect. From what I have seen, it'll be up to your expectations and maybe even beyond.

Still waiting..... losing patience too.

What drew me to this thread today though? I got a model rejection for a too thin wire. The issue with that? The unsupported wire was just a sprue anyway, meant to convert something that would be rejected for being "multiple models" into something that can be printed as one unit, and blatantly didn't need to arrive intact. The killer? That wire met all Shapeways specs. (WSF 1.0mm unsupported wires). The rejection cited no actual specifications for what would be acceptable, nor provided citation to where such specs could be found. It was fully compliant with the specs found here:

<http://www.shapeways.com/materials/strong-flexible-design-guidelines>

The model is private, so I'm not going to post the image showing it, but the wire was supported every ~3.5 centimeters.

The first response to my "WTF?" by Maartje was broadly unhelpful, having clearly not read my initial email, was probably formulaic, and conveniently listed the WSF specifications to which my model had complied. A follow-up requesting contact with someone who could actually provide insight into the issue, rather than just flog a keyboard, was promptly replied to stating the concern would be passed along to the engineer who rejected it.

So here is the thing. There used to be a "fix my model if it can't be printed" option, which I'm sure was time consuming, but addressed the issue of these byzantine and apparently secret specifications regarding why a model could be rejected. So I could go through and list all the solutions customers have been clamoring for (shapeways fix it themselves options, just print it anyway and we'll accept it imperfect, actually bothering to list the full set of specifications against which models are being judged, not rejecting already test printed models, offering a model rejection/acceptance submission system allowing models to be approved permanently and prior to getting money involved, offering the option for model corrections BEFORE rejecting them and permanently costing us a customer/causing public embarrassment, automatically notifying us prior to print spec shifts so models may be updated, allowing order holds to be placed for model updates, etc etc) but since ALL these suggestions have apparently been found unacceptable by

Shapeways, could you possibly come up with some sort of solution that actually works? Clearly there will always be some level of rejections, but the current way they're implemented just doesn't work.

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Thu, 27 Jun 2013 17:54:47 GMT

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hunterseeker5 wrote on Thu, 27 June 2013 15:39So here is the thing. There used to be a "fix my model if it can't be printed" option

As far as this part, that was only for meshmedic to automatically try to fix files that might not be manifold or have other model issues. It didn't check thickness of your model.

Subject: Re: Preventing Rejections

Posted by [hunterseeker5](#) on Thu, 27 Jun 2013 18:14:11 GMT

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Youknowwho4eva wrote on Thu, 27 June 2013 17:54hunterseeker5 wrote on Thu, 27 June 2013 15:39So here is the thing. There used to be a "fix my model if it can't be printed" option

As far as this part, that was only for meshmedic to automatically try to fix files that might not be manifold or have other model issues. It didn't check thickness of your model.

So, out of that ENTIRE post, and the larger string of complaints in this thread, your takeaway message is that really, the automated fixing feature, wasn't terribly helpful anyway. Nice. I can see that, as a company, you're really listening to your customers and working hard on resolving the major issues which are causing strife within the community which supports you.

BTW thanks for responding to my PM in exactly the way I've become accustomed: when pushed you eventually refer to something that has nothing to do with model rejection (in this case an obscure guideline regarding the potential of wall warpage which obviously isn't a problem for a sprue). Have you noticed that these "case by case" explanations tend not to be terribly satisfying, because they provide no reasonable way for a designer to forecast the next rejection?

If it were just a lone rejection, fine whatever I'll tweak the model and the world will keep turning, but its all the time and for ever increasingly contradictory reasons. And its on a whole different level when you reject an already test-printed model that a customer of ours orders. Last time I

checked the rankings, I was in the top 100 sellers on Shapeways. Thats pretty ironic to me, because word has gotten around in the community I serve and people really don't want to order my products direct because they think that they'll end up only getting some of their order despite the models being test printed and photographed before being sold. So I have to go and inventory printed items before they'll really sell. That totally defeats the purpose of the Shapeways model. Likewise if I'm losing this many sales to model rejections, how badly must this be hurting other sellers and Shapeways' growth as a whole? And NOBODY is bothering to address this?

Am I alone in thinking this is nuts?

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Thu, 27 Jun 2013 19:48:14 GMT

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hunterseeker5 wrote on Thu, 27 June 2013 18:14So, out of that ENTIRE post, and the larger string of complaints in this thread, your takeaway message is that really, the automated fixing feature, wasn't terribly helpful anyway. Nice. I can see that, as a company, you're really listening to your customers and working hard on resolving the major issues which are causing strife within the community which supports you.

As you said I sent you a PM to try to help you with your issue. As you said your model is private so I didn't want to give out details that wouldn't make sense to those that don't see your model. I am not a company. I am the forums moderator. I help where I can. I relay information that I receive. And if need be, I clean up discussions that lead down the path of no longer being constructive. So if you'd like to continue to constructively add to the conversation please feel free to. As they say you will catch more flies with honey than with vinegar.

Subject: Re: Preventing Rejections

Posted by [PeregrineStudios](#) on Thu, 27 Jun 2013 19:59:03 GMT

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Woah, woah, woah, hang on now. I wasn't going to weight in on this little exchange, but seriously? That last remark? 'You will catch more flies with honey than with vinegar.' While I am all in favor of civility and manners on the forums, something needs to be made clear here: Shapeways is the service, and we as designers are both the customers providing it with money AND the inventors providing it with unique work. OUR job is not to 'catch' anything. I wholly sympathize with you - as you stated, you are just the forum moderator, nothing else, and this thread is dangerously close to spiraling out of control - but it needs to be understood clearly and without compromise that SHAPEWAYS is the problem here, not us, and that last remark is straying dangerously close to

'you ought to be grateful' territory.

The real problem here is that Shapeways is impenetrable. You say you're just the forum moderator - okay, so where are the full Shapeways staff? Why aren't they weighing in on this? How and where can we address these issues to them DIRECTLY? Without going through forums, without going through customer service reps. We can't. If you, in your capacity as forum moderator, cannot give specific and clear reasoning or answers, then we as designers MUST be able to speak to someone who CAN.

Subject: Re: Preventing Rejections

Posted by [hunterseeker5](#) on Thu, 27 Jun 2013 23:59:06 GMT

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I mean I understand that you're just a forum moderator, and most of the customer service people I speak with are also extremely polite which I appreciate to a point but..... at some point you need to talk to someone who isn't "just a _____ person" you need someone to roll a few heads until the problems are actually addressed, not apologized for.

Why do you think my temper spilled over onto the Shapeways forums? Believe me, in my native forums, there aren't these great mysteries of what the Shapeways problems are, everyone pretty much knows that there is something seriously wrong with the way shapeways processes designs, and in turn runs their business. I couldn't tell you how many more sales I'd be making if there wasn't the general attitude that you may or may not get what you've ordered, you have to shout at someone to get a physical refund although can't just get your order corrected to what you wanted, AND it takes several weeks to show up. Yeah okay, the third one isn't going to be solved any time soon its a labor intensive process to run a store with no inventory, but the first two are problematic and could have been easily fixed.

So, and I've said this privately to the very polite, but regrettably powerless, Mr. Michael and I'll say it again here: we (the makers) have pitched endless ideas on how this problem could be, if not solved, at least significantly improved. Some of these would be just policy changes, some software changes, and some just attitude changes. ALL, at least all I'm aware of, have been soundly rejected or ignored. Hell look at this thread. We're here banging on Shapeways' door and we're getting a (not your fault sorry) paid talking head who can't do a damn thing other than relay information and work the forum tools, presumably gaging me if I become too cutting.

So lets all stop pretending for a moment that Shapeways doesn't have a clue whats going on. Clearly someone who handles money IS watching this thread, and hoping that if they don't say anything we'll all just shut up and go away. Here is the thing though: Shapeways just sent out an

email recently stating they had made one of their funding hurdles. Fascinating then that this whole little business experiment is still suckling at the teet of VC money. How amused do you think they'd be if they saw that Shapeways was intentionally poisoning the community they're dependent on and trying to build? I'd bet not very. I know more than a few venture capitalists, and even if the numbers looked good, a bunch of pissed off end-line consumers would make them pretty queasy.

So what'll it be Shapeways? Keep throwing pions at us, ignoring us, and figuring that all the little arrows stay green and pointed up, or are you actually going to show up and fix this?

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Fri, 28 Jun 2013 02:52:08 GMT

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I had an order completed Monday. But because someone in the production plant didn't take all the models to shipping. It sat there until I complained about it today. Now ShapeWays is over nighting my order via UPS. And that has got to cost them triple what the 5 day ground charge was. And for 2 days no one knew what was going on. They offered to refund the models they couldn't locate, But have yet to do even that. So I don't have the first clue whats in my order.

This is the type of stupidity that I and so many others are talking about. Rejection rates are off the scale. Orders held up and no one knows why, so they have to pay triple to get it to me on time. ShapeWays has people in the Service Team that know what they are doing. But that is mostly as a mouth piece to CALM the riots from the gates of avalon. ShapeWays is too busy worrying about it's money issues, and not spending nearly enough time fixing the problems that are costing them money.

People used to order like it was going out of style. But since December when ShapeWays moved the production plant back in-house. And doubled down on their guidelines. The out going out of their way to find issues to reject models for. I don't know how you are suppost to put a Construction Fury together in one shell. Not at only 14mm wing tip to wing tip. When I have the Discovery One in my shop with 47 shells, and it sells all day long. My Spacer1999 Eagle set, has 170 shells over 4 pieces in the file. Yet it's one of the most successful models in the last few months. I'm attaching pic's of the Construction Furys.

Now I'm not a designer, I and my friends paid to have these designs made. And these designs are very successful. Models from our shop are always on the top selling page for vehicles. But it seems that no matter how successful these models are. ShapeWays seems to be trying to destroy our customer base. People no longer trust that our models can be printed. I've had to go

back in and repair many models, and still can't get them to print. It's driving us all up the wall.

And like "hunterseeker5" stated, no one at ShapeWays main staff seems to care. The Service Team give good lip service. But rarely do they seem to have the power to actually do anything about the stupidity of the home office. I'm tired of yelling at the Service Team, it's pointless. They have their hands tied with nearly everything. So I want to know, "WHERE IS SHAPEWAYS IN ALL OF THIS?" Are they hiding like Enron CEO's did before their company tanked and it cost everyone their jobs? Are they off on vacation, like congress? And why doesn't anyone from ShapeWays main staff actually weigh in on this thread?

ShapeWays best realize something. They are the printing machines. But it's the shop owners and designers that keep them in business. I ain't going to go brown nosing them to get things done. I did that for 2 yrs. Now where's my damm kiss?

The forum moderators are here just to try to keep it civil. Well I've been biting my tongue for some time now. If I had a phone number to call, I'd be on the phone everyday screaming. I know that I am about half a heartbeat away from having TheVerse shop closed, and being thrown off ShapeWays, and being banned. But someone better start listening. Mr. Denissen clearly stated;

"We as cs are seeing the frustration on designers and customers who get rejections of models and we also know that some design rules are strange or tricky."

The sad part is, it doesn't seem to bother anyone at the higher levels in ShapeWays about the GROWING frustration from designers and customers alike. Of that their design guidelines are becoming so strange and tricky, that is causing many people to just give up on 3D printing. If models that have sold many upon many times before, suddenly becomes REJECTED. Why should people order from ShapeWays.

I truely hope that someone at ShapeWays upper management is reading this thread. Just wish they had to guts to speak up, and talk to "US" directly. Instead of passing the buck to the Service Team. I'm sure those folks go home crying most days, from all the emails wanting to know WTF is going on.

Samantha
@TheVerse

File Attachments

1) [construction_fury.JPG](#), downloaded 346 times

Subject: Re: Preventing Rejections

Posted by [bartv](#) on Fri, 28 Jun 2013 08:15:39 GMT
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Hi all,

thanks for your candid feedback in this thread. Yes, rejections are a major issue and we share your pain - they cause us a lot of extra work (and frustration), too. The topic is on our radar and rest assured that the right people ARE reading these messages. I'm talking with our Product people right now to learn what we can share about our future plans here, and you can expect an update from us later today.

Also, if you ever feel that you're having a hard time getting through to us, please reach out to me or Natalia. We're here to advocate you, and are actively championing your issues in our product development groups. You literally can't bother us enough with issues that make you unhappy!

Thanks,

Bart

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Fri, 28 Jun 2013 09:09:59 GMT
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Bartv,

Your future plans should be to stay in business. But your rejection rates are forcing customers and designers alike to bail. How are you going to stay in business, if people all but stop using your company?

December 2012, that's the date when ShapeWays rejection rates jumped clean off the scale. Models from everyone, that printed without complaint, now are total junk. Because you reject for things that in some cases don't make sense. Try this on for size. I wish I still had all the rejection emails that I responded too. Because in them, not once, but several times. Models you were rejecting for WSF guidelines. WERE ORDERED IN FUD!! I've even yelled at the Service Team about it. With NO clear answer ever being given. You got the Service Team so tied in what they can, and can't say or do. They are more like robots. And the emails sound like it too.

When a model gets rejected for multiple shells, it's like WTF. I have one real great selling models in my shop. Discovery One. It's got 47 shells. AND IT'S NEVER FAILED!! So what is this multiply shells issue about? The Service Team either can't say, or won't. I'm tired of yelling at them folks. They are only doing what ShapeWays has told them too do and say.

You tightened your guidelines up so much, it's like trying to get a marble thru a plugged up fire hose. It sounds like it should fit. BUT IT DON'T!. Are you trying to push everyone out? You trying to make everyone not trust ShapeWays?

Because that's what your doing. I have a model that I had designed last yr, It works, it works very well. OR DID! Until December 2012. You used to offer black dye for WSF, and it worked dead on every time. But someone at ShapeWays thought, "HEY I HAVE A GRAND IDEA, LET'S MAKE ALL DYE MATERIALS POLISHED, AND LET'S NOT TELL ANYONE ABOUT IT UNTIL THEY ORDER SOMETHING". Or atleast that's the impression I get about it. Now that model sits. Can't sell it now. It's been shut off by ShapeWays. I tried to reopen it. But all the materials have been blocked. You should have seen to nasty email I got on that rejection last week. I'm still trying to find something soft to sit on.

You've tighened up your guidelines to ridiculous extremes. I've lost so many sells as a result. And they tell me they won't reorder. That mean's you lost out too. My tiny markups don't add to much, but they do work in helping pay the people that work for ShapeWays. Please try to remember that.

Advice, relax some of your guidelines. Allow the printers to try and print models that used to print. And if you have to reject a model, be clear about what, and why. Because I've had a model rejected for thin wall issues, on a detail. Something supported by 3 actual walls. But your people simply refused to listen to me, and even stopped talking to me altogether on the subject. After telling me to please continue to email them my concerns. I had a model that was rejected, corrected file uploaded, rejected again, new corrected file uploaded, rejected again. Only this time I noticed something. the rejection pic's WERE FROM THE ORIGINAL FILE! And too boot, the first file, PRINTED IN WSF, but was rejected for FUD. And I have the model sitting on my desk to prove it. Funny thing is. I took that last updated corrected file, and uploaded it as a new model, and it's never been rejected since. And I didn't make a single change to that last file.

Doesn't sound very damm professional to me.

Bartv, if you can't tell, I'm pissed. And I'm a full blooded Bavarian, too boot. But I'm trying to hold my tongue.

Lets see if you or anyone else, NOT IN THE SERVICE TEAM, has the guts to explain all that to me. And I ain't the only one ShapeWays needs to be talking too either. This thread is loaded with designers and shop owners that are at witts end over it all.

Samantha
@TheVerse

Subject: Re: Preventing Rejections
Posted by [chaos241](#) on Fri, 28 Jun 2013 15:16:38 GMT
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I've had models rejected that were right at the minimums of the materials with new thicknesses that WERE NOWHERE TO BE FOUND.....they were made up tolerances. I've also had issues with models being printed and working perfectly when all of a sudden all sales of that model are rejected.....WHY? Because someone found a "error" which wasn't causing any issues whatsoever in my model.

The best was a model that came back rejected because it was three bodies but in reality someone screwed up and it was still a .stl file that was one model that I made.....I mean I had been printing it for MONTHS before this came up. It seems kinda pointless to run a check each time its printed. I would only check it the first time and if it passes print it and never check it again.

The other thing that really makes me mad is when I receive part of my model and part of someone else's but not the rest of mine. Are you really rushing production that much that you can't make sure all of my stuff makes it in the same bag?

The last thing that makes no sense..... what constitutes a "wall" vs. a "wire" and what length defines a "supported" wire vs. a "free wire"....I mean seriously who thought up all these terms then gave no definition and assumes the modelers can figure everything out.....
<http://www.shapeways.com/materials/strong-flexible-design-guidelines>

Basically all a lot of us want is for our models to be approved. I know my models all fall within tolerances but someone magically decides that it isn't.. Then we call and argue with you and OH it will print.....The best rejection I've had in a while is that your automated check reject a 1.5 in diam by 1 in model for being too large in WSF.....

Subject: Re: Preventing Rejections
Posted by [uncommented](#) on Fri, 28 Jun 2013 15:16:55 GMT
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Has anyone here ever used Sculpteo? Their upload and preview process seems a lot more user-friendly (and I'm currently ordering a few prints through them to test their quality) - maybe the Shapeways team should take a few pointers from them.

Subject: Re: Preventing Rejections
Posted by [GADesign](#) on Fri, 28 Jun 2013 16:29:29 GMT
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I work at a high tech production facility with (World Class Manufacturing / 9001 iso) certification and still many mistakes happen. Murphy's law applies on everything, we are all humans (I've even seen robots getting confused)

I've had my deal of non/misprints and they've always handled it in a correct way by reprinting the product free of charge or refunding the costs. I believe that Shapeways does everything in their power to correct faults and mistakes and make sure they don't happen again in the future but on such a large scale they operate these days it's impossible to change things in a day/week/month.

Not all the problems that occure are Shapeways fault, imagine if they were negative towards us designers when we've designed a non-printable model that we've put up for sale

Remember that shapeways together with the designers are making this all possible, they are not more important than us and vice versa.

There are plenty of other services and designers in this world and none of them are perfect.

Subject: Re: Preventing Rejections
Posted by [hunterseeker5](#) on Fri, 28 Jun 2013 17:42:14 GMT
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GADesign wrote on Fri, 28 June 2013 16:29I work at a high tech production facility with (World Class Manufacturing / 9001 iso) certification and still many mistakes happen. Murphy's law applies on everything, we are all humans (I've even seen robots getting confused)

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Remember that shapeways together with the designers are making this all possible, they are not more important than us and vice versa.

There are plenty of other services and designers in this world and none of them are perfect.

This counter-argument fails to address, or perhaps more appropriately ignores, some of the larger complaints:

- 1) We apparently don't have access to the full specs and definitions that the model screeners are working off of, so really we're fumbling around in the dark trying to guess whether or not something will print. Just as an example, what added height/width ratio converts something from a wire to a wall? What span length and grounding convert a supported wire from an unsupported wire?
- 2) Why can't we address issues before they cause irreparable harm and loss of face, not to mention finances, to customers?
- 3) Most of us test print and photograph models prior to selling them to assure printability. After doing this, try explaining to a customer why their order was screwed up for them.
- 4) Why when a "mistake" happens, why do we get a runaround from the CS people who are either unable or unwilling to fix it?

So I'm not entirely sure if you actually read through our grievances, or are just shilling for shapeways, but really your apologist statements fail to really see the issue that's actually being taken. I think all of us here are used to dealing with people, where mistakes can and do happen, but even if it were only that nobody should be accepting of your mistakes if you can't accept your own mistakes eg. model rejected based on something which was explicitly stated to be allowed (like multiple shells in SLS nylon) and when complaining for a correction you're politely told to go pound sand. Nobody is going to have sympathy for your "mistake" in that instance.

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Fri, 28 Jun 2013 18:31:38 GMT
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Hang on, now, hunterseeker. You have your complaints, and that's fine, and I'm with you to some degree, but slow down. There's a very big difference between complaining to Shapeways about issues that need attention, and actively accusing your fellow designers of shilling for Shapeways or being Shapeways apologists if they state that they have much fewer complaints. Let's have a little more respect in here.

bartv wrote on Fri, 28 June 2013 08:15Hi all,

thanks for your candid feedback in this thread. Yes, rejections are a major issue and we share your pain - they cause us a lot of extra work (and frustration), too. The topic is on our radar and rest assured that the right people ARE reading these messages. I'm talking with our Product people right now to learn what we can share about our future plans here, and you can expect an update from us later today.

Also, if you ever feel that you're having a hard time getting through to us, please reach out to me or Natalia. We're here to advocate you, and are actively championing your issues in our product development groups. You literally can't bother us enough with issues that make you unhappy!

Thanks,

Bart

Thank you for weighing in here, Bart. I look forward to these updates that you can provide.

I DO have to mention one thing, though - eventually, the lip service will need concrete advances to back it up. There are quite a few issues that we've been told over and over - by you, by Natalia, by anyone - that are 'being looked at'. Now, many of those issues are aging rapidly, several months by my count, and still all we've heard is 'being looked at'. I think it may be time to open the doors and let us see EVERYTHING. What are you looking at? How? Why is it feasible, or not? What meetings have you had and with who? What companies or contractors have you contacted? This isn't specific to this thread, but for all issues that will apparently take several months to resolve. We as designers are not just 'customers' - we're a part of the structure of Shapeways, and we NEED to be kept in the loop - at any and all junctures, if I had my way. It's not enough to know that something is 'being looked at'. We need to know how, when, why, by who, and how frequently, and we need to know AS it happens so that we can keep the faith that these issues are being legitimately and fully looked over.

Subject: Re: Preventing Rejections
Posted by [hunterseeker5](#) on Fri, 28 Jun 2013 18:45:20 GMT
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PeregrineStudios wrote on Fri, 28 June 2013 18:31Hang on, now, hunterseeker. You have your complaints, and that's fine, and I'm with you to some degree, but slow down. There's a very big difference between complaining to Shapeways about issues that need attention, and actively accusing your fellow designers of shilling for Shapeways or being Shapeways apologists if they state that they have much fewer complaints. Let's have a little more respect in here.

If you attempt to de-legitimize someone's argument by ignoring their points there are three options: you're not sufficiently intelligent to comprehend the argument, you didn't actually read the argument, or you're a shill. I went out on the limb and assumed it wasn't the first one, so offered up the two alternatives. You're absolutely correct though, it could be the former however people tend to find that insinuation insulting.

Lets be clear, saying you've not had as many rejection issues is not specifically what I'm targeting here as being, at best, apologist. Its things like:

"many mistakes happen"

"Murphy's law applies on everything, we are all humans"

"...on such a large scale they operate these days it's impossible to change things in a day/week/month"

or my favorite:

"I believe that Shapeways does everything in their power to correct faults and mistakes and make sure they don't happen again"

So okay, if thats not apologizing and making excuses for Shapeways, what in your mind would someone have to say to constitute that position?

edit

Side note, I'm leaving for the weekend in a few hours, so feel free to have the last word on the subject as I feel I've made my point.

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Fri, 28 Jun 2013 18:45:52 GMT

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Hold on Hunterseeker.

Quote:eg. model rejected based on something which was explicitly stated to be allowed (like multiple shells in SLS nylon)

Shapeways does not reject models if they have multiple parts in 1 file (if material allows it), however we do reject if you are trying to print a hand with 10 fingers and we spot that the 10th finger is not attached to the rest of the hand, even when the part is just separated by 0.01mm, it's still considered as loose shell

Reason for this is that there is a small gap which might not get fused during the printing process and thus you will receive a bag with 2 parts, Hand and 9 fingers + a separate finger.

Subject: Re: Preventing Rejections

Posted by [hunterseeker5](#) on Fri, 28 Jun 2013 18:55:32 GMT

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Mitchell I missed you, and thought you'd been lost or just transferred to somewhere that you'd be shouted at less. (background, Mitchell has thus far been the ONLY custom service representative I've spoken with who has actually resolved an issue with a false rejection. That was, as I recall, almost a year ago though, but I was about to move to another 3D print service and he renewed my faith in Shapeways at the time.)

As to your specific point

"Shapeways does not reject models if they have multiple parts in 1 file (if material allows it)"

The specific case to which I was previously referring regarded SLS nylon that does supposedly allow it, and in this particular instance it was three parts which were meant to actually be separated when the user received the model. (I started implementing sprues after an earlier multiple parts issue) This point was argued, but unsuccessfully. Once a model has been canceled though, and the credit returned to a customer, you can't exactly take the money back again though which is probably part of the problem with the system. Thats a different argument though.

I'm so thrilled to see you're still alive and kicking though.

Subject: Re: Preventing Rejections

Posted by [numarul7](#) on Fri, 28 Jun 2013 19:32:53 GMT

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Shapeways please check this [i.materialise.com](#) and [sculpteo](#) , [i.materialise](#) it is the direct competitor to Shapeways and it is RUSSIA based yet have Titanium printing, Platinum printing and when something it is printed once they print it from that on without complaints , some designers tend to move to them due Platinum option and pure Gold option.

Any designer lost from you it is a win for them , think about it! And make a practical solution for this type of problems! A better check script on the server to analyze the objects.

For money intake reported in E-MAIL to all we expect that invested money to be used to solve this kinda of problem.

Hire programmers , hire people to solve this and cut the stress on the designers or your busyness will end slow and for good and [I.Materialise](#) , [sculpteo](#) etc will grow from your failures.

Don` t tell us that you can` t solve it and etc , hire programmers and do the job.

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Fri, 28 Jun 2013 21:04:50 GMT
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Mitchell Jetten wrote on Fri, 28 June 2013 18:45

Quote:eg. model rejected based on something which was explicitly stated to be allowed (like multiple shells in SLS nylon)

Shapeways does not reject models if they have multiple parts in 1 file (if material allows it), however we do reject if you are trying to print a hand with 10 fingers and we spot that the 10th finger is not attached to the rest of the hand, even when the part is just separated by 0.01mm, it's still considered as loose shell

Reason for this is that there is a small gap which might not get fused during the printing process and thus you will receive a bag with 2 parts, Hand and 9 fingers + a separate finger. There is also the case in which the staff reports multiple shells as a problem, but it has printed multiple times that way, all of them ending in a solid single part product. The customer keep on pushing and buying, luckily. It was printed after all, and again it ended as single mass. Shells were counted at wrong time.

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Fri, 28 Jun 2013 21:06:32 GMT
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Hi guys,

As Bart said, we are reading this thread and I'm really sorry that we have not responded sooner. Resolving issues with your models are our #1 priority I assure you!

We really do appreciate your suggestions! Some of them are great ideas and some we are already acting on, so we want to share with you some more detail about the many ways we are working to fix rejections.

We have all talked a lot about implementing a "printed before" flag, and while this seems like a magic bullet, it is only a small part of a complex puzzle.

Because we want you to be able to create whatever you can imagine, we check every single ordered model to ensure that it will retain its quality during the production, cleaning, packing, and shipping processes. We want to work with you to resolve any potential issues that your model may have, and the way we (currently) do this is by sending rejection emails to help you improve your models.

Because we would love your help in resolving any issues that we find, we welcome and encourage you to contact us! It's absolutely worth emailing us if you disagree with the rejection reason so we can resolve it together. We'll be the first to admit that our processes are far from perfect, but as we are constantly working to improve, we would love to continue having conversations with you on this topic.

With that said, we would like to give you a bit of insight into our processes as we have several model checks in place. We investigate the production history and ensure quality at each of these production checks.

1. Automatic check on upload to ensure printability

2. Production

This is all about checking the model and flagging it for rejection. Going back to the "printed before" flag, I'm happy to say we now have the first step of this type of feature in our system. Specifically, we can now see how many successful prints there have been of a particular model version. Basically, if the rate is higher than 50% successful we will print it, and not reject it. And most importantly, this flagging only works for a specific model version.

When revising a model's design, make sure you update your model via uploading new file revisions on the model edit page, not by uploading a new model via the create page.

3. Supply Chain

Here we can modify the rejection reason, to give you more context or details. Our production checks involve us analyzing the production history for your specific model. Again, it is important to mention here that when revising a model's design, make sure you update your model via uploading new file revisions on the model edit page, not by uploading a new model (via the create page).

Like I mentioned earlier, this is not a 'be all, end all' system, but rather it is the beginning of having a comprehensive printed before flag. This is the only way we can keep track of your specific model and see that it has indeed been printed before. We are improving this process every single day, and we're trying hard to stay agile in refining our processes.

4. Customer service

The last place where we check models is in the customer service team. This is where we get to email you directly, so help us help you by emailing us back if you have questions about your rejection. We want to have these conversations with you!

Shopper rejections

We understand these are the most painful rejections because it is a bad experience for your

customer and may damage your reputation as a designer/seller. There are a lot of great shops on Shapeways, and the best designers have adopted the procedure of test-printing their products before they offer them up for sale. This accomplishes a few important things:

1. It lets you make sure the model/design comes out exactly as you imagined it would.
2. It lets us have a record that it has, indeed, been printed successfully (at least) once.
3. It allows you to take a picture of the model/design. This greatly improves your product presentation and you are therefore more likely to make sales!

One last point to mention is our design guidelines. When you design crazy awesome models, we get to test if our machines can print them, and we all learn something. We want to work together to make sure your models are printed at the highest quality, and by the same token we always try to push our own limits through what you make. We then take these lessons and create design guidelines to help other people design things too.

We are excited to be able to announce that our community team recently grew in size, and one of our upcoming projects is to rewrite the design guidelines to be easier to understand and with less ambiguity. So stay tuned for that!

As many of you have pointed out, we are all in this together! We are learning to work with a new technology and we want to keep enabling you to print amazing things. Rejections are a way to learn, to improve, and to create the future together. Let's keep the conversation open and explore where we can go together.

Natalia, on behalf of Shapeways

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Fri, 28 Jun 2013 21:13:37 GMT

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So because I'm going to quote the two parties in this, I decided I would post everything they said. So incase someone tries to ban me from ShapeWays for airing the dirty laundry. But I'm tired of being caught in the middle of what one person says, another doesn't agree with, and I get the short end of it.

Here we go again. I just had a model that I had someone buy one in WSF and one in FUD. They both just printed and shipped TODAY.

Yet the Service Team, aka Mr Denissen, just sent me this concerning the model and it's possible updated file.

"I have checked the file for you and checked it for the materials: FUD, FD and WSF.

First the model does contains shells (173). Also the model has detail level that is not sufficient and under the design rules. Also at the bottom you have some thin walls. Attached are the screenshots of the model.

If you can increase the detail level to 0.2 mm and thicken the walls to at least 0.3 mm for FD and 0.7 mm for WSF then we are able to print the model in your desired materials."

Which was QUICKLY followed up by a reply from Mr. Jetten, who had this to say.

"I'm really sorry to intervene in this email conversation. After reading your posts on the forum I spotted something that caught my attention:

"When a model gets rejected for multiple shells, it's like WTF. I have one real great selling models in my shop. Discovery One. It's got 47 shells. AND IT'S NEVER FAILED!! So what is this multiply shells issue about? The Service Team either can't say, or won't. I'm tired of yelling at them folks. They are only doing what ShapeWays has told them to do and say."

Although I'm currently having my last day off (had a week vacation) I still would like to inform you that the email below this one from Joost is incorrect and do apologize for this. The model you have emailed to Joost is actually a file before uploading and thus contains a lot of parts which are intersecting, the assumption that the model is not printable because of the 173 shells is not right.

As soon as you upload your model on the website or software will automatically repair all intersecting parts and will unify your model into single objects. At the moment you are not able to see how many shells your model contains after uploading, but I will make sure that you will be able to see this in the near future on the my edit page of your model.

The model "Aries 1B 14mm V2.stl" has only got 1 shell after our software did its magic trick unifying all intersecting parts. I have attached a small picture to show this in our internal system.

I do know this doesn't answer all your questions right now, but I just wanted to let you know the 174 shells isn't an issue and will be fixed during uploading.

However there is one catch, if there are parts that are not intersecting, our software will not fix this, even if it's just 0.001mm difference."

Now as you all can clearly see, Mr. Jetten & Mr. Denissen do NOT agree about what is reject and

what ain't. And the funny part in all this. The model just shipped. Which means my update, which removed the inner shell that made it hollow, and the outside tiny skirt shell around the bottom, otherwise there was not one thing different in how the two files were seen. Yet 2 different people in the same office, One while on vacation, seen the same model in two completely different manners. Now from what I can tell. Mr. Jetten is over Mr. Denissen. Which means I should really take Mr. Jetten's word over Mr. Denissen's.

And maybe that too is one of the problems at ShapeWays, no two people see the something in the same file. Maybe someone needs to go back to school or something. Because this ain't working like this. Confusing cross communications is only making things worse. If someone is wrong, maybe they need to be FORCED to send a second email admitting their fault, and inform you what the truth really is. I can't do 2 different models for 2 different people, that are the exact same damn models. I don't know how to do that. Stop confusing me, dammit.

Go back to less restrictive guidelines, until EVERYONE at ShapeWays is on the same damn page about the guidelines.

Samantha

Subject: Re: Preventing Rejections
Posted by [uncommented](#) on Fri, 28 Jun 2013 21:42:44 GMT
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Natalia, your point is very well made. However, the assumption you made under the section about shopper rejections concerns me:

Quote:

Shopper rejections

We understand these are the most painful rejections because it is a bad experience for your customer and may damage your reputation as a designer/seller. There are a lot of great shops on Shapeways, and the best designers have adopted the procedure of test-printing their products before they offer them up for sale. This accomplishes a few important things...

I'm pretty sure everyone in this thread orders test prints. The reason that many of us are frustrated is that Shapeways has been rejecting models after successful test prints have been made. Perhaps some of this mess can be avoided by providing transparency regarding the yield rate for designers.

Specifically, if Shapeways consistently looks at production history, and goes by a 50% success minimum or any other magic number, than designers absolutely need to know the success rates

for their models in order to be able to make corrections before serious problems emerge. I'd say a simple "this model has printed successfully x% of the time" message on the model edit screen would be sufficient. If you have the data available as you say, than it is essential that hidden variables such as this become un-hidden to designers. Otherwise we will simply chose competing services.

Best,

Robert

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 28 Jun 2013 21:49:40 GMT
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Hey Hunter,

Haven't read any further then "Mitchell I missed you"
Just wanted to say, I have a week vacation, yes it's my first full week of vacation since 2011

Alright, back to reading the rest of ur post

Edit: thanks for your kind words
I will always do my best to make people leave customer service with a smile.

Feel free to reach out to me at service@shapeways.com including "Mitchell" in the subject, it will redirect your mail to me

back to my friday night drink

Another Edit:
@stannum, yes this, unfortunately, sometimes happens and I do apologies for this.
Feel free to send me an email about these orders and I'll will investigate why this particular model was printed before and did got rejected after a few times.

I feel your pain, as this probably lost you a sale to a customer

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Fri, 28 Jun 2013 22:03:53 GMT
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Mr. Jetten,

I wanted to out in the open, Thank You.

I am just so confused right now, I really don't know what to believe. The Aries 1B 14mm model of mine, the update file I made incase the original one rejected out. Funny thing, Sir. The original PRINTED & SHIPPED TODAY.

So I have a question for you, maybe you can answer.

What happens when Service Team says a model should be rejected (under the new TIGHTER guidelines), but still gets printed and shipped in 2 completely different materials, just DAYS after they were ordered?

Am I looking at a model that will now get rejected because it's been printed twice?

I'm asking, because that is how it seems to go. Upload new model, run first print, then it spends the rest of it's life being rejected.

Why can't you just mark a model that has printed, and printable and stop running it thru checks? Because what one person see's today, another might not ever see. Or even the original person might not see today, might be seen next week, then they might never see it again. BUT once you folks mark a model as having been rejected once. It seems to stay that way forever.

Sorry to have ruined your vacation before it ended.

Best regards,

Samantha

Subject: Re: Preventing Rejections
Posted by [matt_atknsn](#) on Fri, 28 Jun 2013 22:18:32 GMT
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Thanks Natalia for the infos

Hmmm... "printed before flag" ... not much this could do for me nowadays as I've updated some

rejected previously-successfully-printed-models already to the now-missing FUD nuanced design rules (2x edited from original successfully-printed version, 3x rejected, 1 unhappy customer... didn't bother counting emails between me and CS)

EDIT: Any chance for and updated FUD nuance rules since it's still under FD? (Or have it's own separate list from FD's 0.6/0.8/1.0, bar sprues)

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 28 Jun 2013 22:35:53 GMT
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Hey Mechanoid,

Let me get back to you tomorrow on this subject, I need some sleep (0:34am right now). I hope to be able to answer your question after some good night of sleep!

Mitchell

ps. I emailed you the same, I'll answer your questions tomorrow

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Fri, 28 Jun 2013 23:22:12 GMT
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Hi Natalia. This is Dave from the Westport Makerfaire.

Although this thread is going off the rails to an extent, hopefully it is making some people think about the process and how it can get better.

As for test prints- in my opinion they have become useless. I wonder if there used to be an attitude of printing a model if possible no mater what, and as the business changed that had to change, also.

As an example, I learned early on not to offer a model for sale until it had test printed. My first model was a very simple, and somewhat crude, set of 10 chairs sprued together (1/87 scale). It test printed, I had the printed model in my hands, and I used the chair STL file in several other models that included tables or restaurant booths.

Then I sold one- my first sale- YIPEE! I can do this.

Then it rejected 3 times. As I recall the sprue attaching the individual chairs wasn't big enough.

Then it shipped as part of a model that included tables. I have since redesigned the chair- and did a much better job now that I'm starting to understand things better. An order with the redesigned chair shipped today.

I had the same result with other models, but that's the clearest one.

Perhaps Shapeways had to print it 3 or 4 times to get a good print. I don't know because we don't see that data, but if true then I totally understand that I need to fix it and the problem is on my end. But when I hold a model in my hand I have to be able to rely on that model printing again, or have a way to know it has a problem. As it is I have way more rejections than prints on models that I test printed.

That is the source of my frustration.

I continue to fix any issue that comes to me through a rejection email. But now I am spruing together 4 to 6 models and ordering them for myself and try to sell them on ebay. The Shapeways sales model is not working for me. I realize that my models, because they are miniatures, push hard against the design guidelines, and occasionally stray over.

But I'm still having fun- and I still enjoy the process.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Sat, 29 Jun 2013 10:57:16 GMT
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Mechanoid wrote on Fri, 28 June 2013 22:03Mr. Jetten,

What happens when Service Team says a model should be rejected (under the new TIGHTER guidelines), but still gets printed and shipped in 2 completely different materials, just DAYS after they were ordered?

Am I looking at a model that will now get rejected because it's been printed twice?

Well in that case the service team was wrong and I apologize for that!
I will have to investigate this some more and check with the person to see why he or she thinks

the model isn't printable.

Right now your model has a printed before flag, and as long as you do not update the model (other version number in our system) the model should not get rejected.

Like Natalia wrote, we do the last review of a rejection and if your model does get rejected it will clearly state in our system that this model has been printed before and we will do everything we can to talk to the production teams to still have this model printed or get a clear description on why they aren't able to print the model this time.

So this new printed before system, which is still being developed and improved on the fly will help both you and Shapeways from disappointing anyone!

Mitchell

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Sat, 29 Jun 2013 12:24:06 GMT
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Mr. Jetten,

All information was sent via email to you. Thank you for responding, Sir.

Best regards,

Samantha

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Sun, 30 Jun 2013 02:02:53 GMT
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Hurray! I started this thread ages ago and it has been completely ignored by anyone working at Shapeways for a very long time. I have heard that the 'has been printed' flag will be implemented. May I point out that such a flag will be utterly useless. I already have an 'already printed' flag on my models. It's called PHOTOGRAPHS. But that hasn't stopped my models from being summarily rejected again and again and again and again and again. What I need is a GUARANTEE that my model will be printed a second, third, fiftieth, and ten thousandth time. Otherwise I might as well be (colorful metaphor about pointless activities).

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Sun, 30 Jun 2013 03:56:03 GMT
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Roy Stevens,

The one bad part in all of it, is sadly "THE HUMAN FACTOR". No 2 people will see the same 3D model the same, What one person see's today, might never be seen again. Then again one person checks your model today and see's nothing wrong. Next week, they may have had a bad day, maybe they got their backside caught in that meat grinder called their BOSS, and decided they are going to reject everything.

The truly sad part is, it appears from my end, once a model has been rejected, you almost have to delete the thing, and upload the update file as a brand new model, or it too will get rejected. I've had 3 models so far they have done that too.

Mr. Jetten appears to be someone with some influence at ShapeWays. I'm going to give him the benefit of the doubt, and see what he can do to fix this ignorance that's been going on. I have a couple of real beautiful models coming in the next few months. I'm hoping this mess is cleared up before then. I want these models up long before the fall season hits. And I don't want to deal with made up rejection claims. I'm going to need these things to function. Not be ordered once or twice then get REJECTED!

I intend to try to keep this issue firmly in ShapeWays face, until either they fix it, or throw me off the site.

That statement should just about get me banned. LOL

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sun, 30 Jun 2013 11:02:23 GMT
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Obvious difference is that with photographs, someone would have to look at your model page to see if there are any to document that it has been printed, which is obviously impractical. Also, as has been pointed out several times in several threads on this topic, the fact that you hold one printed model in your hand does not tell you how many attempts were necessary to produce it, and most importantly how many cute little kittens had to be sacrificed... Hopefully this new flag in the database will finally settle most of these issues.
@Mechanoid - the "human factor" is not limited to someone having a bad day and rejecting

models out of spite - consider

that experience levels differ, new hires may simply make mistakes, or notice a small flaw in a model without knowing that it is harmless.

Finally, the growth phase after initial success is probably the most dangerous period in the life of a startup - you cannot simply

clone your granny and have fifty identical grannies bake her cherished cookies in copies of the same old stove when the

whole town wants to buy. It is obvious from this thread that several designers have suffered much, but there are still great new

designs appearing in the "It arrived" forum, so overall Shapeways seems to be doing fairly well despite the changes.

(Before you ask, I am not a skill, though possibly a stooge - and glad to be serviced by the well-established Eindhoven facility)

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Sun, 30 Jun 2013 16:32:28 GMT

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It almost sounds like two issues are combining here. The first is inconsistency of prints relating to the printers. These might range from "normal" variations to anything like poor powder batches to uncalibrated printer settings that result in trays or items being rejected. The other is the design rules. But one of the reasons for design rules is to also provide an allotment (or some wiggle room) such that printer variations do not seriously impact yields. 50% is an awful yield. What it leads me to think is that the design rules need to be stricter! Perhaps some or all of the rule minimums might need to be bumped up bt a factor to increase the yields.

Subject: Re: Preventing Rejections

Posted by [NickHawkins](#) on Sun, 30 Jun 2013 16:47:16 GMT

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MrNib wrote on Sun, 30 June 2013 16:32<snip> What it leads me to think is that the design rules need to be stricter! Perhaps some or all of the rule minimums might need to be bumped up bt a factor to increase the yields.

I would not be in favour of this, I'd need to rework all my designs - not worth it, I'd look elsewhere to get my models printed

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sun, 30 Jun 2013 16:58:32 GMT
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Quote:50% is an awful yield. What it leads me to think is
Um, wait, where did this 50% figure come from ??

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Sun, 30 Jun 2013 17:03:32 GMT
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Quote:50% is an awful yield. What it leads me to think is that the design rules need to be stricter!
Perhaps some or all of the rule minimums might need to be bumped up bt a factor to increase the yields.

Wait. Where did you get this 50% yield figure from?? Will you please cite your source for this?
Also, will someone please tell me how to correctly cite someones previous message using this board?

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Sun, 30 Jun 2013 17:04:31 GMT
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NickHawkins wrote on Sun, 30 June 2013 16:47MrNib wrote on Sun, 30 June 2013 16:32<snip>
What it leads me to think is that the design rules need to be stricter! Perhaps some or all of the rule minimums might need to be bumped up bt a factor to increase the yields.
I would not be in favour of this, I'd need to rework all my designs - not worth it, I'd look elsewhere to get my models printed

That's not my preferred solution either. Another solution would be to get better control of the printers if that's possible. But if the design rules were too loose in the first place the obvious solution is to tighten up design rules for future long term benefit. I would likely also lose the ability to print models but if more stringent design rule changes help Shapeways to get to 80, 90, or 99.999 percent yields it would be well worth it in terms of reduced prices and fewer hassles for designers, customers, and Shapeways.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Sun, 30 Jun 2013 17:11:51 GMT

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Roy_Stevens wrote on Sun, 30 June 2013 17:03Quote:50% is an awful yield. What it leads me to think is that the design rules need to be stricter! Perhaps some or all of the rule minimums might need to be bumped up bt a factor to increase the yields.

Wait. Where did you get this 50% yield figure from?? Will you please cite your source for this? Also, will someone please tell me how to correctly cite someones previous message using this board?

It's from up above in Natalia's post.

Quote:2. Production

This is all about checking the model and flagging it for rejection. Going back to the "printed before" flag, I'm happy to say we now have the first step of this type of feature in our system. Specifically, we can now see how many successful prints there have been of a particular model version. Basically, if the rate is higher than 50% successful we will print it, and not reject it. And most importantly, this flagging only works for a specific model version.

It's not a batch or tray yield, it's a specific imodel yield. But this hypothetically also means that models which may be yielding let's say 100% are effectively subsidizing the production of lower yielding parts.

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Sun, 30 Jun 2013 17:24:44 GMT

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@mkroeker, Believe me when I say, I am very aware of that fact. When I put that up, I simple gave a quick couple of examples of the "Human Factor".

Now let me take a moment to enlighten you. Because it appears that you completely misunderstand me, my intentions, my motives, or the entire ordeal that I have been dealing with. I joined the ShapeWays community a few yrs ago. And have been impressed at nearly every turn. The meer idea that you could take and design something on a computer, and then upload it to a website 8k miles away. And in a couple of weeks end up holding something that has never been made before in your hands. Absolutely amazing.

And that is the very reason I'm pissed. Because it was like someone flipping a switch on a lamp back in December 2012. Because that is when the model rejection of working models began.

That also it appears is when ShapeWays moved everything back in-house and decided to tighten their guidelines, change their format and procedures for printing models. Only thing is. ShapeWays DIDN'T TELL ANYONE! ShapeWays stopped communicating with the very people that they depend on as a company. ShapeWays and 3D designers are a partnership. But in this case one side forgot about the other. And the fact is, the response has caught ShapeWays off guard.

Making the guidelines even tighter wouldn't solve their problems. It would push many designers out to other services. The world of 3D printing is here to stay, It ain't going away. Companies are making and improving their home 3D printing units. There are going to be cases where companies and designers clash. It can't be helped. But what can be done, is what this thread is trying to do. It's keeping the issues firmly in ShapeWays face. Yes ShapeWays is a fantastic company. But you can't go around making changes all the time, and not tell anyone until AFTER THE FACT. It's about COMMUNICATION. And right now ShapeWays needs to be told they messed up. They need to be reminded that without the 3D modelers, designers and shop owners. There would be no customers coming to ShapeWays to buy anything. Companies all over the world have forgotten that fact. And many don't survive the mistake. This thread is an attempt by some, to kick ShapeWays in the backside, in hopes they will wakeup before they too don't survive their growing pains. I want to see ShapeWays around for many yrs.

That is why I'm fuming mad about the rejection rates and tighter guidelines that have caused, not just for me, but for many others, to have many models rejected that used to work just fine. Some have started business around the ability to 3D print. Now those business are taking hits, because models that used to work without error, no longer do. It's costing people money, and more importantly customers.

All because ShapeWays forgot to COMMUNICATE.

Subject: Re: Preventing Rejections
Posted by [NickHawkins](#) on Sun, 30 Jun 2013 17:48:59 GMT
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MrNib wrote on Sun, 30 June 2013 17:04NickHawkins wrote on Sun, 30 June 2013 16:47MrNib wrote on Sun, 30 June 2013 16:32<snip> What it leads me to think is that the design rules need to be stricter! Perhaps some or all of the rule minimums might need to be bumped up bt a factor to increase the yields.

I would not be in favour of this, I'd need to rework all my designs - not worth it, I'd look elsewhere to get my models printed

That's not my preferred solution either. Another solution would be to get better control of the

printers if that's possible. But if the design rules were too loose in the first place the obvious solution is to tighten up design rules for future long term benefit. I would likely also lose the ability to print models but if more stringent design rule changes help Shapeways to get to 80, 90, or 99.999 percent yields it would be well worth it in terms of reduced prices and fewer hassles for designers, customers, and Shapeways.

In one of my very early models I accidentally included a large area of wall that was too thin (in WSF), so far as I know it printed fine and because of its curved shape was strong enough once printed (I still have it). I'd suggest that the original WSF guidelines were quite conservative for walls and details (wires in WSF are a different matter).

I've since revised the model to meet the materials guidelines.

The printing technology is getting better, not worse. As a designer I see no justification for increasing materials minimums, I'd expect them to get smaller as 3D printing services mature.

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Sun, 30 Jun 2013 20:30:27 GMT

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

[quote title=NickHawkins wrote on Sun, 30 June 2013 17:48][quote title=MrNib wrote on Sun, 30 June 2013 17:04][quote title=NickHawkins wrote on Sun, 30 June 2013 16:47]MrNib wrote on Sun, 30 June 2013 16:32<snip> The printing technology is getting better, not worse. As a designer I see no justification for increasing materials minimums, I'd expect them to get smaller as 3D printing services mature.

And that is another problem in and of itself. Instead of the minimums getting smaller for materials. They are forcing everyone to go back and thicken every model up, or at the very least change it's scale to increase the wall thickness. But for somethings, increasing a models scale may, just may take it outside of the scale required for a model to be for a customer. So there again, more lost sales. Because ShapeWays just did all this, and only after the fact did they bother too tell anyone what they did or why. No warning, no concern for the shops, designers nor even the customers.

I have had customers that were so mad at me, thinking I had duuped them. They refuse to deal with me again. Thinking all of the models in the shop can't be printed, they are just there to look pretty. As one customer told me. All because someone at ShapeWays had a wild hair up their and decided to change how models are checked, and decided to nit pick every model as if it was brand new and had never sold before. Just looking for any reason to reject it. They should have had the "Printed Before Flag" aspect fully functioning and in place long before they drew everything back in house and tightened the guidelines up to near choke point. Poor planning,

poor execution of intent. And complete break down of communications.

Or as the guy in the movie Cool Hand Luke would say about now;.....

"What we have here IS..... a FAILURE to communicate"

Subject: Re: Preventing Rejections
Posted by [matt_atknsn](#) on Mon, 01 Jul 2013 09:16:47 GMT
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Already-printed or not, IMO it will hinder future (new) models due to current design rules... or lack of (strictly speaking from FUD-modeller's PoV)

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Mon, 01 Jul 2013 15:22:59 GMT
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Soo... has Shapeways actively decided to be dicks about rules now? Just had a WSF proof get rejected. It printed successfully before, but was too small for the rhinestones I'd picked out, so I made it bigger, and NOW it gets rejected for thin walls? When you scale something up, it doesn't get thinner, it gets thicker. If it was a success before, it can only be a better success now.

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Tue, 02 Jul 2013 19:52:29 GMT
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Hi guys,

It seems there is still a lot to talk about on this topic, so we'll be holding two google hangouts TOMORROW, Wednesday July 3rd for you to talk directly to us and get your questions answered!

Details:

Google Hangout in Eindhoven with Bart (Community Manager Europe) and Mitchell (Customer Service) and Luuk (Supply Chain)
Wednesday July 3rd
3PM Eindhoven time (1PM UTC)

Google Hangout in New York with Natalia (Community Manager USA), Christopher and/or Christian (Product Managers)
Wednesday July 3rd
2PM Eastern Standard Time, USA (6pm UTC)

We will post the link to join the hangout in this thread about 15 minutes before it starts, and each will run about 30 minutes.

if you miss it, you can always join our regular Shapeways Live which happens once a month too.

Looking forward to chatting!
Natalia

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 02 Jul 2013 20:26:47 GMT
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Yesterday and today I recieved succesful prints for several models that had been redesigned when rejected after customer orders. I have changed them all to address specific rejections, and I am still happy with the results.

I will be updating the descriptions and let people know what happens if they get ordered.

Some of the prints will be offered on ebay- I'll have to see how that goes.

Dave

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Tue, 02 Jul 2013 23:01:25 GMT
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I temporarily set my who-knows-if-they-will-print-now designs to not for sale or unviewable. I checked back on old designs that still had the original design files to see what I did in the past. Unfortunately I often blew the old ones away. But the revised versions did alter things like minimum wall thicknesses at the expense of having less thickness in decorative details, i.e the decorative surface vs embossing/engraving debate. It turns out that for pen bodies I can generally meet one rule but not always the other. So I had taken the approach of revising all my designs to meet the most recent minimum wall thickness in alumide as a worst case situation thinking that this was more critical than the decorative detail thicknesses. But alas, it's the

decorative surface details that now earn the rejections.

Some of the old designs have 0.3 to 0.38 mm decorative embossing or engraving in alumide and the parts look just fine to me even with polishing, and generally even better with polishing! How many tries it took Shapeways to print them I do not know. As far as I'm concerned I don't necessarily want crisp and highly defined sharp edges and patterns on a pen body particularly if it makes is uncomfortable to hold the pen. What Shapeways thinks is an acceptable print may not be what MrNib thinks is an acceptable print for this specific use. Since the rejections seem to be pattern dependent I have several options for the questionable blank designs in the future:

1) Resubmit all my "risky" designs for fabrication before a customer does and see what gets rejected and what does not. Hope that in the future parts will continue to be fabricated if they are this month. Obviously this is an unwanted expense (if they get printed) unless they can be submitted as check-only-do-not-actually-build parts. Perhaps there could be a small fee to have Shapeways provide a certified design file blessing without actually making parts. You could add a little golden Shapeways certified model ribbon on a model page in this case.

2) Wait for an online Shapeways design rule check that provides a definitive pass/rejection notice at the time of upload or ordering in any specific material. Are there any plans for this? Is it even possible? How much of the design rule checking is black magic and how much of it is quantitative?

3) Do not offer the pen blank parts in alumide. Good idea until you consider the tremendous advantages of alumide for pen bodies in terms of ease of assembly by using super glue to join the pen blanks to the internal pen mechanisms and seal the alumide for handling in one easy step.

4) Write off the novice pen maker and only offer the matching pen blank designs that require lathe work to trim down the outside diameters of the blanks for a specific pen kit. Ironically this just gets you back to the blanks that are being rejected although admittedly with more precise final mechanical fits but without the benefits of polishing which enhances the feel of the pen bodies. In this case pen makers could figure out how to polish their blanks on their own or find a service to do so for them after they machine them.

5) Thicken up the decorative details on the pen bodies to always meet engraving/embossing rules. Possible negative aspects of this are things like overly bulky pen bodies, pens that are uncomfortable to hold and use, and the inability to have straight-sided pen profiles. You still may not know if it meets all the rules until a sale is made but it would be the preferred fix from the Shapeways point of view..

6) Push for a revision or clarification of what constitutes engraving/embossing. Distinguish engraving/embossing of legible text or logos from decorative surface patterns/textures from noisy

rough surfaces inherent most designs, since all three are different surfaces. Create new design rule thresholds to cover these various types of surface definitions. Possibly enable different surface area types to be coded into the model file through the use of color, subsections, or other file format techniques. For example green could be engraving/embossing, blue could be surface decoration, and nothing would be any low level noise arising from the editor due to aliasing or polygon resolution effects. In this case a designer waiver could also be coded into a model (red?) as long as more critical underlying rules such as wall thickness are met in that area. Color coding is not necessarily preferred but you get the idea.

Granted most of this is surface detail embossing/engraving related because that's my main problem, but I think some of what I babbled about may also be applicable to other issues that are causing people heartburn. I plan on posting some pen images to help explain what I'm talking about in my engraving/embossing thread over in the 3D design section but I doubt it will happen this week. It's vacation time. Have a good Google hangout without me!

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Wed, 03 Jul 2013 01:47:42 GMT
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I wanted to add something before the on-line world conference tomorrow.

On July 1st, I got an email from Mr. Jetten, And he was trying to help me with a model that the Service Team kept rejecting at every turn. It was an issues about when a detail is seen as a wall, when it clearly is not. I've tried for months to get a CLEAR & CORRECT statement concerning this.

But to be honest, I would have had a better conversation with a brick wall, by beating my head on it for the last 4 months.

Now I will post what Mr. Jetten said to me. It may help everyone, As it helped me and Mr. Jetten.

This was a conversation about my 9-Cylon Fighters model.

"I did notice that the gun sticks out 0.8mm and is 0.5mm thick, thus in White Strong & Flexible this is considered a wire and not a detail.

Though this does already tell me one thing, there is no clear information on our website when a detail becomes a wall and when a wall becomes a wire.

This confuses both you, the production team and me!"

Maybe that is one thing that ShapeWays needs to fix for all of it's materials. So that designers and the Service Team are all speaking the same language. Specially when it comes to reasons for rejecting a model. Also might MrNib's idea about having a service, where we can pay a small fee, and that service will run a complete 100% check of any model, and be able to get back to the designer with a complete list of faults, what actual material standards the model meets, and how likely a future rejection is for this model as is. And be able to post this, (look below at the image), to the model page, telling customers this model does work. So they can shop with confidence that would they are paying for, will actually arrive.

This simple process would reduce the print facility from having to produce a model several times before getting it right. Which would then cause them to reject the model in the future. It would reduce the complaint emails at the Service Team, it would reduce the total number of rejected models over time, it would help designers to work more closely with ShapeWays like a true business partnership. Allowing for better flow of communications between ALL parties, including the customers.

Which it turn would improve the over all ShapeWays 3D Printing experience for everyone. Make it a true "WIN, WIN" for the world.

Natalie and Mr. Jetten, Please read this before the google world conference tomorrow.

File Attachments

1) [printok.png](#), downloaded 344 times

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Wed, 03 Jul 2013 02:48:24 GMT

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I would pay a fee - even a large fee - for someone at Shapeways to check my file, run it through the printing process, and certify it as printable for time and all eternity in a certain material. Then I could safely advertise the availability of such item(s) in magazines, web site banners, trade show displays, and other things that cost money but can potentially have great return on investment. This whole idea of 'has been printed, but maybe won't be next time' just won't cut it for someone trying to run a business.

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Wed, 03 Jul 2013 04:32:29 GMT
[View Forum Message](#) <> [Reply to Message](#)

Mechanoid wrote on Wed, 03 July 2013 01:47

Though this does already tell me one thing, there is no clear information on our website when a detail becomes a wall and when a wall becomes a wire.

This confuses both you, the production team and me!"

Maybe that is one thing that ShapeWays needs to fix for all of it's materials. So that designers and the Service Team are all speaking the same language. Specially when it comes to reasons for rejecting a model. .

All good physical layout design rule manuals begin with a good set of definitions that are characterized by spacings, cross sections, aspect ratios, lengths, widths, heights, deviations, curvatures, shapes, angles, overlaps, overhangs, enclosures, volumes, volume ratios, orientations, etc. Ideally most rules would be quantitative and implementable in computer code to remove the human factor from making pass/fail decisions, but practically speaking for something as flexible as 3D printing some decisions will inevitably need to be subjective. At least for the time being.

Subject: Re: Preventing Rejections
Posted by [bartv](#) on Wed, 03 Jul 2013 12:51:00 GMT
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Hey folks,

for the EU hangout, please use this link:

https://plus.google.com/hangouts/_/84936e35500fa16f75f6842fe1c527e3088f78fb?authuser=0&hl=en

See you in a bit!

Bart

Subject: Re: Preventing Rejections

Posted by [hunterseeker5](#) on Wed, 03 Jul 2013 13:56:23 GMT
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God damn it I am on *** vacation and after all this public discussion about consistency, clarity, openness, repeatability, etc what do I get this morning? ANOTHER MODEL REJECTION!!!! Seriously shapeways, if you want me to go elsewhere you can just say so you don't need to keep playing this stupid game.

What was the rejection for this time? Apparently they decided my model looked like a weapon.. Since it happens to be a mechanical part for a toy, as the pictures of it posted CLEARLY showed, I find my patience with this strained. It also appears that now someone, as I type actually, appears to be sifting through my models deleting all "similar" items not just the one which was rejected. I in fact watched the links dissappear from the search as I tried to provide one to show, clearly, its not a weapon. I don't think its any secret that I play with airsoft toys, its plastered all over my store, website, etc, so if technical components for something ruled by the US federal government to be a toy is now considered a weapon by Shapeways, after printing them for over a year I might add, it looks like this is just the cowardly way to say get lost. I will begin the process of finding a better alternative and transferring my business to another website on my return. Its just hilarious to me that, not only am I in the top 100 sellers here, but I introduced Shapeways as a bespoke small-parts source to the airsoft community and after starting a revolution there with this website I'll now be walking away from it. *shrug* I guess Shapeways has just gown and gotten "too good" for "my kind."

EDIT

Oh hey look at that, I just noticed Shapeways took down a bunch of my models with no communication at all, no warning, no questions, nothing. Just ripped them off the site and to hell with my descriptions, links, images, etc. Well that was kind of them. I guess I'm done here.

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Wed, 03 Jul 2013 17:38:00 GMT
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James, I would appreciate it if you please try to refrain from using colorful language in your forum posts.

I have confirmed with our CS team that they did indeed send you an email about your models on Monday, and you have an email in your inbox from me explaining the rejection reason in full.

I am more than happy to continue this discussion over email, it is however a personal matter so in

order to be sensitive to your privacy, I would like to keep it out of this thread.

I look forward to chatting with you further

Thank you,
Natalia

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Wed, 03 Jul 2013 18:02:03 GMT
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Hi guys,

The USA Hangout is starting now, click this link to join with any google account:

https://plus.google.com/hangouts/_/ae635ba33806bd75082cbb4b6787b81d6e08b569

I'll be here for the next 30-40 minutes to answer any questions!

Lets hang!
Natalia

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 03 Jul 2013 18:05:34 GMT
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All I get with that link is a message saying "This party is over."

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Wed, 03 Jul 2013 18:06:58 GMT
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Hmmm, we are in it, try this:

https://plus.google.com/hangouts/_/ae635ba33806bd75082cbb4b6787b81d6e08b569

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 03 Jul 2013 18:10:49 GMT
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No joy. Both Chrome and Firefox give the party is over message. I guess technology is beating me.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Wed, 03 Jul 2013 18:17:19 GMT
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Don't feel bad, same story on my end. And I so wanted to be there to talk LIVE with someone from ShapeWays.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 03 Jul 2013 18:54:40 GMT
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It finally worked for me when I loaded the forum message in Chrome and then clicked on the link. It did not work as a cut and paste of the link into any browser I tried. I'm not sure what the difference was.

Subject: Re: Preventing Rejections
Posted by [UniverseBecoming](#) on Wed, 03 Jul 2013 19:16:55 GMT
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It was good to touch base and get more of a personal feel of the nature of the issues Shapeways is dealing with concerning rejections. So much better than just reading text all the time. Keep up the great work! You guys are doing a wonderful job!

As for the frustrations the designers are having, including myself to a small degree, I would just like to say that Shapeways is still a pioneer in this area and is still breaking new ground. It'll all be dialed in eventually. And as for the tempers that have flared, including my own, behind the scenes, that is all apart of us getting there together.

I'm still rooting for Shapeways!

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Wed, 03 Jul 2013 19:29:55 GMT
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I am still a major fan of ShapeWays. I haven't found another company out there that has an easy format to use, as this one. I just want ShapeWays to stop over complicating the simple stuff. It's messing everything up. And that is why I've been so mad over the rejection issues. Because I know deep down, ShapeWays is better than they even realize. I just wish they would trust the printing machines a little more.

I still think I'm one of the few that has ever sent a christmas/ new years card to ShapeWays. LOL

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Wed, 03 Jul 2013 20:46:15 GMT
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It was great to chat with you all! Both this morning and this evening.

I'm really confused why that link didn't work though, I'll investigate so we have an easier time of it next time.

As we mentioned, it seems like we ALL love having face to face chats way more than lengthy exchanges on the forum, so Bart and I will figure out a way to have forum-hangs once a week.

Mechanoid you sent us a card?! AWWWW did it go to Eindhoven or New York? Now Im curious. I keep all the mail we get here taped up next to my desk, I think Ralph or the CS team does the same in Eindhoven

UniverseBecoming great to chat to you too! We'll figure it out together

Dave, Michael, Stijn, Stony and everyone else thanks for joining us!

See you all again soon, and Happy 4th of July to those in the USA

Best,
Natalia

Subject: Re: Preventing Rejections

Posted by [MrNibbles](#) on Wed, 03 Jul 2013 20:53:36 GMT
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MrNib wrote on Tue, 02 July 2013 23:01.

2) Wait for an online Shapeways design rule check that provides a definitive pass/rejection notice at the time of upload or ordering in any specific material. Are there any plans for this? Is it even possible? How much of the design rule checking is black magic and how much of it is quantitative?

From one Mister to another... have you ever used the shapeways ring creator app? It checks each designed ring in any material before you add it to your cart. If you add it to your cart with errors warning bells go off but you can add it after acknowledging it is a bad design. (Then you can download the model and edit it with a package that can open and edit .x3db files. BTW, what packages edit x3db files?)

If a designer could pass their models through that checker would it not resolve some rejection issues?

Subject: Re: Preventing Rejections
Posted by [numarul7](#) on Thu, 04 Jul 2013 03:13:53 GMT
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Nibble .x3db can be open by Blender 3D from www.blender.org and other programs that opens this kinda of file format are listed here
<http://www.web3d.org/x3d/content/examples/X3dResources.html> in the authoring section.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Thu, 04 Jul 2013 04:52:09 GMT
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The link(s) above had a blank in the middle of them.
If you had removed the blank, you could get right in.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Thu, 04 Jul 2013 06:36:56 GMT
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That blender.org link doesn't appear to work at all, I even went as far as to google it, and that link doesn't work either. Either blender site is down, or I have a problem getting that site too open. I used both IE8 and Chrome. Neither could load the site. Found blender though on CNET. But I don't understand the software. But then again I am but a novice. Just getting where I can rescale models, and delete things from a file. Using Netfabb Studio Basic. But I am trying to learn what to do with 3D. My pride though, was my Aries 1B 14mm. I paid to have that created, it never worked. The designer refused to make corrections. So for months I couldn't do anything with it. Every designer I went too, had their own idea's of how it should look. The refused to make corrections. That and what Mrs. Hagens told me, pushed me into trying Netfabb Studio Basic. That Aries 1B 14mm I had to do major repair work on, and really push myself to figure out what to do. Because I wanted it to print. And now it does. Shocking.

Not bad for some ancient broken down old truck driver who's self taught with computers. Because everyone else thought I was too old to teach. LOL

Samantha

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Thu, 04 Jul 2013 16:46:06 GMT
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Some suggestions to move forward and help prevent rejections:

Design Guidelines

These should be complete and definitive. They should be a contract between the designers and SW. I.e. if the model fits the guidelines for a given material, SW will print it, if not they will not. Of course SW can attempt (if they wish) to print marginal cases and according to the outcome the model will have a different status (see below).

Model Status

A model should have one of 4 statuses for each material it can be printed in (i.e. there is no status at all for models that do not meet the design guidelines for a material):

a) Uploaded

This means the model has been uploaded but no attempt has been made to print it. Any renders or photos other than the SW versions are basically "artists' impressions" and the buyer should beware;

b) Not printable

The model has been requested to print but has failed, either at the pre-print check stage or at the actual print stage. This model/material combination cannot be purchased, but can be displayed. A change to the model and a re-print attempt in this material will potentially change the status;

c) Printed but with issues

The model has been printed but the SW staff have decided that the model cannot be printed reliably or consistently or is unsuitable for some other production-based reason. The designer may purchase this model (with conditions attached) but the model is not available for general sale (the current case of Elasto mirrors this). Once again, a change to the model and a re-print attempt in this material will potentially change the status;

d) In Production

The model has printed successfully and is now "In Production", i.e. every order by every user should be capable of being fulfilled. The design is correct and approved by SW and any problems are at SW's end. Rejections should not occur!!!

What I want is a situation where when I create a print that I know either that it needs more work (Printed but with issues) and that I should not sell/market it or that it is "In Production", that I can take photos, try and promote it and not worry about random rejections.

What is needed is a little more certainty. We as designers may need to be a little more conservative but SW must be more consistent. There HAS to be a point when a model is "approved" without reservation, or else frankly the system is pointless.

These are my suggestions and I welcome all (well maybe most) comments...

Subject: Re: Preventing Rejections

Posted by [NickHawkins](#) on Thu, 04 Jul 2013 17:56:37 GMT

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AmlachDesigns wrote on Thu, 04 July 2013 16:46<snip>

Design Guidelines

These should be complete and definitive. They should be a contract between the designers and SW. I.e. if the model fits the guidelines for a given material, SW will print it, if not they will not. Of course SW can attempt (if they wish) to print marginal cases and according to the outcome the model will have a different status (see below).

I disagree, this assumes all designers have a pretty solid understanding of the mathematics/topology of 3D modelling. I'd put myself in this category but see no reason why more artistic/less numerate designers should be disadvantaged.

Quote:<snip>

What is needed is a little more certainty. We as designers may need to be a little more conservative but SW must be more consistent. There HAS to be a point when a model is "approved" without reservation, or else frankly the system is pointless.

I disagree again. There could be good reasons why an approved design might be rejected* , possibly due to external reasons. However, I would expect Shapeways to endeavour to minimise these occasions and communicate warnings in good time to all parties.

*EG bringing a new regional fulfilment centre on line with the need to interpret the guidelines more conservatively whilst the staff develop their skills.

The biggest problem with the current system is communication, not intent.

Why should we (designers AND Shapeways) be seeking the easiest path and falling back on conservative (pedestrian) designs?

3D printing is an evolving and exciting technology, let's keep it that way!

Subject: Re: Preventing Rejections

Posted by [MrNibbles](#) on Thu, 04 Jul 2013 18:18:16 GMT

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numarul7 wrote on Thu, 04 July 2013 03:13Nibble .x3db can be open by Blender 3D from www.blender.org and other programs that opens this kinda of file format are listed here <http://www.web3d.org/x3d/content/examples/X3dResources.html> in the authoring section.

This morning I successfully used netfabb Studio to import an x3db file from the ring creator, scale it, output an stl file, and upload it back to Shapeways. Yippee! Next up is trying to use Blender to do something useful with the x3db or stl file. My conclusion so far is that 3D design in 2013 is all about jumping between different software packages to get anything done!

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Thu, 04 Jul 2013 19:47:17 GMT

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AmLachDesigns wrote on Thu, 04 July 2013 16:46 There has to be a point when a model is "approved" without reservation.

I completely disagree. The only way to implement such a solution is crank up the design rules so as to increase the wall thickness to a point that there is no risk of any breakage. That would put my shop out of business.

1) We need to keep focus on the idea that the printers will get better over time. These rejections are a real pain today, but they are temporary.. there will be a day in the future when we can print higher detail with thinner, stronger walls.

2) You can't fight physics. The mechanical properties of the materials we're using will always affect how we design things. Large items need to be thicker, small items can have finer details, but the smaller items can't be subjected to rough handling. Those of us trying to push the limits on detail will pay a bit of a price as long as we use a third party service and have our models shipped halfway around the world.

Automated software could be written to attempt to determine the survivability of our 3d prints.. but I bet that it can't predict that my 18 month old grandson would drop a FCS model from 3 feet in the air, snapping the part cleanly in half.

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Thu, 04 Jul 2013 21:02:43 GMT

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Quote:Design Guidelines

These should be complete and definitive

Good luck with that. How many volumes do you expect this book of rules to have ?

There would be no simple rules of thumb like "min wire free", instead you would have to tabulate length vs diameter for

wires with different weights on the free end , load-bearing vs purely decorative loops etc etc

I'd rather continue to put up with occasional failures of the mark 1 eyeball.

Subject: Re: Preventing Rejections

Posted by [PeregrineStudios](#) on Thu, 04 Jul 2013 21:36:42 GMT

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mkroeker wrote on Thu, 04 July 2013 21:02Quote:Design Guidelines

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Good luck with that. How many volumes do you expect this book of rules to have ?

There would be no simple rules of thumb like "min wire free", instead you would have to tabulate length vs diameter for wires with different weights on the free end, load-bearing vs purely decorative loops etc etc I'd rather continue to put up with occasional failures of the mark 1 eyeball.

Plus there are some guidelines that are, well... guidelines. Not rules. It says right on the Stainless Steel page, 'thinner walls may be possible based on model structure' or verbatim it says that at least. That's not exactly definitive, and the result of trying to MAKE the rules definitive would be simply giving an 0.3mm minimum across the board... which would cripple stainless steel printing.

I'm fine with the loosey-goosey nature of some of the rules. It's a new(ish) technology. The only metal printers that even exist are the experimental prototypes developed by these companies - you can't just go out and buy one, everything's custom-made, which means there are no manufacturer's instructions. I definitely think Shapeways has made and is continuing to make some mistakes that are avoidable NOW rather than later, but it's also important to remember that by and large, they and their contracted printers are in the same boat as we are - they're figuring this out as they go along. I think it's fairly obvious by now that 0.3mm is NOT the minimum wall for stainless steel - I'm not honestly sure if a single one of my models has a wall that thick, except perhaps the Zelda songrings, because I wanted to make absolutely certain they never failed - but I also think they are not yet sure enough of the technology to bring that minimum DOWN.

These, in my opinion, are the details that are missing from the materials pages or from rejection e-mails:

What constitutes a wall vs. a detail. Looking it up in the forums has me believing that a detail is wider than it is tall, while a wall is taller than it is wide, but I can't find Shapeways saying that, just other designers. It SEEMS to be the truth - shortening walls has solved 'thin walls' issues on some of my models - but there's no way to be sure, because Shapeways won't say. And even if they did say in the forums and I missed, why should I need to expend the effort to look through the forums for this? It should be readily available on the materials page.

Expanded explanations of what the problem with a model is. I'm sorry, but 'thin walls' is not an explanation. And not only are the attached images often unhelpful, sometimes they are actively misleading (ie, I had a model rejected for thin walls, and the image made it seem as though they were thin horizontally, when in fact they were thin vertically). These are not machines giving us explanations, these are people, and people can type out better explanations. I'll use a recent example: a ring, with text inside, was rejected for 'thin walls'. Now, there were two indicators of 'thin walls' - one inside the ring indicating the text, and one indicating an engraved logo on the top. The 'thin walls' warning was only for the logo, as I found out after several messages back and forth with customer service - the text was indicated because it may not print in the proper detail, being too short. Now, none of that was in the e-mail. Would it really take so much longer to type out: 'Engraved symbol on top has walls that are too thin; text is too short, may result in loss of

detail.' These are not just things that are USEFUL for us to know, they are CRITICAL for us to know if we're going to try and fix these models.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 05 Jul 2013 03:45:12 GMT
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Quote:stonysmith
AmLachDesigns wrote on Thu, 04 July 2013 16:46

Quote:There has to be a point when a model is "approved" without reservation.

I completely disagree. The only way to implement such a solution is crank up the design rules so as to increase the wall thickness to a point that there is no risk of any breakage. That would put my shop out of business.

Speaking of skills... Noone here is suggesting that the design rules go so far as to prevent all rejections. Most designers just want a way - whether it be successful prints or some other way - to validate their designs within the existing framework.

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Fri, 05 Jul 2013 06:55:03 GMT
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NickHawkins wrote on Thu, 04 July 2013 17:56Quote:<snip>
Design Guidelines

These should be complete and definitive. They should be a contract between the designers and SW. I.e. if the model fits the guidelines for a given material, SW will print it, if not they will not. Of course SW can attempt (if they wish) to print marginal cases and according to the outcome the model will have a different status (see below).

I disagree, this assumes all designers have a pretty solid understanding of the mathematics/topology of 3D modelling. I'd put myself in this category but see no reason why more artistic/less numerate designers should be disadvantaged.

I don't see your point. Good Guidelines allow both the designers and the checkers to have a solid base for decisions. There is a learning curve for pretty much any activity worth doing. The people you claim would be disadvantaged would be no worse off than at present, trying to comply with a set of 'rules' that do not seem to be clear or fixed. And if you cater always to the worst-case

scenario then the more solid designers such as yourself are disadvantaged.

Quote:

Quote:<snip>

What is needed is a little more certainty. We as designers may need to be a little more conservative but SW must be more consistent. There HAS to be a point when a model is "approved" without reservation, or else frankly the system is pointless.

I disagree again. There could be good reasons why an approved design might be rejected* , possibly due to external reasons. However, I would expect Shapeways to endeavour to minimise these occasions and communicate warnings in good time to all parties.

*EG bringing a new regional fulfilment centre on line with the need to interpret the guidelines more conservatively whilst the staff develop their skills.

The biggest problem with the current system is communication, not intent.

Why should we (designers AND Shapeways) be seeking the easiest path and falling back on conservative (pedestrian) designs?

3D printing is an evolving and exciting technology, let's keep it that way!

What are these external reasons why an 'approved' (or 'In Production') design could be rejected? I can't think of one.

Bringing on a new fulfilment centre under these conditions would be (as it actually is) Shapeway's problem. Staff should be adequately trained, machines tested, processes verified. As with any business when you bring new production on line it is not for the customer to compromise but for the company to get it right. Let's remember that SW is a business.

Quote:The biggest problem with the current system is communication, not intent.

Why should we (designers AND Shapeways) be seeking the easiest path and falling back on conservative (pedestrian) designs?

3D printing is an evolving and exciting technology, let's keep it that way!

I agree that currently communication is a big problem. That is partly why I made my post to try to spark some communication, some debate and thrash out some ideas. The more people that participate the better: I am under no illusions that my ideas are the only or best way to proceed.

Why do you assume that designs that conform to guidelines are necessarily pedestrian? I have not specified what the guidelines are (that is for SW who have the machines, the staff and the know-how) merely that they exist and be explicit.

Yes, 3d printing is exciting and evolving, otherwise we would not be having this discussion, but that does not mean that we cannot try to make the process easier at each stage. I am not suggesting anything to be set in stone for all time: the guidelines are free to evolve along with SW's capabilities.

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Fri, 05 Jul 2013 07:15:41 GMT

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stonysmith wrote on Thu, 04 July 2013 19:47AmLachDesigns wrote on Thu, 04 July 2013 16:46There has to be a point when a model is "approved" without reservation.

I completely disagree. The only way to implement such a solution is crank up the design rules so as to increase the wall thickness to a point that there is no risk of any breakage. That would put my shop out of business.

Not true. Your models print okay now, and repeatably I presume, with no issues. Shapeways are clearly able to handle them and package them, therefore they could be 'In Production'. They comply with the current 'rules' and therefore would comply with future rules.

Quote:

1) We need to keep focus on the idea that the printers will get better over time. These rejections are a real pain today, but they are temporary.. there will be a day in the future when we can print higher detail with thinner, stronger walls.

As the printers get better the rules can change, and SW can publish the changes. This is no reason not to start with the actual rules. The problem now seems to be that the published rules are not the rules being used by SW or at least not consistently.

Quote: 2) You can't fight physics. The mechanical properties of the materials we're using will always affect how we design things. Large items need to be thicker, small items can have finer details, but the smaller items can't be subjected to rough handling. Those of us trying to push the limits on detail will pay a bit of a price as long as we use a third party service and have our models shipped halfway around the world.

True, so how does this affect my proposal? The guidelines will of necessity concentrate on the detail end of a model, the minimum dimensions, as they do now, but equally they can specify part ratios to allow successful printing, handling and shipping. If by a bit of a price you mean money, I agree, if you mean no certainty that a printed model will print again, then I don't.

My proposals are not to cause anyone any problems or restrict creativity but to provide a situation where the requirements are clear and where the status of a particular model/material combination stand within those requirements is also clear. You yourself Stony in another post made a point about SW scaling up production: well part of that process is to put into place systems to allow a high quality, repeatable process for the increased number of participants.

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Fri, 05 Jul 2013 07:27:18 GMT

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mkroeker wrote on Thu, 04 July 2013 21:02Quote:Design Guidelines

These should be complete and definitive

Good luck with that. How many volumes do you expect this book of rules to have ?

There would be no simple rules of thumb like "min wire free", instead you would have to tabulate length vs diameter for

wires with different weights on the free end , load-bearing vs purely decorative loops etc it will etc I'd rather continue to put up with occasional failures of the mark 1 eyeball.

So it would not be easy? So you don't even try?

It all depends what a designer is trying to do with SW. I believe that you create models for yourself, so in that instance it is possible to deal with the rejections, discussions, credits, reprints without too much trauma. However, if the designs are to be sold via SW and fulfilled via SW i.e. without intervention between the designer and the customer, then the apparent randomness of production can cause all sorts of problems.

If I could have only one thing from my list of suggestions it would be that a model can have an 'In Production' status, i.e. a guarantee that if ordered it will print. Without this the use of SW shops to 3rd parties does not fly.

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Fri, 05 Jul 2013 07:38:11 GMT

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PeregrineStudios wrote on Thu, 04 July 2013 21:36

Plus there are some guidelines that are, well... guidelines. Not rules. It says right on the Stainless

Steel page, 'thinner walls may be possible based on model structure' or verbatim it says that at least. That's not exactly definitive, and the result of trying to MAKE the rules definitive would be simply giving an 0.3mm minimum across the board... which would cripple stainless steel printing.

I think you mean 3mm...

Along with the different Statuses, there could be more explicit, standardised error messages perhaps in a drill-down view. If you are successfully, repeatably printing a lot of things under 3mm maybe the rules could be changed.

Are you getting many rejections? Do you sell via SW direct to customers and are they having many problems?

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Fri, 05 Jul 2013 07:39:37 GMT
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Thanks for the responses, guys, good to discuss with you all.

What do Shapeways think?

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Fri, 05 Jul 2013 08:10:11 GMT
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Right now the biggest problem with everything is simply the human factor. When a model is ordered it is sent to people that check it. I've tried making this point before. So I'm at it again. Lets say you have 3 people checking models before going to the print facility. Mary, John and Bubba. Mary might check a model today and see nothing wrong with it and it goes to the printers and is shipped to who ever bought it. John is working the next week, same model comes in, he notices something small. He questions the model. He holds it up for 2 days to really see if there is a problem. He rejects the model thinking the problem is too massive. But an hour later, someone else orders the same model, Now Bubba is checking it. The rejection hasn't gotten to his computer and he puts it through to the printers.

So tell me, who's wrong? My point is simple, what one person see's today, someone else may not. Hell a day later and the same person might see the model they just passed, and reject it.

Until the human factor is removed from checking models against what people may or may not see as a rejection, we are going to have rejections.

Case in point, I had a model that printed and shipped in both WSF and FUD to the same customer last Friday. On the same day those models shipped, Mr. Denissen said the model should have been rejected. Too many shells. That is where Mr. Jetten got involved. He told me that Mr. Denissen was wrong about that. And as proof, Mr. Jetten took that model, and one other I was having issues with, I'll get to that in a moment. And said he was prepared to FORCE them to print. But the models went into the print facility without issue. And from last I heard, all is well.

The second model, which brings up a completely new can of worms to this topic. Has been rejected for a detail being seen as a wall. When Mr. Jetten checked it, he thought the same detail, was now a wire. I am waiting to hear if they printed alright or not. I'm guessing they did. But it brings up a serious issue between ShapeWays, 3D designers, the Service Team and the print facility. The website, in Mr. Jetten's own words, are not clear on this matter. So in that part alone, ShapeWays has failed. I am NOT a 3D designer, I'm trying to learn. But from the information on the website about materials. I've checked my models and they APPEAR to be with-in the guidelines. But that is now where the Service Team comes in, They appear to have a completely different idea of what those 3 things are. And then let us please not forget the print facility. They had an issue with a completely different model weeks before. Several weeks before in fact. But they didn't tell anyone about the design flaw they ran into.

So with the Service Team having one idea about what is and is not a detail, wall or wire. And ShapeWays not having that information clearly stated on the website, the 3D designers are left in total limbo. If Mr. Jetten gets back to me today, and tells me that both models printed without issue, then once again it brings up the question.

WHO KNOWS WHAT A DETAIL, WALL OR WIRE IS?

Because until someone clearly explains it. The Service Team is rejecting models on a believed fault that is not there. At least in the case of my 9-Cylons model. A fault that ain't there.

Mr. Jetten is trying to check something for me, but I believe more so for himself and the rest of the ShapeWays Service Team. So I'm giving credit where credit is due. Things do need to be made clearer. I believe in time they will. As these rejections are forcing everyone at ShapeWays to take a closer look at what they are doing, how different people read and understand the guidelines, and how that information is passed down to to the shop owners and the 3D designers.

So I'm going to keep watch over this. Because like Stoneysmith, my shop is pushing those limits pretty hard. I'm trying too correct that on some models. Other models I'm leaving as is. From what I got from Mr. Jetten, if a model has printed more than 6 times, it's successful. And I ain't touching any of my models that have passed that number so many times over it's looney.

Screaming and cussing at the Service Team does little good. They appear to have their hands tied by ShapeWays themselves. If this issue is NOT corrected in the next few months. The start of the early holiday shopping season. I'm going to go over everyone's head at ShapeWays, and risk getting banned from the site for life.

But for now, I'm going to give the Service Team the time they requested to do something about this.

I have always loved ShapeWays, because it allows me to turn things I remember from ages back, into something I can hold today. And it's because of that, I will keep pushing ShapeWays to get back on "The Path". I refuse to let them fail because someone missed something important. I'll just put it back in their faces. Like helping a friend, who's trying to destroy their lives. I ain't going to go quietly into the night, I ain't going down without a fight, I'm going to make sure of it. My shop is my freedom right now. I ain't making alot of money off it. But some. I wish sales were alot better. Maybe in time.

Samantha

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Fri, 05 Jul 2013 08:10:36 GMT
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AmLachDesigns wrote on Fri, 05 July 2013 07:27mkroeker wrote on Thu, 04 July 2013 21:02Quote:Design Guidelines

These should be complete and definitive

Good luck with that. How many volumes do you expect this book of rules to have ?

.
So it would not be easy? So you don't even try?

My point is that I do not believe

(a) that one set of comprehensive guidelines can cover all the many structural motifs that occur in our models, be it jewelry, railroad or sci-fi models, figurines or whatever. (I would hate to see SW tighten the rules so much that things like dcyale's furniture or stony's forklifts become impossible to do, even though I have never owned a Z-scale railroad) and

(b) that "we" suffer from a lack of guidelines, to me it seems to be more a lack of confidence on the part of (presumably) new engineers at SW. To me, it looks like a (serious) training issue - though part of the problem may be inevitable,

as with the recent growth it may simply not be as practical to just yell "hey Mitch, think this will print" across the room
as it may have been in the original small startup.

Quote: I believe that you create models for yourself,
Yep, sorry, guess I should have clarified that earlier. So I represent a different part of the customer base - few if any reprints, but perhaps more desire to get a model printed without technical compromises.

Quote:

If I could have only one thing from my list of suggestions it would be that a model can have an 'In Production' status, i.e. a guarantee that if ordered it will print. Without this the use of SW shops to 3rd parties does not fly.

Agreed. (And my hope is that is what the oft-promised "already printed" flag will provide, if it is for real this time.)

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 05 Jul 2013 09:26:27 GMT
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Quote: in Mr. Jetten's own words, are not clear on this matter. So in that part alone, ShapeWays has failed.

Please note: most of the design rules are clear, the thing we need to improve is the definition of these rules.

When does a detail become a wall?
When does a wall become a wire?
When is the wire too long for it's thickness?

etc etc.

Although I'm not able to get every single question answered right away.
How about me going to the production team and see if I can get a nice definition of "details becoming a wall" and "walls becoming a wire"

==

Other note: Every single model is different, this causes a lot of headache for everyone as we can't make design rules for every single kind of shape that exists.

Yes, this is bad, I agree, but I read somewhere above "How many volumes do you expect this book of rules to have ?"

It will be so difficult and of course hard to understand if we have 1000 different rules.

So let's find a nice balance.

I'm sure a lot of people will agree that if we communicate the definition of walls, details, wires it's a step in the right direction.

Baby steps

===

@Machenoid, lol feel free to curse, complain, email, forum topics!

We will never ban you for being honest.

Every single feedback we get will help us improving.

Yes, you won't see those improvements within a day, but I'm sure everyone can agree that if you look back to 2009... a lot has changed already

Subject: Re: Preventing Rejections

Posted by [NickHawkins](#) on Fri, 05 Jul 2013 10:36:10 GMT

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mkroeker wrote on Fri, 05 July 2013 08:10

My point is that I do not believe

(a) that one set of comprehensive guidelines can cover all the many structural motifs that occur in our models, be it jewelry, railroad or sci-fi models, figurines or whatever. (I would hate to see SW tighten the rules so much that things like dcyale's furniture or stony's forklifts become impossible to do, even though I have never owned a Z-scale railroad) and

(b) that "we" suffer from a lack of guidelines, to me it seems to be more a lack of confidence on the part of (presumably) new engineers at SW. To me, it looks like a (serious) training issue - though part of the problem may be inevitable,

as with the recent growth it may simply not be as practical to just yell "hey Mitch, think this will print" across the room

as it may have been in the original small startup.

I am in full agreement with both these points

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Mon, 08 Jul 2013 16:38:52 GMT
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Have we resolved all our issues yet?

I cannot for the life of me find any meaningful information on the web about how design rule check software works for 3D printing. Beyond simple checks like wall thickness I imagine the rules and techniques could get complicated, but 3 to 10 pages of basic categorized rules or guidelines that can be understood and implemented in computer algorithms would not be outrageous. You won't ever be able to cover all situations but the wacky cases can still be alerted to designers with warnings rather than full blown rejections. Is there a professional group or published journal that works on these issues? Or do 3D companies squirrel away their rules, methods, and algorithms into proprietary software? I don't really need a new hobby but you know how things go...

@MrNibbles No I did not ever use that ring creator before. That's awesome. That type of creator is screaming to be used for pen blanks!

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Tue, 09 Jul 2013 01:53:35 GMT
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HERE WE GO AGAIN!! DAMMIT ALL TO HELL! I AM POSTING THE ENTIRE EMAIL I JUST SENT TO MR. JETTEN, BECAUSE I'M PISSED AND THIS NOW MEANS WAR!

"ATTENTION!! ATTENTION!!

THIS IS FOR MR. JETTEN ONLY!!!!

Mr. Jetten, It appears that once again people at the Service Team have taken it upon themselves to shut off a model of mine that they rejected.

<http://shpws.me/okPH>

"Command Service Module" # 1184899

The model was ordered in WSF, they rejected it for what they claim as the smallest measurement they could find being 0.66mm. I run my check on it and the smallest I find is 0.68mm. After they rejected this, they then TURNED OFF ALL MATERIALS for that model. Making it not able to be

sold. I have NOT changed anything. As I am DISPUTING this claim. Mainly because it seems that though ShapeWays Service Team DOES have the ability to turn models off. It appears that I am the focus of that technology.

This is what they said;

"The following models have been rejected by our production team:

'Command Service Module' in White Strong & Flexible

Reason: Thin walls

Additional information: We tried to print this model twice but it broke at the same spot both times. The "nozle at the back is connected with a 0.66mm wire. "The minimum thickness for free/supporting wires > 1.0mm and supported wires > 0.8mm for this material. Please thicken the wires of the model. For more information about the design specifications for this material please visit: <http://www.shapeways.com/materials/strong-flexible-design-guidelines>

I will, "AFTER YOU CHECK IT", update the file. The thruster is NOT a wire. Dammit, why are people insisting that is a wire. I am not going to make that 1mm thick right there because some person doesn't know what the sam hell they are talking about. But right now I am getting this nasty feeling that I'm the target for someone at ShapeWays who doesn't like me. I could have understood if the model was 0.5mm, but to reject it for one side of the thruster engine bell. And from everything I can tell, They had to seriously TEAR MY MODEL APART to find that measurement.

Sorry to do this Mr. Jetten, But right now, I'm getting this feeling that this is revenge against me and I ain't taking it laying down."

IF SHAPEWAYS PRODUCTION TEAM CAN'T RESPECT SMALL MODELS AND TREAT THEM AS SUCH, MAYBE THEY SHOULDN'T BE HANDLING THE SMALL STUFF!! IT'S A THRUSTER ENGINE BELL, NOT THE DAMM ROCK OF GIBRALTAR!!

SHAPEWAYS WANTS ME PISSED, THEY GOT IT NOW!

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Tue, 09 Jul 2013 02:19:14 GMT

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Quote:We tried to print this model twice but it broke at the same spot both times. The "nozle at the back is connected with a 0.66mm wire.

I don't understand the issue here, they tried to print it twice. I wish I was a recipient of such

special treatment. If they even TRIED to print my models so much as once before rejecting them I would be ecstatic because it would mean I could still be in the model making business.

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Tue, 09 Jul 2013 03:05:23 GMT

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Do you realize how hard you have to handle something to break a "NEARLY" 0.7mm piece? I have a fighter model that is held together with 0.7mm "WIRE" and I have to cut it. Because the only way to break it is to seriously man-handle the piece. Lack of care. Or maybe you just prefer that they try to print your stuff, man-handle it, break it, then shut your model off and tell you, oh we tried. Ever since they opened that New York Production Facility they have had issues with my stuff. Broken parts, misplaced parts, missing parts. And I'm not talking tiny things either. I had them lose a model that was more than 3.5cm wide, 2cm tall and 5cm long. LOST IT. Sorry. I don't buy they tried anything. That wasn't ordered until last friday, late. Because I didn't post it before then. And they had already rejected it at 2am mountain time today. They just didn't send me the email until just late this afternoon. after 3pm my time. I even asked Mr. Jetten about it in an email at 2am. Because I noticed that the number of sales had dropped. But no rejection email. Took more than 13 hrs for them to reject the model, then send me an email telling me so.

No Sorry Roy_Stevens, I don't buy the excuse. This is an on going issue anyways. What one person see's as a detail, someone else see's as a wall, that someone else see's as an unsupported wire. No clear scale of that on the materials page, and before you go barking down at me, Mr. Jetten ADMITTED it wasn't clear on the website.

So bite me.

Subject: Re: Preventing Rejections

Posted by [PeregrineStudios](#) on Tue, 09 Jul 2013 03:28:55 GMT

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Mechanoid, if I were in charge at Shapeways, you would have been gone a long time ago. Shapeways staff, both low-level and supervisors, and your fellow designers have all been very active in this thread. Useful dialogue has been given from both sides, live discussions have been had, and it's very clear that by no means are these issues being ignored. You, in turn, have repaid this attention with nothing but abuse, towards both Shapeways and us. You've called out Shapeways support staff by name - attempting to shame them - and actively accused fellow designers of shilling for Shapeways, even implied that they are some kind of 'bots' or 'strawmen' created by Shapeways. You frequently shout about how you're in 'the top 100 sellers' as though

that gives you some sort of special access or privilege. You become enraged when Shapeways removes models that violate its TOS - that you agreed to abide by when you signed up for this site. If I were 'Mr. Jetten', I would have told to do some very creative things with some unspeakable areas of your body a very long time ago, and that's just witnessing your offensiveness here on the forums, let alone any additional abuse you've heaped on the support team through private e-mails.

Are the constant rejections a problem? Yes. Is Shapeways pursuing ways to solve this problem? Yes. Can it be solved overnight? No. Will frequent use of Caps-Lock make it go faster? No.

Your utter lack of respect or even halfway decent courtesy has been met with respectful replies from Shapeways staff of all levels. Having been on the receiving end of some VERY excellent help from Shapeways staff recently, I'm going to say what they can't: if you don't like it, leave. If you can't be respectful and courteous here, then stop polluting these forums with your absolute lack of common courtesy.

Personally, I'm seeing a huge upward trend in attempts to fix rejections - just recently, as I said, Shapeways support very happily worked with me to resolve some models issues, even escalating (VERY high, I might add - as high as it goes) to try and get them printed. While there is still work to be done, that kind of effort keeps me here. And frankly, if I were Shapeways support, there is no way in hell I would offer that kind of above-and-beyond to someone who spends all day calling me creative names and raging about me publicly.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Tue, 09 Jul 2013 03:52:30 GMT
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I have supported ShapeWays in every way possible. I have worked with Mr. Jetten closely to try and learn what to do about things. I have NOT, called them names, or started this war. I have tried to be extremely respectful in every possible way. But tonight, was the straw that broke my back. I have hit my limit on this rejection problem, because no 2 people seem to agree what a detail, wall or wire is. The only thing that comes to mind, someone at ShapeWays is trying to run me off. And has been for months. While I have remained ABSOLUTELY SILENT! I have only taken to the forums to battle this. Mainly because all, yes I mean ALL of my polite and respectful emails have gone fully and totally IGNORED! Once I took to the forums, they couldn't ignore me.

You act like in the nearly 3 yrs that I have been on the ShapeWays site, All I have done is bash and insult them at every turn. Maybe if you looked at my message history you will see. But no. That would require you to have used your brain for more than straight out attacking me. Mr. Jetten was told by me that I would try to keep things as civil as possible. He told me to say what I think. Well tonight what I thought came out in full. If ShapeWays wants to kick me for telling the

truth and not brown nosing my way thru this mess. Let them. But like everything else those choices arn't made by you, me or the Service Team. It's made by someone alot higher up, And they will have to find solid reason to throw me out. And more than just telling the truth in a none polite manner. I have respected ShapeWays ever since I got on here. And that is why I am pissed as hell over this. It's like watching a friend trying to flush their life right infront of you. I ain't going to just stand around and do nothing. I'm going to make noise, I'm going to yell and scream, until someone pays attention.

I posted a problem, and worded it in such a way as to make sure that ShapeWays knows I ain't happy. This detail, wall, wire issue is costing me plunty. Lost sales, angry customers and 3D modelers over the last 6 months that simply refuse to make anymore corrections to the models I already PAID them to create for me. The problems are getting where if this problem is not dealt with soon. I might not have a shop in 6 months. But that would make you happy.

And I didn't say word one about EVERYONE else on ShapeWays. My response too the other person, was directed souly at THEM. Maybe next time your itching for a fight, your going to pick someone that doesn't have the proof to back it up.

Now go away.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Tue, 09 Jul 2013 04:22:06 GMT
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Mechanoid wrote on Tue, 09 July 2013 03:52I have supported ShapeWays in every way possible. I have worked with Mr. Jetten closely to
Now go away.

No. You go away. This is my thread. I started it, I kept it going, and now that it's finally getting the attention it needs from people that actually work at Shapeways, I'll be damned if someone that isn't capable of adjusting a \$1 model that I could create in 20 seconds comes in here and hijacks it because they have a temper tantrum because they didn't follow a published rule. I followed every published rule to the letter on my models and yet I can't get them printed even once. I have many hundreds of hours tied up in CAD work, finishing, painting, and photographing dozens of models that are all set to NOT AVAILABLE because of the recent mess in NY. And your little fit isn't what I or anyone else needs to get this resolved.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Tue, 09 Jul 2013 04:50:24 GMT

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Oh I'm sorry, I was NOT aware that ONLY actual 3D designers were allowed to be on this thread.

Maybe someone should have informed ShapeWays. Because they locked the thread I started and moved the entire thing to this one.

Per their request and desires. NOT MINE!

But I'll let you sit there and pound your chest like a gorilla from now on. I'll fight this battle another way.

And if ShapeWays forces that thread back to this one. DON'T BLAME ME!

Go ahead and talk down to me, I'm sure it makes you feel better.

But my fight is the same, forcing ShapeWays to deal with the issues in their guidelines and at that blasted NY facility.

So bite me.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Tue, 09 Jul 2013 05:42:44 GMT

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I had a couple of pens of the same model with rounded tops come back with flat tops. For this design the "break" was right where a hemispheric rounded element was placed next to the shaft of the pen before grouping together. In this case I did not slightly overlap the two elements so it is possible that they were truly unconnected yet everything looked ok in the CAD program (Tinkercad). Unfortunately I blew away the original file and went with the flat top in a redesign since it was probably a better choice for this particular pen and I didn't want to hassle with the issue at that time.

In another case I had the same thing happen to only one of two pens of the same model I ordered at the same time in elasto, but in this case the disconnected top was shipped with the pen body. That leads me to think that the pen fell apart during shipping and was not thrown into the bag at the factory. There is a lanyard hole right at the separation which could have caused the problem but that seems unlikely. For this design the two features were overlapped by 1 mil prior to grouping the parts of the pen together so they should have been unified in the CAD file.

Anyway, If you have a small nozzle falling off your part it may be due to something inherent in the

design file, or a software/machine change at Shapeways that is causing the parts to not be fused together. I never saw this problem before with any of my other parts and having it happen twice in close proximity is curious. I'm having more pens with the overlaps built right now in both WSF and elasto so we'll see what happens with those. I'm always suspect of software and machine settings or system "upgrades" that can generate mysterious problems. Sometimes software revisions cause new problems. I don't know much about New York site or when they started making parts. It's possible that parts made in different plants around the globe may not be using the exact same software revisions for build-file generation or in the printing machines so there's always that kind of thing that can generate difficulties. Just a thought.

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Tue, 09 Jul 2013 07:01:05 GMT

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@PeregrineStudios: In defense of "mechanoid" - unless that "hunterseeker5" guy is the same person, you are attributing at least the "top 100 seller" and "shill" comments and the removal of TOS-violating models to the wrong one.

@Mechanoid: I guess it may be a "cultural" thing, with coarse language perhaps more acceptable among truck drivers. Still it is not going to help your case here, and works wonders to derail this thread to the point where noone with a genuine interest in the topic will want to read it.

After watching the production videos, are you confident you could print your parts yourself without problems ? Myself, I would end up with a big powdery mess for certain.

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Tue, 09 Jul 2013 09:46:46 GMT

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Hey all,

I'm really sorry to see that it's still not going as you would like to see.

As mentioned in this thread, we are actively working on solutions, this thread has been a great help for Shapeways!

Unfortunately, just like with all big projects we are not able to push this live overnight and it will take some trial and error before we get it right.

I'm not able to share you any details yet on those big projects, cause I'm sure it will only disappoint you if one of these projects won't be seeing the daylight.

This is the reason why we are working behind the scenes to provide a better overall experience for everyone without sharing too much details just yet.

Now let me try to explain the rejected model, the "Command Service Module" as I see there is confusion.

Excuse me for using bold text, it just marks the important information:)

- The model was rejected in Eindhoven, Not in NY
- The customer ordered a quantity of 2, we printed both at the same time (thus printed twice as stated in rejection email)
- When we unpacked the models, we spotted that both have broken at the exact same place.
- Due to breaking, a reprint was issued for that orderline (qty 2)
- When something breaks, we re-check the file to see what happened and what might have caused the issue.
- When re-checking the model, we spotted that the broken area is 0.66 mm thick and thus below our design rules.
- This is the moment the model was rejected at our production side.
- At Customer Service we wanted to get the facts right (as we spotted that it was your model) , this is the reason why it took 13 hours before Customer Service approved the rejection and you received the email.

*picture of rejected model

Please do note that besides customer service our production teams and supply chain teams do not see the name of the designer or customer.

I'm referring to the part where you think "I'm getting this feeling that this is revenge against me and I ain't taking it laying down".

It will be bad if we stop printing models because of the person rather than because of the model. Both for you and Shapeways.
No revenge involved!

Yes, we will be working on definitions for wires details and walls (the person who will be answering this question is currently in a meeting, i'll get back to that later on today), and yes it does confuse people.

However one fact is for sure, we did try to print your model and we didn't want to disappoint your customer by sending a broken model.

I hope this answers a few of your questions and I do apologize for all the inconvenience. Let's work together and fix these issues

Best,
Mitchell

@Roy, feel free to send me an email (service@shapeways.com) with mitchell in the subject, let's work together and fix your trains

File Attachments

1) [model Mechanoid.JPG](#), downloaded 260 times

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Tue, 09 Jul 2013 11:55:37 GMT

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While I do not think personal attacks between designers is warranted or helpful, (and hopefully will not continue) I did want to pick out one item from this latest rejection I thought was positive.

Shapeways explained what the problem was, and that it was a problem noticed post-production. It seems that even though a model did not meet the guidelines, instead of rejecting it pre-production they tried, and it failed. I personally don't think we can ask Shapeways to keep printing models that do not survive their normal production process. In looking around the web it seem there are 3D production facilities that can do more detailed models, but not at anything approaching Shapeways' pricing. You do get what you pay for, and Shapeways seems to be the best balance between price and service for me.

The problem, as I see it, was focused on models that used to print but are now rejected, and the lack of communication as to what was going on. Designers had to reverse engineer what would work and what wouldn't, and the rejections came as a surprise (actually a shock).

I still don't think reason for the change was ever explained- only theories from designers offered. Regardless, all I am seeking is a set of guidelines that I can follow to produce models that will not be rejected. Seemingly that is in progress and will be forthcoming. However, I recognize and appreciate the transparency that Shapeways is attempting to introduce.

I also am waiting for clarification on what is a wire, and what is a wall. Hopefully I can use that to redesign a few FUD models I have and make them a little less clunky in certain areas. Time will tell.

At this point I assume since a SWF "wire" supporting weight can not be less than 1mm, that is also the minimum cross-section of a model when there is structure on either side (hopefully that

makes sense). That is the criteria I am using at the present time. Some things I try to design cannot be done within the current guidelines and those projects go on hold. Hopefully the technology catches up before too long.

My last order that was delivered had 3 rejections. After some redesign to address the specific reasons for the rejections, all three were successfully printed and are here. I have offered them for sale again.

My current order has several new designs and a few redesigns that are in the infamous "used to print but no more" category. We will see if I caught everything or if I am going to be redesigning again.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Wed, 10 Jul 2013 10:02:25 GMT
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Hey all,

Would you all be interested if we put something like this on the website:

Wire vs. Detail vs. Wall

A Wire is a feature whose length is greater than 5 times its width.

A Detail is a feature whose length is less than twice its width.

*note: this is a guideline and example

I had a meeting about all different rules and definitions, and one thing that was really obvious; There is no way a rule can be applied to any model without changing (for example) the wall thickness to at least 4mm for everything.

We all know that is not the future we want

Every single model is different, most of the times we can apply the general rules, but for some models its not that simple and the general rules don't apply

My question to you guys:

Examples!

Please share 1 order number and the name of the rejected model where you feel like the rejection doesn't make sense.*

I will sit down with the production team and discuss why your model was rejected from their perspective.

*special note: I will be discussing that rejection in this topic, thus don't write down the order number if you do not want to share the details publicly

I'll be doing like 4 of 5 order numbers (just to make sure i won't be doing this for the next 28 months)

File Attachments

1) [designguidelines_81.png](#), downloaded 185 times

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Wed, 10 Jul 2013 10:16:08 GMT

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Nitpick: by your definition, that picture shows only walls ? (Both features are dimensioned as exactly on the threshold, either add "<" and ">" to the dimension, or (IMHO more intuitive) leave the dimension lines as they are and grow/shrink the features a bit)

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Wed, 10 Jul 2013 10:46:25 GMT

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Thank you for the feedback

the picture was just an example

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Wed, 10 Jul 2013 11:28:47 GMT

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In principal such a diagram is ideal. The more the better.

In this specific example (and maybe this is what mkroeker is saying, but I'm not sure):

1. Which feature is a wall?
2. What is a projection with dimension x where $2W < x < 5W$?

Quote:

I had a meeting about all different rules and definitions, and one thing that was really obvious; There is no way a rule can be applied to any model without changing (for example) the wall thickness to at least 4mm for everything.

We all know that is not the future we want.

You are right that none of us (I think) want such a blanket rule. Can you explain what you mean a bit more please?

In general I think you are heading in the right direction, well done.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 10 Jul 2013 13:40:24 GMT
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I just so happens that this morning I got a rejection on a previously printed model. It might be helpful because the portion that was rejected falls between the wire and detail diagram you provided.

Actually, the model is new, but the sub-model that was rejected previously printed so I did not check that portion of the model. I did change a detail in the headboard, but not the legs.

Order # 267201, the model was Bedroom Stuff 2 HO Scale in White Strong & Flexible.

The rejection reason was: Thin walls. Additional information: The minimum wall thickness for this material is 0.7mm. Please thicken the walls of the model.

The picture was:

The bed in question printed OK before as part of a different group: (As the forum apparently won't let me attach multiple pictures, I'll attach a picture of the bed to another message)

The rejection was for the leg of the bed. It would seem that it is not a wall at all, it is either a detail or a wire. If it is a wire it does violate the design guidelines. As I have a physical copy of the bed, I did not catch this when I reviewed the model.

However the leg is 2.06mm (.081) inches long. That is 4 time the narrow dimension.

It is 1.1mm wide- which is above the limit for either a wire or wall.

I guess I'll have to add a third message with the screen shot of my measurements attached.

So, I guess the questions are:

Why was this considered a wall? I think it is clearly a wire or a detail.

If it was a detail, and it was judged unprintable, wouldn't the proper fix be to shorten it or make the dimension larger?

The fix is easy- and doesn't effect the aesthetics to any appreciable degree. So the change is not the problem. The problem is that I can't tell what will print the 2nd time and what will not. If the technicians had not checked this dimension and printed the model, and I assume it would have printed based on prior history, and then a customer order it and the dimension was checked that time, and the order was rejected, my reputation would have been the one taking the hit.

That is and has always been the problem. Hopefully all this effort will eventually result in a solution to the problem.

File Attachments

1) [bedroom 07 10 13.JPG](#), downloaded 427 times

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 10 Jul 2013 13:41:43 GMT
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A picture of the bed from the last message:

File Attachments

1) [bed.jpg](#), downloaded 440 times

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 10 Jul 2013 13:46:23 GMT
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A screen shot of the portion of the model in question from 3d-tool (www.3d-tool.de) which I actually find much easier to check wall thickness than netfab, as with 3d tool the measurement is continuous under the mouse as you move it around and you don't have to click on a certain area, although the measurements are in inches not mm.

File Attachments

1) [bedroom measure 07 10 13.jpg](#), downloaded 27 times

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 10 Jul 2013 13:48:36 GMT
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AHHH! This time I will actually embed the screenshot from 3d-tool:

File Attachments

1) [bedroom measure 07 10 13.jpg](#), downloaded 422 times

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Wed, 10 Jul 2013 13:52:51 GMT
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I would reject this!

It is not a wire, to me because it is connected only at one end and has to support itself. It is not a detail because it is too large. It is not a wall in the normal sense, but for me, since it is relatively so large (wrt the model as a whole) it should be considered a part of the main structure and therefore the min dimension of 0.7 should apply. The length of the feature does not affect the fact that the min thickness has not been reached.

The proper fix IS to make it larger, as the rejection notice said. I read it that if you make the leg 0.7 mm thick it will print.

Just my opinion...

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Wed, 10 Jul 2013 14:15:32 GMT

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As far as my understanding of a detail, it should not be taller than it is wide. I've got a nice set of guidelines that I'll confirm and make less technical (easier for all to understand). We're moving in the right direction with clearing up wall-wire-detail.

Subject: Re: Preventing Rejections

Posted by [UniverseBecoming](#) on Wed, 10 Jul 2013 14:55:30 GMT

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I just had an idea that I thought of just now while catching up on this thread.

How about if Shapeways simply charges by a kind of printing probability? Has anyone thought of this yet?

So, Shapeways would start off with a base price like it does now and then if / when a problem is discovered the price goes up. The current operations would stay in place, cuz that's working well. But mainly, what the problem is, as can be discerned from this thread, is the problems that are discovered after a model has already been successfully printed.

So, why does Shapeways care? Cuz they are loosing money! And so it is only fair that Shapeways should be compensated. So if a product is found to have a probability of printing only print 50% of the time for example, then Shapeways should be compensated accordingly until the model is made more robust wherein the probability of a successful print is increased and the price lowered back to the %100 successful printing probably starting point.

That way, designers who have large numbers of products wouldn't be at a complete loss as they would just raise their markup to compensate for those products that had been found to have a lower probability of printing and if they wanted to get the prices lowered they would work at making improvements to products that had low printing probability. And to encourage buyers, shop owners could simply inform buyers that the price for such and such product is a little higher cuz the geometry of the model is on the cutting edge of what's possible and must be printed more than once and or may be too fragile to process and must be reprinted when it breaks.

Most importantly, post printed rejections would be a thing of the past and that would make

everyone, including customers, a lot more comfortable.

Someday there will be supercomputers that analyze everything that comes in to a very high degree and will catch all printing probability errors before they happen!

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Wed, 10 Jul 2013 15:07:35 GMT

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dcyale wrote on Wed, 10 July 2013 13:46A screen shot of the portion of the model in question from 3d-tool (www.3d-tool.de) which I actually find much easier to check wall thickness than netfab, as with 3d tool the measurement is continuous under the mouse as you move it around and you don't have to click on a certain area, although the measurements are in inches not mm.

Sorry, I didn't finish reading the full story yet,, will do in a minute.

You can actually do this as well in Netfabb, use the checking feature and hold down your left mouse button, if you hover around the model you can check the whole model within seconds

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Wed, 10 Jul 2013 15:12:25 GMT

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UniverseBecoming wrote on Wed, 10 July 2013 14:55

How about if Shapeways simply charges by a kind of printing probability? Has anyone thought of this yet?

Implementing the same software as we have at the Ring Creator might help you?

<http://www.shapeways.com/creator/custom-ring> -> click on the first pattern -> go to 3d printing checks tab

We are still testing this tool, and eventually we can implement this for regular uploads.

Note: no guarantees yet, we are still testing

Of course a computer check can still fail, but it will point you in the right direction, right?

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Wed, 10 Jul 2013 15:13:14 GMT

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The current design guidelines differentiate between a supported wire, which I understood meant a wire connected on each end, a free wire, which I understood to mean a wire connected at one end only, and a weight bearing wire, which I hope is self explanatory. It is my understanding that this, if a wire, would be a free wire. That is based mostly on prior rejection messages that I do not have handy and how Shapeways has classified this type of structure into the past.

Maybe I misunderstood the definitions all along?

And I agree, the part does not meet the design criteria. I thought I mentioned that in the first message. The confusion is what correction is required. If it is in fact a wall, then .7mm is the target. If it is a free wire, 1mm is the design target, and if it is a detail it meets the design criteria.

What I want to avoid is making the structure .7mm and then next time being told it's a free wire and has to be 1mm. At this point I see that as all too possible.

Youknowwho4eva: In calling it a possible detail I was using the example shown by Mitchell in earlier in his thread in which a structure is a detail if no more than twice it's width, a wire if more than 5x it's width, and there appears to be a grey area in between. I know that is not the general current understanding of a detail. This falls into the grey area of more than 2x the width and less than 5x the width in Mitchell's example.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Wed, 10 Jul 2013 15:23:27 GMT

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In my search for more comprehensive 3D design rule definition examples on the web, which is still a rather fruitless endeavor, I ran across this work at Purdue which attempts to dynamically fix models for strength and long term survivability. I suspect software like this could be adapted to correct small printer related detail/wall/wire issues as well. Obviously it's a research project but it shows the extent that design rule checking could be combined with other factors to provide more robust and manufacturable models. Someday...

<http://hpcg.purdue.edu/?page=publication&id=164>

Subject: Re: Preventing Rejections

Posted by [UniverseBecoming](#) on Wed, 10 Jul 2013 15:45:50 GMT

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Mitchell Jetten wrote on Wed, 10 July 2013 15:12UniverseBecoming wrote on Wed, 10 July 2013 14:55

How about if Shapeways simply charges by a kind of printing probability? Has anyone thought of this yet?

Implementing the same software as we have at the Ring Creator might help you?

<http://www.shapeways.com/creator/custom-ring> -> click on the first pattern -> go to 3d printing checks tab

We are still testing this tool, and eventually we can implement this for regular uploads.

Note: no guarantees yet, we are still testing

Of course a computer check can still fail, but it will point you in the right direction, right?

No, I don't have any rejections to speak of. I was merely making the suggestion for solving the main problem talked about in this thread, the rejection of previously successfully printed items.

Subject: Re: Preventing Rejections

Posted by [UniverseBecoming](#) on Wed, 10 Jul 2013 15:51:28 GMT

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MrNib wrote on Wed, 10 July 2013 15:23In my search for more comprehensive 3D design rule definition examples on the web, which is still a rather fruitless endeavor, I ran across this work at Purdue which attempts to dynamically fix models for strength and long term survivability. I suspect software like this could be adapted to correct small printer related detail/wall/wire issues as well. Obviously it's a research project but it shows the extent that design rule checking could be combined with other factors to provide more robust and manufacturable models. Someday...

<http://hpcg.purdue.edu/?page=publication&id=164>

This would be great if they could do it quick enough after upload, or as a stand alone for designers.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Wed, 10 Jul 2013 16:14:16 GMT
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dcyale wrote on Wed, 10 July 2013 15:13 This falls into the grey area of more than 2x the width and less than 5x the width in Mitchell's example.
My understanding is that this "grey area" denotes everything that is treated as a wall, no more, no less:
If it were longer than 5 times its width, it would have to be regarded as a wire (unsupported wire in your case),
if it were shorter than [Mitchell: twice] its width, it would pass for a detail.

Do I win ?

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Wed, 10 Jul 2013 16:16:33 GMT
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dcyale wrote on Wed, 10 July 2013 15:13 Youknowwho4eva: In calling it a possible detail I was using the example shown by Mitchell in earlier int his thread in which a structure is a detail if no more than twice it's width, a wire if more than 5x it's width, and there appears to be a grey area in between. I know that is not the general current understanding of a detail. This falls into the grey area of more than 2x the width and less than 5x the width in Mitchell's example.

mkroeker and I also commented on this anomaly earlier.

Perhaps the most urgent task is to come up with some agreed upon terms for all the parts of a structure that must conform to rules? That surely must be the basis for moving forward.

What is a wire, supported and unsupported?

What is a detail?

What is a wall? Is wall the best descriptive term for what is being described?

How do thicknesses matter at the meeting of 2 planes? 3 planes? A point?

Etc

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Wed, 10 Jul 2013 17:22:19 GMT

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Mr. Jetten,

The 9-Cylons. Thats my model. Because a detail gun in the wings, that is supported by 3 actual walls was seen by others in Service Team as a wall. When I asked you to check it, you called it a wire. Telling me the model would NOT print. But they are sitting on your desk. And you didn't have to FORCE them to print. They just worked.

Your guidelines do NOT take into account that a piece may be supported directly by 3 other walls. Which in fact turns the wire back into a detail. Yes?

File Attachments

1) [cylon gun.png](#), downloaded 393 times

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Wed, 10 Jul 2013 17:44:07 GMT

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My heartburn lies in those gray areas where I want a subtle decorative surface pattern that may not exactly duplicate what is seen in the model file but where I don't expect it to exactly match the model file, yet I meet other primary design rules such as underlying wall thickness.

Let's say I'm designing a body for a pen. Establishing a decorative surface decoration using the embossing/engraving rules, which are ostensibly there to create detail that can repeatably provide legible text or logos, may not be best for a pen body. What's confounding about recent rejections is that I have parts that broke embossing/engraving height rules in the past by roughly a factor of two and are absolutely perfect for my application whether polished or not - even using alumide. I also see the same destiny for my prototype elasto based pen blanks. I am breaking the embossing/engraving rules yet the parts are turning out to be perfect as pen bodies. Will they

also be rejected at some point in the future if the rules remain the same?

It strikes me that model related surface detail is like an onion with several definable levels.

1) unintended low level surface roughness This is caused by editor induced quantized vertex locations, the inability to perfectly mate and transition joined geometries, or any other unintended surface roughness or transition. Generally these variations may be less than printer layer thickness but they may also be very large depending on designer skill resulting in large seams that run across models. I would venture a guess that all these effects are completely ignored by the design rule checking process and the parts are manufactured.

2) intentional surface roughness Let's assume someone wants a rough surface and creates it by placing randomly located small bumps (cones, pyramids, cubes, etc) on a surface all having random heights falling between zero and the embossing/engraving rule heights. What would cause this scenario to pass/fail? What are the criteria to make that determination? Is it an eyeball determination?

3) subtle to large surface decorative patterns This category is also for features that fall below the engraving/embossing rule limits but generally are long or large enough to have properties of resolvability and coherence. In other words they can be seen or felt even when falling close to the print layer thickness. Think of this as looking for the Colorado River from space. Since it is very long it will be visible from orbit. Yet a round pond having the same diameter as the river width will not be visible from space because it is too small. (This would also apply to the Great Wall of China). I know walls or grooves having a width of 1mm and depths or heights of 0.38 mm or so are perfectly fine for my application (alumide polished or not) yet they are now being rejected. Creating a decorative detail allowance rule for this situation would involve setting parameter limits which might include a multiple of print layer thickness for depth/height, minimum feature width, and a feature minimum length to width ratio, but they would fall below the engraving/embossing threshold limits. The transition from surface height to detail height or depth should not matter in this case (as long as there is no undercut). Polished or not it's not the transition that needs to be resolved. Rather it's the overall decorative pattern which is of interest.

4) engraving/embossing patterns Well these are what they are as of now. Again I assume these were intended more for legible text, logos, and similar fully resolvable details.

5) free wires and walls These are somewhat out of the areas of my concern but it strikes me that they need to be defined by a combination of minimum widths, minimum cross sectional areas, cross sectional aspect ratios of maximum width to minimum width, and the amount of material volume beyond the point of minimum cross sectional area. This helps to remove the pass/fail criteria from considering specific shapes, such as round legs versus square legs, but it also makes the check more dependent on having a good computer checking algorithm as opposed to an eyeball determination.

This is a good representative part which was rejected in my recent order 260042.
<http://shpws.me/obcC> I would encourage you to print it in both polished and unpolished alumide to see the results, or provide me with a waiver to allow me to get the part made so I can make a decent determination. I think you'd better appreciate the results with a part in your hand. Heck, I'd even convert them into real pens for you to use at trade shows and conventions to better understand my dilemma!

Added:

I just sent in this part for fabrication in regular and polished alumide to see if it will be rejected.
<http://shpws.me/oo2j> I cleaned up the cylindrical shapes to be smoother and in this case the depths of the holes are exactly 0.381 mm, well below the engraving/embossing limits for regular or polished alumide. Will they be fabricated or rejected? Time will tell!

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 10 Jul 2013 17:51:11 GMT
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Just so I understand the 9-cylons model (and any further discussion of it) it looks like the gun is a separate shell that is a tapered cylinder and intersects another shell that is the wing? Is it also supported underneath, and how far is it from the top of the gun shell to the bottom of the wing shell?

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 10 Jul 2013 17:58:06 GMT
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The other thing that occurs to me, is that perhaps this thread needs to be split into different threads for different materials. What is germane for FUD might not be for a metal product, and maybe the terms detail and wall and wire cannot have a universal definition that allies to all

materials. I basically use FUD, WSF and a little full color sandstone. So when I talk about what wire has printed in the past, or the height/width ratio of a detail, very well might not be accurate for metal.

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Wed, 10 Jul 2013 19:08:47 GMT

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The 9-Cylon model's gun, is sitting in a channel. The gun in fact is 2.74mm length, 0.90mm of the gun is unsupported by the bottom wall. The channel the gun sits in is not square, it's kind of like a shallow "U" channel. It's 0.51mm at the bottom of the gun, 0.53mm in the middle. The outside wall leaves 0.66mm of the gun only being supported by the inside wall. Leaving only 0.12mm of the gun's tip (which is 0.48mm round), hanging out unsupported at all. At one point the Service Team told me the gun was an unsupported wall, rejecting it. As stated above, when I asked Mr. Jetten to check it again. He came back and said it was an unsupported wire. Everyone kept looking at the gun itself, totally ignoring the channel it was in. This model was designed for WSF material. I had intended to open it for FD as well. But the tighter guidelines almost make that impossible to do. As some details on the fighters would be seen as walls, or unsupported wires. But it prints just fine, it's not the production facility that kept rejecting it, it was the Service Team. Mr. Jetten now has a set sitting on his desk to confirm it. Here is the pic he took showing it.

From what I have dealt with, if something is a detail in WSF material, it does risk becoming a wall or even a wire in FD or FUD. Making the model rejected. Though one would think with the guidelines showing about FD, that a model designed for WSF should have no issues being passed and printed in FD. FUD is another animal unto itself. At some stages any model that is being designed for FUD, almost needs to be designed for WSF, but with much shallower details. Or they could be seen as walls or wires.

File Attachments

1) [DSCN0405.JPG](#), downloaded 37 times

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Wed, 10 Jul 2013 20:55:45 GMT

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Do the gun shell and the wing shell actually intersect and overlap, or are the shells actually physically separated? Or I guess they could occupy the same plane where they meet, also, but I think that unlikely from the diagram. I suspect they intersect, just want to be sure.

My understanding, and please someone from Shapeways correct me if I am wrong, is that when two or more shells intersect they are treated as one solid shell by the printing software.

While we are on the topic (which is slightly off topic I know), is there resheiling software that actually works. I get very mixed results from netfab cloud, and with a minimal markup I can't afford to spend thousands.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Wed, 10 Jul 2013 21:31:36 GMT
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I am a novice at 3D modeling. Just starting out. I know that in Netfabb Studio Basic, when I tear the model apart, the shell of the gun is down inside. I am not sure what you call that. But the gun shell goes into all 3 shells along ways. It's not sitting on top of the shells. It is fully connected. I do know that according to Mr. Jetten, their software takes an uploaded model, and turns a models shell count into 1 basic shell. Personally I don't now how to do that.

Yes I'm a moron. I'm old and never did this sort of thing before. I was a truck driver for nearly 18 yrs, and worked at the U.S.Forestry Service for 7 yrs. My one friend has 21 yrs driving and the 3rd person @TheVerse has 15 yrs driving. So none of us have dealt with 3D software before, or know much about computers. You got a diesel engine to be rebuilt, got you covered. But this is a new tool that I am trying to learn. I see unique possibilities for this, and that is why I'm trying to learn. But because I'm old, most people don't want to teach me, or they talk down at me, So I'm learning as I go on my own. But I'm learning fast and I'm expanding what I know all the time. Plus I don't have the 2,000 dollars for Netfabb Studio Pro.

But this issue that I'm pointing out seems to be at the heart of some of the other problems with rejections. What one person see's, another does not. Or they see it differently all together. And sadly how the Service Team see's a model, is not how the engineers down with the printers see it either. No 2 people are on or working from the same page of guidelines at ShapeWays. And how each person interprets those guidelines also effects how each person does their job. I think that is the first step ShapeWays needs too address head-on. Getting everyone from the engineers to the Service Team working from the same page of guidelines. Maybe have 2 different people check a model, if they don't come up with the same results, it goes to a 3rd person who is an engineer who would make the final conclusion of a model being printed or rejected. Checks and balances.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Thu, 11 Jul 2013 01:44:06 GMT
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A lot of people who are "designers" here are new to the idea. My self, I am 52, presently an attorney and previously a cop for 20 years. Although in the past I self taught myself programing, it was child's play compared to modern 3d software, mainly applications to keep records and information organized. Modern database programmers would probably have a good laugh at my old programing.

Having said that, we novices are the exact audience that the design guidelines have to make sense to. If we can understand it, then more experienced designers should be able to. Don't short change yourself. It seems a big part of Shapeway's plan is to make itself available to the non-professional 3D designer, and working through the current issues will go a long way towards that goal.

Dave

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Thu, 11 Jul 2013 16:00:17 GMT
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Well I suppose this is some kind of progress. My submission to have this part built in regular alumide and polished alumide has created 2 data points. The alumide non-polished version passed the processing step and is now at the production phase. I probably shouldn't claim success yet though since I imagine that after it is built someone could make a decision that they don't like the result and cancel it before shipping.

The polished alumide version was rejected immediately. (order #268605) Personally I would hypothesize that the polished version would be just as good if not better than the non-polished version (for pen use). Since the depressions are shallow (0.381 mm) and fairly wide I would expect the pattern to still be viable after polishing in terms of being visible and detectable by touch. The "walls" or vertical transition profiles between the two different heights would be affected and end up being sloped by the polishing process. But in fact that is what I expect and desire to have happen!

<http://shpws.me/opl0>

So this leads me to the logical line of questioning. What depth/height of pattern in this case would have resulted in a favorable outcome for polished alumide? In this particular case I was toying

around with the idea of increasing overall outside diameters by a small amount to compensate for material removed in the polishing process, making the polished alumide versions the standard default for my ARTG series of blanks. (ARTG = Almost Ready To Go which means novice pen makers could make decent pens without the need for an expensive lathe.) So what if I increased the pattern height definitions to 0.508 mils? Could that height be considered as being ok for a decorative pattern? Another alternative is to thin the cylinder walls under the decorative patterns to below 1 mm to increase the decorative pattern depths, but that comes at the expense of breaking the wall thickness rule which is something I consider to be a primary and overriding rule which must never be broken. Or is it?

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Fri, 12 Jul 2013 02:06:07 GMT
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There are papers trying to get things to be printable as shown above, but there are also papers examining how to fix printer behaviour by modifying the input model so the final print really matches the original 3d model. Human creators can do the same, we do the same already. Why model a tiny chamfer if you know the material will fuse and do it without more effort? Of course, someone else will say that joint will clog a bit, which is exactly what's desired, instead of modelling it and then getting a trully thick area.

The pen bodies is one such case of doing things "wrong" because the purpose is exactly that, use the material behaviour to get a "right" result. Similar things doing some sharp ends to achieve a smooth joint. Sometimes it's just about getting randomness out of the process. Being able to pick print orientation would make all this an art on itself, just like knowing how to sculpt a rock or wood piece, maximizing the inner structure (knots, grain, etc) of the material. But even without that, you can also design taking into account the printers.

Sometimes you must design with that in mind, even if you would want not to. And even SW knows about this, you have to model holes differently than tubes in some materials if you want them to match one into another, for example. Elasto is the biggest example of that, you have to take into account how it will behave or will be disappointed. And all this is one reason some of use test before putting something for sale.

Subject: Re: Preventing Rejections
Posted by [NickHawkins](#) on Fri, 12 Jul 2013 08:40:31 GMT

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I've been using Blender's wireframe function to generate canopy frames for my aircraft models. This has the disadvantage that it's not very controllable and can generate various small scale artefacts (EG jaggies). From a modelling point of view the artefacts are irrelevant because the WSF printing process smoothes them away.

I've recently had a couple of models rejected (out of 200+ printed) because of these artefacts (thin walls, your detail is too fine...) and did not know what to do to resolve the problem, it's not like the mesh was broken

I'm pleased to say that I have found a solution

The Blender skin modifier creates a most satisfactory wireframe that is much more controllable than that produced by the wireframe function.

You can set the radius using Ctrl-A or the transform inspector/frame (I use 0.05).

I'll be using this for all my future models and will retrofit it to any of my existing models that need revision

Nick H.

EDIT: Had to be too good to be true, the skin function crashes on some meshes so it may not be a universal solution

UPDATE: A web search suggested that there had been problems with the skin modifier due to recursion and memory issues in the past. Ensuring that there are no other modifiers applied to the mesh before applying skin seems to resolve the issue.

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Fri, 12 Jul 2013 08:49:10 GMT

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Good to know. Thx.

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Fri, 12 Jul 2013 08:54:39 GMT

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stannum wrote on Fri, 12 July 2013 02:06.... And all this is one reason some of use test before putting something for sale.

Well, I would say that everyone should test before putting something on sale.

But the problem that has been repeated again and again in this thread is: once you are happy with your test print, how can you guarantee that it will print time and again with no problems? This, for me, is a fundamental issue, hence the suggestions I have made above (admittedly not to universal acclaim!).

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Fri, 12 Jul 2013 18:03:29 GMT
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While I don't mind the expense of having several basic designs fabricated to prove form, fit, and function it shouldn't need to extend to all decorative variants for all time. In my case form, fit, and function basically comes down to cylinder length, inside hole diameter, and outside diameter to make 3D print level quality pens that work and look/feel interesting. These dimensions are guided by design rules (particularly wall thickness) and to provide reasonable allowances for process variations. It's things like detail or texture pattern rules (my imaginary rule class!) versus hard embossing/engraving rules that make this task rather difficult. I could attempt to build every design in regular or polished alumide first but that becomes cost prohibitive very quickly beyond a few representative designs. And then there is that potential problem that in the future parts will not be built for someone else after the parts are released into that big social ocean. We all know that story.

I think we all understand that Shapeways is trying to protect designers from themselves and general customers from designers. I'm also appreciative of the fact that Shapeways makes attempts to print things so I don't want to sound overly critical. I just get a little hinkey feeling when I'm working in a regime that is skirting some existing design rules and how it impacts my original reasons for exploring the wonderful world of 3D printing. My only hope is that my efforts will somehow help to generate and clarify rules and processing techniques for the future.

So getting back to spending money, I love spending money to ping the system and see what I can get away with. It's a valuable exercise for understanding a process and eventual improvement. A few posts ago I showed that a blank with patterned cylinder holes having a depth of 0.381 mm will be attempted to be fabricated in regular alumide but not polished alumide. In preparation for that pass/fail information I had prepared an almost identical dimpled design with the same maximum pattern depth but sloping detail transitions rather than 90 degree walls. We now have two additional data points. This design has passed the processing step and is now in the production phase for both regular and polished alumide.

<http://shpws.me/optF>

Right now you're thinking "MrNib, you've solved your problem!" Well yes and no. There could be a new rule that states for any height deviations below the engraving/embossing limits that all angles of deviation must be less than 63.59 degrees (arbitrary number). But I would maintain that although the blank design with the vertical side wall cylinder holes after polishing would have a similar appearance to the dimpled design it would be subtly different. Also the cylinder wall thicknesses of the two designs below the patterns are both 1mm. This means that both designs made in polished alumide would not have a critical defect in terms of the polishing process breaking through the cylinder wall resulting in a defective pen blank. The difference in pass fail for these two very similar designs was either triggered by a computer algorithm which detects the transition angle or is purely an aesthetic judgement of a human operator (subject to variation over time for the same or different operators).

Subject: Re: Preventing Rejections
Posted by [miaka618](#) on Sun, 14 Jul 2013 04:51:05 GMT
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Wow, this thread is thick. I just wanted to throw in my two cents for the processing....process.

Ok, so here's my situation. I'm working on a model that is meant to be printed in silver, but I have yet to print anything in silver and I know there are a few extra rules that involve the flow of the silver. Is it possible to have the model checked for print-ability before an order is made? To my understanding, there are folks sitting in front of computers checking every single model that is ordered regardless if that particular model has been printed before. That seems like a lot of extra unneeded work.

Here's how I think it should work:

Model is uploaded and designer is happy with it and wants to buy it or offer it for sale.
Designer selects the materials they wish to sell their model in and sends them to processing.
Our little computer friends check the models against the design rules for each of the materials the designer selected and either approves them or rejects them.
After the model has been approved, it can now be sold in that material how ever many times it wants without any additional checks...unless, of course, it fails during the print, then the process needs to start all over again.
If the designer uploads a brand new file for the same design, the process must start all over again.

I dunno, what do you think? This seems to make more sense to me. Forgive me if this idea has already been brought up.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Sun, 14 Jul 2013 17:05:46 GMT
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miaka618 wrote on Sun, 14 July 2013 04:51 there are folks sitting in front of computers checking every single model that is ordered regardless if that particular model has been printed before. That seems like a lot of extra unneeded work.

After the model has been approved, it can now be sold in that material how ever many times it wants without any additional checks...unless, of course, it fails during the print, then the process needs to start all over again.

If the designer uploads a brand new file for the same design, the process must start all over again. I dunno, what do you think?

I've been pushing for a top-down design verification from the start of this thread. The good folks at Shapeways seem to be resistant to this idea, preferring to allow individual operators work off their own set of rules, with the hope that they will look at the new 'previously printed' flag as a guideline. The operators have to check each item before printing anyway as it is my understanding that it gets grouped with a bunch of other items before printing so I don't think that it would save much if any time though. I have also been advocating a way for us designers to lock the orientation of our models. This is especially critical with materials like FUD that if oriented a certain way could have a thin wire supported by three inches of a thin wall of support material. And this is where things fail, and then everyone is disappointed. The whole purpose of this thread is to make the system much more robust for those that want to actually use this as a business. I understand that there are still a large number, probably a majority, of users that want it to be like the Beta, and I certainly don't want to take that away from them. But it would be awesome to have a flag on the model that says "An expert has evaluated this item to be printable in X material and if it fails it was a problem with the machine and/or operator, not with the design" and I would pay good money for that verification process.

Subject: Re: Preventing Rejections
Posted by [matt_atknsn](#) on Tue, 16 Jul 2013 21:58:52 GMT
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Will there be an update on (specifically) Frosted Ultra Detail's design rules any time soon? I've attached a screenshot of my most recent rejection of a 1/4800 ship modeled with that (old design rules) in mind, updated a few months ago with some minor details and unfortunately being a new version and all, doesn't have the 'Previously Printed' flag and will have the 0.6/0.8/1.0mm wires (ridiculously thick for FUD, as much as I'd want to go close to scale but still be within that old design rules)

File Attachments

1) [01686538-Capture.JPG](#), downloaded 169 times

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Wed, 17 Jul 2013 04:01:47 GMT

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Hmmm.... Looks like a bunch of the barrels might be long enough to be out of the detail range and under the minimum diameter for a free wire. A model is rejected for the first item found. Fix that, and the next time something else may get it rejected. I call this whack a mole- shapeways style. It seems no matter how careful I am in checking, I often miss something.

Dave

PS. SHAPEWAYS, are you still reading this thread? I was wondering about my earlier post. I never saw an answer it that bed leg was a wall, as stated in the rejection and only needs to be .7mm thick, or a free wire and needs to be 1mm.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Wed, 17 Jul 2013 04:58:00 GMT

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Fun is thinking your integrated circuit design is done but then passing it through a layout design rule checker and getting 21 warnings and 320 errors. Yet on the bright side you get the 21 warnings and 320 errors, with multiple errors often resulting from the same geometry. You can usually fix up that list in just a few hours.

And those are just the layout design rules. Then you have to go through electrical design rule checking that makes sure your schematic matches your design, that currents, voltages and power levels don't exceed maximum levels relative to circuit dimensions, and that other things like overall circuit performance specifications fall within specified windows and stability is guaranteed. In addition all electrical behavior is generally modeled in a Monte Carlo process that analyzes overall circuit behavior in a statistical manner for random or correlated variations in all circuit elements based on possible process variation excursions. And then if you're really lucky you also get to do 3D electromagnetic modeling that reveals unwanted coupling paths of energy between components/interconnect lines and thermal modelling to look for hotspots. Go to jail and do not pass Go until you iterate this process enough times to get what you want.

All of that is just one small component of a framework of preliminary, intermediate, and final

critical design reviews with 10 to 30 goomers in a room that all feel compelled to throw in their 2 cents worth that generally results in more work. Also don't forget the numerous check-offs, sign-offs, and changing requirements and specifications from start to finish.

Yes my friends, we have it easy in the 3D printing world. And that is both a good thing and a bad thing at the same time.

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Wed, 17 Jul 2013 06:24:14 GMT
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Quote:

Yes my friends, we have it easy in the 3D printing world. And that is both a good thing and a bad thing at the same time.

Not really a like-for-like comparison. I believe if serious objects were being made with 3d printing such as turbine blades, car chassis, human organs etc you would probably have a scenario not far off what you describe for printed circuits.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Wed, 17 Jul 2013 07:27:48 GMT
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dcyale wrote on Wed, 17 July 2013 04:01Hmmm.... Looks like a bunch of the barrels might be long enough to be out of the detail range and under the minimum diameter for a free wire. A model is rejected for the first item found. Fix that, and the next time something else may get it rejected. I call this whack a mole- shapeways style. It seems no matter how careful I am in checking, I often miss something.

Dave

PS. SHAPEWAYS, are you still reading this thread? I was wondering about my earlier post. I never saw an answer it that bed leg was a wall, as stated in the rejection and only needs to be .7mm thick, or a free wire and needs to be 1mm.

My apologies, due to the length of the leg I would say 0.7mm is good enough.
Though it will easily bend with 0.7mm and might snap during the shipment.

Recommended would still be 1mm just to be sure

@matt_atknsn those parts sticking out of a model are really hard to handle without breaking them during the process (or shipping to your customer)
A cage around the model will be helpful as well

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Wed, 17 Jul 2013 09:38:14 GMT
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Mitchell Jetten wrote on Wed, 17 July 2013 07:27
parts sticking out of a model are really hard to handle without breaking them during the process (or shipping to your customer)
A cage around the model will be helpful as well

Uh, if that is the actual reason for the rejection, i guess it would help if you guys stated this in the rejection message.
Such things may be obvious to you, but most of us are on here cuz we can't afford the kind of EOS/Stratasys toys you play with on a daily basis, so it is not always clear if printing or handling is the problem.

Subject: Re: Preventing Rejections
Posted by [matt_atknsn](#) on Wed, 17 Jul 2013 10:36:10 GMT
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Mitchell Jetten wrote on Wed, 17 July 2013 07:27@matt_atknsn those parts sticking out of a model are really hard to handle without breaking them during the process (or shipping to your customer)
A cage around the model will be helpful as well

Hi Mitchell,

Thanks, suggestion well received (IIRC I've put up 'cages' around my most recent 1/4800 warships, hopefully those are satisfactory, for those products at least)

Unfortunately though I do have another caged product that got rejected due to parts of the sub-model violating the 0.6/0.8/1.0mm wire rule (will get back to you with the order #, or at least here's the model that got rejected: <http://shpws.me/oqQY> with the landing gear 'legs' the offending area)... again the original (v.0) was done with the (FUD) nuanced rule.

Cheers!
RoeT

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Wed, 17 Jul 2013 11:13:50 GMT
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If you would like to revise it, make it 0.6mm and i'll make sure they won't reject it again (email me the new order number)

I'm postive that the cage around it will prevent damage of those wheels!

mitch

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Wed, 17 Jul 2013 11:16:22 GMT
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mkroeker wrote on Wed, 17 July 2013 09:38

Uh, if that is the actual reason for the rejection, i guess it would help if you guys stated this in the rejection message.

Such things may be obvious to you, but most of us are on here cuz we can't afford the kind of EOS/Stratasys toys you play with on a daily basis, so it is not always clear if printing or handling is the problem.

Will work on that

Note: I was referring to FUD, on the design guidelines we do write a little about this:

"Parts that jut out are more likely to break during shipping

To protect your pieces, sometimes it is helpful to build a cage around your object. This is especially true for thin wires that jut out (like the post on a model ship), the thinner the structure the more brittle the part. However, please note that a cage might cause some leftover support material on your part"

* I didn't write the text

Edit: the FUD printer is a 3D systems HD3500 We don't have any Stratasys toys here

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Wed, 17 Jul 2013 11:33:38 GMT
[View Forum Message](#) <> [Reply to Message](#)

MitchellJetten wrote on Wed, 17 July 2013 11:16
Note: I was referring to FUD, on the design guidelines we do write a little about this:

Noted, but still it would help to know which rule or guideline was violated. Cage-a-mole being probably cheaper than whack-a-mole in the long run...

Quote:

* I didn't write the text

says the man with multiple identities

Quote>Edit: the FUD printer is a 3D systems HD3500 We don't have any Stratasys toys here
Thx. Somehow mixed them up with the objet line, and I have only ordered WSF and FCS so far.
(Would love to
try the trapped support material trick for ECM28, but I am running out of time)

Edit: Removed the quoted guideline text for brevity

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Wed, 17 Jul 2013 16:02:37 GMT
[View Forum Message](#) <> [Reply to Message](#)

AmLachDesigns wrote on Wed, 17 July 2013 06:24Quote:

Yes my friends, we have it easy in the 3D printing world. And that is both a good thing and a bad thing at the same time.

Not really a like-for-like comparison. I believe if serious objects were being made with 3d printing such as turbine blades, car chassis, human organs etc you would probably have a scenario not far off what you describe for printed circuits.

I'm not advocating the same level of process and busy work to get 3D printed designs fabricated. But just having a slightly more rigorous, documented, and transparent submission and approval process with well defined design rules would be a good thing, right? The one thing we could all use is a Shapeways sanctioned layout design rule checker program with sufficient rules and checks that catches 80 to 95% of problems. If you can work through a list of errors prior to submitting design it saves everyone a lot of time and effort.

I still can't for the life of me find much information on 3D layout design rule checking. Does anyone deal with any serious software that performs these functions or know of any standards groups or organizations that include design rule checking efforts as a part of their goals? Or is it still just a hodgepodge of university work and proprietary development at different small companies at this point?

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Wed, 17 Jul 2013 18:03:10 GMT
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MrNib wrote on Wed, 17 July 2013 16:02 Does anyone deal with any serious software that performs these functions or know of any standards groups or organizations that include design rule checking efforts as a part of their goals? Or is it still just a hodgepodge of university work and proprietary development at different small companies at this point?

I believe that it's simply the school of hard knocks. The checking (and rejections) are done by humans, and many decisions are based simply on prior experience. I'm know that there are entire college courses for Materials Strength, Moment Arms etc, (I had too many Physics classes in college) but I don't know that any such courses of study have been translated (yet) to software specifically tailored for the 3d printing industry.

We're in a new world.. time to write some new software!

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Wed, 17 Jul 2013 18:42:13 GMT
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I'm thinking more along the line of pure geometric checks and the algorithms that would be used to analyze 3D files. No finite element analysis to determine stresses or anything like that!

For example, the simplest check is probably wall thickness. For that you could look at each surface polygon, draw one or more normal vectors into the object from points on the polygon, and if any of the vectors pass through the object back into free space within the minimum wall thickness distance you have an error. Or perhaps you don't depending on interpretations and other design rules. And then the checks get progressively more complicated from that point on. Most of the effort is basic vector math and geometry but the calculations would be voluminous so you need a good number crunching computer. Unfortunately that's what you need to do to remove the human element wherever possible. I'm just wondering what is being done algorithmically now in the real world because otherwise it is difficult to contemplate generating useful design rules.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Wed, 17 Jul 2013 21:38:47 GMT
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stonysmith wrote on Wed, 17 July 2013 18:03don't know that any such courses of study have been translated (yet) to software specifically tailored for the 3d printing industry.

We're in a new world.. time to write some new software!

The Solidworks Professional package has all this built in. FEA with gravity, thickness checking, and various other simulation and design verification elements that were originally written for the plastics injection molding community but are easily adapted to rapid prototyping. I use these tools quite often on my designs. Unfortunately all this is way out of reach of the the average Shapeways designer and if I ever lost my day job I would no longer have access to any of these fun tools.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Wed, 17 Jul 2013 22:15:43 GMT
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Mentioned earlier in this thread: www.3d-tool.de

It works fairly well, but can be very slow for complex models.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Wed, 17 Jul 2013 23:48:07 GMT

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Thanks for the info. I will look into those packages. It strikes me that Matlab would be an excellent tool to develop new algorithms. You can parallel process a job on multiple processors/computers and you can generate compiled C++ run code (as I understand it). I wouldn't mind letting the computer crunch on the file data for several hours if it saves several days of iterations. Unfortunately I don't presently have access to Matlab and it is rather expensive, but investing money into software development might ultimately be more lucrative than the 3D design and selling activities, if not a larger headache!

Subject: Re: Preventing Rejections

Posted by [stannum](#) on Thu, 18 Jul 2013 00:59:15 GMT

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MrNib wrote on Wed, 17 July 2013 18:42 For example, the simplest check is probably wall thickness.

Shapeways has something like that in the new ring creators. The competition had that even earlier, for all models.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Fri, 19 Jul 2013 01:02:47 GMT

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Got a new rejection today. Apparently my models printed OK in SWF, but didn't survive cleaning. I can understand that, and will beef it up, but I was told it is below design standards, and it is not. It is my second chair design. I designed the chair, saved in a stl and imported that into several different models which I then saved as an stl for upload. So the models in question have 20 copies of the chair stl (thank goodness for arrays in blender). Now the model has printed OK before, and I got another model with the same chair in it today, but I see where it is weak. The model that was delivered has 50 chairs in it that I will sell in sets of 10 on ebay. One or two of the chairs are damaged. I'm not sure if it was from cleaning or shipping. Shapeways seem to be using bigger bags which helps on the shipping end.

I pasted three pictures together. The top one is one of the rejections. The next is my measurement in netfab, and the third a cut from netfab to show the shape of the offending part. When you look at the cross section, I think the green line represents what should be measured, but the rejection measurement is closer to the red line.

The spokes in the chair rung become parallelograms on the outside set, however the corner to corner measurement is still .9mm across the narrowest measurement.. Since the rung is supported on both ends I am assuming it is a supported wire. As I understand it the standard is .8mm for this part.

When the tech measured it, the distance was between two points that were less than the corners, as if you measured a round wire but not across the biggest part of the cross section.

Like I said, I'll beef the part up so that it prints reliably, but the rejection should not be that it fails to meet the design criteria (unless I'm wrong on what a supported wire is), the reason should be that it doesn't survive cleaning. I can accept that even some "legal" models cannot be printed. And the measurement in the rejection is clearly not even close to the true dimension of the part.

Of course maybe my thought pattern is wrong. My designs assume that as long as a .8mm round wire cross section would fit entirely within the cross section of a part classified as a supported wire, regardless of the shape of the cross section, it is a legal part. Hopefully that makes sense.

The order # was 269819. The aggravating part was not that I need to redesign the chair (it will get better every time I do it) but that I ended up spending \$6.50 to ship an \$8 model (the chairs that printed) and the \$15 and \$20 models didn't ship. That takes a real chunk out of my markup when I list these on ebay.

File Attachments

1) [chairs all 07 18 13.jpg](#), downloaded 498 times

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Fri, 19 Jul 2013 08:43:32 GMT

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You are right dcyale!

The model shouldn't have been rejected and the model is indeed thick enough to be printed. As you have noticed yourself, the rejection was probably caused by checking the wall thickness on the red line instead of green line.

To compensate you for the inconvenience I have issued an additional Store Credit which will cover the shipping costs for your next order

Special note: the model contains 2 shells, you might want to remove the part (see pic) so you won't receive a multiple shells rejection next time

Cheers,
Mitchell (who requires some more sleep)

File Attachments

1) [11.JPG](#), downloaded 493 times

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Fri, 19 Jul 2013 09:47:31 GMT
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Mr. Jetten,

What I want a clear answer on, that I have never gotten. Taper. Like a wings taper. If the majority of the wing is well above the guidelines, and the rest is a taper to the back thin area of the wing, shouldn't that be allowed? The reason is, I see planes on here all the time that have taper, Infact I've ordered a few just this year. And ShapeWays just rejected my Orion space plane for having taper.

With so many of us on ShapeWays being new to this, a clear statement of what is taper and what is allowed I think would be a good thing. Because right now I'm confused.

File Attachments

1) [01688458-Capture.JPG](#), downloaded 483 times

Subject: Re: Preventing Rejections
Posted by [FabMeJewelry](#) on Fri, 19 Jul 2013 10:50:19 GMT
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@Michael I've sent a mail to service 2days ago with a similar rejection like dycalé, no response.

Could you check if the mail came thru?
info@fabmejewelry.com

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 19 Jul 2013 10:54:01 GMT
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seems something went wrong in our inbox!

I'll make sure Thomas will reply your email today!

My apologies

Subject: Re: Preventing Rejections
Posted by [FabMeJewelry](#) on Fri, 19 Jul 2013 10:56:28 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thnx for the super quick reactoin !

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 19 Jul 2013 10:59:39 GMT
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Mechanoid,

It depends on the size of the tapered part.

If it's small the tapered section is seen as a detail, whenever it's bigger it will be seen as a wall or wire and thus requires the minimum wall or wire thickness.

File Attachments

1) [model.JPG](#), downloaded 472 times

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Fri, 19 Jul 2013 11:16:36 GMT
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So I'm guessing you all see it as a wire. I wish someone would put up a chart up showing how far a taper can extend before it's no longer a taper in ShapeWays eyes. That wing tapers down to the back and out to the tip. I have giant rotor blades that taper much more extreme that you all printed just fine. They go so thin they actually had flash on the edges. And it wasn't that long ago, maybe 2 months.

Also because another model was rejected with this, all materials had been turned off. And though I uploaded a corrected file quickly, all materials were still off, and wouldn't let me do anything. I have been forced to delete said model and upload the corrected file as a brand new model. Now the thinnest area is 0.76mm thick. And that is the giant solar panels. I'm guessing that it should work. Unless because of their size they are now going to be seen as unsupported wires.

Again, one person see's one thing, another see's something else. No checks and balances to prevent one persons error from causing problems.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 19 Jul 2013 11:25:13 GMT
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Mechanoid,

Not really, this isn't a wire due to the size of the wing, the part is seen as a wall. If you make every part 0.7mm in WSF you will be fine.

Mitchell

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Fri, 19 Jul 2013 11:29:30 GMT
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An unofficial diagram proposed by StonySmith was posted in this recent thread, but was not commented on by Shapeways staff, and the designer resorted to removing all tapered areas from his model. Shapiers please note that this same topic has come up in another thread over in the 3DDesign forum yesterday - this is another area where official guidelines are needed to prevent needless frustration.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 19 Jul 2013 11:34:40 GMT
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I kinda like Stony his diagram

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Fri, 19 Jul 2013 12:37:07 GMT
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Mr. Jetten,

I realize you and others at ShapeWays are working on the problem. But let me point out a small fact for you. This thread was started back Feb 19th, and it blew up about 2 months ago into a near fire storm. Many people (myself included), have let our tempers rear up on here over these restrictive guidelines that no one seems to know what they are. Yes you have been good at telling everyone that the problem is being addressed. But one must ask how long does it take to start getting something official on these new restrictive guidelines. Frustration is starting to wear on some folks. This idea that 3 different people can look at the same model and not agree weather it's printable or not, to the point you were prepared to force it thru, when it wasn't needed. People have to get on the same page, and not just the Service Team. But designers as well. If no one knows what the real guidelines are, then how can models keep getting rejected. Designers and the Service Team need to be able to be operating on the same page. Right now it seems like everyone is operating against each other, not with.

ShapeWays doesn't have to release ALL the new guidelines. But you have to give us something to work from. Help us out a little. If you put out a couple of the new guidelines, and made clear statements about a couple of others. It would help designers know what they need to do with some models to get them passed the restrictive guideline checks.

We're starving here. Feed us something. Something official. Something that people can point to as an actual design guideline. So that models can be corrected in the right way, calming everyone's nerves.

Let me remind you, Christmas is a major selling season. And it's COMING! If people can't get models to pass the restrictive and UNKNOWN guidelines, how can anyone really sell much for Christmas? Some aspect of the guidelines must be put out and soon. So designers arn't in a rush to try and fix models and end up only missing things and making things worse for themselves.

Help us out, please.

Subject: Re: Preventing Rejections
Posted by [fx](#) on Tue, 30 Jul 2013 06:51:50 GMT
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I'm really wondering about the unpublished rules which are now used to check FUD prints. Given the rejections I recently had, I'm now under a strong impression that unlike what the published rules are stating, no wall can be less than 0.6mm thick. Is that right ? Anyone from Shapeways ?
[edit] And yes, I agree with Mechanoid: Christmas season is coming, and following unpublished designing rules is quite hard... telepathy link doesn't work as good as it should

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 31 Jul 2013 20:04:14 GMT
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This topic has gotten too quiet!

I got two rejections today. The first I totally agree with. It seems I must have scaled down a model incorrectly causing it to be smaller than expected- and it had thin wires.

The second however, puts me squarely on an issue I don't think I have seen and answer too, although I have asked customer service in the past and gotten a non-answer, and it has been voiced on this thread.

When is something a wire and when is it a wall? I have seen other designers state if it is twice as wide as thick it becomes a wall, so that is what I went with.

Today I got a rejection saying I had a thin wire. Below is my netfab screen shot of the area that was rejected:

As you can see it is twice as wide as it is thick. The thickness is .76mm, almost 10% thicker than the minimum for an unsupported WSF wall, and the width is 1.47 mm. So the width misses double the thickness by .05mm. (Of course, if the rule is twice the thickness, I could make the wall a little thinner, down to .71mm, and then the width would be more than twice the thickness).

Customer service, or someone, somewhere, called it a wire. Maybe the piece broke in that spot post production because it wasn't strong enough and this was the closet reason that could be found?

SO WHAT IS THE RULE? Or, if I have just missed it somewhere, can someone please tell me

where to find it? Or is it just something that cannot be a rule because it changes depending on circumstances?

The fix is fairly easy- and doesn't effect the model, so no big deal. But now I have to reorder it, and my goal is to get to models that print the first time, every time (and boy, do I have a ways to go). To do that I need a bit more education on this point.

For reference: Order 275829, model was "diner complete" <http://shpws.me/oHNO>

File Attachments

1) [dining car wire v wall.jpg](#), downloaded 391 times

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Wed, 31 Jul 2013 20:38:10 GMT

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What material did you order the item in? Have you asked Customer Service to take a second look?

What is the Height of that section? (the dimension you didn't show) If it's longer than 10mm, then I might also declare it to be a wire... it seems to me that any horizontal pressure at the midpoint of that "wall" would break it. That may be why they used the generic word "wire".

I know that the word "wire" is inopportune for some designs such as this, but almost any word you pick would have the same difficulty.

"Wall" usually has the inference that the shape is solidly tied to two or more adjacent perpendicular surfaces. Your piece appears to only be attached on each end.. making it less structurally sound than if it was connected somewhere on the longer dimension.

One thing I do want to note.. on your model, just to the right a bit is a five-sided indentation on the floor. It appears that there is a small bit of "flash" covering the outside of that indentation. From the partially red coloring of that area.. that tells me that it has zero thickness. That area should have been caught and rejected.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Wed, 31 Jul 2013 21:09:12 GMT

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It was in SWF. The piece is actually connected top and bottom. Here is a picture of the entire piece:

It is a one piece interior for an Athearn dining car. The rejection was about 1/3 of the way from the far end- the doorway between the pantry and the dining area. It is .95 inches tall (Netfab is doing its buggy measure in inches even though metric is selected- I guess I should see if there is an upgrade available)- that's 24mm, but connected on the top, but to another thin piece.

I already imbedded a reinforcement into the wall on question so it is thicker than minimum wire size, and ran it well up past the narrow portion, and uploaded the corrected file.

I have not gone back to customer service yet. In the past I have not gotten a good answer to this question from them, and it is easier to simply fix the problem this time.

File Attachments

1) [dining01.jpg](#), downloaded 370 times

Subject: Re: Preventing Rejections

Posted by [NickHawkins](#) on Tue, 13 Aug 2013 09:06:21 GMT

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Got my latest lot of test prints yesterday in WSF, I'm generally impressed, there seem to be far fewer printing artefacts from the new 'fast WST' service than previously. Rejections seem to be found much sooner too.

On the flip side I've had a couple of models unprintable recently due to bad file/details too small (0.001 mm and even a 0.000mm !).

From the location I can only guess that this is due to an interaction of the Shapeways auto-repair process and some of the Blender modifiers (EG boolean and skin).

Has any one else had any similar experiences recently?

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Tue, 13 Aug 2013 16:04:15 GMT

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Last night I ordered a bunch of ARTG pen blanks (B0019 in WSF, WSF-P, cranberry, FUD,

alumide, polished alumide) with just over 0.5 mm pattern engraving detail in several processes to evaluate and lock down patterning ability at Shapeways for my needs. Previously these had been just over 0.38 mm but I increased all of these designs to 0.5 mm since this value is more consistent with minimums at other printing services for alumide, but I do require polishing for the best reasonable final fit of blanks with the pen kits for the customer without a lathe, and polishing is best suited for something that is handled. I can't go thicker without having to use versions that must be processed on a lathe, something I'm trying to avoid with this class of blanks. The biggest risk of rejection is for the polished alumide option but these are just supposed to be subtle patterning and not crisp text or corporate logos.

Now I'm just waiting to see what gets rejected, and if I can successfully have any cancellations reversed with a "yes I know what I did waiver." Hopefully if this design is built in the various processes it will establish a proven baseline for builds of other design variants using 0.5 mm depths. I can't possibly have all designs built in all processes without going broke to see which versions get everyone's seal of approval. I also can't begin to broadly promote these parts in pen maker circles if there's a risk of rejections for other customers. It's a great Catch 22 example.

11:21 AM So far so good. Alumide and polished alumide in production. Rejection Prevented!

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Tue, 13 Aug 2013 16:30:40 GMT
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Quote:... to evaluate and lock down patterning ability at Shapeways for my needs. ...

You are making an assumption that has tripped up so many and is a major problem for selling from the shops: that is, that if a model prints once successfully (or conversely fails) that that is a repeatable event and that you can proceed on that basis.

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Tue, 13 Aug 2013 17:15:48 GMT
[View Forum Message](#) <> [Reply to Message](#)

AmLachDesigns wrote on Tue, 13 August 2013 16:30Quote:... to evaluate and lock down

patterning ability at Shapeways for my needs. ...

You are making an assumption that has tripped up so many and is a major problem for selling from the shops: that is, that if a model prints once successfully (or conversely fails) that that is a repeatable event and that you can proceed on that basis.

That is true. I can only hope that in the future Shapeways will put less effort into not making a sale, that printing history matters, that a designer waiver will be permanent, that photos of existing prints are some proof of something, that print orientations can be specified for increased printing consistency, etc. You know, all the good stuff we keep mulling over. As far as I can tell there have been some recent changes to the design rule pages for embossing/engraving detail so I'm not as discouraged as before (although the revision history is not available so I'm not positive about that). My other key statement was this:

Quote:but I increased all of these designs to 0.5 mm since this value is more consistent with [recommended] minimums at other printing services

Unfortunately I haven't run across anyone else that sells polished alumide, although it's only a matter of time. I could purchase unpolished parts and polish them myself and sell on Ebay but for now I'll jump through a lot of hoops to avoid doing so.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Tue, 13 Aug 2013 17:22:04 GMT
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AmLachDesigns wrote on Tue, 13 August 2013 16:30Quote:... to evaluate and lock down patterning ability at Shapeways for my needs. ...

You are making an assumption that has tripped up so many and is a major problem for selling from the shops: that is, that if a model prints once successfully (or conversely fails) that that is a repeatable event and that you can proceed on that basis.

That is the main reason that now I place a test print order for 3 prints of a model in the same order. I've begun to realize that if you order 3 test prints, and all 3 print without going back 20 times to be re-checked. Then in most cases it is safe for customers to order. If however I notice a model prints 1 of 3, then the remaining 2 go back to be re-checked 4 or 5 times, then there is likely something they are having issue with. Whether it be the design, or they are having a post

printing issue. Mr. Jetten is now handling those issues headon. And so far I have noticed a change in how a rejection is done. Though the NY Print Facility seems to still have post production handling issues with FD models. They keep losing them.. Not sure how to get around that problem just yet.

But also I have now noticed something else. Since I am still learning 3D modeling, and since ShapeWays seems to have some design guidelines that they are still sorting through. I have sent models before to the Service Team to see if they would run a basic check for printability in 1 or 2 selected materials. And this last time I sent a model to the Service Team to be checked, they refused. Instead telling me that Mr. Jetten had told me about netfabb Studio, and that I should use it to check models in the future.

I guess that means the folks at the Service Team are now refusing to checks models. A small service that from time to time has proven helpful to me, since I am still learning, with a long long ways to go. But mainly I have gone to the Service Team to have a select model checked, because of the ever changing design guidelines. This service was very helpful in spotting if there was a questionable area that may have met the printed guidelines, but not the unknown guidelines that the Service Team uses for checking models. Guess "service" is no longer part of that departments name.

Oh well.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Tue, 13 Aug 2013 17:35:38 GMT
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That would depend on how often you used their services in recent weeks ? Also keep in mind that we are still in the middle of the summer holiday season, so the Eindhoven crew may well be at reduced capacity at the moment.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Tue, 13 Aug 2013 23:04:36 GMT
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So here's another perfect example of Shapeways trying to avoid making anything in FUD. I've seen some questionable rejections in the past, but this one really took the cake. These detail rods are barely 0.6mm long on the short side.

File Attachments

1) [01717519-Capture.JPG](#), downloaded 267 times

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 13 Aug 2013 23:58:45 GMT
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Do those structures support the cylinder or is the cylinder attached directly to the deck?

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Wed, 14 Aug 2013 04:20:37 GMT
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It is supported elsewhere, thus my assertion that these are details.

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Thu, 15 Aug 2013 00:20:09 GMT
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Hi guys!

Exciting update on the topic of rejections with today's release...we're at step one of fixing rejections by helping you improve your models. Read on for details...

(Cross post from Announcements)

We want to enable you to print anything you imagine but sometimes, we simply can't print a model. When this happens we want to make sure we can provide you with the information you need to be able to resolve printability issues. We also want to ensure your customers can be confident that they'll always receive quality products from you and Shapeways.

If you have a model that has printability issues (models that have been rejected) in certain materials, we want to give you the opportunity to fix it so that you can avoid unhappy customers. This means rejected models can not be sold until they have been updated in the rejected material family.

We're shifting the focusing from unfortunately having to say "Sorry, we can't print this" to "Hang on, let us help you." If an ordered model is unable to be printed you will now see a flag on the

product page, alerting you to the printability issues, which are displayed on all affected materials.

You'll also receive an email that describes the printability issues that we need your help in resolving (like thin walls) as well as suggestions for improvements (like widening escape holes). If there's a printability issue with a model you've printed before we also provide the print success rate. In short, we want to help you as much as possible, but we can't do it alone, we need your help.

If you see a flag while editing your model, or have received rejection email, it means we need your help in updating your model to print it again. We will provide as much information and suggestions as we can, and then it's up to you to use this to improve your model. Together we can ensure printability so you can 3D print exactly what you want.

Check it out and let us know what you think! This is the first step in a long line of rejections improvements, so soon we'll be able to print everything you can imagine!

Best,
Natalia

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Thu, 15 Aug 2013 05:18:57 GMT
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Will the flags be added from this point onwards, in other words only for new rejections? I couldn't find any and I know I had some recently!

Where do these flags appear? In the material options pull down list when you try to place an order?

If there are red flags to indicate rejections in a material, will there also be green flags to indicate successful prints within the chosen material list?

It might be a good idea to also have a downloadable status spreadsheet that summarizes material flag status for each model in a user's library.

What factors are considered for print rejection? Are they exclusively "hard" or "critical" errors such as too-thin wall thicknesses or do they include non-critical "warning" errors such as "we don't feel comfortable with your embossing/engraving detail depths"? Perhaps a yellow flag could indicate a

designer established waiver for non-critical errors.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Thu, 15 Aug 2013 15:38:35 GMT
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Hmmm... ALMOST makes me want to place an order that WILL get rejected just to see how the new process functions. <GRIN>

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Thu, 15 Aug 2013 15:44:12 GMT
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Ha ha Stony how about we just post some screen shots instead?

Mr Nib to answer this:

What factors are considered for print rejection? Are they exclusively "hard" or "critical" errors such as too-thin wall thicknesses or do they include non-critical "warning" errors such as "we don't feel comfortable with your embossing/engraving detail depths"? Perhaps a yellow flag could indicate a designer established waiver for non-critical errors.

It will be "critical" errors for now, but we are moving towards having all the warning errors too. One step at a time! We want to see how this improves the process, then we can continue to make it better.

Matt from our Quality Team is going to show you what it looks like...

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Thu, 15 Aug 2013 16:15:10 GMT
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I fail to see how this is a change from the existing system of rejections, updates, and further rejections unless you saying that if someone orders something and it is rejected, we will have a window in which to fix the rejection before the order is cancelled.

Subject: Re: Preventing Rejections
Posted by [fx](#) on Thu, 15 Aug 2013 16:32:30 GMT
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natalia wrote on Thu, 15 August 2013 15:44(...)

It will be "critical" errors for now, but we are moving towards having all the warning errors too. One step at a time! We want to see how this improves the process, then we can continue to make it better.

(...)

Please do NOT reject anything on a warning error, please do NOT ! "Normal" rejections on so-called "critical errors" are sometimes already wrong, please do not change anything which could make this even worse.

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Thu, 15 Aug 2013 17:47:43 GMT
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fx wrote on Thu, 15 August 2013 16:32natalia wrote on Thu, 15 August 2013 15:44(...)

It will be "critical" errors for now, but we are moving towards having all the warning errors too. One step at a time! We want to see how this improves the process, then we can continue to make it better.

(...)

Please do NOT reject anything on a warning error, please do NOT ! "Normal" rejections on so-called "critical errors" are sometimes already wrong, please do not change anything which could make this even worse.

My thought was that critical errors would certainly provide a rejection, as always, although adding an appeal/repair step at this point would be helpful. Critical errors prevent an item from being fabricated, handled, or shipped. Fixing problems in this area require better computer checking algorithms to ultimately remove the human element.

A warning should not result in a rejection, unless that rejection can be waived by the designer. A warning could provide feedback to the designer that may indicate an aesthetic problem or something that just seems weird or unexpected (the wild card). A warning might be set up to

allow the designer to cancel and abort the order once alerted to get a quicker fix into the system. And of course once a waiver is logged the part should never again be rejected to infinity and beyond in a particular process.

Examples of critical errors:

Walls too thin.

Large sections connected by wimpy connections such as thin wires that will break.

Drain holes that are too small or too few.

Text or logo embossing/engraving depths which fall below hard limits.

Models that are too large or too small.

Examples of warnings:

Inadvertant seams or shell mating surfaces with steps of 0.001mm.

Decorative embossing/engraving depths which fall below recommended limits.

Any repairs that were automatically carried out by the upload process.

Operator's eyeball. Are you SURE you want this? It looks goofy because _____.

Subject: Re: Preventing Rejections

Posted by [mboylevt](#) on Thu, 15 Aug 2013 21:04:13 GMT

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Hey everyone!

I'm Matt, a Quality Engineer @ Shapeways on the software side, and I'm here to give you the rundown on how this new feature will help with fixing rejections.

As Natalia mentioned, sometimes we just can't print a model. To prevent yourself or your customers from making multiple purchases of a model which cannot be printed in a specific material group, we will now disable all materials in the material group ordered. For example, if your model is rejected in Antique Bronze Matte Stainless Steel, it will be disabled in ALL Stainless Steel finishes. In order to re-enable a model in disabled materials, you'll have to upload a new model file fixing the issues which caused the previous version of the model to be rejected.

I understand that this can be confusing, so I've created an example (with screenshots) below to help clarify the process.

You upload a model, and either you or a customer purchases it from your Product Detail Page.

Pretty sweet cube, right?

For some reason, the model is rejected. When this happens, you will receive an email detailing what the issues were with the model, and the materials which are now marked as unprintable.

Here's an example of the email you'd receive

When a material group is rejected, your product detail page will display this notice to the designer only

Your Edit Model page will show the same notice, plus the materials which have been rejected will be tagged with the 'Update Model to Print' flag

Once you've fixed the model, you can update your model with a fixed file. This will re-enable the material group, provided your new model is printable.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Thu, 15 Aug 2013 21:26:54 GMT
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Matt,

Do me and yourself a favor please. Go talk to Mr. Jetten. He has 2 of my models, that the Service Team said were unprintable, and then disabled them. The sad part is, they print just fine. He has the models on his desk, or he should. Ask him about the Aries 1B 14mm and the 9-cylon.

The reason I bring these 2 models up is simple. I don't see anything in your post that says what happens if a model was rejected, that should not have been. Simply because someone looked at

something wrong and assumed it was something else. Mr. Jetten is my proof of this.

No 2 people at the Service Team see's the same model the same way as any one else.

This has caused many a temper to rear it's ugly head.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Thu, 15 Aug 2013 21:42:51 GMT
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So if I understand this correctly, the elephant in the room is now a beautiful rosy pink ? That is to say you have created fancier messages and decorations for these often controversial rejections but nothing fundamental has been changed ? I guess you are not going to win many friends with this...

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Thu, 15 Aug 2013 22:16:28 GMT
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The problem isn't models getting rejected. The problem is models - that HAVE printed or SHOULD print - getting rejected. This update is nice, but it solves the wrong problem. The problem is and always has been communication - from Shapeways to the designer, from Shapeways to the customer, from Shapeways to other parties at Shapeways. Noticeably lacking from this update are:

Any mention of improved communication about model issues. Yes, Natalia mentioned that we'll be told what's wrong with the model. But supposedly, we're being told that now, and we really aren't. I won't be satisfied until I get rejection notices that are longer than: 'thin walls'.

Any mention of how you're going to ensure that a model that HAS printed will not be rejected by a different operator or inspector. In the past, models have been approved one week, then rejected the next, despite anywhere from one to several successful prints. How will you prevent this?

Any mention of how you'll communicate print issues to the designer. Suppose a model prints successfully, but in the process it almost failed (say a hollow area of a stainless steel print nearly collapsed on itself). How will you communicate this with the designer? The current process is to ship it and then sit around with your thumb up your arse until you can reject it the next time. If I receive a successful print, and no communication from you indicating that future prints will be a problem, I assume - and rightly so - that it will be approved next time.

You've certainly formalized and streamlined the process of fixing a rejected print, which is nice, but that's NOT what we've been complaining about. It's nice to see effort being made, but you appear to have fundamentally misunderstood the problem.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Thu, 15 Aug 2013 22:31:05 GMT

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mboylevt wrote on Thu, 15 August 2013 21:04Hey everyone!

I'm Matt, a Quality Engineer @ Shapeways on the software side, and I'm here to give you the rundown on how this new feature will help with fixing rejections.

As Natalia mentioned, sometimes we just can't WON'T print a model. it will be disabled in ALL (similar) finishes.

This is certainly a step in the WRONG DIRECTION. We designers are begging for a solution to random rejections here and all we get is kicked when we're down.

Subject: Re: Preventing Rejections

Posted by [PeregrineStudios](#) on Thu, 15 Aug 2013 22:41:55 GMT

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Roy_Stevens wrote on Thu, 15 August 2013 22:31mboylevt wrote on Thu, 15 August 2013 21:04Hey everyone!

I'm Matt, a Quality Engineer @ Shapeways on the software side, and I'm here to give you the rundown on how this new feature will help with fixing rejections.

As Natalia mentioned, sometimes we just can't WON'T print a model. it will be disabled in ALL (similar) finishes.

This is certainly a step in the WRONG DIRECTION. We designers are begging for a solution to random rejections here and all we get is kicked when we're down.

No, that's a correct move on their part. If it won't print in Stainless Steel, it won't print in Gold

Plated Glossy either. The issue is stopping the incorrect rejections from happening, not reducing their impact.

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Fri, 16 Aug 2013 00:38:37 GMT

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The major problem is, what one person see's today for one model, someone else might not see tomorrow, for the same model. ShapeWays just printed 3 test prints of a model of mine. Soon as I opened it to the public and someone bought it. NOW they reject it. Now the Service Team even refuses to respond to my dispute over the rejection. I have had this issue many times over, concerning several models. Not one person in that place can agree what they are looking at, when checking a model. The posted guidelines don't help, if the people checking models, either don't understand those posted guidelines, or they see something differently than everyone else. The Service Team does not function on the same level as designers, or the print engineers. They operate completely outside the box that ShapeWays expects designers to operate inside of.

And this flag thing will only work, if it's going to be applied equally to every model. And only if the Service Team agrees to check ALL models against the same guidelines that they expect models to have been created by. Which I don't see how that is going to happen. Unless they are putting computers incharge of checking models. Where it would see the same detail and same wall the same way every time it checks the same model. Because right now someone in the Service Team may see one model on monday one way, but come friday they are fedup, ready for the weekend, they are moody or whatever. But as a result they are NOT checking all models the sameway they did monday. My cylon fight set is proof of that. 3 different people seen the same detail on the same model as something else. And at no time did any of the 3 people's views, agree with anyone else.

Subject: Re: Preventing Rejections

Posted by [PeregrineStudios](#) on Fri, 16 Aug 2013 00:54:55 GMT

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That's exactly the problem. While this update is nice, is does precisely nothing to address the real issue.

Subject: Re: Preventing Rejections

Posted by [NickHawkins](#) on Fri, 16 Aug 2013 05:26:04 GMT

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The reason I approve of (fallible) people in the loop are:

- Computers are thick, they do exactly what they have been programmed and only what they have been programmed. They have no ability to learn from their mistakes.
- Complex, rule-based algorithms, such as the ones that would be needed to fully check our models are very time consuming (expensive) to debug and certify.
- For consistency if the checking process were purely algorithmic the material guidelines would have to be written in mathematical terms that could prove difficult for many designers to interpret. (I think the current guidelines are a good compromise between exactness and accessibility.)

I agree that the changes do not address the main problem which is communication, being told that my model has sections less than 0.000 thick is unhelpful (particularly as the wrong element was highlighted).

The material flags are not going to be as useful as they could be because there is no way to filter the materials that are displayed to just the ones you have enabled. It's a long list to scroll through on the off-chance that one material has been flagged unprintable. Could the material list be made hierarchical?

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Fri, 16 Aug 2013 06:56:50 GMT

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I believe the general guidelines provided to designers are fine as is, as long as they are enforced logically and with common sense. Any complex computer algorithms are a long term development, especially considering the present state of 3D software capability, and they would most likely reside at Shapeways to more consistently flag potential problem spots in designs. It would still be up to operators to look at these algorithmic results to ultimately come up with a determination as to whether something should be rejected or not, certainly in the near future. Perhaps in the year 2525 it will all be fully automated. What the algorithms would do is simplify the task of operators to find problems, flag known problems more thoroughly and consistently, and avoid the issue of problematic designs slipping through, being manufactured, and then rejected later. The algorithms would never be a panacea but they would be just another computing tool in the process flow to overcome some of the limitations of human checking. And since such capable algorithms apparently do not as of yet exist the whole point is rather moot at the moment.

Speaking of process flow, will there be a process flow diagram that shows what will happen in the future with submitted designs? So many items have arisen in this discussion related to submissions, how rejections will be handled for designers or general public customers, revisions,

numeric print histories, and now rejection flags, that it would be nice to see the flow in a cohesive and comprehensive diagram. It must at the very least be drawn on a white board somewhere at Shapeways. Is that something that can be shared to show us where key decision points are made and how the overall process works? At least at a higher executive level? A good process flow would include not only the optimum design submission to successful shipped product path but also all the different failure paths that result in something being rejected and cancelled, along with the recovery paths to get to long term successful problem free prints.

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Fri, 16 Aug 2013 07:33:02 GMT

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MrNib wrote on Fri, 16 August 2013 06:56 and avoid the issue of problematic designs slipping through, being manufactured, and then rejected later.

If you order 1 of something I could see a problematic design slipping through. However if you order 3, and the 3 are printed without issue at the same time, in the same print tray, and as soon as you open it to the public, then it gets rejected, it's not a problematic design. It's the human factor kicking in. No 2 people are seeing the same detail, wall or wire the same as someone else. I had a model that used to print very well. Then one day this yr they decided to check it, rejecting it on the spot for what can only be called a failure to know the difference between a detail, wall or a wire. 3 different people checked this model at the Service Team. And not one of them could agree what it was they were looking at. Mr. Jetten said he would be willing to force print the model to findout if the errors the 3 people seen was real or not. It printed without being forced. Meaning that the 3 different people have failed to agree with the Printing Facility. Since that point the model has not rejected again. That is when I learned for test printing if you order 3, then the likelihood is that the model will get printed in 3 completely different angles that would force an error.

So if a model prints without issue 3 times in the same print tray, all at different angles, how is it then that as soon as the model is bought by a customer that it has errors? If you can explain that one, you are alot smarter than me. Because even ShapeWays refuses to answer that question. Except to simply say "it should never have been allowed to be printed in the first place". Now they just simply refuse to respond in any form.

I realize that computers are a long ways from being able to do the checks. But it would be nice if ShapeWays changed it's check process to having a model be checked once by one person, then to make sure, have one more person check the model. If the 2 checks don't match, then send it to a 3D engineer that works with the actual printers to make the final call. And once a model has been printed 3 times, stop checking it, so long as the file is not changed, or the Print Facility doesn't report having printing issues with said model. The Service Team likes to over ride the

Print Facility. And in many cases, the Service Team is dead wrong. But they won't ever admit that.

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Fri, 16 Aug 2013 07:33:32 GMT

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Mechanoid wrote on Fri, 16 August 2013 00:38The major problem is, what one person see's today for one model, someone else might not see tomorrow, for the same model. ShapeWays just printed 3 test prints of a model of mine. Soon as I opened it to the public and someone bought it. NOW they reject it.

Mechanoid, I have explained this a few times before.

Your model will only have a Printed Before Flag attached to the model as soon as it's shipped.

When your model is still in production and someone else orders it, this model does not have a printed before flag.

The model is still subject to breaking and other issues thus the newly ordered model will be checked again.

As for your model, it's really to thin (0.4mm while at least 0.7mm is required).

If you want to be certain, please hold on till your order is shipped, this way it will have the printed before flag and I can do my best to prevent it from being rejected.

=

Quote:I agree that the changes do not address the main problem which is communication, being told that my model has sections less than 0.000 thick is unhelpful (particularly as the wrong element was highlighted).

My apologies, I re-assigned a lot of these rejection reasons to our production team as they weren't helpful and didn't show you the issue. (if I'm correct those models had multiple shell issues), seems your rejection slipped through my checking net

=

Quote:Examples of warnings:

Inadvertant seams or shell mating surfaces with steps of 0.001mm.

Decorative embossing/engraving depths which fall below recommended limits.

Any repairs that were automatically carried out by the upload process.

Operator's eyeball. Are you SURE you want this? It looks goofy because _____.

Good news I'm currently working on a project called Printability (short term name.. couldn't think of anything else).

In this project I'm checking every single rejection that is being made in all SLS based materials, Sandstone and FD/FUD.

As soon as I see that a model is being rejected due to one of the warning messages you provided, I reach out the customer and be like

"hey we noticed that the text on your model will not be readable as it's really small, would you still like us to go ahead and print the model as is, knowing that you won't be able to read the text?".

If the customer agrees, I re-assign the rejection and will ask our production team to go ahead and print the model, thus no rejection, no re-order!

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Fri, 16 Aug 2013 11:11:13 GMT

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I am glad Shapeways is responding and making changes. In a prior life I did some software design, and the changes we are seeing take time and money- and we may see some bugs- it happens.

As to rejections of models that printed OK in the past, recently almost all of mine are legitimate violations of the design guidelines. My last involved a model that has a wall with a slot in it, The slot was less that a wire width from the edge, and it was considered a wire. (I didn't save the screenshot). Although the particular wall was used once in that model, and had printed before OK, and if fact that same wall, with the same slot, was repeated 6 times in another model that printed OK, since it was a problem I just fixed it.

I wonder if there it would be appropriate to have a separate pre-production review track for models that are test prints, that the designer intends to sell to the public in the future. The goal would be to prevent these violations that get through initially and crop up later before a model goes on sale. Basically a "do your worst" flag for the individual reviewing the model.

Also, although there seem to be plans to let us know the print history of a rejected model, I'd love to see it on a successful model, also. Of course, that's only helpful if we also know what is normal- is a certain percentage of failure due to the technology, even with a good model? It would help me detect problem models that could stand a bit of redesign to prevent future rejections.

My current order had a test print of 10 or so sub-models that had never been printed before so I expected to see this new rejection process, but it says it's done! Of course, there are a couple other test prints that I am much less worried about, so I have some additional chances.

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Fri, 16 Aug 2013 14:52:02 GMT

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I'll repeat myself again.. I am offering to PAY a dollar or two per model to have it CHECKED.

I have (many) models that other people have commissioned me to build. I have zero interest in having one of the items myself, and the expected sales from the item is probably under a dozen total. I will never make enough profit off the item to compensate me enough to warrant purchasing one as an end-to-end test print.

Therefore the concept of "purchase one before making it public" doesn't apply to these items. It WOULD be worthwhile to have it CHECKED with the same level of scrutiny as though it was going to be printed.

I don't expect Shapeways to lose money on these checks. I know that it takes a bit of human labor to do the checks, and I think they should be compensated for such. I'd rather not see a \$10 or more charge for them.. I think \$1.00 is reasonable.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Fri, 16 Aug 2013 15:05:46 GMT

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What would it cost? I would suspect it would take a few minutes for the worker to test the model. You have to pay the worker's salary, maybe benefits, a little bit of the cost of the computer, network, electricity, rent, insurance, and a ton of other overhead. I suspect the cost would be more than one thinks.

I know what my company charges for my time, but in my office there are 5 people whose time gets billed, and 4 support staff, as well as the rent, etc., so costs go up quick. It may look like a lot per hour to the customer paying the bill, but it gets spread out pretty thin in the end.

Having said that I'd layout \$5 for such a service, as long as there was a strong correlation between a successful check and the model printing OK after that. And it would have to be a full check, not a rejection after one flaw is found. It would be cheaper than loosing the sales when a customers get rejections after a successful test print.

Dave

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Fri, 16 Aug 2013 15:16:08 GMT

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dcyale, But think of it like this. If ShapeWays had a way for people to have models checked, for a price. it would cut down on the number of designers and customers that would end up being pissed. The time it takes them to ignore people until they are ready to blow a gasket. It would lower everyone's stress levels. It wouldn't solve everything, but it would solve enough to make life AT, FOR and WITH ShapeWays alot better for everyone.

It would be better than the Service Team telling you they are here to help, then when you actually ask for it, you are ignored. Plus think about the numbers of models, designers that are on ShapeWays. 2 dollars a model to have it actually checked against the same printing guidelines, would also save on wasted materials. Plus it might help the Service Team to realize they all need to be seeing the same thing in the same model as the rest of their co-workers. Because right now, they don't.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Fri, 16 Aug 2013 15:47:23 GMT

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DRC pre-submission checking would be good, if not at Shapeways then at some other service that would utilize a Shapeways authorized rule deck and eyeballs to do this, perhaps at a small fee. Ok all you software entrepreneurs out there get off your duffs and do it!

Another possible long term solution is for software like Blender, etc., to perform dynamic checking or control feature sizes as models are being generated, based on the input of a few key parameters for a particular process. This might be similar to or leverage the dynamic meshing process that some software uses on the fly. It wouldn't require as many computing resources since you would only be examining the localized regions of a model that are being worked on. Maybe something like this is already out there?

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 16 Aug 2013 16:30:11 GMT
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stonysmith wrote on Fri, 16 August 2013 14:52I'll repeat myself again.. I am offering to PAY a dollar or two per model to have it CHECKED.

I think \$1.00 is reasonable.

The problem with said check is that the model is already 'checked' every time it goes to print, by a different set of eyes that may or may not be in a bad mood that day.

I would pay upwards of \$50 to have a design inspected, verified, and stamped with the official logo of the empire as printable for now to eternity. That way I would be safe sending said design out to bloggers, take out ads in magazines and on trade web sites, and other costly advertising to get my product out that I don't dare right now because of random rejections.

I do 3D design all day every day, I know how to create a printable model. All of my stuff is being rejected in the inspection step, and always because someone decides to call a wall or detail a wire.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Fri, 16 Aug 2013 16:38:30 GMT
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Mechanoid-

I don't think it can be done for \$2 a model. What I would like is a full check. I am assuming at this point it is only checked until a flaw is discovered, at which time the rejections is issued. What I would like is a full check with all the flaws (if any) tagged, and an assumption it will print once it passes. I am not sure it can even be done for \$5 a model. There are some people that would connect 50 models up to the size of the printer, with sprues and want it checked for the same low price. That obviously can't work.

I do think a validation process would have value if possible, though.

I am sorry you have had issues with customer service- and I have read your past posts on your experiences and am not trying to minimize your frustrations. My experiences have been positive, however. Even when a mistake is made, the solution has always been fast and fair.

Dave

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Fri, 16 Aug 2013 16:44:01 GMT

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Roy_Stevens: That is why I now sell items on Ebay. I connect multiple copies with sprues and order them, then sell and reship them individually. That way I have the model in hand. I still offer my models on shapeways, and it's great when I get a no overhead, no handling sale, but it's not reliable enough for me.

Dave

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Fri, 16 Aug 2013 17:03:52 GMT

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I don't understand why a model continually gets checked even after N successful prints and shipments in a specific process, unless the model has been updated or design rules have changed. That seems like a lot of busy work for staff unless there's a history of models getting corrupted in the tile build process because of transfer errors, packing density manipulation, software changes, 3D printer updates, etc. Or are newer checks being triggered by poor printing success rates (<50%?) presumably determined by quality control after each printing run?

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Fri, 16 Aug 2013 17:32:21 GMT

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MrNib wrote on Fri, 16 August 2013 17:03a model continually gets checked even after N successful print

So, checking it once and approving it would be a REDUCTION in manhours, right? So my Pay-For-Validation idea at only \$1 could still be cheaper than the current process.?? <grin>

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Fri, 16 Aug 2013 17:34:13 GMT

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dcyale, It was just a figure off the top. They could charge on the size of the model. The smaller the model, the cheaper it would be, mainly because it wouldn't take as long to check.

Honestly I'm just kicking ideas out there, like others are. Hoping that one of the ideas from here finds life at ShapeWays.

If the Service Team would come to me and tell me there is a glitch, I could deal with it. Hell I have had several models that I absolutely agreed that should have been rejected. I made a mistake on those models. And I have a couple of models that after I got them, I don't know how they didn't get rejected.

But that is not how they have done it. They run my test prints, then they shut the model off. When I tried to raise a dispute, the same answer I am given, if I get one at all, is "well it should not have been printed in the first place".

I found that by running atleast 3 test prints of a model, it's normally enough to cause hidden glitches to show up. But I guess for some of my smaller models I am going to have to jump it to the required 6 prints, to get them to stop checking. The sad reality is, if they look hard enough, and are set on finding glitches, the minds eye will create it every time. On even the most successful models. Took them over 60 prints of a model to find a glitch that they could reject it for.

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Fri, 16 Aug 2013 17:47:59 GMT
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stonysmith wrote on Fri, 16 August 2013 17:32MrNib wrote on Fri, 16 August 2013 17:03a model continually gets checked even after N successful print

So, checking it once and approving it would be a REDUCTION in manhours, right? So my Pay-For-Validation idea at only \$1 could still be cheaper than the current process.?? <grin>

This would depend on the process flow chart.

I find this subject captivating in some strange, sick way. It's a bit like a Whodunnit mystery show!

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 16 Aug 2013 20:15:16 GMT
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MrNib wrote on Fri, 16 August 2013 17:03
presumably determined by quality control after each printing run?

Yeah, you're correct here.
If the model fails, we check it again which trigger the rejection.
Models above 75% success rate will be printed, but like above, it can get rejected if it fails.

If you upload a newer version, the model will be checked again and might lead to a thin wall rejection on places which did print fine in the past.
We are unable to check what changed in each version and see if that particular error in the newer version did or didn't change in the previous version.

In some cases a rejection is requested by the production team if they have received multiple complaints.
For instance, we had to reject a particular airplane which has been printed a few times and does meet the design rules, however the sprue kept breaking and people emailed customer service requesting for a replacement.
Of course we reprinted the model, but at a certain point we had to reject the model (designer did not reply previous emails requesting to change his file).

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Mon, 19 Aug 2013 03:24:44 GMT
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For very small model changes you could perform a differential model check between the old and revised models to visualize the changes. Just subtract the old model from the new one and create a new model showing the changes. But if there are any larger scale changes then likely it cannot be done. It might also be difficult lining up the two models if the x-y-z origin points are different in the two files. This type of check is best suited for a single small change.

If the design rule check is not robust enough to catch errors that impact printing success up to

25% of the time then that's a problem. It sounds like the printing step is an extension of the design rule checking process because of the production feedback loop(s) that trigger duplicated checking. Normally any feedback from the output of a process like this would be used to change the design rules at the input stage of the process, or to improve intermediate steps and reduce process variations. What Shapeways seems to have is a new kind of hybridized nonlinear and iterative process control. I guess it all comes down to balancing design rules, checking, and printer consistency issues to get the most bang for the buck. Good luck with this juggling task!

Subject: Re: Preventing Rejections
Posted by [fx](#) on Mon, 19 Aug 2013 08:29:39 GMT
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Just got a new rejection today. It isn't called a rejection anymore, now it's "Help us resolve issues with models you've sold" sale is canceled and lost as before.

@mkroeker: Nice pink elephant, isn't it ?

Subject: Re: Preventing Rejections
Posted by [Dragoman](#) on Tue, 20 Aug 2013 16:00:27 GMT
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MitchellJetten wrote on Fri, 16 August 2013 20:15

In some cases a rejection is requested by the production team if they have received multiple complaints.

For instance, we had to reject a particular airplane which has been printed a few times and does not meet the design rules, however the sprue kept breaking and people emailed customer service requesting for a replacement.

Of course we reprinted the model, but at a certain point we had to reject the model (designer did not reply previous emails requesting to change his file).

But as far as I see, this is not the common issue designers are complaining about. In your case, the customer got his stuff in the end and the designer was informed of the problem, but did not lose an actual sale.

The nasty situation is the designer thinks everything is fine with a previously tested model and then something goes wrong when some customer places an order.

Greetings

Dragoman

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Tue, 20 Aug 2013 16:17:20 GMT
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Pretty much the same thing I've said all along about rejections I've had...
We printed this fine 15 times in different finishes, but we can't keep it up = rejected with multiple excuses including the most plausible, silver flow issues, which then changed to oh we can do it if you go for extra glossy, except we can't polish it all.

OK, yep; Tricky model that falls well within the guidelines and I can understand why there may be issues, particularly silver flow.

However,

At no time were any of the previous issues conveyed to me until, imo, the production partners flaked due to the demand.

Then everything was conveyed in the space of maybe 7 orders over a few days.

Shapeways, please, I ask you again, let us designers have clear and concise reasons for rejections, none of your wishy-washy ra-ra speak emails, just give us the pure hard details, techy info too, some of us do really understand the ins-and-outs of the materials, the more we know the better the success rate (well, especially for those of us who really like to push things)

Paul

Subject: Re: Preventing Rejections
Posted by [Dragoman](#) on Tue, 20 Aug 2013 16:25:49 GMT
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I offer quite a number of my models in various scales. For example, I design it in 1/300 scale and the scale the whole model up to 1/200 scale. I don't change the shapes, just scale it up by the proper factor (of 1.5 in this case).

You would think that something that prints successfully in 1/300 scale should not run into thin wall problems when you scale it up, wouldn't you?

Wrong! I have run into "thin wall" problems with upscaled models half a dozen times this year. Apparently, something that is overlooked or interpreted as a "detail" in the smaller model is suddenly noticed as a problem when the whole item is bigger.

A recent case I find especially weird.

It's about these models:

<https://www.shapeways.com/model/1171847/1-200-south-korean-k-1a1-tank.html>

<https://www.shapeways.com/model/920824/1-200-vw181-kurierwag-en.html>

mboylevt wrote on Thu, 15 August 2013 21:04

As Natalia mentioned, sometimes we just can't print a model. To prevent yourself or your customers from making multiple purchases of a model which cannot be printed in a specific material group, we will now disable all materials in the material group ordered. For example, if your model is rejected in Antique Bronze Matte Stainless Steel, it will be disabled in ALL Stainless Steel finishes. In order to re-enable a model in disabled materials, you'll have to upload a new model file fixing the issues which caused the previous version of the model to be rejected.

They were ordered by a European customer on 10th July (order # 268530) in WSF and rejected because of thin parts the next day.

By the quoted logic they should no longer have been available

They were ordered by an American customer on 12th July (order # 269666) in WSF and successfully printed!

Shipped on the 24th

I only got around to repairing the model designs on the 14th. AFAIK items are printed off the files as they were at order time, not as they are at the time of printing. So this should not have influenced events.

Confused....

Dragoman

Subject: Re: Preventing Rejections

Posted by [Innovo](#) on Wed, 04 Sep 2013 08:01:47 GMT

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Hi everyone,

I just got another rejection today for yet another one of my co-creators. All my last three co-creator orders were promptly rejected and cancelled.

Now, I'm not going to go over the fact

- of losing 90\$ in revenue for the past month, or
- the 3 angry and disappointed customers that I will be losing forever as clients (one of them was going to make his wedding proposal with my poem ring - thanks Shapeways...) or
- my time wasted making these co-creator models or
- the fact that I've been told for a year now that this rejections issue is being worked on and resolved (thus my patience so far) or
- the fact that the "rejection gurus" consider my lettering details as "thin walls" or
- the fact that these models have successfully been printed dozens of times before.

No, I am not going to bitch about any of that. Since it isn't worth the effort anymore, I will be deactivating all my co-creators until someone finds a workable solution to this mess.

I refuse to let my clients get disappointed anymore and have more of my time wasted.

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Thu, 05 Sep 2013 02:22:06 GMT
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What Shapeways giveth, Shapeways can taketh away.

Subject: Re: Preventing Rejections
Posted by [bartv](#) on Thu, 05 Sep 2013 07:59:54 GMT
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Hey Innovo,

that sucks. I take it you feel that those rejections were incorrect? Would you mind sending that communication over to me at bart@shapeways.com? I'd like to dig in to this for you.

Bart

Subject: Re: Preventing Rejections
Posted by [Innovo](#) on Thu, 05 Sep 2013 09:21:00 GMT

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bartv wrote on Thu, 05 September 2013 07:59Hey Innovo,

that sucks. I take it you feel that those rejections were incorrect? Would you mind sending that communication over to me at bart@shapeways.com? I'd like to dig in to this for you.

Bart

Hi Bart, thanks for the reply.

I believe that some rejections are unfair and some may be not. That is not the greater issue though.

Because of how the system is set-up right now I cannot trust myself or Shapeways to produce a printable object. My rejection rate is high enough to be a problem for me and as far as my co-creators are concerned (because of their inherent high-detailed design) it's ridiculously high, like a 50/50 chance of printing, nowadays. It's just silly. It's really not worth the effort anymore. I'll be happy to re-activate my products when the issue is solved (or when high detail stainless steel is a printable option).

Thanks for noting my concerns.

Subject: Re: Preventing Rejections

Posted by [bartv](#) on Thu, 05 Sep 2013 09:25:02 GMT

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Yeah, we're very aware of these issues. Nat, Mike and I (and the CS team) are constantly pushing to get this solved, but it's a hairy problem as you may imagine. We'll keep voicing your issues inside Shapeways, and I hope we'll be able to regain your trust soon.

Bart

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Thu, 05 Sep 2013 14:11:58 GMT

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Bart,

I just got rejections for a couple of private models. Reason, a 0.87mm bar is too thin. But that is not where it started though. They claimed that a 0.87mm bar, had a 0.23mm thin wall issue.

Sadly another identical model, just missing a few parts, was passed by another person checking models in the Service Team. Meaning that once again, no 2 people are looking at the same model the same way.

One person passes it, another rejects it. The level of consistency in the Service Team is ZERO. You want to help, then get everyone looking at the same damm thing, the same damm way. Like some of the others, my shops rejection rate is out of hand. My reputation is MUD because of the rejections. Models that printed several time within the last 8 months, now being rejected. [message edited to conform to Communtiy Guidelines - BV] I've had models that absolutely the same, yet one gets printed, one gets rejection. And with your new system. Now when a model is rejected, even if you folks are wrong, is for us to either make an updated file, or delete the old model, and upload the same file as a new model. Because now when they turn a model off, you turn it and the designer OFF.

Let me give you a resent example. model #1218143 Rob-Bot 1-87 <http://shpws.me/oxci> was printed without issue. Not once, but 4 times within a week. But because of the post production mishandling at NY (see other post), all the domes were lost. So under the suggestion of Stoneysmith, the dome was attached to the top of the head in a new version, model #1290842 Rob-Bot 1-87 V2 <http://shpws.me/oWDh>. Now this is the same model in every way possible. But the dome was moved from sitting at his feet, to now being attached directly to his head. So that NY couldn't lose the domes anymore. But the new version w/ attached dome. was rejected. Mrs. Hagens took my complaint seriously and went to the engineers there in Eindhoven, and they said it was very printable. Proving once again that 2 identical models have a straight 50/50 chance of coming to life.

People in the Service Team are worked hard, Yes I get that. [message edited to conform to Communtiy Guidelines - BV] No consistency what so ever in checking models. One person gives it a go to the printers, and another rejects it because they THOUGHT they seen something bad. Then the lame excuse of "we are not professional 3D modelers. Well maybe it's time that ShapeWays makes them professional. Maybe you need to hire another set of Service Team people, and limit everyone to 3 days on, 3 off. Maybe then they will be rested and energetic to do the job right. Maybe it's just enough if you brought in a new team, made up of 2 engineers from the printing facility, and 2 actual professional 3D modelers to check every single rejection the Service Team tries to dole out.

I'm trying to get models ready for the holiday shopping season. This is my one real chance to make up for all the lost money from rejections so far this yr. But how in the hell am I suppost to do accurate models, if you all keep rejecting them at every turn. Instead of the 3D printer technology improving, advancing. You folks have actually gone backwards. Now model guidelines that said a free standing bar for WSF had to be atleast 0.8mm, now it has to be 1.1mm. But I can't seem to find that guideline on the materials guideline pages. But that is what I was just told today.

Trust? Naw, it's hard to trust a company that spends it's time screwing up the website, messing with peoples shop formates, when you have major issues with rejections that are happening everyday. Hard to trust when your solution to the rejection issues is to restrict models, lock the models so even the designer can't do anything. While you have a serious communications issue between the Service Team the designers and the engineers. The Service Team seems to be speaking their own language, leaving everyone else dazed and confused. Not to mention frustrated and down right mad.

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Thu, 05 Sep 2013 16:13:52 GMT

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Hi Mechanoid,

Although I do understand your frustrations, it looks like you're not providing all the information.

Quote:You folks have actually gone backwards. Now model guidelines that said a free standing bar for WSF had to be atleast 0.8mm, now it has to be 1.1mm. But I can't seem to find that guideline on the materials guideline pages. But that is what I was just told today.

If you read your rejection email carefully, you can see that we have tried to print your model. Reason: We have attempted to print this model but the support wires are too thin to be cleaned. Please thicken the support wire for the steering wheel to at least 1.1mm and ensure that all wires and supports fully contact the base.

Due to the big wheel on top they were unable to clean the model without breaking those wires. As we have explained to everyone in the past, unfortunately we are unable to say "every model can be printed with thickness x". Your model was 0.95mm and still snapped. To ensure that part not breaking again we have requested you to thicken it to 1.1mm instead of 1mm which is the normal design rule for wires.

Once again, I understand that this is frustrating, but our production team did print your model and tried it even though the wire is below the 1mm minimum thickness for wires.

Subject: Re: Preventing Rejections

Posted by [robs_mw](#) on Thu, 05 Sep 2013 16:20:18 GMT

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Just to keep this thread alive..

First customer of an earlier successfully (test) printed model, now rejected of course....bye bye customer....

'The minimum thickness for free wires' message...hello SW, before it was exactly the same...

consistency

consistency

noun

noun: consistency; noun: consistence; plural noun: consistencies; plural

noun: consistences

1.

conformity in the application of something, typically that which is necessary for the sake of logic, accuracy, or fairness.

Difficult to build a business like this.

Cheers,
Robert

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Thu, 05 Sep 2013 17:04:04 GMT

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Mr. Jetten,

There was a reason I didn't post that pic. It's a private project. You and the others at ShapeWays knew what I was talking about. I did notice that you did attempt to print it. And I even said something to Mrs. Hagens about it. Thanking her for her efforts. And that is not what this is about.

That model, for all intents and purposes met the design guidelines. Except for those side support bars, That I admit was an error. But your the ones making the rules. I guess I can't fight you.

So it's going to be made 1.1mm. But it is once again, not something that is posted on the design guidelines page.

The rest of THIS issue I will take up in private.

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Thu, 05 Sep 2013 17:40:41 GMT

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Mechanoid wrote on Thu, 05 September 2013 17:04Mr. Jetten,

There was a reason I didn't post that pic. It's a private project.

I have removed the image.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Fri, 06 Sep 2013 05:50:29 GMT

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MrNib wrote on Tue, 13 August 2013 16:04Last night I ordered a bunch of ARTG pen blanks (B0019 in WSF, WSF-P, cranberry, FUD, alumide, polished alumide) with just over 0.5 mm pattern engraving detail (over 1mm thick walls) in several processes

blah blah blah....

Just to follow up on this... I did manage to get all these parts back and they look great. The good news is that the alumide parts that were at risk of being rejected were not. The bad news is that the alumide B0019's that were to be polished came back unpolished. I'm not sure if this was an oversight or if someone decided the "shallow engraving" (i.e. MrNib desired subtle surface patterning), would not be to their liking after polishing. No matter, I can still do my own polishing on a lathe for this blank design although I was hoping to see for myself what polishing would do to it in terms of dimensional reductions compared to non-polished in the same order. No need to bother customer service with this one.

So I must try, try again. This time I ordered 9 different patterned ARTG blanks only in polished alumide, which also happens to be the most desirable and default material choice, IMHO. So far so good seeing as they are now in production. Will they make it through the entire production process? Will they all be polished? Stay tuned for more exciting updates!

Now I need to start making some reference pens with the ones that made it back to me. ...After I caulk and paint the back wall of the house.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 06 Sep 2013 08:58:46 GMT
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In Production Printing 2013-08-14
In Production Quality & Finishing 2013-08-16
In Production Ready To Ship 2013-08-16

You are correct, it seems that they didn't polish your model
If you reach out to the service team, I'm sure they will fix this for you

As soon as I see a "manufacturer rejected" model with small details which might not show up, i re-assign them back to the production team and ask them to have them printed as is (without notifying the customer).

This way you won't receive a rejection for this.

Edit: your current order is printing since the 4th, this tray will most likely be unpacked today.
I have added a comment to the order to make sure they will polish it this time!

Mitch

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Fri, 06 Sep 2013 16:07:26 GMT
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Thanks! There's no need to deal with customer service on this matter since I have plenty of R&D to do with the parts I received on unrelated issues. I can wait for the next order with polishing.

The only reason I need the polishing is for one class of parts, the "Almost Ready To Go" blank series that lets people assemble pen kits if they do not have access to a lathe. All I hope for is for these parts to be fabricated using the standard manufacturing process. If that calls for 10 minutes of polishing time then they should get 10 minutes of polishing time. Ultimately I'll decide if the polished versions are proper for sale and use, if they need to be redesigned for better appearance after polishing, or if they should not be offered as polished components. I don't think the burden of final appearance related to decorative detail in this case needs to be on the shoulders of Shapeways. All Shapeways needs to do is to follow a process that generates reasonably consistent results that would allow a customer to see a photo of the polished part on the model page and expect to purchase something close to that.

One of these days I need to put together an instructional primer on pen assembly using these blanks made with the various materials. I've futzed around with this work for almost a year so I should share the techniques I've learned. People I've given samples to love the polished alumide pens, others like the unpolished versions, and others prefer the SF versions. And those older pens have 0.38 mm details (or less!) on the bodies. I've altered the designs to have 0.5 mm patterning depths which actually risks making the pens less pleasant to hold and use in some cases but if it helps with manufacturing that's a trade-off I'm willing to make. Another option is to drop alumide completely but unfortunately that seems to be the best material for this application.

I've also identified two other common pen kits that lend themselves well to being made with printed blanks. The sooner I can lock down the processing issues and acceptable dimensions the sooner I can generate blank models for those kits as well.

Subject: Re: Preventing Rejections

Posted by [matt_atknsn](#) on Fri, 20 Sep 2013 13:18:41 GMT

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Will the nuanced rules for the Frosted Ultra Detail material ever return?

Subject: Re: Preventing Rejections

Posted by [TrainThingz](#) on Fri, 20 Sep 2013 17:52:27 GMT

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Been working like a madman since I decided to get into making things here. My cup runneth over with product ideas. Got a bunch of things ready, ordered some, and started the long, long wait...

Then I get a list of items rejected. <<sigh>> Ok, that's part of life and learning. Looked over the items, puzzled out what the rejection messages were about, made some fixes, resubmitted and re-ordered.

A couple of the fixed ones passed... but one in particular of the fixed items was rejected again... for a DIFFERENT reason. <<sigh, again>>

Went back and fixed it, reuploaded and re-ordered. I can be pretty persistent. It's in for the third try now.

But this brings up an issue - why weren't the problems caught the FIRST time through? From what I could tell, they weren't really judgement calls, just my mistakes (Hey, I'm still a noob at this...) ... but now it's been what... 4 days, and twice I've had to fix something, and you're inspecting it for

the third time now... wouldn't it be more efficient for ALL of us for you folks to tell me about ALL the problems the first time, instead of "Whoops! One issue! I'll stop now and throw it back!"

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Sat, 21 Sep 2013 01:50:39 GMT

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TrainThingz wrote on Fri, 20 September 2013 17:52

But this brings up an issue - why weren't the problems caught the FIRST time through? From what i could tell, they weren't really judgement calls, just my mistakes (Hey, I'm still a noob at this...) ... but now it's been what... 4 days, and twice I've had to fix something, and you're inspecting it for the third time now... wouldn't it be more efficient for ALL of us for you folks to tell me about ALL the problems the first time, instead of "Whoops! One issue! I'll stop now and throw it back!"

This is pretty typical. The production partner see something they don't like, they'll find a reason to reject it and then they move on. Another reason why a validation process is badly needed. I like your products, one suggestion is that if you are going to sprue your semaphores you should sprue them from both sides. With the unique capabilities of printing I have re-thought the sprue concept, preferring now to sprue my thin parts vertically. It keeps things more compact which reduces rejections and handling errors.

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Sat, 21 Sep 2013 11:58:31 GMT

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This is not limited to production partners, I think - the check is for "printability", so one flaw found and you are out (though they often flag additional issues when they are in the same general area of the model and easy to spot for them) . Thorough checking for additional defects would cost time in a workflow streamlined for high throughput - after all, the customer might just shelf the project after the technician took an hour to flag numerous problem areas. Perhaps shapeways will offer it as an additional service at some point.

Subject: Re: Preventing Rejections

Posted by [TrainThingz](#) on Sat, 21 Sep 2013 13:10:15 GMT

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Quote: I like your products, one suggestion is that if you are going to sprue your semaphores you should sprue them from both sides. With the unique capabilities of printing I have re-thought the sprue concept, preferring now to sprue my thin parts vertically. It keeps things more compact which reduces rejections and handling errors.

I'd prefer not to sprue them at all, but they're so small that they'd be easily separated and lost if they weren't attached. I considered attaching them in two places, but the blade and spectacle, though tiny, are the one part of the semaphore that is the focus of attention, so I need to minimize any possible flaws... and they assemble as moving parts, so there's an additional limit as to where I can actually attach sprues, because of the difficulty in cleaning the sprue off something that small.

They're in N scale, so the entire print including sprue box is only about 2 x 3.5 cm. I might be able to stack them vertically, still attached at the same point on the spectacle - though they won't "show" as well on the page, it might reduce the cost significantly.... though it probably would make them much more difficult for SW to clean. Right now I think the sprue costs more than the actual parts! I'll play around with that idea and see what I can come up with.

Subject: Re: Preventing Rejections
Posted by [TrainThingz](#) on Sat, 21 Sep 2013 13:16:01 GMT
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Quote:Thorough checking for additional defects would cost time in a workflow streamlined for high throughput - after all, the customer might just shelf the project after the technician took an hour to flag numerous problem areas. Perhaps shapeways will offer it as an additional service at some point.

To me, it would be far less discouraging to get an item kicked back ONCE with many fixes noted than to get it back, fix one problem, get it back again, fix a DIFFERENT problem, get it back yet AGAIN, fix a THIRD problem, ad nauseum... THAT is the very definition of frustration and wasted time on EVERYONE'S part.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Sat, 21 Sep 2013 14:26:34 GMT
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I work in Z scale (1:220) - two thirds your size, and have had MANY rejections.

I realize that it can be a bit frustrating to go thru the "cyclical" process of multiple rejections, but, doing so has taught me more about what the human checkers are looking for, so I now comprehend how to design better models that very often will pass the checks on the first try.

They are not being "mean" or "evil" by stopping after the first few failures found, they're keeping the cost down by pushing more of the checking back onto my plate.

You can think of it as they're not checking "everything" on your model, but rather they're checking for general design techniques that are problematic. If you know that you used the same thin wall in 50 places around a model, then by the operator checking only one of them, they are in fact warning you that all 50 of them will fail. The particular wording they use could be a bit more explanatory, but if you look at it as a critique of your overall style rather than only pointing out individual trouble spots, then it'll make more sense.

There are a couple of programs that could be used to check the entire model for thin walls, etc. in a single pass, but the two or three that I have found so far increase exponentially in run time as the triangle count of the models increase. One 300,000 triangle model I tried to process told me that it was going to take 14 hours to check!

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Sat, 21 Sep 2013 15:16:26 GMT
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stonysmith wrote on Sat, 21 September 2013 14:26
There are a couple of programs that could be used to check the entire model for thin walls, etc. in a single pass, but the two or three that I have found so far increase exponentially in run time as the triangle count of the models increase. One 300,000 triangle model I tried to process told me that it was going to take 14 hours to check!

Solidworks checks the entire model for thin sections in a fraction of a second, even the ones exceeding 1 million polygons. But it doesn't know the difference between a wire and a wall. Then again, neither do the people working in Shapeways production.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Sat, 21 Sep 2013 15:47:47 GMT
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@TrainThingz: You can check your model over yourself and save loads of time (as in wasted time waiting for the dreaded next rejection) with tools like NetFabb and the NetFabb Cloud Service.

Luckily I've not suffered any disappointments recently, mainly because I've done nothing new and the models that were probelmatic aren't selling because I changed them so much (after being previously printed) or the other one hasn't not sold as I've put a kind of 'disapointment disclaimer' on the model page - that one is pot lick as to what excuse comes up for the rejection.

Might be back sometime.

tffn
Paul

Subject: Re: Preventing Rejections
Posted by [TrainThingz](#) on Sat, 21 Sep 2013 19:42:55 GMT
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Well, I tried the NetFabb cloud service (cloud.netfabb.com) - uploaded a model to them, and let them work on it, then downloaded the result and loaded it back in to sketchup to look at it...

wow...

The model was pretty much destroyed. Gaping holes all over where the geometry and parts were not just altered, but completely missing. I wonder how much of this is due to the conversion process... from .skp to .stl. and back to .skp?

Doesn't really matter - if I can't check the work it does, it's not a viable solution, no matter the cause.

Seeing the results, though, makes it HIGHLY unlikely I'd even consider dropping \$300.00 US on NetFabb Private!

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Sat, 21 Sep 2013 20:39:06 GMT
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Netfabb cloud service can really screw up a small model- like a scale model railroad item. Other times it fixes reversed faces and other problems like a champ. You have to take a good look at the results. I have found Netfabb studio (free version) can really mess up a model when I scale it down from 1/1 (as designed in sketchup) to 1/87 to print. BUT, the studio version is good for finding problems and changing the units from mm to inches. It seems the export plugin I use in

sketchup has problems with that metric/imperial stuff.

I have been tempted to spend the \$300 to buy the home version of Netfabb, but first would want to know how well it's ability to hollow out solid shapes works, as well as it's ability to work with a 2d picture and develop a 3d part. I haven't had the time to do the research into it yet and decide if the expense would be worth it. I wish there was an evaluation copy, even if it didn't save the work so I could get some hands on time.

I now use Meshlab almost exclusively to scale down models and I have found that it works very well for that, even though the interface is a little clunky.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Sat, 21 Sep 2013 20:42:09 GMT
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Oh, one last thing- I use [3d tool](http://www.3d-tool.com/en_cad-viewer-download.htm) to view stl files after netfabb cloud gets done with them. I find skeetchup is not totally happy looking at stl files with a lot of detail.

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Sun, 22 Sep 2013 07:43:30 GMT
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Maybe talking hogwash here (I am not a SketchUp user), but I seem to remember people saying that for small objects scale them up to work with them and only make them the correct size right at the end. Some peculiarity of SketchUp. Maybe. I don't know...

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Mon, 23 Sep 2013 15:56:13 GMT
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Here's my latest rejection in WSF. While I would also admit that this could be considered "sloppy" design by some standards (I could eliminate that joining seam) but I didn't expect it to necessarily appear in the final print. I'd really like to know, for future reference, why this type of thing is

considered so bad that it results in a rejection. Does it somehow negatively impact the print process in terms of printer damage or creating shards of lasered plastic that hurt re-use of extra powder? Is there concern that I would get upset if I did not see a 0.06mm step when the process rules state an accuracy of only 0.15mm? Is this another example of aesthetics being judged by operators putting together the trays? Why is this considered to be embossing or engraving as opposed to a non-fatal noisy artifact due to design technique or design software limitations?

I probably shouldn't mention it but there were two other items in the same order with basically the same feature that were not flagged (4 occurrences total between all of the designs). And of course I've had no rejections with previous versions of such parts dating back to about a year ago. It's the same old same old.

File Attachments

1) [detail_vs_embossing_vs_engraving_vs_seams.jpg](#), downloaded 273 times

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Mon, 23 Sep 2013 16:30:00 GMT

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Was the rejection due to the engraving? (What was the message?) This could be a rejection in that they are trying to faithfully reproduce your design, and the 0.06mm channel would end up disappearing (hence the 0.2mm embossing rule). As to the exterior of the tube, 1mm - 0.12mm is still thicker than the WSF minimum of 0.7mm so you should be good there.

If it is because of the engraving, then this model fits into a "gray area" (which is WHY we can't have hard-fast rules based on cold computer logic). If they allowed this to pass, it might be that the engraving was crucial to your design, and therefore you'd be asking for reprints. They don't know whether it's acceptable or not on the final product.

I again make my case for Notes on each model to be delivered to the Production team... if this model could be notated "loss of resolution is acceptable", then the production team could make the decision without having to worry that you would ask for reprints or credits if the engraving disappears on the final model. The production team can only make assumptions about what we wish to have done on such "gray area" models. We need a way to communicate our needs/desires.

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Mon, 23 Sep 2013 16:30:57 GMT

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Was the rejection due to the engraving? (What was the message?) This could be a rejection in that they are trying to faithfully reproduce your design, and the 0.06mm channel would end up disappearing (hence the 0.2mm embossing rule). As to the exterior of the tube, 1mm - 0.12mm is still thicker than the WSF minimum of 0.7mm so you should be good there.

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Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Mon, 23 Sep 2013 16:43:18 GMT

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Yes, it was the embossing engraving error. It's not actually a channel, it's just a small step at the end of the narrowing section where it joins with an internal tube that establishes the 1mm minimum wall thickness for the entire length of the object.

"Your detail is too fine to print correctly, Min Embossed Detail is > 0.2mm; Min Engraved Detail is 0.2mm, while recommended for readable text is 0.5mm (embossed, engraved and clearance). Please increase the height/depth/clearance of your detail. For more information about the design specifications for this material please visit:
<http://www.shapeways.com/materials/strong-flexible-design-guidelines>."

The step is obviously not something a reasonable person could construe as being text or a logo. If I increased the height of the step the part would end up looking kind of stupid, although I don't expect Shapeways to know the final application for this part. Is it detail or an artifact?

I agree that a waiver of some sort would be great, particularly one you could establish after a rejection that would get the part back into the fabrication flow and shipped with your original order. I still find it amusing that Shapeways works so hard at not making a sale (although technically with no refund of the money they don't really lose a sale in the strictest sense, but it could prevent future sales).

File Attachments

1) [taper_step.jpg](#), downloaded 243 times

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Mon, 23 Sep 2013 18:15:34 GMT
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That is definitely something that you should have turned back to service@shapeways.com

I've had fairly good luck by simply explaining to them that the part is "acceptable the way it is".

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Mon, 23 Sep 2013 19:02:42 GMT
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I took your advice and did that, although I suspect it will be an exercise in futility.

I requested that either they try to reinsert the rejected part into the process flow and have it made with a permanent waiver , or, reject all the other parts in the order that slipped through checking having the same issue. Since I'm trying to have some "final" version reference parts fabricated prior to taking photos and putting parts up for sale it doesn't make much sense to get parts back that are rejectable yet still fabricated. These repetitive redesign loops based on inconsistent rejections are a real 3D downer.

Subject: Re: Preventing Rejections

Posted by [TrainThingz](#) on Tue, 24 Sep 2013 23:23:37 GMT

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They're in N scale, so the entire print including sprue box is only about 2 x 3.5 cm. I might be able to stack them vertically, still attached at the same point on the spectacle - though they won't "show" as well on the page, it might reduce the cost significantly.... though it probably would make them much more difficult for SW to clean. Right now I think the sprue costs more than the actual parts! I'll play around with that idea and see what I can come up with.
[/quote]

With this in mind... what ARE the requirements for being able to clean FUD items? I'm looking at "boxing" these together, and am wondering if getting inside to the individual blades is going to be an issue, or if the cleaning process for FUD even requires any kind of manual "scubbing" <<considers for a bit...>> Hmmm... hold off on any replies.. I'll go ahead and do one so you can see exactly what I'm talking about.

<< a little later...>>

OK. here we go... Is cleaning this item an issue? Dimensions noted in drawing.

[quote title=Quote:]

File Attachments

1) [Stacked Semaphores.jpg](#), downloaded 203 times

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Wed, 25 Sep 2013 00:39:10 GMT

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I would put a center beam down each side of the box. That keeps large objects *thumbs* from penetrating the box and breaking off the fragile parts.

Also, I pack the items closer together.. no need to be pretty. Then, I use an image of a single one as the primary image in my shop.

<http://shpws.me/oA1O>

<http://shpws.me/olbA>

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Wed, 25 Sep 2013 01:04:23 GMT

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For my problem customer service decided that was an unnecessary rejection/cancelation and also credited shipping since it would be a redundant cost. However I should probably redesign those parts and remove the micro-steps just to be safe for store sales, I guess.

Subject: Re: Preventing Rejections

Posted by [TrainThingz](#) on Wed, 25 Sep 2013 01:04:24 GMT

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Quote:I would put a center beam down each side of the box. That keeps large objects *thumbs* from penetrating the box and breaking off the fragile parts.

Also, I pack the items closer together.. no need to be pretty. Then, I use an image of a single one as the primary image in my shop.

!?!?

How small are their thumbs there? Do they have pixies working in the shop? The whole thing is only about 1 x 1.5 x 2 cm

The blades are only a bit under 3mm apart now, and I'm worried about cleaning... how much closer can I get them? I'm not thinking about "fusing moving parts", but the practical cleaning issues... if any.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Wed, 25 Sep 2013 02:05:26 GMT

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[quote title=TrainThingz wrote on Wed, 25 September 2013 01:04]Quote:

The blades are only a bit under 3mm apart now, and I'm worried about cleaning... how much closer can I get them? I'm not thinking about "fusing moving parts", but the practical cleaning issues... if any.

I don't know if this link will work, but it's a stack of fresnel lenses for a scale caboose lantern.

<https://www.shapeways.com/model/1201528/24lensassy.html>

They are linked by a rod that just kisses each one at three places, and they are 0.21mm apart at the closest. This prints and cleans up very well. The standard way Shapeways cleans FUD is with heat that melts the support wax away, which works well if you design for that in mind. I have also been told that sometimes they use a toothbrush *gasp*. I'd rather they just send me the print with all the wax on it rather than attacking my finely detailed models with brushes.

Subject: Re: Preventing Rejections

Posted by [TrainThingz](#) on Wed, 25 Sep 2013 02:16:51 GMT

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Yeah, hence my concern about spacing things TOO close together. I really don't want someone in there with a toothbrush!

I think I'll leave them as they are for now... I might try closing ranks later, but i want to be sure they're printable as they are first.

It's not just cleaning... I don't want the customer breaking them trying to get them out, either... right now, I think you could use some rail nippers to snip out the whole runner, and throw a "tarp" over the box and use it for part of a flat car load.

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Wed, 25 Sep 2013 02:18:52 GMT

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The support material for FUD is a waxy like substance - they heat the items in a small oven and the wax (mostly) just drains out.

That means that you can actually have parts spaced at the minimum distance - 0.05mm (although I use 0.10mm) and you'll get the same amount of "cleaning".

There is a bit of the waxy (oily) material left on the surface of the models.. I use a product called Bestine (chemical name heptane) to remove the wax. Other folks have found that a bit of Dawn dishwashing soap and agitation work acceptably well too.

I prefer the Bestine because it leaves the surface of the FUD an opaque white, much the same as if you had coated the item in primer paint.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 25 Sep 2013 12:27:46 GMT
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Hi Stony-

Have you used acetone in the past for FUD clean up? I have been looking for a direct compassion it with Bestine from someone with experience. Does Bestine make the model soft like acetone?

(My gosh, this thread goes all over the place)

Dave

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Wed, 25 Sep 2013 14:24:14 GMT
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dcyale wrote on Wed, 25 September 2013 12:27(My gosh, this thread goes all over the place)

Good point,

Probably would be best if this discussion started it's own thread in 3D Printing

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Wed, 25 Sep 2013 14:52:41 GMT
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91% isopropyl also seems to work although I don't paint any of my FUD so I don't know how thoroughly it removes the gunk as a prep step. It also leaves an opaque white surface and is less noxious.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Wed, 25 Sep 2013 18:58:35 GMT
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@dcyale : some dicussion here FUD wax removal - best way I've found is with a drop or two of washing up liquid in plain water in an ultrasonic cleaner.

Having been out of the loop (re: rejections) for a while, has anybody found Shapeways current position to be of any use with regards to informatoin about rejections?

Cheers,
Paul

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 25 Sep 2013 19:24:50 GMT
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Although the messages have changed, the results do not seem to have. I leave open the possibility that there have been behind the scene changes that help, but are transparent to the designer.

As usual, most of my rejections are my own fault in failing to catch something. My last was a thin wire. I had test printed a model called "test print" which was a bunch of smaller sub-models sprued together (they were all separate STLs made into one STL in blender with sprues attached). It passed and printed perfect. When I took one of the sub-models, a 1/87th scale steam radiator, and made it a separate model consisting of multiple copies of the same radiator that had printed OK, it was rejected because a wire was OK for free, but too thin for free with weight. I'll own the mistake of misclassifying the diameter needed. Still kinda' frustrating, though, as the model obviously prints OK.

I still want to know if one of my models has trouble printing so I can check and see if there is something I can change to make it more robust, and minimize the customer will order one and get a rejection out of the blue.

Dave

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 02 Oct 2013 15:42:41 GMT
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Well, the latest rejection completely floored me. I have a model of a port-a-potty in 1/87th scale with a complete interior (well, almost complete). The stl file that makes up the model has printed fine in the past as you can see from the little bit blurry picture. The successfully printed version was the same stl file that was made part of a larger model- I separate the individual models and

direct sell them.

The font I used to make the copyright notice on the bottom of the model has small gaps between the letters and the inspector thought it might fuse. Did they really think that the letters printing slightly incorrectly on the bottom of a port-a-potty model was a reason to reject it? Come on. Where is the thought process? Or is the inspector given absolutely no discretion in a case like this.

At least this time, for the first time, the customer messaged me about the rejection so I could apologize and offer to try to make his inconvenience right, and maybe make a repeat customer out of him as opposed to someone who just thinks I'm an idiot.

SUGGESTION: The form email that goes to the customer when a model is rejected, can it specify that the designer is not told their identity and provide a link to a private message if the customer wants to contact the designer about it? Or is this already in place (I have never seen the message a customer gets).

File Attachments

1) [ppnuts.jpg](#), downloaded 122 times

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Wed, 02 Oct 2013 16:21:43 GMT
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post reply system is bust - used to be that the forum topic post that is being replied to was shown below my response typing box - now there is the first post and responses. = bug

Anyhow, DC, what material is the model in?

If wsf, the thin wall issue with the text may be one of those "uh oh, that might mess up the whole print run" type of things, depends which wsf printer it was sent to.

Shapeways, I've been asking you for the last year/18 months to open up clear and direct communications with your print partners... I hate being the middle-man in any deal and sometimes, I really just wonder if Shapeways cares about being the employed middle-man?

Hoping for changes every day,
Paul

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 02 Oct 2013 16:39:26 GMT
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It was SWF, and the rejection message made clear it was that the clearance might be fused:

Start rejection message-----

Model: Port-a-Potty (x2) HO Scale
Version: 1
Materials Affected:
- Black Strong & Flexible (Guidelines)
- White Strong & Flexible (Guidelines)

Here is why we cannot print your model:

Your detail is too fine to print correctly, likely to fuse together.
Min Embossed Detail is > 0.2mm; Min Engraved Detail is 0.2mm, while recommended for readable text is 0.5mm (embossed, engraved and clearance). Please increase the height/depth/clearance of your detail. For more information about the design specifications for this material please visit: <http://www.shapeways.com/materials/strong-flexible-design-guidelines>

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Wed, 02 Oct 2013 16:49:59 GMT
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It might be argued that if you took the trouble to place a copyright notice on the part, you would require it to be readable.
OTOH it again raises the issue of the mythical "already printed" flag - or was it the first time this particular version of the file was printed ? (Obviously the model itself having been printed as part of another file would not count, as there would be no way to automatically crossreference the two instances)

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Wed, 02 Oct 2013 17:09:31 GMT

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stop4stuff wrote on Wed, 02 October 2013 16:21post reply system is bust - used to be that the forum topic post that is being replied to was shown below my response typing box - now there is the first post and responses. = bug

Paul

Paul.. please post something over in Bug Reporting - I don't quite understand what you're saying is broken.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Thu, 03 Oct 2013 02:17:31 GMT

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mkroeker: Yes, it was the first time the "shapeways retail" version was ordered so you are correct on the already printed flag, it wouldn't have made a difference in this case.

And I'm not even saying the rejection was wrong according to the design standards. What I am saying is this stl file had successfully printed as a sub-model of other models twice before, leading me to trust the design. Now, a different person looks at it and rejects it. THAT is the problem- no consistency in the pre-print checking process. And Shapeways has until now offered no ideas of what they might be doing to work on this, or even said that it is a necessary evil at this point in the technology and cannot be fixed.

I think I would be happy with an acknowledgement if it just can't be helped, IF the customer who gets a rejection message was told what the situation is.

Academic. I have re-uploaded the model with the copyright notice removed. As I understand the process no one could master a mold off it anyway because of the shape of the model so the copyright notice is not really needed.

Dave Yale- still learning this stuff and probably always will be

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Thu, 03 Oct 2013 03:10:08 GMT

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I ordered the same Tinkercad generated model in FD, WSF, and brass in the same order, and all

had the same detached shell problem. Bottom line is that three different people, not necessarily all at Shapeways, checked the model and only the person who checked the WSF caught the problem. And this is a critical problem as opposed to the detail vs. embossing/engraving stuff. It seems like it's a lot of duplicated effort with a checking success of only 33%. Ouch!

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Fri, 04 Oct 2013 01:18:41 GMT
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Something just occurred to me. At several times in this thread (I think it was this thread) it has been mentioned that a small piece of a model could come loose and mess up a whole batch of SWF because it's a loose shell, which is a cause of rejection. How is that different than a print of the following model (call it a candy cane):

As it prints from the bottom, at some point the layers of nylon powder reach the point that the end of the curved section starts to print. So the first layer is one grain of nylon thick on the first pass, two on the second, etc. So why, when that end of the candy cane curve first starts to print, doesn't it get swept into someone else's model like an unconnected shell?

Of course, on this model the print orientation would be adjusted, but it is an illustration. As I understand it Shapeways loads the build box with multiple models so every time the SWF machine runs there must be times there are portions of partially fused models only one or two layers thick just sitting there.

So is a loose shell a rejection because it potentially can ruin a print run, or because there is a potential for the customer to complain and want a refund?

File Attachments

1) [test.jpg](#), downloaded 422 times

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 04 Oct 2013 02:01:10 GMT
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dcyale wrote on Fri, 04 October 2013 01:18Something just occurred to me. At several times in this thread (I think it was this thread) it has been mentioned that a small piece of a model could come loose and mess up a whole batch of SWF because it's a loose shell, which is a cause of rejection. How is that different than a print of the following model (call it a candy cane):

So is a loose shell a rejection because it potentially can ruin a print run, or because there is a potential for the customer to complain and want a refund?

The idea that a loose piece could cause a problem with a WSF print is an absolutely ridiculous concept. As some of these items print up they could have at one point dozens or even hundreds of unsecured little sintered pieces that will eventually meet up as the print progresses. It's a lousy excuse to not print an item. That said, I have had no rejections in the past 3-4 weeks and some of my more established models are selling fairly well. But I still don't dare put any effort or money into advertising until I can be certain that such effort won't be wasted.

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Fri, 04 Oct 2013 02:44:09 GMT
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In my case, at least, I understood the problem to be more of a print with a potential missing portion problem. If a shell came loose when taking the tray apart I would hardly expect an operator to try and figure out where the extra bits came from.

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Fri, 04 Oct 2013 11:41:22 GMT
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Weeeeelp, just got a rejection this morning for a ring that's printed successfully three times. It's only slightly forgivable because each ring size is a different upload, and this size hadn't been ordered yet. So a 'printed' flag wouldn't have done anything. But I mean... come on, you can see a photo of the printed ring and everything!

Even better, thanks to this new 'disabling materials' nonsense, I can't even print it in Stainless Steel again until I get service to sort this out.

Subject: Re: Preventing Rejections
Posted by [numarul7](#) on Fri, 04 Oct 2013 11:59:13 GMT

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This thread scares me when I read everyday , another rejection , another ... for products that printed. How can you tell users "print your model" then after you print it second time it is "not printable" ?! How can mathematical correct model be measured different by different people ? Eyesight problem ? Low salary ?

How about telling the one that verify the models that some designers that "they check" with their attitude off , are poorer than them , and even living for selling that object he for "he`s ego not paid well" reject it , then rejecting someone food on the table , paying rent so on.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Fri, 04 Oct 2013 12:40:55 GMT
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Can you share the reason they gave ? "Thin walls" , or "engraving will run together" or something ? (Just wondering if the ring size have affected overall scale to the point that a feature actually became marginal ?)

With the metals done by a production partner (IIRC), pictures in a shapeways shop are probably not checked. (Would be interesting to know if shapeways employees cross-check any rejections received from production partners before passing them on ??)

(And yes, the "good idea" behind automatic disabling of materials might be implemented better with just some kind of warning about potential failure)

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Fri, 04 Oct 2013 13:08:41 GMT
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Thin walls. They indicated a detail on the knot. Here's the thing: it's printed successfully in both Size 6 and Size 13. The rejection was for Size 12. Scale should not be an issue.

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Fri, 04 Oct 2013 13:16:32 GMT

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Correction: it actually printed in Sizes 6 and 10. The point still stands though. If it wasn't too thin at Size 10, like hell it's too thin at Size 12.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Fri, 04 Oct 2013 14:22:40 GMT
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Some height vs width thing again ? (Or, more idle speculation, two or more production partners get assigned orders at random, and WileyWorks just is not on par with ACME Metals ?)

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Fri, 04 Oct 2013 15:25:14 GMT
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The ratio of width to height would be exactly the same in Size 12 as it would in Size 10 or Size 6. I didn't alter any specific dimensions of the object, I just scaled the whole thing up.

If it was thick enough in Size 6, it was thick enough in Size 12.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Fri, 04 Oct 2013 18:23:20 GMT
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I don't want to start a flame war, but I have to agree with the production team on this one.

I have items in my shop that I uploaded 3+ years ago, and they printed successfully. If today I rescale (slightly larger) one of those items, I do not (and should not) expect that the production team would search thru my entire shop (300+ models) to notice that "oh, it worked in another size 3 years ago". There is also the topic of "grandfathered" models - ones where the rules have been tightened such that an older model no longer fits the rules.

I will grant that it would be nice if all the sizes of an item could be listed together as one product, with simply a dropdown for the desired size. That would relieve (a portion) of the problem you're having here.

There is also a proposal that has been made (entered by yours truly) to allow the customer to select some multiplication factor to enable re-sizing an item before ordering. I have recently come to debate the wisdom of that request - we can discuss that elsewhere.

But for today, each model stands alone. Since THIS COPY of this item has never been checked, then it needs to be.

As a shop owner myself, yes it is frustrating to me when some 'copy' of a model is failed for a different reason than the original. A good bit of this is due to different people checking the item at different times. YES, I would like to see a higher level of consistency with the checking. YES, I'd like to see some automated, (but non-binding) software rule-based validations. But, at the same I appreciate the fact that Shapeways is working HARD to make printing more repeatable - unfortunately that means still more rejections in my future for models where I keep pushing the rules.

Subject: Re: Preventing Rejections
Posted by [SavlsSavvy](#) on Fri, 04 Oct 2013 18:27:27 GMT
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We're going to have some tips in the Shop Owner challenge that should help with some of this, too! Thanks for chiming in Stony. We know this process is challenging and we really appreciate your understanding as the process evolves.

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Fri, 04 Oct 2013 19:25:54 GMT
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What annoys me isn't that they didn't go through all my models to ensure that it would print. What annoys me - once again - is the total lack of consistency. Three times in a row operators looked at this model and said 'yep, looks fine'. The fourth time, they had a look and said 'woah, that's no good, reject'. Even without a previous order history to pull up, a printable model should be a printable model, and a non-printable one should be a non-printable one. Full stop. I'm getting very tired of different operators' different opinions influencing whether a model is can be printed or not.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Fri, 04 Oct 2013 19:54:33 GMT

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Quote:they didn't go through all my models to ensure that it would print
Again, the human-powered checks are not performed on models that haven't been sold yet, and for all they know, the geometry from one model to the next could be entirely different. They don't see YOUR workflow to know that one is "merely" a size difference, and it's invalid for them to assume that it is.

Quote:different operators' different opinions influencing whether a model is can be printed or not 100% with you on that part. I regularly campaign for (more) consistency also.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Fri, 04 Oct 2013 20:51:16 GMT
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Stony, with respect, I'm laying down the BS card.

Why?

Because for one of my models that was produced, without any reported problems for quite a while, suddenly last Christmas time I got numerous rejection emails with differing reasons. Eventually in February (after the christmas rush) the model was do-able again.

Since then none have sold (apparently)

So yep, a single consistent reason is understandable, but differing reasons during a busy period, to me is too frustrating to even bother anymore. I got enough stuff going on in my life that I've just walked away from the what I still see as the rejection lottery - people lied to me, I don't trust liars.

Paul

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Fri, 04 Oct 2013 22:19:58 GMT
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@Paul.. please. I was responding only to the "Multiple Sizes" sub-topic above, not to the overall subject.

I fully acknowledge the fact that the application of the rules has been inconsistent over time.

Make NO mistake: I'm frustrated over it also. I just haven't aired my frustrations in public.

I would vote that we split this thread up into sub-topics so that we can keep the discussion(s) a little more focused. There are several aspects of rejections that need to be addressed separately:
Lumping all of it together hides the complexity of the issues.

Rules that don't make sense to the designer(s)

Inconsistent application of rules

Items rejected before printing

Items that pose a risk to the printer itself

Items that break during cleaning - after printing

Items that break during shipping

Model 1 is "the same" as Model 2 - why was Model 2 rejected?

Affect on designers vs customers

Insert your favorite topic here

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Fri, 04 Oct 2013 22:39:13 GMT

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Fair enough.

The multiple sizes, more than likely has summat to do with size/strength ratio before finalising, i.e. smaller in stainless or silver works better than larger due to the 'wet sand' or fragile wax print before infusion or casting.

Paul

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Fri, 04 Oct 2013 23:51:41 GMT

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stonysmith wrote on Fri, 04 October 2013 22:19

I would vote that we split this thread up into sub-topics so that we can keep the discussion(s) a little more focused. There are several aspects of rejections that need to be addressed separately:
Lumping all of it together hides the complexity of the issues.

[/list]

But lumping it all together shows that the the issue desperately needs to be addressed, and we haven't had much more than a cursory nod from the powers that be at Shapeways. If they do start to address this problem then by all means, we can start breaking it up. Until then we need to keep this protest as big and as loud as we can. I'm 'occupying Shapeways' and have been here for ten months. Stony, I would prefer that you not shill for them on this thread. Let them speak for themselves.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sat, 05 Oct 2013 10:27:55 GMT
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I think we would need some kind of digest thread or wiki that collects results from this thread - all the snippets of information buried in the "but I want my newbie project printed" or "and by the way how do you clean" detours. And on the topic of "shilling" - as long as no one really in the know speaks up, I for one am happy to follow the reasoning of someone who appears to be a little closer to the scene than most of us.
(Which certainly does not mean that I believe every explanation put forward in this way)

Subject: Re: Preventing Rejections
Posted by [PeregrineStudios](#) on Sat, 05 Oct 2013 13:43:54 GMT
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stop4stuff wrote on Fri, 04 October 2013 22:39Fair enough.

The multiple sizes, more than likely has summat to do with size/strength ratio before finalising, i.e. smaller in stainless or silver works better than larger due to the 'wet sand' or fragile wax print before infusion or casting.

Paul

That was a plausible explanation until a Size 7 was also rejected last night. Someone in service is just screwing with me now.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sat, 05 Oct 2013 13:51:15 GMT
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So who does the checking on metal orders - someone from shapeways or someone at some (potentially varying?) production partner ?

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Sat, 05 Oct 2013 15:18:59 GMT
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For stainless and varites of stainless, I believe there is just the one production partner, ExOne, although by now they may have licensed out their proprietary methods to other manufacturers. Haven't a clue about silver though,

It would be good to know who does the final checks though, as they are the people that should be communicating any issues with model found at production time - designer errors like detached shells and thin parts etc are picked up by Shapeways staff before the model file is sent to the print partner.

Paul

Subject: Re: Preventing Rejections
Posted by [virtox](#) on Sat, 05 Oct 2013 15:27:33 GMT
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Quote: Stony, I would prefer that you not shill for them on this thread. Let them speak for themselves.

Please keep it civilized without blows below the belt.
Stony has been a very helpful community member for several years.
He suffers as much from these issues as any of you.

His suggestion makes sense, each issue needs to be handled separately to reach the best outcome.

Besides, shill is technically incorrect.
Stony is a moderator and that is fully disclosed.
He is also part of the Beta team that helps to tackle all sort of situations that occur on an ever growing and evolving site.

Full disclosure before I would be shilling myself:

I was once a community member that suffered from numerous bugs and site flaws I just made sure to voice proper solutions and ideas where I could.

As a result, I am now both a member of the Beta team, as well as a Forum Moderator.

This is all on a voluntary base and by choice.

We try to help where we can and relay as much info to the right people as possible.

And we're only human, so please be nice.

Cheers,

Stijn

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Sat, 05 Oct 2013 15:43:14 GMT

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Roy_Stevens wrote Stony, I would prefer that you not shill for them (SW) on this thread. Let them speak for themselves.

Maybe we have different understandings of the word 'shill' but think this is harsh. Stony is always positive, it is true and I do not always have the same views, but it is my impression that he always conveys as much as he is able to and he always helps everyone. Imo he is a major plus to the forums.

Quote: Let them speak for themselves.

But is this not the problem, that they do not participate in these threads? And so we can divide this particular thread up how we like, without meaningful response from people who a) know the facts and b) can change something then it's all just (metaphorical) hot air.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Sat, 05 Oct 2013 20:39:10 GMT

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Let me remind everyone the post that I made that started this thread, and the issue that has yet to be resolved:

Roy_Stevens wrote So a typical product cycle goes like this: I design and refine a new product, print it, occasionally refine it more, print it again, post-process the print including paint, take good photos, upload them, spend some time getting the word out on my new product on message boards, and then the customers start purchasing it and Shapeways REJECTS THE PRINTS!. So all my time is wasted, my name is mud, and I look like a fool. And this has happened more than once. I'm well aware of the design rules and follow them, (thus the I get the prints first time around) but it doesn't seem to matter. So what can I do to prevent this?

And let me put into perspective how I see posts from our esteemed moderators. I feel like I'm picketing outside the congressman's office, and our moderators are like the local P.D. that comes to tell us to calm down and that our congressman is hard at work fixing the problem. So you'll forgive me if say I want to hear from the main office.

Subject: Re: Preventing Rejections
Posted by [TrainThingz](#) on Sat, 05 Oct 2013 20:55:31 GMT
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Rather than breaking it out at this level, kick it up one and make "Preventing Rejections" its own forum on the same level as "Suggestions". Then the individual cases can still be kept together, and they're all collected in one place.

It's certainly important enough, and has enough interest, to warrant that kind of forum.

Subject: Re: Preventing Rejections
Posted by [coaster](#) on Sat, 05 Oct 2013 23:51:10 GMT
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Agreed

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Sun, 06 Oct 2013 21:05:35 GMT
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I repaired and updated my screwy model with the shell problem. This was the first time I

observed the "your model has serious problems so you need to fix it" flag and the "thanks for fixing the model it can now be released for sale" flag status changes. That was kind of cool. It seems that a small extension of the code would allow other flags such as:

"the model has printed before in process A so there's no need to ever check it again in this material" flag

or

"we rejected this model but after communications with designer it was shown to be a false or non-critical error so no need to ever check it again in this material" flag

or

"we approved or printed this model in process A so it is automatically approved for less stringent processes B, C, X, Y, and Z"

Multiple flag categories may not be necessary in the long run. Eventually a "officially approved for future manufacturing in Processes A, B, C, and etc. should suffice and it should be visible on the model page prior to purchase. Of course changing design rules or uploading a new model would likely reset all flags to zero unless a differential rules check could be developed to transfer previous approval flags to the model revision.

The fly in the ointment is that annoying issue of not always getting successful prints and having to track a success percentage of a print. However I would still consider that to be more of a problem of a lack of process control in the printing department (machine settings, improper calibrations, variabilities in source materials, normal machine and operator variations, etc). Design rules always need to reflect the capabilities and normal process spreads of the printing, operator handling, and shipping (in this case) and not the other way around. If you have a good statistical handle on the overall manufacturing process the design rules and checking processes (manual or automated) should become more straightforward.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Mon, 07 Oct 2013 12:42:01 GMT

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I want to give a compliment to Shapeways on my latest rejection. I had a multimodel order where everything had printed except one model which was back in processing so I knew something was wrong. Here was the text:

"We have attempted to print this model several times, but it cannot be cleaned and shipped. The

thin wires supporting the seat backs are not sufficient to support the parts during cleaning. Please consider thickening the seats and seat backs to give a sturdier model."

Clear and to the point, and it tells me they tried. The fix to strengthen the portion of the model they refer to is not hard, and I'll correct it later this week. As I've said before, my goal is to make sure my models can print when a customer orders them and this feedback hopefully will allow me to do that and avoid future rejections.

Dave

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Mon, 07 Oct 2013 16:51:35 GMT
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That is an excellent description of a problem. So I would assume that the design met all basic design rules but that this is a special case such that it would be impossible or impractical to have additional design guidelines that might cover this physical arrangement of wires and other structures in the model?

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Mon, 07 Oct 2013 17:06:26 GMT
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It probably fell into the "wire v. wall" grey area, a difference that seems to defy a rule.

The model was WSF, and the connection was about 1.5mm wide and .8 mm thick and rectangular in cross section, so there was quite a bit more cross section than a 1mm round wire (1.2 sq mm vs. .79 sq mm for a 1mm round) and there were two connections supporting the back of the seat. This is a scale model of a passenger car that railroads used to use, designed to fit into a particular train model made by a particular company- and there are a bunch of these seats in it. <http://shpws.me/pgmO>.

So now I have a better understanding of how to design a feature like this in the future. If Shapeways can't clean the model because of my design it is defective no matter what the design rules say.

Dave

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Mon, 07 Oct 2013 18:41:50 GMT
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I wonder if they have recently changed how they clean WSF parts. I have some pen parts with deeper cylindrical cavities that used to be filled with powder beyond an inch or so behind the exterior hole. I just got a new batch and they were clean as a whistle to the full depth of the cavity.

For me that's a good thing since it reduces efforts to clean them out upon arrival and it's good for Shapeways since it lets them recycle more powder. My parts are rather robust in comparison to those tiny things you railroad people like to make. But I can imagine for small and delicate parts an improved or different cleaning process can also affect the ability to successfully print and ship parts now that may have been shipped with more residual powder in the past. Or this could all be due to an operator with better cleaning techniques. Anyway, I suppose it's another variable that can affect final success rates.

Subject: Re: Preventing Rejections
Posted by [railNscale](#) on Thu, 10 Oct 2013 20:11:09 GMT
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Why, if a model doesn't meet design criteria according to a Shapeways-Team-member do I receive a mail as follows?

"Hello railNscale,

After taking a closer look, we cannot print one of the models in order 312075 (placed on 10/09/2013).

We've credited $\$xyz$ to your account.

You may be able to update and print your model based on the information below.

If you have questions or concerns contact us at: service@shapeways.com. We're happy to talk with you about this rejected model before you update it."

This means that the order is cancelled? Why does Shapeways not allow modifications before cancelling?

In this case the mentioned problems were partially not correct, since the manual quality check made an error (just measuring half the width of a component).

To me this is quite a contrast to the statement of Shapeways as mentioned in the FAQ:

"My model uploaded correctly, but after ordering you cannot print it. Why?"

3D Printing is both art and science. Our goal is to help you make anything you can imagine, but sometimes your model cannot be printed in the materials you choose at the quality we strive to achieve.

Once you place your order, one of our production engineers will closely examine your model. They will check for printability, but also if the model will be too fragile within shipping and handling. In some cases, we'll try to print a model but find out that it cannot be 3D Printed with certainty, at the quality level you would expect. In all these cases, we will provide you with detailed information on the issue and how to solve it. We're here to help!"

Please spot the difference....

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Thu, 10 Oct 2013 20:48:51 GMT
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1. If you had several models in your order, only the unprintable one has been cancelled.
2. Fixing actual errors will almost inevitably change the volume of material used, and hence the price.
3. Shapeways would have to set some more or less arbitrary time limit for such fixes or they would be drowned in "dangling" orders soon.
Their business model revolves around efficient mass processing of print orders, which naturally limits the amount of counseling their engineers can provide to individual customers.
4. If a rejection is clearly in error, and errors do happen especially a shapeways takes on new staff - email service right away - they might get the cancellation removed, or at least be able to issue an additional credit covering the additional shipping cost
5. If the picture you received in the email does not give a clear enough indication about what is wrong or how you could fix it,
email service for clarification.

Subject: Re: Preventing Rejections
Posted by [railNscale](#) on Fri, 11 Oct 2013 14:51:43 GMT
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mkroeker wrote on Thu, 10 October 2013 20:48:1. If you had several models in your order, only

the unprintable one has been cancelled.

2. Fixing actual errors will almost inevitably change the volume of material used, and hence the price.

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Their business model revolves around efficient mass processing of print orders, which naturally limits the amount of counseling their engineers can provide to individual customers.

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5. If the picture you received in the email does not give a clear enough indication about what is wrong or how you could fix it, email service for clarification.

1. This is really the big problem. To save shipping costs I order multiple models at once. By this I can reduce the shipping cost to product cost ratio to a more acceptable level of 1 to 4. Yes, most of my models are small. By deleting parts of the total order I am more or less forced to re-order the cancelled products, hence doubling shipping costs.

2. This seems logic. But is often not true. In all the cases of rejections the requested modification was adding 0.1 mm material. In my last order 312075, 2 out of 4 models were rejected because of very local thin material issues. After solving these two models the prices of both models went up by 0.00 euro. Especially since SW does not give me money back but instead keeps it and give me a credit instead the potential up-cost of a model could very easily be solved.

3. I regret the one-way direction in this policy. This is in my opinion quite contrary to the image Shapeways wants to promote. Especially with new techniques this is not very helpful for customers. Secondly Shapeways Quality checks are far from robust. I noticed that with my orders that roughly 1 out of 3 remarks by Shapeways are incorrect. By without consulting the designer cancelling of orders is bold. Furthermore I noticed that about half the mentioned problems are not true issues, but merely robustness-issues due to the choice of SW to optimize their production proces. Many models were produced without any issues. And later-on the exact same design features were proven not good enough for production.

4. Well I am awaiting SW's proposal.....

5. Most of the time that seems to be not a big problem. The problem arises when you upload models. I find it difficult to check the uploaded geometry with the tiny screen.

So, why does SW uses 'strict rules' and shows hardly any kind of flexibility towards their customers/designers, and in the same time allow them self to 'optimize their print processes' (stacking, orientating, delaying etc w/o consulting customers resulting in potential quality issues) and still shows not to be able to truly justify models? Is this shaping the future?

Subject: Re: Preventing Rejections
Posted by [CGNScale](#) on Fri, 11 Oct 2013 17:40:46 GMT
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I would simply like the following option at check out:

If an issue is discovered on one of the items, cancel my entire order. Yes/No

By default, they will only remove the offending item. But, as Rail N Scale points out above, if I'm ordering multiple models at once to save shipping I still have the option to save that shipping.

I don't think Shapeways should delay orders in this event. That's just a logistical nightmare. Cancel them outright and I can re-order at my convenience, even if it's just 30 minutes.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Fri, 11 Oct 2013 18:17:24 GMT
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This sounds like a good idea. The only problem would be if part of the order was already in the printer. Different materials may hit production and be checked at different times.

I have called Customer Service and cancelled an entire order when one item was rejected, and upon re-ordering the order was bigger, so they made out.

They also offer you the chance to cancel an order from the "Orders" page, which I have used when I hit the order button and then realized I messed it up.

Dave

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Fri, 11 Oct 2013 23:40:20 GMT
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Cancel in Orders page is only possible at the beginning.

The Cancel if something fails would be as simple as check everything before committing the jobs. Yes, print problems will still happen, but all the other cases in which staff sees a problem will be

gone.

Subject: Re: Preventing Rejections
Posted by [railNscale](#) on Sat, 12 Oct 2013 06:09:34 GMT
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Well, that would be a major improvement.
The model checking bit is by far the most intransparent process step of SW.
Just by pre-check before actual ordering (read: paying) will make a real improvement.

The current situation at SW addresses all problems at the customers' side and really doesn't show the helpful face as suggested on the website. By telling 'we can't change orders', and 'an update will likely add costs to the product', does not show flexibility.

A second reason I'm not keen on doing a lot of business at SW is the fact that all my payments seem to stick in credits. This is not so healthy since it will not motivate SW to do a lot about the current situation. The money is in anyhow. I prefer the 'no cure no pay' system.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sat, 12 Oct 2013 08:36:59 GMT
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While payments "seem to stick in credits" by default, all it takes is a message to service to get them back to your bank (or paypal) account if you do not plan to resubmit the order with a fixed model.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Sat, 12 Oct 2013 14:42:13 GMT
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While this is all well and good, I think it has been established that Shapeways service is top-notch and are willing to help with just about anything when a designer is ordering their own designs for the first time. I've had numerous occasions where they have refunded my shipping where all but one of my test prints were rejected, I've asked them to cancel the order - which they can't - and then ask them to refund the shipping because it's usually the \$4 item that makes it through the inspection. I consider it part of the design process. The real breakdown happens when I'm trying to put on a professional appearance on my storefront with designs that have already made it through the inspection/printing process and should be ready for customer consumption.

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Sat, 12 Oct 2013 15:05:18 GMT

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Quote:While this is all well and good, I think it has been established that Shapeways service is top-notch and are willing to help with just about anything when a designer is ordering their own designs for the first time.

I whole-heartedly agree. I just had a case almost exactly as you describe and I don't think anyone could have handled it better (thanks again, Gary!). I have not used other services but I would be surprised if they can match SW on this.

Quote:The real breakdown happens when I'm trying to put on a professional appearance on my storefront with designs that have already made it through the inspection/printing process and should be ready for customer consumption.

Unfortunately, I also have to agree with this. The Manage Inventory seems to be unusable to me, and without more certainty on the reproduce-ability of models it is hard to invest much in shop promotion.

Subject: Re: Preventing Rejections

Posted by [natalia](#) on Wed, 16 Oct 2013 01:23:44 GMT

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Hi guys,

I know this is always going to be a hot topic because of the many variations of rejections that are possible, but it's heartening to hear that many of you are working together with the service team to resolve issues on a case by case basis.

I know inconsistent rejections are infuriating. Your #1 ask from us is also our #1 priority to fix. I know we haven't posted in a while on what we are working on, so I wanted to share some updates since my last post

As I said then, we're working on making guidelines much better. This includes wall and wire definitions (which I know are particularly hard to define) and rewriting the design guidelines to be easier to understand and with less ambiguity. The more we are all on the same page about what can be consistently printed, the less chances we have of rejections (especially those that have been printed before).

Another big step is standardizing checking. This involves making sure every engineer everywhere is making the same decisions on whether or not to reject models. Right now, there are a certain amount of judgement calls involved in checking, and this causes the inconsistent rejections and

printed before rejections. We are working hard to calibrate checking so every engineer is consistently making the same decisions about printability, and giving you enough feedback to be able to print your models going forward.

I know this isn't everything you want to hear, but I wanted to share that we ARE making progress, and each step is a step towards a future where you can confidently design and print amazing things.

Natalia

ps.

A little while ago, I posted this, as an insight into our process, and I wanted to share it again for those that are coming new into this discussion, and to share with you all the ways we are working hard to make this process better:

(from here its copy paste from our last message, no edits)

We have all talked a lot about implementing a "printed before" flag, and while this seems like a magic bullet, it is only a small part of a complex puzzle.

Because we want you to be able to create whatever you can imagine, we check every single ordered model to ensure that it will retain its quality during the production, cleaning, packing, and shipping processes. We want to work with you to resolve any potential issues that your model may have, and the way we (currently) do this is by sending rejection emails to help you improve your models.

Because we would love your help in resolving any issues that we find, we welcome and encourage you to contact us! It's absolutely worth emailing us if you disagree with the rejection reason so we can resolve it together. We'll be the first to admit that our processes are far from perfect, but as we are constantly working to improve, we would love to continue having conversations with you on this topic.

With that said, we would like to give you a bit of insight into our processes as we have several model checks in place. We investigate the production history and ensure quality at each of these production checks.

1. Automatic check on upload to ensure printability

2. Production

This is all about checking the model and flagging it for rejection. Going back to the "printed before" flag, I'm happy to say we now have the first step of this type of feature in our system. Specifically, we can now see how many successful prints there have been of a particular model version.

Basically, if the rate is higher than 50% successful we will print it, and not reject it. And most importantly, this flagging only works for a specific model version.

When revising a model's design, make sure you update your model via uploading new file revisions on the model edit page, not by uploading a new model via the create page.

3. Supply Chain

Here we can modify the rejection reason, to give you more context or details. Our production checks involve us analyzing the production history for your specific model. Again, it is important to mention here that when revising a model's design, make sure you update your model via uploading new file revisions on the model edit page, not by uploading a new model (via the create page).

Like I mentioned earlier, this is not a 'be all, end all' system, but rather it is the beginning of having a comprehensive printed before flag. This is the only way we can keep track of your specific model and see that it has indeed been printed before. We are improving this process every single day, and we're trying hard to stay agile in refining our processes.

4. Customer service

The last place where we check models is in the customer service team. This is where we get to email you directly, so help us help you by emailing us back if you have questions about your rejection. We want to have these conversations with you!

Shopper rejections

We understand these are the most painful rejections because it is a bad experience for your customer and may damage your reputation as a designer/seller. There are a lot of great shops on Shapeways, and the best designers have adopted the procedure of test-printing their products before they offer them up for sale. This accomplishes a few important things:

1. It lets you make sure the model/design comes out exactly as you imagined it would.
2. It lets us have a record that it has, indeed, been printed successfully (at least) once.
3. It allows you to take a picture of the model/design. This greatly improves your product presentation and you are therefore more likely to make sales!

One last point to mention is our design guidelines. When you design crazy awesome models, we get to test if our machines can print them, and we all learn something. We want to work together to make sure your models are printed at the highest quality, and by the same token we always try to push our own limits through what you make. We then take these lessons and create design guidelines to help other people design things too.

We are excited to be able to announce that our community team recently grew in size, and one of our upcoming projects is to rewrite the design guidelines to be easier to understand and with less

ambiguity. So stay tuned for that!

As many of you have pointed out, we are all in this together! We are learning to work with a new technology and we want to keep enabling you to print amazing things. Rejections are a way to learn, to improve, and to create the future together. Let's keep the conversation open and explore where we can go together.

Natalia, on behalf of Shapeways

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Wed, 16 Oct 2013 03:19:49 GMT
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natalia wrote on Wed, 16 October 2013 01:23Hi guys,

This is all about checking the model and flagging it for rejection. Going back to the "printed before" flag, I'm happy to say we now have the first step of this type of feature in our system. Specifically, we can now see how many successful prints there have been of a particular model version. Basically, if the rate is higher than 50% successful we will print it, and not reject it. And most importantly, this flagging only works for a specific model version

Natalia, on behalf of Shapeways

I'm very happy to hear that this will be implemented. Will you please make this success/failure rate visible to the designer?

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Wed, 16 Oct 2013 07:17:23 GMT
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Quote:Shopper rejections

... There are a lot of great shops on Shapeways, and the best designers have adopted the procedure of test-printing their products before they offer them up for sale. This accomplishes a few important things:

1. It lets you make sure the model/design comes out exactly as you imagined it would.
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Okay, I appreciate the efforts that you and your team go to to print Models that in theory should be rejected, and I have benefited from it myself. And I fully agree with creating test prints both to validate the model (from designer and SW perspective) and to provide photos for the Shop. But these two approaches can be mutually exclusive. If I am test printing a Model for my Shop which is expensive, then it does not benefit me really to have that production put through on a one-off basis. Yes I have the object to look at and check, but if I know (or worse, don't know) that it will be rejected the subsequent times then there is no point in photographing and possibly marketing that product, because first I must modify the Model and request another (expensive) test print.

There has to be a way to know that a specific Model will print and print reliably (occasional, normal snafus notwithstanding). If there is a way to keep the 'we pushed the limits for you but please don't do it again' Models so much the better, but for me that is secondary. The economics of designing for shops demands it, I believe.

Thanks

[Edited 'counterproductive' to read 'mutually exclusive'.]

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Wed, 16 Oct 2013 08:32:34 GMT
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Perhaps you could add a checkbox on either the model or order page (the former probably makes more sense) "This is a shop item"/"Verify for repeated printing"/"Expect to see more than one order of this part" ?

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Wed, 16 Oct 2013 12:27:12 GMT
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I like mkroeker's idea. When a design is ordered perhaps the designer could let shapeways know that it is designed for multiple sales- a kind of "be mean to this model" choice. That way shapeways avoids multiple failed print expenses on a marginal model, and the designer gets more assurance that the model will print when a customer orders it.

It also helps a developing designer, and I include myself in this category, to learn what will and won't work in a design and prevent the learning of bad habits. That is what happened to me- models that inadvertently violated the design guidelines successfully printed at the test stage, I offered them for sale, and subsequently they were rejected when a customer ordered them. It would have been so much better if they were rejected the first time and I had corrected them, and didn't make the same mistakes on the next few models I designed, which led to more rejections and redesign.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Wed, 16 Oct 2013 16:57:51 GMT
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dcyale wrote on Wed, 16 October 2013 12:27 It would have been so much better if they were rejected the first time and I had corrected them, and didn't make the same mistakes on the next few models I designed, which led to more rejections and redesign.

Dave Yale

The question I have is whether your issues were really problems that caused failed prints or if they were just features that existed in the grey area between wall/wire/detail and were caught by an operator that wasn't feeling particularly helpful that day. I get those a lot, and if the 50% success rule is truly followed then all those problems will go away. This is why I think the designer needs to know the print success rate. If I see a model down below 75% success rate, maybe I need to take a look at the design.

Subject: Re: Preventing Rejections
Posted by [dycyale](#) on Wed, 16 Oct 2013 17:11:50 GMT
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The "defects" I am refereeing to in particular were in violation of the design guidelines. When I started I saw "guideline" I pushed a bit, not interpreting that as hard fast rules. For instance the one that still gets me is a wire I had that was square in shape but slightly thinner than the

guideline. A "legal" round wire had less cross section than my square wire, but after a successful test print, photos, and offering it for sale it was rejected when a customer ordered. My argument fell on deaf ears at customer service. And, I my thought process was that it was OK as long as the cross section was there, thinking the strength should be the same, so I did it again on other models prior to the first model being rejected. All had to be corrected.

I understand and do not argue that Shapeways has to be able to have design rules, and different thicknesses for different cross section shapes is too completed to implement. I just wish my first model had been rejected instead of arriving in a box on my doorstep.

The suggestion I seconded is for Shapeways to allow designers to choose, and their technicians to know, that a model should be given hard and close scrutiny so that it has the best chance of being a robust and reliable design which benefits both the designer and shapeways.

Since then I have translated the word "guidelines" as "rules" and it has been better. I even have models that so far have printed every time!

Dave Yale

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Wed, 16 Oct 2013 18:16:49 GMT
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dcyale wrote on Wed, 16 October 2013 17:11

I understand and do not argue that Shapeways has to be able to have design rules, and different thicknesses for different cross section shapes is too completed to implement. I just wish my first model had been rejected instead of arriving in a box on my doorstep.

Dave Yale

I would argue the opposite. If I can get a robust design that bends the rules past the checks first time out and then rely on the 50% success rule from then on out, I can put mullions back in my windows, brakes back on my trucks, and use tangent mates on curved surfaces. Things that I know from experience work well but get rejected by overzealous operators.

Subject: Re: Preventing Rejections

Posted by [railNscale](#) on Thu, 17 Oct 2013 18:49:27 GMT
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natalia wrote on Wed, 16 October 2013 01:23

Shopper rejections

We understand these are the most painful rejections because it is a bad experience for your customer and may damage your reputation as a designer/seller. There are a lot of great shops on Shapeways, and the best designers have adopted the procedure of test-printing their products before they offer them up for sale. This accomplishes a few important things:

1. It lets you make sure the model/design comes out exactly as you imagined it would.
2. It lets us have a record that it has, indeed, been printed successfully (at least) once.
3. It allows you to take a picture of the model/design. This greatly improves your product presentation and you are therefore more likely to make sales!

As you can see all models in our shop were ordered by us before putting them on sale. All models. However for some models we made SETs consisting of multiple models that were all ordered successfully before. Reason for these sets: N-scale models are so small that the start-up costs are higher than the actual material price.

Still we get occasionally rejections. This is just not acceptable. I fear it's ruining your reputation. Really SW has to implement a 'build before' flag and has to accept that if models were successfully printed before they just are printable. And I'd like to see this flag being showed at any model that was printed before Visible for everyone.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 18 Oct 2013 07:35:21 GMT
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Hi railNscale,

I have explained this on a dutch forum to you as well.
We do have a "Printed Before" system.

But the issue is uploading models in a set and then separating them.

Quote: However for some models we made SETs consisting of multiple models that were all ordered successfully before.

Like previously explained, a model will only have a Printed Before if that model ID has been printed before.

This means that if you first print a set and then separate the pieces and upload them individually, it will lose the Printed Before flag.

We print hundreds of models every single day, unfortunately our production team is unable to remember every model and be like "we have printed this same model in a set (different model ID) 2 weeks before".

Please do note: this doesn't mean that you aren't right, because yes, our system needs to change and we do need a better system.

But by first printing a set and then offering the parts individually removes the printed before flag.

Subject: Re: Preventing Rejections

Posted by [railNscale](#) on Fri, 18 Oct 2013 08:07:48 GMT

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Well, I've sold 4 models yesterday (hurray good day).

3 out of 4 were rejected because SW suddenly sees problems. Yes the models were printed before.

Of course I got already e-mails by foreign customers asking what's going on.

And you can guess what happens on fora.....

What's wrong with SW?

It is really insulting to get informed via the backdoor that my models couldn't be printed for a customer.

SW really has to change the work-around a.s.a.p. Let's start with FIRST consulting the designer.

As designer I already get hardly any information about the printing process. What about other people who decided to buy something via the internet?

It's nice to read that SW is concerned about the quality of their prints. One major thing SW doesn't seem to think about is their designers/customers.

I must say it's almost end-of-experiment by me.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 18 Oct 2013 15:47:43 GMT
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railNscale wrote on Fri, 18 October 2013 08:07Well, I've sold 4 models yesterday (hurray good day).
3 out of 4 were rejected because SW suddenly sees problems. Yes the models were printed before.

This tells me that someone wasn't being truthful when we were told that the 'printed before' flag was being followed. I lost my cool this morning when the third update I had done to a model to address fabricated issues was rejected again because they measured a wire at the thin point of a taper. I have a dozen of these models sitting on my workbench, the design is (to me) obviously robust enough to print. I can't be chasing my tail every time someone decides that what I've designed looks too complicated. That's the point of rapid prototyping. If it wasn't complicated I'd be having it injection molded in China right now.

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sat, 19 Oct 2013 10:31:45 GMT
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"Printed before" as in "exactly this model file" ?
Still I wonder if shapeways could modify their rejection process for third-party orders - perhaps contact the designer first and give him a 24 hour grace period to rebut spurious rejections (wrong measurements, exact same model printed before under another model number) ?

Subject: Re: Preventing Rejections
Posted by [NickHawkins](#) on Sat, 19 Oct 2013 13:49:15 GMT
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mkroeker wrote on Sat, 19 October 2013 10:31"Printed before" as in "exactly this model file" ?
Still I wonder if shapeways could modify their rejection process for third-party orders - perhaps contact the designer first and give him a 24 hour grace period to rebut spurious rejections (wrong measurements, exact same model printed before under another model number) ?
This is tricky to do for a global business where designer, purchaser and factory may be in different time zones, how would you measure the 24 hours response time?

Also how, exactly, do you classify a spurious rejection? and what happens if the fixed file costs more to print than the original?

I've learnt where I can bend the guidelines and what shapes have to be designed conservatively, gaining this experience was a rough trip at times and I still don't get it right all the time but I'm reasonably happy with the current system.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Sat, 19 Oct 2013 14:49:23 GMT
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The time frame is tricky, however everyone keeps bringing up "What if the corrected models costs more?" That's easy in concept, although a complete software rewrite, and therefore hard, to implement- The additional cost could come out of the designer's mark up assuming there is a mark up and it is enough. I would rather take a profit hit than look bad to a customer.

It would have to be restricted to models that had successfully printed in the past, though, as a new model could have MANY problems, especially if done by a new designer- like my first models did.

In this business model it would have been nice to have implemented in the beginning.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Sat, 19 Oct 2013 17:06:55 GMT
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I lost my cool several months ago - the doctor reckons I should be back to 'normal' by July next year (2014 - yes seriously, though a lot of other stuff is involved, Shapeways was one of those bricks in the wall that caused my head to break).

I PM'd Natalia a few days ago, but have yet to receive a response.

From what I see, sitting on the sidelines, is a lot of 'Ra-Ra' speak with very little action.

I mentioned to Anna, a long time ago, that I saw Shapeways headed the same way as Microsoft - release now, fix later attitude - and I still see the same.

I have a question for Shapeways.

Why is it that you, Shapeways, listen to your customers, make a the right noises about what you have listened to, but yet have not paid a single bit of notice to a single word?

Going forward... a few suggestions.

- General

Release everthing to your Beta testers (I gave that up as another pointless head banging exercise, as the most important changes were not live to Beta testers)

Listen to and act promptly on feedback.

Do not crow about investment funding without crowing about definite fixes that are live.

Do not (repeatedly) say 'Yep, its on the todo list' when the issue is never going to be resolved (e.g. USD/Euro nonsense)

- Specifically about rejections.

I have been asking for a very long time for clear and open communitcation between production partners and designers when a rejection occurs - impliment this. I should save a lot of time, confusion and frustration getting a messge from the horse's mouth rather than 'he said, she said' via a 3rd party (i.e. Shapeways Customer Sevices).

If you (Shapeways) are able to make a statement about a improvement then bloody make sure the improvement works before telling everyone that it's good to go - do not tell your customers that the printed before flag is in place when clearly it is not.

Shapeways, your customers are the designers, without designers there would be no products for sale.

So please don't alienate your customers with dodgy practices.

Paul

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Sat, 19 Oct 2013 18:26:45 GMT

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NickHawkins wrote on Sat, 19 October 2013 13:49This is tricky to do for a global business where designer, purchaser and factory may be in different time zones, how would you measure the 24 hours response time?

I am aware of the timezone problem, and one can probably name a hundred perfectly normal situations where it is impossible for the designer to act within 24 hours, but it might be a trade-off that helps resolve some of the current problems without imposing too much administrative effort at shapeways (i.e. a measure that could be put in place without much discussion and

reorganization).

Quote:Also how, exactly, do you classify a spurious rejection?

Those where a shapeways engineer misplaced the reference points in netfabb, or decided that some negligible detail would not print perfectly (I think Mr.Nib mentioned such cases with his pen blanks recently)

Quote:and what happens if the fixed file costs more to print than the original?

My suggestion specifically covers the case where no fixing of the file is involved - where the designer only needs a chance to tell shapeways that their engineer made a mistake, or to prove that the model or detail in question was already printed successfully as part of another model file. (A connection that we cannot expect the shapeways engineers to make, unless their database software were upgraded to perform a 3d similarity search on models)

Quote:I've learnt where I can bend the guidelines and what shapes have to be designed conservatively, gaining this experience was a rough trip at times and I still don't get it right all the time but I'm reasonably happy with the current system.

Fully agreed - it seems to me that most problems arise where both the designer and shapeways are proud to create something right on the edge of their current capabilities, and then learn that it is not reproducible during everyday operations. (See PopeDesign's thread in the general forum about his miniature bulldozers that were featured models once and rejected later when ordered by others).

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Sat, 19 Oct 2013 18:40:19 GMT

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mkroeker wrote on Sat, 19 October 2013 18:26...

Fully agreed - it seems to me that most problems arise where both the designer and shapeways are proud to create something right on the edge of their current capabilities, and then learn that it is not reproducible during everyday operations. (See PopeDesign's thread in the general forum about his miniature bulldozers that were featured models once and rejected later when ordered by others).

Exactly why I have been asking for clear & consise communication from Shapeways' production partners.

Exactly what happened with some OO scale phone boxes, featured no less than twice on

Shapeways and once in Hornby Magazine.

Another question for Shapeways.

At what point during the '50% fail = no print' exercise does the designer get informed as to what issues there may be before the 50% limit is hit?

Paul

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Sat, 19 Oct 2013 23:25:05 GMT
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stop4stuff wrote on Sat, 19 October 2013 17:06
I PM'd Natalia a few days ago, but have yet to receive a response.

Natalia is @ the Dutch Design Week this week.
I'm sure she will answer the PM after the event

Mitchell (1:24am here)

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Sat, 19 Oct 2013 23:37:38 GMT
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24 hours? It could also be 72 (and weekends don't count)... it's just 3d printing, not life or death!

stop4stuff wrote on Sat, 19 October 2013 17:06- Specifically about rejections.
I have been asking for a very long time for clear and open communication between production partners and designers when a rejection occurs - implement this. I should save a lot of time, confusion and frustration getting a message from the horse's mouth rather than 'he said, she said' via a 3rd party (i.e. Shapeways Customer Services).

You are not alone when asking about proactive actions* instead of always waiting for the big rush... and then have plenty of final customers think SW and the designer suck. The signals are mixed: officially promoted items, tutorials about using advertising, advice that photographed items sell better... but no warranties that all those is not just a waste of designer's resources.

*: Keep modellers informed of reprints so everybody knows something is not 100% successful, not just the backoffice. Show photos of failures to understand why. Etc.

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Sun, 20 Oct 2013 07:37:34 GMT
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SW seems to love paradoxes like:

Only by printing your Model can you prove it is printable and get the photos you need to promote it.

BUT

By printing your Model once we in no way warrant that it will print again.

And:

You need to work hard on your shop to get a coherent design and present your Models in the best possible light.

BUT

The tools we give you to achieve that are not good and in fact have taken a backwards step. (Oh and btw the Models might not print anyway.)

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Sun, 20 Oct 2013 10:27:03 GMT
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Hey all,

railNscale wrote on Fri, 18 October 2013 08:07 Well, I've sold 4 models yesterday (hurray good day).

3 out of 4 were rejected because SW suddenly sees problems. Yes the models were printed before.

Of course I got already e-mails by foreign customers asking what's going on.

And you can guess what happens on fora.....

Just wanted to inform you that I have had a phone call with railNscale and explained the issues.

Those didn't have a "Printed Before" flag.

Although one rejection was doubtful (sprue rejection)

The other rejections are, unfortunately, valid due to a part sticking which is printable, but will always break during cleaning/shipping.

The part sticking out was not on his previously successful print.

stannum wrote on Sat, 19 October 2013 23:37

*: Keep modellers informed of reprints so everybody knows something is not 100% successful, not just the backoffice. Show photos of failures to understand why. Etc.

I like the idea of sending an automated email if your model is being reprinted!! (lemme bug some people)

Though it happens from time to time that the model breaks during cleaning which is not your models fault but the person doing the cleaning.

In that case you would receive an email that the model is being reprinted and thus probably giving you the feeling that something is wrong.

Same goes for tray crashes.

But I'm sure we can define those "reprints" better and only inform you when it has something to do with your model.

--

Also on a personal note:

I have not had a rejection in at least a year in my personal train shop (www.spoorobjecten.nl) and still do sell around 100 to 200 models a month.

This is mainly cause i try to stay way above the design rules without making the model look bad. (for example, my trains have a wall thickness of 0.8mm in FUD, yes i can go lower, but 0.8mm is good for strength and I'm on the save side)

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sun, 20 Oct 2013 12:22:05 GMT
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stannum wrote on Sat, 19 October 2013 23:37:24 hours? It could also be 72 (and weekends don't count)... it's just 3d printing, not life or death!

Just tossing a number here - could be 72 or anything, but we probably need to find a balance somewhere, so that shapeways does not get buried in pending orders. ("Until noon of the next business day, NY timezone" ? That would still allow someone at shapeways to conclude the affected order without much delay iff my idea is feasible at all)

stop4stuff wrote on Sat, 19 October 2013 17:06

I have been asking for a very long time for clear and open communication between production partners and designers

Production partners may be another, bigger can of worms - how forthcoming are they about production problems, how much additional fluctuations in personnel and production quality may be encountered there ?

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sun, 20 Oct 2013 12:29:17 GMT
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stop4stuff wrote on Sat, 19 October 2013 17:06

Do not crow about investment funding without crowing about definite fixes that are live.

I used to be annoyed by this (and the "US flag waving") as well, until I concluded that it is probably directed (however indirectly) at an entirely different audience - investors who want to rise with the next bubble, and may not even care about how or if 3d printing works, as long as it a hot topic everywhere and they see that other investors put their faith (i.e. money) in it.

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Mon, 21 Oct 2013 00:14:56 GMT
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MitchellJetten wrote on Sun, 20 October 2013 10:27

But I'm sure we can define those "reprints" better and only inform you when it has something to do

with your model.

The idea is about real failures, not spamming the designers every time the cat trips the power cord.

Quote:

(for example, my trains have a wall thickness of 0.8mm in FUD, yes i can go lower, but 0.8mm is good for strength and I'm on the save side)

It sure saves the issues with cylinders (high face count prisms), where a 0.01mm difference becomes a reject.

Subject: Re: Preventing Rejections
Posted by [Vidalcris](#) on Tue, 22 Oct 2013 14:38:56 GMT
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Just one more funny rejection i received ...
Look like purple is harder to make than blue lol

File Attachments

1) [Sans titre-1.jpg](#), downloaded 155 times

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Tue, 22 Oct 2013 14:48:53 GMT
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Judging from that list, the blue one has not been checked yet - the model appears to be private, but what little can be seen from the thumbnail suggests it may be too fragile to survive the mandatory polishing step.

Subject: Re: Preventing Rejections
Posted by [Vidalcris](#) on Tue, 22 Oct 2013 14:51:35 GMT
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Ok you can protect Shapeways if you want
I created those models one years ago and i printed them using shapeways, Sculpteo & private printers.

so i already printed them around 40 times.
But anyway you are right this is impossible to print

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Tue, 22 Oct 2013 15:00:59 GMT
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Not protecting anyone, just an observation - as far as I know, a model in the "Processing" step is queued for checking (i.e., the money has been received - payments by bank transfer take a few days), just as "In Production" does not actually mean you can already see it growing in a printer somewhere.
Also bear in mind that shapeways changed their dyeing process a while ago, so any earlier models you received - or those received from competing services - may not have been polished. (Probably a case of "you can get it in any color here, as long as that color is black" - as black strong&flexible is still dyed without polishing.)

Subject: Re: Preventing Rejections
Posted by [Vidalcris](#) on Tue, 22 Oct 2013 15:06:23 GMT
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You are right how can you protect a firm that dont change the price but change the process and then become worst, that's really awesome...
Thanks a lot Shapeways for improving your services

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 22 Oct 2013 15:08:28 GMT
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I had another rejection because of the raised lettering on a copyright notice. Funny thing is the model prints fine in 1/87 scale, and the rejected model is in 1/64 scale from the same master design, so the lettering is actually bigger. I guess that is a case of the "previously printed" flag saving me on the 1/87 scale version.

Not a big deal- I'll just remove the copyright notice. In the size of my models I don't think it's possible to have a raised letter design that passes the guidelines in SWF, even though many of my older models have it. I don't bother anymore on the newer ones in SWF.

I have come to the conclusion that as long as I push right against the design guidelines I am going to have rejections like this. It is simply inevitable with a human being in the process.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [Vidalcris](#) on Tue, 22 Oct 2013 15:08:43 GMT
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Just for information Scultpeo can print the same models 2x smaller without any problem...

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Tue, 22 Oct 2013 15:14:44 GMT
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How about opening a new thread here in Suggestions about wanting the unpolished colors back ? Probably better than turning this one into a general rage thread once again. (And I seem to remember that change of process was far from universally applauded when they came up with it... so it might make sense for all involved to get some kind of opinion poll going.)

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Tue, 22 Oct 2013 15:29:55 GMT
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Vidalcris wrote on Tue, 22 October 2013 15:08 Just for information Scultpeo can print the same models 2x smaller without any problem...
It's a bit difficult to say anything factual until you know why they were rejected.

Subject: Re: Preventing Rejections
Posted by [Vidalcris](#) on Tue, 22 Oct 2013 15:36:44 GMT
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Rejected for a spike as always.

it's easy to measure a spike and say that this is not thick enough...

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Tue, 22 Oct 2013 15:47:41 GMT
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Huh ? There goes my polished theory... Did they share any information about the previous print success rate of this model (as stonysmith suggested they would do now), or did you make any changes to the "successful" model that would invalidate its previous history ?

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Tue, 22 Oct 2013 17:08:45 GMT
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Just popping it to let you guys know we are still listening and still working diligently on tools, tutorials, and guidelines to assist in making perfect products every time.

For all individual issues, please email service and feel free to post about your issue separately so that we can work on individual issues outside the mass of this thread. We have members dedicated to helping you solve any and all print-ability issues. Please keep the mass discussion here, and any individual posts please try to keep on topic of the original post.

As for discussion of competitors, we do appreciate insight into what they can and can't do, but please refrain from suggesting other services.

Thank you again for your input, and I hope to have news for you in the near future.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 22 Oct 2013 18:34:35 GMT
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Actually, discussing specific rejections is helpful so designers know what to avoid. If I can learn from someone else's rejection it may prevent me from making the same mistake. It is from discussing specific examples that this thread actually has a lot of learning in it, along with some messages that might have crossed the respectful disagreement line into something less helpful.

Also, when I started getting rejections on models that previously test printed OK, it helped me understand that it was a system wide issue and many designers were facing the same situation, not something that was only effecting me and my designs. That was actually important and somewhat reassuring.

Almost everything I have learned has come from Shapeways' forums and tutorials, or some other public forums, and I feel I have progressed from a rank amateur up to a novice in my design skills.

As to discussions of other services, I do see your point in Shapeway not wanting to host ads for competitors.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Tue, 22 Oct 2013 18:41:20 GMT
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Dale,

I'm glad that we have been helpful in advancing your knowledge. This thread certainly has a place, I just wanted to point out that if someone wants one on one guidance, this thread probably isn't the place to post. I don't want someone to post here and not feel heard and helped, and I don't want someone to post elsewhere looking for help and be sucked into a wider ranging discussion such as this one.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Wed, 23 Oct 2013 06:53:21 GMT
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Hey guys,

Please, please keep in mind that it's only a printed before if THAT model ID has been printed before (not including updated version).

Vidalcris, your model was rejected for all wallthickness of 0.54mm this is around 5 layers thick in SLS:

[img]http://i.imgur.com/pztb866.jpg[/url]

Polishing will remove around 0.1mm thickness of your model which is why we ask people to please make sure that the model meets the minimum required thickness.

mkroeker wrote on Tue, 22 October 2013 15:47

(as stonysmith suggested they would do now), or did you make any changes to the "successful" model that would invalidate its previous history ?

If printed before and rejected it will indeed show the success rate.

A different model or similar model will not have this information in the rejection mail.

Subject: Re: Preventing Rejections

Posted by [railNscale](#) on Wed, 23 Oct 2013 18:43:43 GMT

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On the printed before issue, I'd like to add something.

The Printed before flag will be gone as soon as a model was changed (even if the model is actually improved in respect to produceability). The same is happening if you're creating a 'set', being a cluster of already printable models. To me as a designer, this is a little awkward, since in both cases I'm pretty sure the models can be produced, but I cannot guarantee the model will not be rejected by SW.

Now, IF SW would just consult the designer before any rejection, I really wouldn't be bothered so much. But this still is not the case. Communication with SW-team goes pretty good I must say, but the damage was already done. So, when is the the 'consult-first, reject later (if needed)' policy being adopted?

Or the other way around, when is SW providing the true model check/guarantee that once a model was printed successfully, this will be respected (even if a model or parts of the model was updated/improved by the designer)?

regards,
Maurice
RAIL N SCALE

Subject: Re: Preventing Rejections

Posted by [uncommented](#) on Wed, 23 Oct 2013 22:59:19 GMT

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Has the policy of requiring a 50% yield changed? I recently received an email telling me that Shapeways took my model down for having a "only" a 96% success rate.

Subject: Re: Preventing Rejections

Posted by [FabMeJewelry](#) on Wed, 23 Oct 2013 23:00:42 GMT

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railNscale wrote on Wed, 23 October 2013 18:43

Or the other way around, when is SW providing the true model check/guarantee that once a model was printed successfully, this will be respected (even if a model or parts of the model was updated/improved by the designer)?

regards,
Maurice
RAIL N SCALE

Sometimes a designer can think he/she improved a model but infact made it worse, every human makes mistakes from time to time. The same for when a designer first ordered a set and then decides to make it one piece, even if it's the same model shapeways has no guaranty that the designer didn't make a mistake.

A successfully printed flag should mean that the geometry of a model is printable, if the geometry changes the flag should dissappear until it has been sucessfully printed again.

/Quote

It's better for all involved to buzz the designer about design flaws before a model is ordered by customers. Customers who have no technical knowledge and can't do anything about the problem probably are more disappointed when they receive a rejection than we are ?

A long time ago i too received a few rejections for models that were ordered by customers from /FabMe and my other shop /GAD, it really gave me a bad feeling not being able to contact the customer. From then i decided i had to make most parts of my designs 10/15% thicker just to be sure they will be printed & shipped in perfect condition.

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Thu, 24 Oct 2013 06:13:39 GMT

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uncommented wrote on Wed, 23 October 2013 22:59Has the policy of requiring a 50% yield changed? I recently received an email telling me that Shapeways took my model down for having a "only" a 96% success rate.

Best contact service directly for clarification - I guess this is about one of your "Discord" models (that seem to work surprisingly well along their own storyline) ? (OTOH, the material overview just told me that today it will be possible to print in "Oops", so you may want to try that...)

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Thu, 24 Oct 2013 14:11:14 GMT

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mkroeker wrote on Thu, 24 October 2013 06:13uncommented wrote on Wed, 23 October 2013 22:59Has the policy of requiring a 50% yield changed? I recently received an email telling me that Shapeways took my model down for having a "only" a 96% success rate.

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I investigated, and it appears this was a mistake on our end and corrected.

Subject: Re: Preventing Rejections

Posted by [TrainThingz](#) on Thu, 24 Oct 2013 17:12:44 GMT

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I am rapidly coming to the conclusion that the issues with rejections for some items may not be the fault of the modeler, but of SW's checking software.

I have had, on a number of occasions now, models rejected for this reason:

Quote:The file contains shells which aren't attached correctly, printing it will result in them not being attached and getting lost in the printing process.

This is rather odd... it's always 3D raised text, and there's accompanying graphics that show the individual letters highlighted.

Now, I'm using Sketchup 2013 for these models, and it generates the text as a group, not individual letters, and attaches them as a unit.

However, the graphic from SW shows some letters highlighted, and some not, implying that some

letters are properly attached, and some are free. It also never shows all instances of text with this problem.

Now, I'm using the "Solid Inspector" plugin in Sketchup, as well as CleanUp3. None of these show any issues at all with the text. I also ran it through MeshLab, and it finds no errors. (Don't EVER try to FIX a model with MeshLab, though... it absolutely destroys them) I'd post a picture of the model being checked with Solid Inspector or Meshlab, but there's little point - they don't show anything.

So I'm getting claims of errors from SW that I cannot find, replicate, or identify. I create the text exactly the same way every time, and yet sometimes it bounces, and sometimes it is accepted.

I think it's time to at least entertain the idea that the software SW is using to check the mesh might not be properly interpreting the model.

File Attachments

1) [01810340-Capture.jpg](#), downloaded 429 times

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Thu, 24 Oct 2013 17:16:47 GMT

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Can you email me the file?

A few things to point out, In sketchup the letters may be grouped, but we use netfabb for checking, and netfabb looks at individual shells not groups.

But I can take a quick look to see if I see the issues they are communicating.

Subject: Re: Preventing Rejections

Posted by [stop4stuff](#) on Thu, 24 Oct 2013 17:55:53 GMT

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Youknowwho4eva wrote on Thu, 24 October 2013 14:11mkroeker wrote on Thu, 24 October 2013 06:13uncommented wrote on Wed, 23 October 2013 22:59Has the policy of requiring a 50% yield changed? I recently received an email telling me that Shapeways took my model down for having a "only" a 96% success rate.

Best contact service directly for clarification - I guess this is about one of your "Discord" models (that seem to work surprisingly well along their own storyline) ? (OTOH, the material overview just told me that today it will be possible to print in "Oops", so you may want to try that...)

I investigated, and it appears this was a mistake on our end and corrected.

Mike, along the same lines about 50% success rate.

I had v1 of a model which successfully printed a few times without any reported issues, then the model was rejected. I adjusted the model as per recommendations and uploaded the replacement model, v2 (which to be honest now looks amaturish, the original v1 was bang on scale)

My question, is the success rate data for v1 available?
I'd like to revert to v1 if possible.

Cheers,
Paul

[edit] sorry about the caps

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Thu, 24 Oct 2013 18:01:26 GMT

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stop4stuff wrote on Thu, 24 October 2013 17:55

Mike, along the same lines about 50% success rate.

I had v1 of a model which successfully printed a few times without any reported issues, then the model was rejected. I adjusted the model as per recommendations and uploaded the replacement model, v2 (which to be honest now looks amaturish, the original v1 was bang on scale)

My question, is the success rate data for v1 available?
I'd like to revert to v1 if possible.

Cheers,
Paul

I don't have access to that data. I'll point Mitchell in this direction to see what he can tell you.

Reverting is not possible, and success rate of v1 is lost after updating

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Thu, 24 Oct 2013 18:55:28 GMT
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I've had mysterious shell type errors once in a while if I didn't slightly overlap items prior to merging, although that's in the Tinkercad world. Sometimes you have this problem sometimes you don't. The best way to check this in Tinkercad is to define the entire finished object as a "hole" and the planes where outside faces butt up to each other inside the object look darker.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Thu, 24 Oct 2013 18:58:54 GMT
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Thanks for the info Mike.

Back to TrainThingz shells issue - run the stl through NetFabb Cloud service - the service will boolean merge any overlapping shells. Any shells that are face to face will mess up the normals and fail the process or make a complete mess of the model. If there are shells that do not overlap, the resulting 'fixed' model will have the number of shells on the fixed model download page.

Unless your model is chainmaille

Paul

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Thu, 24 Oct 2013 19:09:35 GMT
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stop4stuff wrote on Thu, 24 October 2013 18:58 Back to TrainThingz shells issue - run the stl through NetFabb Cloud service - the service will boolean merge any overlapping shells. Any shells that are face to face will mess up the normals and fail the process or make a complete mess of the model. If there are shells that do not overlap, the resulting 'fixed' model will have the number of shells on the fixed model download page.

The automated software on upload should do this. If it doesn't, then my guess there is a gap. If there is no gap, then I'd think the software isn't working properly.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Thu, 24 Oct 2013 19:15:08 GMT
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Hi Trainthingz,

One side is fine, the other has a gap between the parts

File Attachments

1) [model.JPG](#), downloaded 402 times

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Thu, 24 Oct 2013 19:21:28 GMT
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Youknowwho4eva wrote on Thu, 24 October 2013 19:09stop4stuff wrote on Thu, 24 October 2013 18:58Back to TrainThingz shells issue - run the stl through NetFabb Cloud service - the service will boolean merge any overlapping shells. Any shells that are face to face will mess up the normals and fail the process or make a complete mess of the model. If there are shells that do not overlap, the resulting 'fixed' model will have the number of shells on the fixed model download page.

The automated software on upload should do this. If it doesn't, then my guess there is a gap. If there is no gap, then I'd think the software isn't working properly.

Not sure if much has changed on the automated side, however there were circumstances whereby a model would pass the automated checks, yet have shells too small to be printed/recovered.

Paul

Subject: Re: Preventing Rejections
Posted by [TrainThingz](#) on Thu, 24 Oct 2013 22:40:39 GMT
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Well, at least I know what the actual issue is now...

Want to bet, though, that if I was having a model printed with surfaces I WANTED to be separate parts that were that close together, it would be rejected because they would fuse? Those letters

are 0.5mm thick/tall. That makes that gap... something on the order of 0 .005mm? So just how thin is a layer of FUD, anyway (since it's the highest detail material...)

I've tried NetFabb, BTW... the downloadable version completely fails to load on my Mac. Trying again just wants me to register... again. It accepts the registration, then never opens. (as in "waited 20 minutes for it to do something while I watched the spinning beach ball" never opens... I can create a YouTube video for upload faster than that!) This on a quad-core iMac running OSX 9 Mavericks.

I still don't understand why the two sides are different though - the text was attached in EXACTLY the same way on each side.

I've tried again, running it through the cloud version of Netfabb... which I REALLY don't like, because you get no practical feedback at all... So now I guess I have to wait for another rejection to know whether it's really fixed or not.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Thu, 24 Oct 2013 23:38:00 GMT
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In truth, the actual problem is probably the evil computer gremlin called "Rounding Error". Whatever drawing tool you used rounded UP the size/distance one way on one side of the surface, and rounded DOWN for the same object on object on the other side.

====

The automated software (MeshMedic) that Shapeways uses is a very close version to Netfabb Cloud.

Both of them go thru your model, welding any shells that overlap into a single shell. But.. they must actually overlap, no "tolerance" is accepted.

The difference is that MeshMedic (the Shapeways version) then looks for any small loose shells. One example is that letter "e" shown on the picture.. it's floating away from the rest of the model.

This is one of those cases where automated software does a worse job than a human would. In this case, the human operator MIGHT decide that 0.005 is "close enough" and allow the model to pass. (the actual clearance delta is 0.05mm) But.. MeshMedic is being very literal. It is not sophisticated enough to measure the distance between too shells.. it simply determines that there are two separate shells, and that one of them has a net volume below a certain threshold.

===

I happen to use Windows machines, and Netfabb works great for me. If you would like to share the model with me, I'd be happy to take a look and let you know if there's any problems I can spot - to try to save you a rejection.

Subject: Re: Preventing Rejections
Posted by [TrainThingz](#) on Fri, 25 Oct 2013 13:52:09 GMT
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Quote:I've tried NetFabb, BTW... the downloadable version completely fails to load on my Mac. Trying again just wants me to register... again. It accepts the registration, then never opens. (as in "waited 20 minutes for it to do something while I watched the spinning beach ball" never opens... I can create a YouTube video for upload faster than that!) This on a quad-core iMac running OSX 9 Mavericks.

Well, we got THAT issue solved, anyway... I e-mail the NetFabb people yesterday about this, they responded asking for my system details. I essentially dumped everything in "About This Mac" in their laps.

This morning, I got an e-mail from them that they had found the problem in their software and fixed it. Sure enough, it now actually loads on my Mac. Now if I can just figure out how to use it...

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Fri, 25 Oct 2013 14:02:41 GMT
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Check the Blog - Part 13 of the "Shop Owner Challenge" series has a micro-tutorial on using netfabb...

Subject: Re: Preventing Rejections
Posted by [TrainThingz](#) on Sat, 26 Oct 2013 01:02:55 GMT
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Yes, it does... but there's no mention of how to fix detached shells in the tutorial, and I can't find any way to do it in the program either. Anyone have any ideas?

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Sat, 26 Oct 2013 01:11:54 GMT
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TrainThingz wrote on Sat, 26 October 2013 01:02 Yes, it does... but there's no mention of how to fix detached shells in the tutorial, and I can't find any way to do it in the program either. Anyone have any ideas?

Let's move this particular discussion outside of this forum thread.

Rather than deal with the limited formatting choices of the forum, I saved my notes here:
http://stonysmith.com/wired/Netfabb_Tutorial_1
I'll work with Shapeways to try and get it moved over to the Tutorials.

Subject: Re: Preventing Rejections
Posted by [TrainThingz](#) on Sat, 26 Oct 2013 01:24:55 GMT
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I'd love to see it have it's own sticky thread so we can help others, too

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Thu, 07 Nov 2013 17:46:16 GMT
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Hey guys,

We know rejections are a huge issue that has been affecting our community for some time now and we want you to know that we recognize that it's a complex issue that affects your entire experience of Shapeways. What we also want you to know is that it's a complex issue for us, and that the entire team at Shapeways is working to fix.

Behind the scenes we have been making a lot of measurable progress and I want to share that with you. Below you'll find details on the recent changes we've made and how we plan to continue to improve your experience over the coming months.

BUT FIRST:

There is one thing that we all need to understand: 3D printing is a process that we are all learning together. We either embrace the technology and accept its inherent risks or we walk on the safe side and throttle creativity for the sake of consistency. Shapeways, at its core, is about enabling. So we err on the risky side so YOU can create whatever you imagine.

There is a choice we had to make between being conservative and having consistency in prints, and taking risks and allowing you to push the envelope of what is possible, which can lead to printed before rejections and inconsistencies. We choose to walk on the edge because we want to let you to make whatever you want. If we want to experiment and really push the envelope, then we need you to embrace risk, inconsistency and rejections with us. If we want to eliminate rejections entirely we would need to increase all the design guidelines into a very safe zone. That zone would rule out the fine detail and intricacies that 3D printers allow in the first place. Shapeways has chosen the edge, and much of the excitement that brings us to work everyday is what YOU create with this design freedom.

Your models help us learn what our machines are capable of, and what you WANT them to be capable of. Your designs push us to push the machine manufacturers to improve their machines. Everyone wins. It's a long process, but growth is not smooth sailing, you must take risks to gain rewards. As Pete put it, "if you want to live on the edge, you have to sometimes hurt yourself"

That said, there is a lot we can do to mitigate risk and make this process easier. So we are taking the top rejection reasons and eradicating them one at a time by updating software and our processes.

In short, we are approaching rejections from three ways:

Automated software to help you see and help you fix your printability issues

Improving our internal checking processes even further

Improving the way you communicate with us about rejections

Here's a summary of the recent projects we've been working on and how they'll impact you:

1. Upload

We recently improved the upload experience - now you can see your model online almost instantly, it is processed in real time and the prices are instantly displayed. This new interface lays the groundwork for more improvements and we are building even more automated software to help you see, improve and fix your printability issues.

2. Process Change: Checking before assignment

Previously, it could take days or even a week for you to receive a rejection. Now, we check your model BEFORE we send it to manufacturing so if there is an issue, we inform you faster, giving you a chance to fix it. Checking also happens continuously during all business hours in real time, so your order is checked by a 3D printing engineer much faster.

3. Process Improvement: More rejection reasons

We want to give you as much information as possible to help you improve your model. Previously, we had a limited number of rejection reasons and now we have almost double. This increase helps us give you more accurate feedback about the issues in your model and how to resolve

them. We want to make sure you are receiving accurate and actionable information so you are well equipped to improve your model for printing. Permanent rejections are a part of this too, as soon as we know there is an issue with your model, it's not visible for sale until you have had a chance to improve it for printing. To help with some of the jargon, we are trying to give better explanations. We check up to 700 models per day, so our 3D printing engineers are becoming experts, but they are not infallible.

4. Model Resolution Project

Currently, when you upload a model, it first goes through an automated check then it is manually reviewed by a 3D printing expert before it's sent to a printer. In an effort to try to eliminate some of the printed-before rejections, we launched the model resolution project with Mitchell, our awesome customer service coordinator, where he did a SECOND manual review on each rejection. This was a critical step for making sure printed before models were being printed again instead of being rejected and getting rejections feedback to you faster. Mitchell was offering customers the choice to print the item even if it was going to fail. Most people said yes, so we know that is something you wanted, and in certain situations, we are able to offer this as a choice going forward. Note this is not something you can chose when you order, but only on certain models that are already queued for rejection, and we think there is a good chance they might survive regardless. This is the edge we're talking about!

5. Process Improvement: Consistency in Checking

The last, and perhaps most important piece is our steps to improve consistency. This is about consistency across our factories, consistency between 3D printing experts and consistency of your model being printed again and again. Unlike a regular manufacturer, almost everything we print is unique. That means, of the million models we have printed to date, 99% were different. Right now, there is not a guaranteed way to know that a specific model will print. We can only make educated estimates on the probability that it will print based on similar products we have printed previously, and on knowing the limitations of our machines. This makes it incredibly difficult to guarantee certainty. What we CAN do however, try to ensure consistency. So whether you order today or next week, or your order is produced in either factory, it will be consistently checked for markers of printability. So in the coming months as we roll this out, you can look forward to a little more consistency in your rejections - including the printed before rejections.

I know printed before rejections are the absolute worst and as long as we allow you to push the limits, there is no way that we can guarantee these will be totally eliminated. However, since we've implemented all these changes, printed before rejections have fallen by a third! I'm sure you'll agree that's a huge improvement and you should see fewer and fewer of these going forward.

All of these improvements so far are the building blocks, we are continuously improving the process, our software and the way we communicate our leanings with you so we can increase

printability for more models.

As I said at the start, we either embrace the technology and accept its inherent risks to learn or we walk on the safe side and throttle creativity for the sake of consistency. We want you to experiment and really push the envelope, so we ask you to embrace the risk with us and together we can make push the boundaries of manufacturing.

I hope we can continue this journey together.

It's certainly why we come to work everyday

-Natalia, Bart, Michael and Savannah - your community team.

Subject: Re: Preventing Rejections

Posted by [UniverseBecoming](#) on Thu, 07 Nov 2013 19:51:24 GMT

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Nice write up Natalia!

Good to see Shapeways is shaping up!

Perhaps I'll try printing some of my models that Shapeways refuses to print, that is, if they can also be put into production.

By the way, not related to rejections, but one of your competitors made a huge announcement a few days ago. Looks like they're going to actually start working with designers to actually help them with a HUGE discount and also professional photography to help them develop their products and their stores. If you're not aware of these developments you can contact me (Shapeways employees only) behind the scenes and I'll tell you more about what's going on. This is one of the things I've been saying is going to happen eventually and that Shapeways should be the first to do it since Shapeways is the leader. I've been warning about what will happen if a competitor steals all the designers away by making deals so tempting that every designer would be a fool not to take them up on it.

It's so exciting to see how the story of 3D printing is playing out for the world. I can't wait to see what's going to happen next!

Subject: Re: Preventing Rejections

natalia wrote on Thu, 07 November 2013 17:46Hey guys...

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...

-Natalia, Bart, Michael and Savannah - your community team.

Hi Natalia,

Thanks for the great explanation. I do have a question, however. If a model has been successfully printed before, and even been printed many times before, why does it need to be reviewed at all? I have heard from customer service reps via email that the reviewers are always very busy, and time for reviewing models is a premium. If this is the case, why not relieve them of the job of reviewing already printed models entirely? If a model has been reviewed and printed, why is there a need to review it again and again and again? Isn't this a waste of your time, energy and money? Isn't it leading to the issues that we, as customers, are having?

If a model is, as you say, right on the edge, then perhaps you could have the reviewers give it a once-over, but from the perspective of knowing that it has already been successfully printed, to help take them out of the frame of mind of "find a reason to reject this model" and put them into the frame of mind of "just look for anything that is glaringly bad that might have been missed before". Also, if there are reasons that the model is "right on the edge", if it is printed anyway, some form of communication should be sent to the designer to let them know that their model is considered to be on the edge and why.

I have some models that were printed even though they have some areas (and not small areas, but significant areas of the model) with a 0.56mm wall thickness. This wasn't caught until a customer ordered one of these models, despite the fact that I had already ordered several of these models. My evaluation is that the material handled this wall thickness quite well, though I was happy to fix the problem. This was a case where there WAS something glaringly wrong that had not been caught before, and I'm fine with the rejection (though I would have preferred the rejection had come when I was ordering the models, not when a customer was ordering the models).

While I really do appreciate that you are working to improve consistency, I think that it has been mine and other's experience that there is still a significant problem with consistency. This problem makes it hard for us to have confidence in the SW service as a means of dealing with people who buy our designs. I don't know about anyone else, but every time I sell a product, I find that I'm holding my breath for days waiting for the model to clear so that I know that I've REALLY made a sale, and not had a customer get ticked off at me because of a rejection.

I realize that fixing complex systems is not easy, but there are a lot of suggestions around here that could REALLY help mitigate some of the issues (including in the thread that I have about my own list of suggestions), and some of them should be pretty easy to implement.

Thanks for the great service, and I really do hope that you keep the improvements coming.

Best,
Geoff.

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Fri, 08 Nov 2013 17:09:36 GMT

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Quote:take them out of the frame of mind of "find a reason to reject this model"

This accusation is IMHO both unnecessary and unfair - remember that rejection means that shapeways loses money, as we do not pay for the time spent checking if the model turns out to be unprintable.

BTW I am not sure if you expect or encourage comments on your private monologue thread ?

Most of what you wrote there has been discussed at length elsewhere (viz. this thread), and there may be some misconceptions e.g. about accessibility of superseded versions of a model, feasibility of comparisons between previous and "improved" versions during checking etc.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Fri, 08 Nov 2013 19:38:25 GMT

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mkroeker wrote on Fri, 08 November 2013 17:09 Quote:take them out of the frame of mind of "find a reason to reject this model"

This accusation is IMHO both unnecessary and unfair - remember that rejection means that shapeways loses money, as we do not pay for the time spent checking if the model turns out to be unprintable.

It may be your opinion that it is unnecessary and unfair, but many of us feel this way after being beat down time and time again with silly rejections, such as measuring a 0.5mm long detail connected at both ends as a wire, measuring the narrow side of a taper, and other things that have me convinced that Shapeways would like to discontinue anything that isn't a 1cm cube in WSF. If I can't be assured that my customer will receive the model when ordered, what is the point of having a shop?

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Fri, 08 Nov 2013 20:24:42 GMT

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Working on the edge is great for prototypes and developing processes but it's not so great for general sales to other people (which leads to the consistency complaints). There needs to be an effective way for that edge to move into the realm of normal and boring with design guidelines changing over time to reflect the advances and improved capabilities of people and process. Otherwise you never have a good grasp on where that edge is and it's likely to cut you when you least expect it.

Subject: Re: Preventing Rejections

Posted by [SnowyRiver](#) on Sat, 09 Nov 2013 05:14:10 GMT

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mkroeker wrote on Fri, 08 November 2013 17:09 - remember that rejection means that shapeways loses money, as we do not pay for the time spent checking if the model turns out to be unprintable.

But this is part of the point. If their focus is on getting things through the inspection process as quickly and efficiently as possible, then things like print history should have an immense impact on the review process. Instead, there are countless instances of models being successfully printed, sometimes many times over, and then getting rejected. Also, I have had a similar experience to the 0.5mm detail that is connect on both ends being called a wire that Roy mentioned. This stems from looking for reasons for a rejection, rather than looking to see if the particular instance doesn't really cross the line.

Further, I've had parts rejected that, upon contacting customer service, they went back and reviewed the part again only to admit that it shouldn't have been rejected, and the reason didn't really apply.

Now, don't get me wrong, I'm not saying that I harbor ill feelings toward SW. Quite the contrary. I think they have a great service, and they're working in a difficult, ancient industry. But their current business model feels underdeveloped, and they need to move to get changes in place to put their shop owners forward as their highest priority customers. When they reject a part that I'm ordering for myself, it's a nuisance. When they reject a part of mine that someone else has bought, often despite some tremendous efforts on my part to try to ensure that the model meets the design guidelines, it hurts me as a business.

Also, on the topic of SW losing money on rejections, I'm curious how you figure that. When I order a part, SW gets my money. If the part is rejected, they do not refund me that money. Instead, they give me credit. In other words, they get my money either way, and it's up to me to order a new model to try to get my money's worth. So, they're getting money whether or not models are rejected.

Quote:... there may be some misconceptions e.g. about accessibility of superseded versions of a model, feasibility of comparisons between previous and "improved" versions during checking etc.

During discussions of a modeling bug from the CAD program that I use that was plaguing a

couple of my early models, I had occasion to want to have one of the customer service reps look at a version of the model that had been updated twice since. I assumed that they didn't keep these, so I offered to send an archived copy that I had to him. However, he promptly wrote back saying that he had pulled it up and looked at father issue we were discussing, and so on. In short, the accessibility of previous versions has been directly demonstrated to me. As for comparisons, most CAD programs offer relatively easy tools that allow you to inspect the differences between two models. If SW doesn't have the tools to allow them to do this, then they are choosing to spend time and have their inspectors reinspect every model every time, rather than investing in proper tools to accomplish their task with better efficiency.

Long and short, there are clearly many ways that SW could work to improve their service. There is no doubt that they have choices to make about which ones they want to implement. But, it is quite clear, also, that they try to be nimble and move quickly. These rejection issues have been going on for a long time. While reducing reprint rejections by a third is a pretty good chunk, the question must be asked why reprint rejections cannot be reduced by 90%-100%? And the fact that it is taking them so long to try to get these kinds of rejections reduced also shows that they're potentially leaving room for a competitor to come in and pull the rug out from under them.

I like SW. I want them to succeed. I wouldn't be putting the effort into writing posts such as this one if I didn't.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Sat, 09 Nov 2013 06:43:51 GMT

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I think they are using ClearCase/ClearQuest for documentation control with regards to model updates so yes, all previous uploaded models should be available. I surmised this because I once had an error or something pop up with regards to things going wonky during an upload. Of course they may be using something else by now.

I'm very familiar with looking at changes in CAD files with a differential check but that's for the integrated circuit design world where things can be analyzed with 2 dimensional Boolean checks - including the design rule checking. For 3D stuff differential checking becomes more problematic particularly if the two models have changed significantly, scaling has occurred, or origin points have shifted. I suppose it's simpler for 3D designs with very minor localized changes. In the IC world the foundry generally sends a copy of the final fabrication designs back to you. That way you can use a differential check to make sure what you sent to them is what they will be fabricating. At this final QC step you'll catch errors like the wrong version of a design being used, things being inadvertently filtered or corrupted, layer mapping errors, etc. But unlike the 3D world there's a lot of automated checking capability for IC design rules. It's decades old established technology. You can generate a list of hundreds of small errors that need to be worked through

before a design will be accepted by the foundry. A circuit like a microwave amplifier or mixer circuit may be checked on your desk top computer in 30 seconds or less for gross errors. (I'm talking simpler analog circuitry here, not complex microprocessors with millions of transistors.) Sending a design out to the foundry's server for more complete checking may take anywhere between minutes and an hour to get the full monty check depending on how many other people are sending in designs for checking. I suspect an equivalent amount of full checking for a 3D design could take many hours or even a good chunk of a day, but I still haven't found enough information on the subject to know what's possible or what design rules could be reasonably checked in today's world.

Anyway, I don't know what the best immediate solution is to the rejection thing as long the set of guidelines is not large enough to define 90 to 99% of problematic printer situations and there isn't practical automated software that can correctly check models to list all guideline (aka design rule) violations in a model. I know that thoughts of automated checking leads to complaints like 1) but that would limit designers or 2) there's no way to come up with comprehensive potential printer issues for 3D models or 3) there isn't software that can do that cost-effectively or 4) you can't expect most designers to follow 30 pages of illustrated guidelines. Fine, but I still think the only realistic long term solution is automated checking based on comprehensive guidelines which leads to better overall process control, product consistency, and less impact by the human checking factors. I don't know if that will take 2 years, or 10 years, or 20 years but I think it is the inevitable and necessary solution.

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Sat, 09 Nov 2013 07:49:22 GMT

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Quote:Also, on the topic of SW losing money on rejections, I'm curious how you figure that. When I order a part, SW gets my money. If the part is rejected, they do not refund me that money. Instead, they give me credit. In other words, they get my money either way, and it's up to me to order a new model to try to get my money's worth. So, they're getting money whether or not models are rejected.

This is easy: if you ask for your money back, they will return it, end of story. SW are scrupulous in this regard.

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Sat, 09 Nov 2013 10:51:48 GMT

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Quote:In short, the accessibility of previous versions has been directly demonstrated to me So the misconception was on my end,sorry. Strange, I am quite sure I saw in a recent thread someone asking if a previous version of a model could be reinstated and I think the reply was that this was not possible. (Maybe it depends on how long ago the desired version uploaded, or I am just imagining things.)

On the topic of automated analysis, shapeways appear to be actively fostering research - see this project that was briefly mentioned in the forum some time ago. Also keep in mind that shapeways hired many new workers for their NY factory, few of whom we can reasonably expect to have any previous 3d printing experience. Such an event has to be disruptive, even if it is now more than a year ago experience levels among the team will not have equalized.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Sat, 09 Nov 2013 10:52:18 GMT
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MrNib wrote on Fri, 08 November 2013 20:24Working on the edge is great for prototypes and developing processes but it's not so great for general sales to other people (which leads to the consistency complaints). There needs to be an effective way for that edge to move into the realm of normal and boring with design guidelines changing over time to reflect the advances and improved capabilities of people and process. Otherwise you never have a good grasp on where that edge is and it's likely to cut you when you least expect it.

Well said. Perhaps there need to be design guidelines for "Print almost always" for productions items, and another "We will try but make no guarantees" for innovative designs.

Dave

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Sat, 09 Nov 2013 16:32:11 GMT
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Quote:Also, on the topic of SW losing money on rejections, I'm curious how you figure that.

A note from basic economics:

Shapeways has to pay the human to check your models. Any rejection (with a full refund) means that they have to absorb the cost of the manhours spent checking your model. This cuts into the profit they make on the model when a copy is finally ordered. I've got eight models in my shop right now that have been rejected without subsequent patron orders. That means that Shapeways "lost" the payroll dollars paid to the humans that performed the checks, along with lost the profit they would have collected from a successful print. So, it is NOT in their interest to "deliberately try to annoy us" as has been suggested.

That's why I personally advocate a \$1 option to have a model checked and validated so that it can be released to the public without my having to pay for a full print. I've got too many models where the net markup collected to date doesn't cover the cost of a single print. I'd be losing money if I paid for a test print of every model just to ensure it won't be rejected. Of all the items in my shop, 67% have not produced enough markup to cover the cost of buying a test print of the item. But again.. I'm in this for the designs, not the money. This is a HOBBY for me.

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Sat, 09 Nov 2013 18:07:30 GMT
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At least we can all have a good catharsis every two weeks or so on this subject. Am I right?!!!

And on the bright side at least the healthcare.gov people aren't developing design rule checking software.

Subject: Re: Preventing Rejections
Posted by [stop4stuff](#) on Sat, 09 Nov 2013 19:34:05 GMT
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stonysmith wrote on Sat, 09 November 2013 16:32Quote:Also, on the topic of SW losing money on rejections, I'm curious how you figure that.

A note from basic economics:

Shapeways has to pay the human to check your models. Any rejection (with a full refund) means that they have to absorb the cost of the manhours spent checking your model. This cuts into the profit they make on the model when a copy is finally ordered. I've got eight models in my shop right now that have been rejected without subsequent patron orders. That means that Shapeways

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The cost of a human checking the model is already factored into the print cost - rarely do we see the cost of a material increasing. Unnecessary repetitive checking of models that have already printed eats into Shapeways' profits with wasted man-hours, in the case of many examples of this thread, it severely disrupts the designer too.

The model that iMaterialise use, whilst more expensive than Shapeways for the designer, means that once printed the model remains printable. Costs are covered and a successful item/product is the end result.

As far as I can see, this issue of rejections, preventing rejections and how the issues can be handled is just going around in circles.

@Natalia.

Please can you answer specifically.

- 1 - Do previous versions of uploaded models get stored and are they retrievable?
- 2 - If so, and if the previous version of a model was printable, will Shapeways allow reversion to that previous model and honour the printability status of that reverted model?

Cheers,
Paul

stop4stuff Modeller for hire
Shapeways Shop - Controller
Pendant
Twitter
YouTube

Subject: Re: Preventing Rejections
Posted by [SnowyRiver](#) on Sun, 10 Nov 2013 07:03:13 GMT
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stonysmith wrote on Sat, 09 November 2013 16:32... So, it is NOT in their interest to "deliberately try to annoy us" as has been suggested...

Ah... I never suggested that this was an issue of them being interested in deliberately trying to annoy is. What is said is that it seemed that their reviewers were in the mindset of "look for any reason to reject this model". From an immature business model, this make a lot of sense, as attempting to print a model that cannot be printed, and then causes a printer crash, can cost them a lot more than the cost of the time for the reviewers. So, early on it would make a lot of sense for them to have their reviewers in this kind of mindset.

But now, with their growing skill in this new business, they should be working, and working hard, to implement some new approaches. This is my point. When reviewers check models, they should categorize them into something like three categories: fine, borderline, and needs improvement. Needs improvement would be the equivalent of a rejection, but it could give the designer a chance to fix the model before it is simply deleted from an order, whether his own order or someone else's. Borderline models would be subject to mild scrutiny with every printing, but previous print success rate would be taken into account. And "Fine" models would not get scrutinized again, unless a new version of the model were uploaded.

So, I think you heard me accusing them of something malicious, where I was seeing something natural but in need of change.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Sat, 23 Nov 2013 00:37:17 GMT
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stonysmith wrote on Sat, 09 November 2013 16:32... So, it is NOT in their interest to "deliberately try to annoy us" as has been suggested...

I wish I could believe that, but check out this rejection. Note that the exact same round sprue rod is measured at one point as OK and another point as rejected.

File Attachments

1) [01845300-Capture.PNG](#), downloaded 528 times

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Sat, 23 Nov 2013 01:06:31 GMT
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No, they're not saying one measurement is rejected and the other is accepted.

I will categorically state that their communication should be clearer, however, the green highlight you see there is purely a matter of that is the point they measured last. They are (inarticulately) stating that NEITHER of those measurements is acceptable.

Since that is a sprue, and there's a good deal of weight on each end, they are (poorly) expressing that it needs to be 0.8mm or even larger. Personally, I make my sprues 1.0mm or even 1.385mm so that there's no doubt that it is above the limit they desire.

Looking at this single image of your model, I'd move the three items closer together (no reason to space them out) and I'd put the sprue thru the main hole there in the items. A sprue does not need to touch the items, it can also just help hold them together such that the entire assembly can be picked up as a single part, like this:

Subject: Re: Preventing Rejections

Posted by [PeregrineStudios](#) on Sat, 23 Nov 2013 01:08:18 GMT

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Just got a rejection for a model made using one of Shapeways' own 'Easy Creator Apps'. That's a very, very bad sign when internal consistency is so bad that the stuff that Shapeways itself puts together for you gets rejected.

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Sat, 23 Nov 2013 01:17:24 GMT

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PeregrineStudios wrote on Sat, 23 November 2013 01:08: Just got a rejection for a model made using one of Shapeways' own 'Easy Creator Apps'. That's a very, very bad sign when internal consistency is so bad that the stuff that Shapeways itself puts together for you gets rejected. Would you mind sending the model # to service@shapeways.com? The CS folks can then forward it to the development team. The Dev team needs to see examples of stuff that doesn't work.

As a programmer myself, it's "easy" to make stuff that doesn't work and "easier" to make stuff that does work - from my own data. What's much tougher is to imagine what "users" will try to do to my code. <grin>

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Sat, 23 Nov 2013 01:21:20 GMT
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stonysmith wrote on Sat, 23 November 2013 01:06

Since that is a sprue, and there's a good deal of weight on each end, they are (poorly) expressing that it needs to be 0.8mm or even larger. Personally, I make my sprues 1.0mm or even 1.385mm so that there's no doubt that it is above the limit they desire.

The rules state that supported wires must be 0.6mm minimum, and I have followed that rule. That particular rule is serious overkill anyway and I would argue that there is essentially no weight at either end. The sprues are there only for the convenience of handling at the production facility, and certainly get in the way otherwise.

Subject: Re: Preventing Rejections
Posted by [SnowyRiver](#) on Sat, 23 Nov 2013 02:01:45 GMT
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Roy_Stevens wrote on Sat, 23 November 2013 01:21stonysmith wrote on Sat, 23 November 2013 01:06

Since that is a sprue, and there's a good deal of weight on each end, they are (poorly) expressing that it needs to be 0.8mm or even larger. Personally, I make my sprues 1.0mm or even 1.385mm so that there's no doubt that it is above the limit they desire.

The rules state that supported wires must be 0.6mm minimum, and I have followed that rule. That particular rule is serious overkill anyway and I would argue that there is essentially no weight at either end. The sprues are there only for the convenience of handling at the production facility, and certainly get in the way otherwise.

As the only material that has a design spec for supported wire of 0.6mm is frosted detail plastic, I presume that's what you're working with. However, if you look just a little farther down the design guidelines, it does say "Min Wire Supported: 0.6mm; Min Wire Free: 0.8mm (if not bearing weight) | 1.0mm (if bearing weight, like a sprue)". Given that, though I grant you that it probably should be spelled out more clearly, if they were considering those to be sprues, then they would be looking for 1.0mm diameter, and that may have lead to the rejection. I will agree, however, that the design guidelines are often not that fully explained, and leave room for interpretation. This is, I think, a consequence of trying to work right at the edge of the capabilities of their machines.

I do think that more can be done to deal with the rejection issues, but calling foul on one rejection because you don't agree with the reasons, without first contacting customer service to get an

explanation, is a bit excessive.

(Now, when I got a rejection that gave the reason for the rejection as "Totally impossible to deal with", I cried foul at once. The CS folks did acknowledge that this was not a helpful message to have sent to me, but did help me to understand the actual reason for the rejection, and what I could do to fix it.)

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Sat, 23 Nov 2013 10:27:39 GMT

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The biggest issue here with sprues is that you don't mind that it breaks. But when we take the model from the printer tray, and let's say we pick it up on the section on the right, it will mean that due to leverage effect the sprue might break really easily. (thus getting lost, having to reprint the model)

This is why we ask people to use 1mm sprues to make sure it will not break during the post process which includes cleaning as well.

There are 2 major things (personal opinion) that are different in your software and in real life:

1*. Details and text, in your 3d software these details and text will be visible when using 0.01mm but in real life this isn't visible (text will only start to be readable after 0.4mm). So to me this is an optic illusion, there is no real way of knowing if the detail will show up as it will always look good in your 3d software, no matter what size used.

2*. gravity! I have seen people making the strangest models you can think of, many of them are actually wire like models which go in every direction, not being supported by anything. In your 3d software this looks like a beautiful cloud with wires of 1mm thick. However as soon as we 3D print the model, gravity starts to kick in and the model will end up looking like spaghetti. To my knowledge there is no way of knowing before printing what gravity will do to your model (any ideas???)

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Sat, 23 Nov 2013 11:42:40 GMT

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Some thoughts:

A tutorial gallery composed of rejection images from this and similar threads with their explanations might help us designers understand better what your production people are seeing as defects in our models when the average rejection message is short and sometimes cryptic.

And as I have been guilty of both #1 (undue skimpyness) and #2 (defying gravity), I would like to suggest some means of communicating that some imperfection would be acceptable (a broken sprue, or in my case a missing ball on the outside). Such messages would only have to be read before a reprint is made, so hopefully would not interfere with your current workflow. (Initial implementation could be limited to the materials processed in-house, where access to the information would presumably be easier).

For #2, possibly a stress-strain analysis with a (possibly exaggerated) downward force - commercial packages for this tend to be expensive, but perhaps GMSH (from geuz.org) is up to the task ?

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Sat, 23 Nov 2013 12:04:50 GMT
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I have to go right now, but did want to answer quickly the sprue thing:

"a broken sprue" might be harder than it sounds.

Most people use a sprue for really small models, so if the sprue breaks it might potentially result in small parts getting lost in the process.

And the rejections, I would love to do this, but this brings up the point: would you like it if I share a your rejection to the world?

A lot of models are private and I'm sure they don't want to have their rejection picture shown to the public.

Mitchell

Subject: Re: Preventing Rejections
Posted by [mkroeker](#) on Sat, 23 Nov 2013 12:11:21 GMT
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Have to go too, so even quicker:

1. broken sprue - option to continue anyway only if you would not have rejected the part without it

anyway.

2. use only rejection images that have been posted here already, hence world visible already and (i think) by your t&c already free for you to use as you see fit

Subject: Re: Preventing Rejections

Posted by [AmLachDesigns](#) on Sat, 23 Nov 2013 12:23:22 GMT

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Quote:However as soon as we 3D print the model, gravity starts to kick in and the model will end up looking like spaghetti.

To my knowledge there is no way of knowing before printing what gravity will do to your model (any ideas???)

Well, in Blender you can apply gravity to objects. How do you do it? No idea, way too advanced for me...

These links might also be interesting:

<http://hpcg.purdue.edu/?page=publication&id=164>

<http://3dprintingindustry.com/2013/08/01/make-it-stand-3d-printed-objects-that-dont-tip-over/>

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Sat, 23 Nov 2013 18:23:12 GMT

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MitchellJetten wrote on Sat, 23 November 2013 12:04Would you like it if I share a your rejection to the world?

Mitchell

Please feel free to share ANY rejection from my shop, if you can still find any.

I would really like it if you share any rejection from tomorrow. That way I can get started on it early. <GRIN>

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Sun, 24 Nov 2013 05:22:50 GMT

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MitchellJetten wrote on Sat, 23 November 2013 10:27

2*. gravity! I have seen people making the strangest models you can think of, many of them are actually wire like models which go in every direction, not being supported by anything.

In your 3d software this looks like a beautiful cloud with wires of 1mm thick.

However as soon as we 3D print the model, gravity starts to kick in and the model will end up looking like spaghetti.

To my knowledge there is no way of knowing before printing what gravity will do to your model (any ideas???)

Solidworks will do an analysis of a design with gravity, but one still needs to know where the bottom is. One caveat is that the software will assume a homogeneous material, which most printed materials aren't. In FUD what works well in the X-Y plane will fall apart in the Y-Z plane. But gravity isn't the enemy. It's overzealous cleansers, rock-hard bubble wrap and too-small zip-lock bags that tend to destroy my models. But those are issues for a different discussion list.

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Sun, 24 Nov 2013 05:51:17 GMT

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Considering that handling and survival of models through the shipment step is factored into rejections it could be part of this discussion. In general I find the packing methods to be extremely variable over time. But I will save clarifying comments for a different discussion list...

Subject: Re: Preventing Rejections

Posted by [kengabourie](#) on Wed, 27 Nov 2013 20:17:04 GMT

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I don't know what the actual problem is as I've never bought any of the models produced by the designers engaged by Shapeways but I am just about to spend a sizable chunk of change on numerous models produced by Stony Smith. In reading these messages, am I to assume that they are no longer available through Shapeways? If this is true, then I'm hooped. Many of the items I want I can't get anywhere else because no one else produces them.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Wed, 27 Nov 2013 20:20:08 GMT

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kengabourie wrote on Wed, 27 November 2013 20:17 I don't know what the actual problem is as I've never bought any of the models produced by the designers engaged by Shapeways but I am just about to spend a sizable chunk of change on numerous models produced by Stony Smith. In reading these messages, am I to assume that they are no longer available through Shapeways? If this is true, then I'm hooped. Many of the items I want I can't get anywhere else because no one else produces them.

Don't worry, Stony is a beta tester and forum moderator for Shapeways, as an insider he gets special treatment. You'll have no trouble ordering his items.

Subject: Re: Preventing Rejections
Posted by [kengabourie](#) on Wed, 27 Nov 2013 20:27:23 GMT
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Now that's a relief. I thought I was gonna be royally screwed here.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Thu, 28 Nov 2013 09:35:32 GMT
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lol, no worries, nobody gets a special treatment here, the production teams don't see the names of designer / customer while checking.

And I remember seeing rejections from Stony as well in the past :)

Subject: Re: Preventing Rejections
Posted by [Vidalcris](#) on Thu, 28 Nov 2013 09:37:43 GMT
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There is no way to prevent rejection with dumb services, i'm sorry to say that.

Here is the last test we did :

https://www.shapeways.com/forum/index.php?t=msg&goto=80077#msg_80077

SW dont want to work with us anymore, this is the truth !!!!

Subject: Re: Preventing Rejections
Posted by [bartv](#) on Thu, 28 Nov 2013 10:08:47 GMT
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Hey Vidalcris,

let's keep your complaint in one place on the forum instead of spreading it everywhere. I've already answered you in the other thread. We treat every member on an equal basis, no need to think we don't 'want to work with you' - that would be a *very* unhealthy strategy for us!

Subject: Re: Preventing Rejections
Posted by [Vidalcris](#) on Thu, 28 Nov 2013 10:10:54 GMT
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You are not working like a year before... this is your choice.
Let me show what i know to the community ;)

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Fri, 29 Nov 2013 17:44:18 GMT
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....and just to reiterate again, we are working really hard to make this process better.

Stay tuned here for good news soon ;-)

Have a great weekend everyone!

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Fri, 29 Nov 2013 18:20:17 GMT
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stop4stuff wrote on Sat, 09 November 2013 19:34

@Natalia.

Please can you answer specifically.

1 - Do previous versions of uploaded models get stored and are they retrievable?

2 - If so, and if the previous version of a model was printable, will Shapeways allow reversion to that previous model and honour the printability status of that reverted model?

Cheers,
Paul

Hi Paul,

Quick answers to your questions

1. We have this history but we can not easily access it. So, effectively no.

2 Mitchell tells me is a maybe, if we printed it successfully and you upload that exact same file, we can at least give it a try but its all manual work so you would need to email customer service the order and provide the info that you uploaded the exact same file...and even in that case we can't validate that it was really the original version. So again, not really.

Rather than work backwards like this, we are working on making it easier to print successfully every time!

Subject: Re: Preventing Rejections
Posted by [railNscale](#) on Sun, 01 Dec 2013 16:09:08 GMT
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Again we received a print rejection from Shapeways.
And again, we talk about a rejection of a model that was succesfully printed before.

The model is in:

- (a) A set of 2 identical models
- (b) A single model
- (c) A part of a larger set

Now, (a) is rejected for having a socalled too thin wire. Well it's hardly a wire, and the way SW measures geometry is arguable.

Model (b) has been printed once and shipped to a happy client.

Model (c) has been printed four times and shipped to several happy clients. Nine other orders are between assigned and in production.

And ofcourse we have printed the models for our own purpose as well.

Now some person working at SW tells, "Hello railNscale,
After taking a closer look, we cannot print a model that you have available for sale.
You may be able to update and continue to sell your model based on the information below."

Now, that's incorrect. SW has at least printed this little model SEVEN times. And I can tell you, the model is far from weak.

More cynical is that I have specifically asked a member of the SW-team to check the printability of the model.

IT WAS OK.

Now, you can always try to measure models in such way that you find some geometry that does not meet printing criteria. But this is just pathetic.

The length of this so-called wire is (please sit before reading) a mere 1.2mm. Wow how feasible this design is...

And how is SW solving the issue this time? Maybe just printing it would do the trick.

File Attachments

1) [01860971-Capture.JPG](#), downloaded 51 times

Subject: Re: Preventing Rejections

Posted by [SnowyRiver](#) on Sun, 01 Dec 2013 17:07:01 GMT

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railNscale wrote on Sun, 01 December 2013 16:09: Again we received a print rejection from Shapeways.

And again, we talk about a rejection of a model that was successfully printed before.

...

Now, you can always try to measure models in such way that you find some geometry that does not meet printing criteria. But this is just pathetic.

And how is SW solving the issue this time? Maybe just printing it would do the trick.

This does seem like a problem stemming from SW old system, one which I've run up against many times now. We have been promised that a new system is almost ready and we can look forward to seeing changes soon. I think that it's important for us to remember that the kinds of systems that are needed for SW's business require not only policies governing their employees, but also software that will support their methodology. So, while we want changes NOW, SW has

to work with due diligence to first choose and develop a new system, then build all of the support systems that a new system will need, then implement the new system with all of their employees. In short, we can armchair quarterback all we want, but SW must face certain business realities in their timeline for making changes.

That said, I really do hope that these new changes that we have been told are coming represent some significant improvements in these areas, and will get here soon. As I indicated earlier, the current model seems to me to be that of an immature business, and if SW doesn't mature with its business model, it will surely get left behind.

Subject: Re: Preventing Rejections
Posted by [railNscale](#) on Mon, 02 Dec 2013 16:23:53 GMT
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We received the following 'answer' from SW.

"Dear Maurice,

I am very sorry about the rejection.
It seems like our planners didn't think this could be accepted after all.
I know that getting a rejection is a bad news, however I agree that it's always better to make sure the models are stable enough for printing, especially if you offer them for sale.
I would like to ask you to repair the model.
Please accept our apologies for the inconvenience.

Adela"

Excuse me? It seems like our planners didn't think this could be accepted after all. ???

The model was printed numerous times!
And SW calls this an answer.

It is a real shame that Shapeways is

1. not performing any kind of proper quality check.
2. Just kill orders from OUR clients without ANY kind of normal communication
3. Just doesn't seem to give a #\$\$%^
4. not even taking the time to check
5. Sending meaningless apologies.

This is totally unacceptable.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Mon, 02 Dec 2013 16:54:56 GMT

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Was this item previously printed, or was it just a new item based on previously accepted designs? I know it isn't the best solution but in the past for 'new' models I know work that get rejected like this, I will just upload the file again to kick the rejected flag off and try again. Often this has worked for me on the second time through the system. Perhaps the person checking the model was having a bad day. I hope they get this sorted soon, it has been almost a year since the rejections went from occasional to ridiculous, and nothing has really been done to fix it.

Subject: Re: Preventing Rejections

Posted by [railNscale](#) on Mon, 02 Dec 2013 17:12:58 GMT

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To explain the issue.

We have designed five N-scale vehicles. Let's call them model A, B, C, D and E.

These models can be purchased as individual cars.

Kit A

Kit B

Kit C

Kit D

Kit E

Furthermore we have made the following SETs:

Kit A + A

Kit B + C + D

Kit E + E

Kit A + B + C + D + E

The following kits were produced succesfully: A, C, E, A+A, B+C+D, A+B+C+D+E (the last is by far the most popular one :))

Kit B and Kit D are not sold yet.

And Kit E+E is suddenly rejected by appearantly someone who probably think it's not produceable, and never even tried producing one.

What does SW think?

Do I really have to buy all the NINE different kits to proof it is printable? Come on. That's pathetic. You hardly sell anything here because of SW-site. I am sure 95% of our sales is a result of promotions we made on several fora and our own multi-language site.

SW should be extremely thankful. Yet they proof not to learn a thing.

I still await a proper answer (means make the model and send it to our client)

And of course I reloaded kit E+E. And it's promptly sold again. Let's wait and see.....

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 03 Dec 2013 00:39:18 GMT
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Sounds like you have been bit by the same thing that got me several times in the past. You have an STL that successfully prints and use it as a "sub-model" in another STL, and it gets rejected. I found that in the vast majority of the time the design did violate a design rule and I was just lucky the first time.

I am not sure of the complaint though. Are you saying that the model violates the guidelines, but since the model printed OK as part of another model in the past SW should simply waive the guidelines for the new model, or are you saying that the model meets the guidelines and the rejection is in error.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Tue, 03 Dec 2013 04:09:57 GMT
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Dale,

It's not always that a model violates any rules or guidelines. It is seen by someone as being questionable. And for that reason alone the Service Team WILL reject a model.

Now let me say that one more time.

""A model does NOT have to violate any of the design guidelines or rules to be rejected.""

"They just have to think that there may be an issue in post production, and they will reject your working model."

Someone simply has to say they "fear" something would happen to it. post production. I have had several models here of late that has happened too. I have several models that someone in the Service Team simply looks at wrong and rejects the model making claims that do not exist in the model. I have disputed their wild fantasies and they are once again back to the same old reply.

"Although the model is printable, there is a likely chance of the engines breaking at the points where it's thinner. It would be really helpful if you can make some changes to this model."

Design guideline says 0.8mm wall, new guideline 1.0mm wire. The point being mentioned was 0.97. And that was because they didn't check it straight 180 degrees from the 2 points on a round shaft. The Service Team has also stated they (meaning ShapeWays), have the right to increase the size of a model by 15% during production. But god help you if you are 0.029mm below on a false measurement check. They will shut your model off, you dispute it and they lock the model so no updated files can be uploaded.

No two people are checking the same model the same way. They have no tolerance guide for a model. Now let me make this clear, I have mentioned this before too several people. With no response. When designing a model you set it too 47.00mm long, when you upload the model it is now 46.99mm long. I have noticed this on several models. Where their system is rounding down the measurements. Never rounding up, just down. I have had to start changing designs to be over the desired limit. Knowing their system will round it back down. And sometimes when a model gets rounded down, it makes some details, walls or even wires 0.01mm below their guidelines that they absolutely refuse to admit that is happening and allow it anyways.

So once again you have to test print every single model, because the Service Team now refuses to help you with a model issues. Where you have 6 identical models, but something was added too each file making it different. I have one set of private models, 6 variants. 4 they will print, 2 they rejected for a part that is on all 6 models. And that they did not correctly check the detail, instead mistaking it for an unsupported wire, though it's not.

It has gotten where disputing anything with the Service Team, is much like beating your head on a brick. At least with the brick you know at some point it's going to break. Now whether you can stay awake till that point, that's another point altogether.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Tue, 03 Dec 2013 10:51:50 GMT
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Quote:The Service Team has also stated they (meaning ShapeWays), have the right to increase the size of a model by 15% during production.

I'm really interested to see where you have seen or heard this.
Shapeways does not resize or alter models!

The only option where this might happen is Stainless Steel where they will be printed slightly(!) bigger to compensate for shrinkage but this is no way near 15%.

Quote:Design guideline says 0.8mm wall, new guideline 1.0mm wire. The point being mentioned was 0.97.

&

"Although the model is printable, there is a likely chance of the engines breaking at the points where it's thinner. "

Just like stated: the printer should be able to print your model without any issues, however during cleaning and shipping this part might break.
At this point you are not talking about printability (design rules) but more about manufacturability. In short this means: are we able to produce this model several times from printing to the customer receiving it without failing.

@RailNScale, I'm sorry I haven't been able to dig into this yet :(, however I did check the screenshot you have attached:

Quote:Now, (a) is rejected for having a so-called too thin wire. Well it's hardly a wire, and the way SW measures geometry is arguable.

The part is 0.53mm thick and it seems that the length is more than twice its width and thus considered a wire.

We are working hard to align the way checking is done but I do agree that we are not consistent enough in doing so, yet.

Best,
Mitchell

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Tue, 03 Dec 2013 15:13:06 GMT

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I stand slightly corrected. It is not 15% it was infact 0.15%. As it was sent in an email concerning material and a series of models that did not come out right. And how WSF material can make a model larger in accuracy. There, I have now corrected my statement.

"My colleague indeed had a look at this and as far he could see the models are still within the design

rules. We mention on the material page for White Strong & Flexible that the accuracy can be 0.15%."

And from what I was told, means that the material can indeed make a model larger. And with that being the case, One must ask why then does the Service Team go postal over 0.01mm that the model was shrunk by during the meer uploading process?

No Mr. Jetten, I am not trying to start trouble. Just stating that which has been stated so clearly to me in emails. I noticed though you didn't address any aspect of my comments concerning a model being down scaled by the ShapeWays computers during upload. The problem is, what is stated to me in emails does not always translate to reality. Yes I didn't post the correct % number. I admit that error. I had to go back to find the email in which that was mentioned. But now I have it saved and will keep it for future reference.

I have 2 models on a recent order that were for every sense of the word, identical. Only in one model file the ships had cargo boxes on top, the other model did not. The model without the boxes on top printed without going back to be rechecked even once, from what I could see on me end watching the models process from checking to production to done. The one with these boxes on top however WAS rejected. The cargo boxes were not the issue the rejection issue was the engines. Both models have the same engines. Yet it was the one with the boxes that got rejected for being 0.971mm instead of being 1.000mm. Yes I added the last number, because the size difference was 0.029mm. I even tried pointing this out and was rebuffed with the rejection stands.

I maybe could have understood the rejection if the engine section was 5mm long, meaning the length could have broken it off. But it's 2.5mm long. The 0.971mm measurement is nearly half the engines overall length. I don't get 2 99% identical models ordered at the same time, 1 gets rejected, the other prints, both have the same measurement on the engines. This is almost like my 9 Tin Cans model. One thought it was an unsupported detail, one thought it was an unsupported wall, and you thought it was an unsupported wire. But the model printed without you having to force print it. Do you remember that?

The Service Team still has no tolerance guideline to take into account that your computer system

will down scale a model by 0.01mm, if it looks at the measurements of the model and determines that the numbers for x, y and or z axis are not greater than 0.67% of 0.01mm. it will round down that measurement to the next whole number. Meaning that if you upload a mode that is 47.00mm in length as it appears on your computer system. But the true measurement is 46.9966mm, the ShapeWays computer system will down scale the size to 46.9900mm. Though I do have too admit, I've never seen the ShapeWays computer system round up those numbers. Only rounded down.

Subject: Re: Preventing Rejections
Posted by [railNscale](#) on Tue, 03 Dec 2013 16:37:37 GMT
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LS.,

I am a little puzzled about what SW-business model is. It seems that SW wants to be out of business within the next few years. At least we are actively looking for alternatives now.

Because SW -as a supplier- is not taking its responsibility. SW admits their process is far from consistent. SW knows this for many years.

The socalled design guidelines are guidelines. That makes sense especially since each design is more or less unique. A guideline is not a rule.

SW's reason for this is that they want to have an escape in case a model is not printable (even if the guidelines is followed-up for 100%).

But it also goes the other way around. I mean what is the point?

SW proofs (meanwhile a dozen times!) that a model can be printed, cleaned, is strong (as far as I understand can even be printed right away without issues).

Still SW is only interested in a knock-out criterium. Really hooked on it. Just to proof they are right. Like SW's statement: "The length is more than twice the thickness thus a wire." That the models are successfully printed anyways seem to be totally not of any interest.

Now 1.2 mm in length is really some wire....

But what is the point?

Should I simply delete the model instead? Because some person at SW thinks that a model cannot be printed? Is this SW's business model? Getting very bad comment all over the internet? Is that SW's mission?

Sounds like 'een paarse krokodil'. This has really nothing to do with service. 'We are here to help',

'Apologies', 'We understand you are frustrated'
Just meaningless expressions. SW doesn't act this way.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Tue, 03 Dec 2013 19:36:08 GMT
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Quote:Still SW is only interested in a knock-out criterium. Really hooked on it. Just to proof they are right. Like SW's statement: "The length is more than twice the thickness thus a wire." That the models are successfully printed anyways seem to be totally not of any interest.

Hold on here RailNScale, I have not said that I agree that the model is printable or not. I have informed in the sentence above that I haven't had time to dig into the case and see if the exact same model has been printed before.

All I informed you is that "what is considered a wire".

Also regarding:

Quote:SW proofs (meanwhile a dozen times!) that a model can be printed

I have explained this on the phone last time, and although I do understand your frustration: every model is checked again when having a different model ID. Thus for our system not recognized as "printed a dozen times".

Now for this model, I did see it has been ordered again and asked our production team to print it anyway ;)

Once again, and I'm sorry, I have not been able to dig into the case about it being printed in a different model set.

Cheers,
Mitchell

Subject: Re: Preventing Rejections

Posted by [FreeRangeBrain](#) on Tue, 03 Dec 2013 20:58:45 GMT
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"It's not always that a model violates any rules or guidelines. It is seen by someone as being questionable. And for that reason alone the Service Team WILL reject a model."

I can think of several examples of a model conforming to all specific rules, yet not being printable. One quick example: a barbell with a center spindle large enough to pass the minimum wire size rule, but with weights either end that would make the whole too fragile to survive processing and handling. It passes all the specific rules, yet will be rejected as a whole.

Subject: Re: Preventing Rejections
Posted by [matt_atksn](#) on Sat, 07 Dec 2013 03:16:35 GMT
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Quote:""A model does NOT have to violate any of the design guidelines or rules to be rejected.""

"They just have to think that there may be an issue in post production, and they will reject your working model."

Here's mine, Frosted Detail material:

Quote:Here is why we cannot print your model:
The minimum supported wall thickness is > 0.3mm for this material. Please thicken the walls of the model.

Upon asking service "what the criterias considered that made these as walls instead of being details?"

Quote:Thanks for reaching out to us.
These spots are exposed and unsupported, making them easy to be broken off while cleaning. Thickening them will allow is to clean off the support material without them breaking.

File Attachments

1) [o1873979-873979.JPG](#), downloaded 134 times

Subject: Re: Preventing Rejections
Posted by [tebee](#) on Thu, 12 Dec 2013 23:25:35 GMT
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It would help if Shapeways informed us BEFORE they change criteria for rejection

Several times now the first I learn of a rule change is because one of my models is rejected because of it.

It would be even better if they consulted the designers first, but that's probably too much to ask.

Tom

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 13 Dec 2013 03:49:44 GMT
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Quote:Upon asking service "what the criterias considered that made these as walls instead of being details?"

Quote:Thanks for reaching out to us.

These spots are exposed and unsupported, making them easy to be broken off while cleaning. Thickening them will allow is to clean off the support material without them breaking.

I've received this type of rejection before. When asked what they could possibly be doing to break off details such as this, I was informed that they poke and prod at our tiny detailed models with Q-tips!

I wish they would re-word this type of rejection as "Thank for modeling in FUD, but we really hate this material. Please come back when you want to sell some 1cm cubes in WSF."

Subject: Re: Preventing Rejections
Posted by [Unistrut](#) on Fri, 13 Dec 2013 07:05:37 GMT
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Hello,

Just want to jump in with another retelling of the classic tale: Make model, print model, realize model is way too tiny, make model larger, print it again, paint it, open store, model gets rejected when someone finally orders it. Pointing out to CSR that model was successfully printed before

(twice, once smaller!) has no effect. Closed store rather than face having to constantly reconfigure models to meet the guidelines of the week.

-U

Subject: Re: Preventing Rejections

Posted by [FabMeJewelry](#) on Sat, 14 Dec 2013 21:33:09 GMT

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I must say that Shapeways has improved a lot !

Past few months we've received many orders from the FabMe Jewelry + GÃfÂ¼nter Art & Design shops without any rejection.

Designing products for sale is very different than designing products for personal use, you have to make sure the product arrives in perfect shape and will survive the terrible things us Humans will do to it. Think about building a bridge, it isn't designed with the minimum wall thickness of construction steel in mind but with strength and durability.

We can't wait what 2014 got in store for us, expecting nothing but magic :)

Subject: Re: Preventing Rejections

Posted by [natalia](#) on Thu, 19 Dec 2013 14:57:38 GMT

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Hey guys,

Exciting update on fixing rejections... WALL THICKNESS VISUALIZATION on upload!! Yep, that "first of many" we've been talking about is HERE!

That's right, we help you see problem areas BEFORE you order!

Read all about it, and tell us what you think... right here!

I've been dying to share this with you guys!! YAY!

Natalia

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Mon, 30 Dec 2013 16:38:06 GMT

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lensman wrote on Mon, 30 December 2013 14:34

I was reading another post here where someone printed an object that failed three or four attempts before the final one went through; that's absolutely great that Shapeways went to that effort to get it to work and please the maker but what happens when a customer orders it and now it fails again? Good chance it will be rejected as unprintable.

Inconsistency is something that really needs to be addressed by Shapeways.

How would you suggest that Shapeways handle the issue? Reject it on first breakage, without even attempting a second print? Reject it before printing because it MIGHT break? I've seen both points argued at length. WE need to send Shapeways a consistent message as to how we'd like it handled.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Mon, 30 Dec 2013 16:43:22 GMT

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This thread has gotten so old, I may have mentioned this.

Perhaps if a designer could indicate at upload time if it was a one off model, or it was intended for public sale. A model intended for public sale would need to be a bit more robust so it will reprint reliably- and Shapeways would know that if the model fails during printing it could be a problem later. A one off model is not intended (and perhaps can be locked out from) sale to the public, and more chances can be taken.

Dave Yale

Subject: Re: Preventing Rejections

Posted by [MrNib](#) on Mon, 30 Dec 2013 18:12:14 GMT

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If models are not printing or breaking under existing guidelines the guidelines are insufficient to reflect the process capabilities. While it is preferable to have one set of guidelines perhaps one set is required for designer only efforts and a more stringent set for items which are available for purchase. These problems will never go away if you try to occupy that middle mushy ground.

Many commercial manufacturers can supply higher precision or better quality product but that is generally reflected by special order and additional cost. If a designer must push the envelope, which increases the cost for everyone, why shouldn't they pay more for service to cover their additional costs of multiple failed prints and human touch time?

Subject: Re: Preventing Rejections

Posted by [lensman](#) on Mon, 30 Dec 2013 18:49:37 GMT

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

dcyale wrote on Mon, 30 December 2013 16:43

Perhaps if a designer could indicate at upload time if it was a one off model, or it was intended for public sale. A model intended for public sale would need to be a bit more robust so it will reprint reliably- and Shapeways would know that if the model fails during printing it could be a problem later. A one off model is not intended (and perhaps can be locked out from) sale to the public, and more chances can be taken.

I definitely agree with this. If a maker wants to sell the model then it should print first time out - no issues - period! That could be the "default" upload option.

Then if a maker is experimenting with pushing printing boundaries, or is going to sell the item privately, he/she can check off a box that states: "This model will not be offered for sale on Shapeways. Please attempt to print."

Perhaps if the second option is chosen then Shapeways can inform the maker if indeed there were some printing issues or if the model can be "unlocked" for sale to the public?

I know for a fact that Shapeways has gone to some extraordinary efforts to print some of my models and I wouldn't be stupid enough to offer them to the public. On the other hand I'm not the only one that has had Shapeways print something, had a customer buy it, and then got the "Sorry, this can't be printed" email !! Very, very frustrating.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Mon, 30 Dec 2013 19:50:03 GMT

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lensman wrote on Mon, 30 December 2013 18:49

Perhaps if the second option is chosen then Shapeways can inform the maker if indeed there were some printing issues or if the model can be "unlocked" for sale to the public?

I know for a fact that Shapeways has gone to some extraordinary efforts to print some of my models and I wouldn't be stupid enough to offer them to the public. On the other hand I'm not the only one that has had Shapeways print something, had a customer buy it, and then got the "Sorry, this can't be printed" email !! Very, very frustrating.

I have proposed that the print/fail ratio be visible to the designer. I want my customers to have the best experience possible, but that includes buying a model that matches the prototype as closely as possible within the constraints of the material. Which means often times pushing the limit. I don't always know if that limit was pushed too far until I get burnt. It would also be great ammo for those rejection messages if the P/F ratio was 95% and then someone decides that a little detail was actually a wire.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 31 Dec 2013 12:04:21 GMT
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Had a rejection in my mail box this AM when I woke up. My understanding is that when you sprue a bunch of pieces together, with several connections the sprues are considered supported wires. This model is in WSF and it was rejected:

I asked CS for clarification as I have had older models print OK with sprues of this size, and if Shapeways start rejecting them it will start a new round of having to review many old models and trying to identify and update this issue. If a piece was only attached with one sprue I have (hopefully) tried to make it larger than the minimum for a free wire.

What experience have other people had on this issue?

Dave

File Attachments

1) [free or supported.JPG](#), downloaded 399 times

Subject: Re: Preventing Rejections
Posted by [lensman](#) on Tue, 31 Dec 2013 12:27:02 GMT
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Great, I just went to the Design Guidelines page for WSF and all it loads is a white page....
Anyway, my feeling is that I think for a "wire" they require 1mm minimum? I could be wrong and cannot check that right now.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 31 Dec 2013 12:53:02 GMT
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It just came up for me and it specifies a free wire as 1mm and a supported wire as .8mm.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [tebee](#) on Tue, 31 Dec 2013 15:04:47 GMT
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I've had so many rejections over sprues that I've stopped using them on all but the smallest things.

In my recent experience they are now always considered as supporting wires and so need to be 1mm. I've had rejections too at 0.8mm.

Tom

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 31 Dec 2013 16:03:33 GMT
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Hmmm. anyone from shapeways monitoring so they can chime in with an "official" version. Of course in the model in question I could simply eliminate the sprue entirely.

I like them because when I resell models on Ebay it helps ensure that the customer is getting a full

model.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Tue, 31 Dec 2013 19:48:28 GMT
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So I got the shop owner survey. I really couldn't believe the options given for the question "What are your greatest barriers for growth on Shapeways?" Not a single option for rejections, random design rule changes, overall lack of transparency in the approval process, rough handling in cleaning and shipping. Not a single mention.

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Tue, 31 Dec 2013 20:10:22 GMT
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Is there any "[] Other, fill _____" or any comment field? Like in the previous.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Tue, 31 Dec 2013 21:22:42 GMT
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On a variety of subjects:

The survey allows to check rejections as an area that needs improvement- there is not a real comments section.

WSF sprues need to be 1mm according to CS.

I was reviewing my year end sales *(from March when I started) and saw something interesting concerning rejections. Of 22 customer order rejections, it looks like 12 of them were from non-US orders. I had 144 total model orders, and 58 were non-US. So on raw statistics, non US orders were more likely to be rejected. I do not know what production facilities print for different countries so don't know how valid conclusions on this basis are,

Of the rejections, virtually all had test printed successfully prior to being offered for sale, but because I ordered them they don't show up in my sales analysis and I'm too lazy to go through my

orders and add them manually.

HEY SHAPEWAYS: How hard would it be to offer an excel sheet of my orders that looks like the sales summary so we could merge the two?

There seems to be a higher incidence of rejections of previously successful customer ordered items rejected when it was successfully ordered in either the US or non-US, and the rejection was a later order was from the opposite, but to be honest that is beyond my hazy recollection of statistics, and analysis of my sales is way too small a sample to draw any conclusions. But I wonder if Shapeways has looked at the issue of a model being successfully printed at one facility, and then rejected at another, or if it is an issue at all.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Wed, 01 Jan 2014 00:15:16 GMT
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dcyale wrote on Tue, 31 December 2013 21:22How hard would it be to offer an excel sheet of my orders that looks like the sales summary so we could merge the two?

I still suggest that the personal orders simply be included IN the Sales Overview Spreadsheet. That is a trivial code change and I don't see any negative result from including them. I'd be happy to withdraw my suggestion if anyone could point out why NOT to have it.

Actually.. there was a week or so there back many months ago when personal orders WERE in the SOS (it was a bug). I'd like to see them come back.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Mon, 06 Jan 2014 22:25:38 GMT
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It seems that I go two steps forward and three back. (Actually the wall thickness tool has identified 2 different problems that would have resulted in cancelled models- a real step forward).

Today I got a rejection for a thin wire. The model was in FD. Wire design specs are .6mm supported, .8mm free, and 1mm weight bearing.

Here's the picture:

The wires are over .6mm and supported at both ends. The rejection notice was the canned one that gives the dimensions required for different wire sizes with no application to my model or the specifics. I followed up with CS, asked when a wire is supported vs. free and why my wire wasn't a supported wire, and got a polite answer differentiating between different wire types, but with nothing explaining the concept to the model in question.

When I look at this wire I see it supported on all ends and carrying no loads- it's decorative, not structural. Each wire mutually supports the others. Maybe I'm crazy because I just don't get it.

File Attachments

1) [trailers 01 06 14.JPG](#), downloaded 321 times

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Mon, 06 Jan 2014 22:49:17 GMT

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Did they specify what diameter they want them to be ? Maybe the whole railing is too fragile to withstand cleaning (lever action breaking some of the posts, or something like that). Would it be practical to build a protective cage around the trailers ?

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Mon, 06 Jan 2014 22:57:47 GMT

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mkroeker wrote on Mon, 06 January 2014 22:49 Did they specify what diameter they want them to be ? Maybe the whole railing is too fragile to withstand cleaning (lever action breaking some of the posts, or something like that). Would it be practical to build a protective cage around the trailers ?

Nothing more than the boiler plate. Which I quote below.

I have had other models that are much more intricate that printed and cleaned OK. Here are some pictures a customer recently sent me-

There are some wires the same diameter on this model.

Here is the rejection:

Hello dcyale,

After taking a closer look, we cannot print a model that you have available for sale.

You may be able to update and continue to sell your model based on the information below.

Model: Trailer Assortment x4 HO 1/87 Rentals

Version: 1

Materials Affected:

- Frosted Detail (Guidelines)

Here is why we cannot print your model:

The minimum wire thickness for this material is 0.6mm. Wires that are supporting a structure should be 0.8mm, and ones bearing more weight should be 1mm.

To print (and continue to sell) your model modify your file and update it here:

<http://www.shapeways.com/model/edit/-----> .

We know you've already put a lot of time and effort in creating your model. If we can help in any way email us at: service@shapeways.com.

Kind regards,

File Attachments

1) [painted01.jpg](#), downloaded 309 times

2) [paint02.jpg](#), downloaded 304 times

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Mon, 06 Jan 2014 23:57:42 GMT

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As one of those who was involved with the testing of the Wall Thickness Visualization Tool, WTVT as I call it. I found the tool if used correctly can catch many errors that get over looked in a model during design. By using the WTVT I am learning what it is that the Service Team is looking at, and ignoring. Some things require contacting Mr. Jetten over. Some it's best to just make minor changes and move on. I have several models that I have uploaded during the testing of the WTVT and found that by using the WTVT to identify areas of concern, then going back to the actual model and checking the results, I have been able to find areas of concern before the Service Team has. Been able to correct those areas and get a model uploaded with less than 2 WTVT high lighted areas of concern, which were so minor that only one rejection has happened while using the WTVT. Of more than 17 new models, only one model rejection that clearly was my

fault.

Some of what I found with concern to wires, unsupported wires and those things, is that the space between supports can determine if the Service Team see's a rejection, or a print. A model I have has wing guns on it. The guns are down in a channel of 3 walls. But because of the shape of the gun, the Service Team didn't notice the 3 walls and rejected it. After several disputes and more rejections, the model was finally put to the test and it never failed. Since then Mr. Jetten has limited this model to selected materials and suggested that I not change those settings. Sometimes it's not the details, walls or wires that are at issue, it's the geometry of them in relation to other seen or ignored areas surrounding the part in question.

I can tell you that that sometimes even I don't get what it is the Service Team is looking at. But by using the WTVT I am able to head them off at the pass, fix a model and get it uploaded and working without having to deal with rejections. The WTVT has reduced my stress, allowed me to better handle and manage my models in my shop. And it has seriously reduced my rejection rate. I have also found that by designing a model slightly smaller than wanted, then changing the scale by as little as 2% (and for super tiny models that ain't much change), it brings everything into requirements and has also reduced my rejections. And I have some rather tiny models in my shop. Go look at the Space: Above and Beyond models, or the Construction Fury set in the Space Station section. Believe me when I say, the construction furies are tiny. the entire structure bar over the top is 1.25mm wide, and all the support bars in it, both on top, sides and bottom all printed in FUD. Even the claws on the arms print clearly.

Sometimes I think we designers, shop owners, sellers and such, push the limits just too close. I still have some models that I think the Service Team is insane over. But using this new WTVT, I have managed to limit their involvement and triggering rejections. Not to mention it's allowing me to really understand 3D modeling and design so much more. And as a result I have some fantastic new and much smaller and thinner models working.

Yes, sometimes I still want to take the Service Team out too the woodshed, but sometimes it truly is my own fault. The WTVT has limited those faults and improved my calm. We all cried for ShapeWays to offer a way to check a model before ordering it. Well the WTVT is that tool for that request. And it's open too all who upload models. We have to learn to use it, to check our models ourselves. The thinner the red area, the more likely it won't get rejected, Unless it's an entire part, then you have to make changes. Believe me, the WTVT is a really nice tool to have.

Subject: Re: Preventing Rejections
Posted by [MrNib](#) on Tue, 07 Jan 2014 06:52:42 GMT
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Maybe someone thinks that trailers are meant to be used wheels up!

Subject: Re: Preventing Rejections

Posted by [MitchellJetten](#) on Tue, 07 Jan 2014 07:57:09 GMT

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Dcyale, I emailed our production team to check why they state 0.8mm while the design rules page 0.6mm.

Personally I think the 0.6mm is for FUD and 0.8mm for FD (not showing up?)
Reason for thinking so is cause we do state the wall thickness in FD and FUD:

Min Wall Supported: 0.5mm (Frosted Detail) & 0.3mm (Frosted Ultra Detail)

I'll get back to you once I have more information :)

@ Everyone else

Some addition information from Alan Hudson regarding the wallthickness check:

Quote:Currently the visualization is for informational purposes only. It can help you see possible problem areas related to wallthickness problems. It only calculates thin areas. It doesn't currently calculate structural strength. So yes its possible for this tool to not show you something that the human checkers will catch. A simple example is a meter long 1mm T character., White Strong and Flexible needs to be at least 1mm for free wires. But at the extremes of models these rules break down due to large physical forces. This tool is not trying to model that type of thing but just help you stay within the design guidelines as published.

The other problem could happen as well(and does with details right now). This tool might show you some areas below wallthickness that the human checkers will recognize as ok(something like lettering). We are working to reduce this case but right now its possible.

Hopefully the tool helps people understand some of the potential problems with a model. We realize its not perfect but I've found it really useful in my own 3d modeling.

Subject: Re: Preventing Rejections

Posted by [mkroeker](#) on Tue, 07 Jan 2014 08:08:17 GMT

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I guess the pipes on that (t)rusty steam engine are shorter and less exposed ? I'd try with .8 mm rails if possible - on the assumption that each segment of the top rail supports its neighbors and the posts it sits on. (But what do I know...)

Subject: Re: Preventing Rejections

Posted by [Strange fate](#) on Mon, 20 Jan 2014 18:19:42 GMT

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Just wanted to join in and add myself to the list of people having issues with rejections of items printed before several times successfully... of course, it wasn't rejected when I ordered, but when a customer did.

The excuse I got too was that if it had been caught before, it wouldn't have been printed... so I imagine that the dozen or so previous times it did print before, shapeways did a sloppy job at model checking ?

Ironically, 20 minutes after the email with the issues arrived, I got another one for my own order saying my order was sent to the printer (and was approved)... that order of mine contains a variation of the same item, the 'problem' areas are exactly the same...

One thing I'll learn from this, is to not bother ordering test prints anymore. I've spend over \$2000 on shapeways test prints, and they clearly don't seem to mean much, better to save the money and invest it into a new 3d printer. Live and learn.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Wed, 22 Jan 2014 22:57:09 GMT

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Well, I haven't ranted in a week or two in this thread. I did a new model of large machine tools in 1/87 scale- <http://shpws.me/qlwi>. Did a test print- you can see the pictures of the models I received in the mail.

Made them available for sale and the first customer order was rejected- loose shells. OK, there were loose shells. I now know better how to check them in netfab and learned something new. Kind of defeats the purpose of a test print, though. Just a waste of my money- (WHEN is

shapeways going to offer a really intense screening of a model upon first order- even at an upcharge- to catch this type of thing as much as possible? Is this in the pipeline Shapeways?) As a designer it would be cheaper to pay someone at Shapeways who does this all day to really go over the model, rather than have to purchase multiple test prints.

I fixed the shells and re-uploaded the model on Jan 17th. The new price was pennies different in price.

Today (Jan 22) I get a message that I sold a model that couldn't be printed. It sends a screen shot of the old model with the loose shells. I am assuming the order was put in before I updated the file- there's no way for me to tell. And the model is now locked out in the only material enabled- FUD.

So here are my two gripes- I can understand an order of a model goes with the version of the file that was in place when the order was placed. However, maybe before rejecting a customer sale Shapeways could see if the model has been updated. If there is only a couple pennies difference couldn't we substitute the corrected version? Good for the designer, good for Shapeways and good for the CUSTOMER!

The second gripe- this old rejection locked out a new version of the model. I suspect that's not supposed to happen. So what happens to the orders in the pipeline when the material gets locked out due to a rejection of an old model, but the order is of an updated model? I have a new test print of the model pending- in processing, so it will be interesting to see what happens.

I have emailed CS about the locked material. We'll see what they say.

Dave Yale

Subject: Re: Preventing Rejections
Posted by [lensman](#) on Thu, 23 Jan 2014 00:07:31 GMT
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Very well put, Dave. I've said before somewhere in these forums that it's great how Shapeways bends over backwards to get some of these difficult prints out, but in reality they are shooting themselves and the designers in the foot - When the next time it is printed and a new operator says "Nope, that ain't going to work" it gets extremely frustrating; especially when that order has been placed by a customer! I don't believe that even the new model checking tools that have been implemented are going to quite get rid of this problem.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Thu, 23 Jan 2014 00:11:34 GMT
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dcyale wrote on Wed, 22 January 2014 22:57 If there is only a couple pennies difference couldn't we substitute the corrected version? Good for the designer, good for Shapeways and good for the CUSTOMER!

I fully agree. The difficulty will be when that turns into a couple of dollars.

dcyale wrote on Wed, 22 January 2014 22:57 I am assuming the order was put in before I updated the file- there's no way for me to tell.

The Sales Order Spreadsheet can pinpoint when the order was placed, and all you have to do is compare that to the upload date on your model.

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Thu, 23 Jan 2014 00:18:50 GMT
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I didn't think of the spreadsheet. When I get home I'll take a look.

I agree that a couple bucks is an issue. But thickening a thin wire, or reattaching a shell makes minimal difference on my models as far as price. In this case I think the price went down a couple cents.

I also recognize the potential problem if the change makes a difference in appearance. The customer ordered one thing and gets another. It just seems that the potential pluses makes it a scheme that's worth looking at and seeing if the problems can be managed.

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Thu, 23 Jan 2014 00:20:21 GMT
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dcyale wrote on Wed, 22 January 2014 22:57 Well, I haven't ranted in a week or two in this thread. I did a new model of large machine tools in 1/87 scale- <http://shpws.me/qlwi>. Did a test print- you can see the pictures of the models I received in the mail. Made them available for sale and the first customer order was rejected-
Dave Yale

This tells me that the promises made about pushing through designs with >50% print success was complete BS and smoke up my - you know. When are we going to get straight answers and consistent service from Shapeways??

Subject: Re: Preventing Rejections

Posted by [Strangefate](#) on Thu, 23 Jan 2014 00:32:13 GMT

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I think it would help if customers could just combine shipping for separate orders. That way a failed print would just delay their goods, not cost additionally.

I've ordered myself 2-3 items at times and if one isn't printable, it's somewhat annoying to have to order it again paying the full shipping price, which is often higher than the item, and almost too high to bother with the other item remaining in the first order.

I think customers could live with this too more or less and encourages coming back more... personally as a customer I'd feel somewhat cheated if I order a few things and not all ship but the shipping price stays the same.

Right now if I'm lucky I'll manage to cancel the whole order until I can fix the offending model, but more often than not it's too late and I have to make an extra order for 1 item that's almost not worth to pay shipping for again.

Subject: Re: Preventing Rejections

Posted by [dcyale](#) on Thu, 23 Jan 2014 00:35:50 GMT

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I have to take the fault for the defect in the model, that's not my complaint. I screwed it up. My problem is that the test print went through without a problem and then it gets rejected on a customer order, I think three separate orders actually. I wish they had rejected the test print, that way I would've fixed it and put out a model that was printable for my customers.

I review my models, but let's face it, I am an amateur. I will never catch some of the things that the people at Shapeways, who do this all day long, can catch. I am getting better, but I have a long way to go.

Subject: Re: Preventing Rejections

Posted by [Roy_Stevens](#) on Thu, 23 Jan 2014 01:00:52 GMT
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dcyale wrote on Thu, 23 January 2014 00:35 I have to take the fault for the defect in the model, that's not my complaint. I screwed it up.

I understand that you had a loose shell, but obviously that wasn't as issue as your test print was successful. I've had 'loose shells' on models before, usually where a cylinder is mated tangent to a surface and lesser CAD programs see that as a separate item. But they always print fine until someone checking models didn't have their coffee and bam - rejected. Print success should always trump an ornery employee.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Thu, 23 Jan 2014 08:53:31 GMT
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I'll look into this dcyale ;)

Have to talk to the one that printed it, the one that rejected it and the one that approved the rejection.

As for the second rejection, this was probably caused by overlapping faces which caused parts of your geometry to be removed, resulting in a rejection.

Note that printed before models always go straight to the planning team (they aren't been checked again).

However as we manually plan trays, during this stage it sometimes happens that parts are dragged individually (instead of groups) to make the tray as tight as possible.

So when we drag the model individually, we notice the small part that wasn't attached.

While, most likely, the successful print was dragged to the tray as group.

For Printed before models with thickness rejections, these also go to the planning team right away without being checked again.

These are actually printed but it happens that after printing it breaks -> resulting in a rejection.

Of course there are exceptions, and we are working hard to align this better.

@dcyale, i really do understand your frustration and it always makes me sad to see we did reject something that has been printed before :(

Sadly this is the case and it still happens from time to time :(

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Thu, 23 Jan 2014 14:26:50 GMT

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Maybe there is a way we can make this more prominent?

If you go to the Edit Model section of the Edit page, there is a Details tab. At the bottom of that, it lists the Number of Separate Parts. The model in the image, has 4 separate parts.

File Attachments

1) [Seperate parts.png](#), downloaded 140 times

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Thu, 23 Jan 2014 15:51:55 GMT

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Mr. Jetten,

ShapeWays has a thing about parts in a models file have to be so far apart. Maybe what is needed is something that tells designers and shop owners when a part is not attached, but is also too close and could (if printed), get attached to the other shell during printing. I think a tool feature like that could be as useful as the WTVT.

And instead of just doing a flat-out rejection, maybe change it so the designer/ shop owner is contacted about the issue, requesting a "GO AHEAD AND PRINT IT" option. So that not everything is put on the heads of the Service Team, and it also allows for the "Printed Before Flag" to actually be considered before just shutting a model off.

Which as you know, just causes tempers to flare and peoples feelings get hurt and things don't go smoothly afterwards.

Subject: Re: Preventing Rejections

Posted by [stonysmith](#) on Thu, 23 Jan 2014 16:03:49 GMT

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Just to be repetitive... even though this is two shells, this would be considered to be one PART, because the pieces won't separate.

Likewise the item on the left below would be counted as two PARTs, but the item on the right would be considered to be only one PART.
On the left, the ball can come free - on the right, it's trapped and can't fall out during cleaning/packing.

File Attachments

- 1) [OnePart.jpg](#), downloaded 127 times
 - 2) [OnePart1.jpg](#), downloaded 126 times
-

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Thu, 23 Jan 2014 16:14:08 GMT
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Out of curiosity, Stony, is the number of parts determination performed by software or humans?
If by software, is it a difficult determination?

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Thu, 23 Jan 2014 16:31:16 GMT
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@ Youknowwho4eva:

I never paid attention to this screen before- thanks for the info. A new QC check I can make.
Thanks.

Dave

Subject: Re: Preventing Rejections
Posted by [Youknowwho4eva](#) on Thu, 23 Jan 2014 16:34:01 GMT
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@Dave discussing with the team, this may miss items closer that .1mm. We're discussing how to improve this, and also make it easier to find.

Subject: Re: Preventing Rejections
Posted by [stonysmith](#) on Thu, 23 Jan 2014 19:34:29 GMT
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AmLachDesigns wrote on Thu, 23 January 2014 16:14: Out of curiosity, Stony, is the number of parts determination performed by software or humans?
If by software, is it a difficult determination?
It's done by software, and it is a VERY difficult computation. I believe that Shapeways uses the "first order solution"

The software makes only one pass at computing the solution.. it would call this one PART, when it's actually two:

See how to solve this puzzle here

Because it's only a first-order software solution, it will make some errors.
There's a chance that it could call this a single part, due to the orientation:

File Attachments

1) [OnePart2.jpg](#), downloaded 385 times

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Thu, 23 Jan 2014 22:03:23 GMT
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Thanks Stony, that's kind of what I imagined.

If the solution is not 100% guaranteed, is it worth doing it?

Subject: Re: Preventing Rejections
Posted by [Roy_Stevens](#) on Fri, 24 Jan 2014 01:26:51 GMT
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MitchellJetten wrote on Thu, 23 January 2014 08:53: I'll look into this dcyale ;)

So when we drag the model individually, we notice the small part that wasn't attached.
While, most likely, the successful print was dragged to the tray as group.

I sometimes use blocking plates and other features across multiple 'parts' to ensure that my prints don't end up poorly textured regardless of orientation in the tray. I had no idea that even that effort could be subverted. How can I lock my parts in a certain orientation short of adding sprues? (which causes all sorts of other issue)

Subject: Re: Preventing Rejections
Posted by [stannum](#) on Fri, 24 Jan 2014 02:28:04 GMT
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dcyale wrote on Thu, 23 January 2014 16:31 @ Youknowwho4eva:

I never paid attention to this screen before- thanks for the info. A new QC check I can make. Thanks.

Dave

The part info could be over the Update File button. All the other info is already there, with more eye catching formating, visible all the time. It would also save one click.

Subject: Re: Preventing Rejections
Posted by [MitchellJetten](#) on Fri, 24 Jan 2014 07:51:20 GMT
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stonysmith wrote on Thu, 23 January 2014 19:34

The software makes only one pass at computing the solution.. it would call this one PART, when it's actually two:

See how to solve this puzzle here

So right now, for this model, if you go to "EDIT MODEL" and click on the "Details" tab, you will see:

=====

Parts

Number of Separate Parts: 1

=====

cause you will receive 1 part in the bag.
what if we would include the actual number of shells:

=====
Parts

Number of Separate Parts: 1
Number of shells: 7

=====

Would that help?
As an example my own model:

In this case it's supposed to be 1 part and 1 shell.
If the page would show that there is 1 part and 2 shells, you know something is wrong
(unfortunately we can only tell you, not show you).
This would potentially help you as you can investigate why the model has multiple shells (like a
loose door handle) before having to order it.

Mitch

Subject: Re: Preventing Rejections
Posted by [dcyale](#) on Fri, 24 Jan 2014 09:26:54 GMT
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If the information is already available, the number of shells certainly couldn't hurt.

Dave

Subject: Re: Preventing Rejections
Posted by [railNscale](#) on Wed, 19 Feb 2014 14:59:27 GMT
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LS.,

And AGAIN we receive an annoying rejection about geometry that was printed numerous times
with success and which is not even close to critical.

The noticed wall thickness seems to be a 'problem'. Now the interesting bit is that the exact same

geometry has been produced 13 times for our customers, and several times for us. As a matter of fact one customer has ordered multiple models with the exact same geometry, of which ONE model is rejected. Shall I explain this customer that SW doesn't want to print one model because it is 100% exactly the same than the other models SW is happy to print?

Maurice
RAILNSCALE

Edit: Removed non-constructive language.

File Attachments

1) [01976933-976933.jpg](#), downloaded 32 times

Subject: Re: Preventing Rejections
Posted by [railNscale](#) on Thu, 20 Feb 2014 16:57:41 GMT
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Hello,

Well I received the apologies again from SW. So thanks for that. Hopefully the customer is not too upset and willing to re-order.
So far so good.

But

Why is this happening so often? 9 out of 10 rejections proved to be false!

I understand that humans make mistakes. What I totally not understand is the procedure. Who invented the title: "Help us resolve issues with your customer's order". The text underneath such an email never opens a way to resolve issues, because the order is was already killed by SW. So, the title promises something that will actually not happen.

The rejection text currently contains the following message: "We want you to be successful, so we encourage you to:

Fix and update your design here: [your brilliantly designed model]. This will ensure that you can continue to sell your product.
Let [your unhappy client] know you're fixing the issue by sending them a message."

What does this text suggest? 'you can continue to sell your model' sounds in my Dutch ears as a

'continuation' of the already placed order. Meaning: we don't cancel it, we continue printing (after a modification - if at all needed) ...

Of course I was wrong, but the chosen wording of SW just sounds more crispy than telling the plain truth.

So in reality the order is cancelled. I need to write my comments and more or less try to convince SW. Meanwhile I am suppose to do damage-control to our customer who often happens to be German or French speaking (roughly 80% of our customers) who are already completely lost. The fun is that I have to explain that the remarks of SW are faulty. I happen to explain this in German or Google-French. After the confirmation of SW that they were wrong again, I then send another message to this customer telling him/her that it was all a bit of a joke and that he/she can re-order the model and that SW will pay the shipments cost.

Are my experiences unique here?

Maurice

Subject: Re: Preventing Rejections
Posted by [AmLachDesigns](#) on Thu, 20 Feb 2014 17:16:18 GMT
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Edited

Subject: Re: Preventing Rejections
Posted by [lensman](#) on Thu, 20 Feb 2014 22:29:18 GMT
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railNscale wrote on Thu, 20 February 2014 16:57
Are my experiences unique here?

No, they aren't unique. We've all received that "Help us fix your model..." email, although I think the number of times it happens with your model is a bit unique. I, too, used to think that the order was still active and that all I had to do was correct the model, upload it, and all would be okay... but not so, unfortunately.

Subject: Re: Preventing Rejections
Posted by [Mechanoid](#) on Fri, 07 Mar 2014 15:14:04 GMT
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I had an older model that works, get rejected last week. When I disputed the rejection, I was ignored for 3 days. Then when I was contacted, it was to tell me to calm down, and Please try to work with us, we would love to keep you as a customer. Which sounded alot like a subtle threat that I might be thrown of ShapeWays for disputing The Service Team. When I brought that up in my reply, besides asking them to check the models listed below.

Now they refuse to even reply to me at all.

The model in question is #1170710 SA-25A Badger Nightfury Set. Which the same model is in the fallowing sets. Exact same wing section on every model.

#685770 Galaxy Fighters 1/1000 Scale

#1170706 SA-23 Aurora Basic Nightfury Set

#1170702 PSI Corps Black Omega Nightfury Set

#1170710 SA-25A Badger Nightfury Set

#1170712 SA-30-E-A Badger Set

They said the wing was below the the guidelines for wall thickness. They failed to realize the wing has a taper, Starts at 1.08mm thick, and slopes down 0.46mm at the edge.

Now here is the actual model with the measurements from all over the wing.

The Service Team refuses to admit that this model works. This wing section is identical in every one of the files above. Model #685770 has been up and working without any issues for well over a year. I had to go back into all the newer sets and delete the spurs, because they were causing production issues. And that reset the "Printed Before" flags.

The Service Team keeps saying "Work With Us On This Issue", then they go back to ignoring people. They have no consistency from agent to agent in checking models. The WTVT even says it's fine. Now they are telling me, ---

"Also, I am sure you know that the WTVT is JUST an indicator, it does not catch everything, all the models are still subject to our manual review."

It's like The Service Team doesn't like the WTVT, and as people are learning to use it, they somehow feel threatened. That maybe the WTVT is going to make their jobs worthless. Because since I started using it, no rejections at all of new models. As I go back to old models, I'm making repairs as needed. But if the WTVT says it's fine, I'm leaving it alone. And every model that the WTVT says is good, it has printed without issue.

I have attempted several times to communicate with The Service Team, and they are still ignoring me. I have even asked that Mr. Jetten be asked to take a look, to get a production engineer involved. But still nothing. ShapeWays seems to really hate when people air dirty laundry in public like this. But it seems that is the only way to get them to respond to an issue.

Let it also be known, I am NOT calling The Service Team names, insulting them or putting them down in any form what so ever. All I have done is call them out, on the job they are suppose to be doing anyways.

One agent gets a model first thing that morning and see's no problems, model gets printed, Another agent gets the same model on another order an hour later, they reject it. This is what confuses me to no end. No consistency at all from agent to agent. It's causing tempers to flair, blood to boil and it's costing shop owners customers, as well as their reputations. And I honestly thought the WTVT would have brought much of that to an end. Guess Not.

Samantha

File Attachments

-
- 1) [01986749-Capture.jpg](#), downloaded 208 times
 - 2) [Wing Section.png](#), downloaded 211 times
-
-

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Fri, 07 Mar 2014 16:28:39 GMT

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Samantha,

We have no problems with people bringing their issues to the forums. Especially when they are in a constructive manner.

First off, we don't want you or anyone to leave.

Second, a question. Looking at your SA-23 Aurora Basic Nightfury Set and your SA-25A Badger Nightfury Set, is there a difference in the sets? If not, you already have the one that's printed, could you sell it as the other set as well? Just a suggestion, if that one has successfully printed as is, then it has the previously printed flag.

Now, we have the new Print it Anyway (PIA) button. I know your customers can't use this for your models, and currently successfully printing with PIA doesn't generate a previously printed flag, but if you were to order it for yourself and use PIA and there were no issues in the production, you'd have some weight to say that we can print it. This would not guarantee that we'd sell it to your customers! But one of the future purposes of PIA is so modelers can prove something is producible.

As for your concerns with service, I'll get with the rest of the community team (they're at SXSW today so it probably won't be till next week) and with the service team to see what's going on and how we can better serve you.

Thanks,
Mike

Subject: Re: Preventing Rejections

Posted by [Mechanoid](#) on Fri, 07 Mar 2014 17:34:38 GMT

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Mike,

Yup there is a difference. The SA-25A Badger Nightfury Set has a second cockpit on the backside. That's the only change between those 2 designs. It was a special design fighter. That is why I have the different sets. The oldest file, the Galaxy Fighters Set, has most of the new sets in it. The only one that is not in the old file is the Mind Bender Black Omega Nightfury Set. They have a special Black Omega on the tops. And they started out as the SA-23 Aurora Basic

Nightfury Set. That is why I am totally confused why some are being printed, and this last set was rejected. For the same wing that is in the other files.

Since I had to remove the spurs, most have been printed and gotten the Printed Before flag. The SA-25A Badger Nightfury Set was overlooked. Now I'm preparing to order this set, using the PIA. But how do I find out if there were issues or not? I know this set will print, just have to get it past The Service Team first. And I don't know how to do that.

Mike, the email I got last week, which did NOT address my dispute at all, it just read like it was either a hint that I might get booted from the site, or that it was a mild threat, telling me to shut up or I would be. It just weird how things are being done lately. Like I said I have been using the WTVT to manage my designs better. Even the older designs I had to pay outright to have created. WTVT has made it easy for me to find and repair models before The Service Team gets to reject it. As a result I truly know my models, what works, what is in question.

Consistency, that is where the heart of the rejection problems lay. One agent see's a problem, one doesn't. Looking at the exact same model. The combative vibe that The Service Team gives off at times, total refusal to admit when they made a mistake. They turn a model off, it's off until I upload the model again, or cave in to what I was TOLD. If I make a mistake, I'm the first to admit it. And I take responsibility for it. When The Service Team makes a mistake, they reply with; "well it should have never been printed before", or something down those lines. But when you dispute it, they take it personally. They never admit to being wrong. So how can I "HELP US RESOLVE ISSUES", if they are not taking responsibility for their part in things?

Mike, tell me what to do, PLEASE.

Subject: Re: Preventing Rejections

Posted by [Youknowwho4eva](#) on Fri, 07 Mar 2014 18:27:37 GMT

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Samantha,

About the different models: I see, and certainly understand the frustration. Even if the whole piece was exactly the same, the checkers can't compare and verify. But I see your point, that either all should fail or none. We are working on the inconsistency issues.

I haven't seen most of the emails yet. We'll assess and address that. For now lets handle that, at the least, outside of this thread on preventing rejections. Preferably lets address through email so we can get all the facts together and come to a happy conclusion.

For PIA, it's my understanding that you will be informed of any and all issues including

"rejections". So if you order with PIA, and the checker rejects the file, it'll be noted that it was "rejected" but will be sent to the printer anyway. If the quality doesn't meet our standards, same thing. It'll be noted that it was "rejected" but will still be sent to you. Here's the full details of PIA.

As for what to do right now, take a breath and enjoy your weekend! I'll handle getting all the back end stuff started. The rest of the community team is at SXSW until Wednesday, but I should be able to reach them via email so that we are at least starting the discussion.

Subject: Re: Preventing Rejections

Posted by [pezhetairoi](#) on Mon, 17 Mar 2014 22:47:08 GMT

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Very disappointing.

Another rejection with previously printed models. Says they cant be printed in "x detail" material.
[https://www.shapeways.com/model/782884/10-aquatic-intercepto rs.html?materialId=5](https://www.shapeways.com/model/782884/10-aquatic-intercepto%20rs.html?materialId=5)
[https://www.shapeways.com/model/782879/10-aquatic-fighter-bo mbers.html?materialId=5](https://www.shapeways.com/model/782879/10-aquatic-fighter-bo%20mbers.html?materialId=5)

Odd, since I can do it here at home with a similar style machine (see model photos). I have some Shapeways samples of even thinner "walls" from other models in "transparent detail" here on my desk, and they look great.

What's wrong with these? What the operator cites as wall thickness looks like embossed detail to me. The little bumps? They don't even need to be perfectly formed. They are meant to be hand painted.

When I asked about it, the message said this:

Thanks for reaching out to us so sorry to hear we had issues with these models.

Both models have never been printed before in White or Black detail Plastic. Due to the fragile nature of Detail Plastics, we strongly advice against making them available in this material. Strong and Flexible and Frosted Ultra Detail will be able to withstand this geometry better. I'd recommend removing the option for Detail Plastic or updating the model so that it can be printed successfully.

So the suggestion is ... just don't do it?

The service here is less than practical. The non-responses are both unhelpful and irritating.

File Attachments

- 1) [ol1014216-Capture.JPG](#), downloaded 27 times
 - 2) [ol1014215-Capture.JPG](#), downloaded 22 times
-

Subject: Re: Preventing Rejections
Posted by [natalia](#) on Wed, 09 Jul 2014 16:17:16 GMT
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Hey guys,

Since this thread was started a year and a half ago, I wanted to post an update on this long-raging topic.....

At Shapeways, we have a tradition of giving internal projects an animal name that captures its essence. In this case, the problem we wanted to tackle is a big hairy one with lots of sections and legs, across all our teams -- like a caterpillar. The problem is: rejections. Our goal is to dramatically improve how we give you feedback when a product you have ordered cannot be manufactured using 3D printing. Historically, you might have received our standard rejection email that said, "After taking a closer look, we cannot print one of the models in order # ..." You probably spent hours designing, or searching for, that one unique product that is not for sale anywhere else and then we had to tell you to start over! We understand that this could be a very disappointing message. With Project Caterpillar, our aim is to turn design feedback and iteration into a positive experience, and watch our caterpillar eventually go into its chrysalis and emerge as a beautiful butterfly.

It has been half a year since we formed a team to tackle this issue head on. The team consists of community managers, operational directors, software developers, customer service representatives, product managers, and supply chain coordinators. It has been all hands on deck to fight what many of you felt is the worst experience when shopping, selling or making products at Shapeways: getting a rejection.

Why is this such a hairy problem?

At Shapeways we always aim to quickly and affordably turn your ideas from digital designs into real products, but due to the limitations in 3D printing, some designs just can't be brought to life in their current form. To help clarify how to best design for 3D printing, we provide tools on our website that give you the information you need to make the best possible decisions while designing a product, but it's not always that simple. Usually we know what will print, but we are also learning with our customers every day -- you are pushing the limits of the technology, and we're right along with you, even if sometimes we have to give you bad news that we can't produce your product as you've built it.

But really, why is this so hard? Here are some of the biggest issues:

Well, the first thing was to accept that it is OK to fail. We should take chances, and if that means we try it a few times and we still can't print your product, that's OK so long as we give you actionable feedback once we figure it out--and then we can keep learning about what works and

what doesn't.

For makers in particular, most of the time we have never seen these products before, and we are not sure what you want! Should that really small propeller actually be attached to the plane? Is it OK if you have a ton of powder stuck inside? We are guessing, and need better ways to understand your intentions and communicate.

One of the biggest challenges has been consistency: every model gets checked by hand, and we have dozens of production partners who are looking at thousands of models that have been made 5 minutes or 5 years ago in 40+ materials. This is a lot of people and data to coordinate. So a huge part of our focus was around training our 3D print engineers, and on giving you useful, timely feedback.

You might have noticed that we publish guidelines and not rules. That's partially because we want to continue to allow you to push creative boundaries, and also because creating designs with 3D software that also observe rules of physics can be subjective. For instance, a thin wire will work if the rest of the geometry is structurally sound, but a hard "no thin wire" rule would have eliminated this option. So it's a lot of art, and less science than we would prefer, especially when the technology improves every day.

With this in mind and the goal of turning rejections into resolutions, our teams have been working around the clock to surface potential issues with your models as soon as possible, to provide actionable, consistent feedback when there is an issue, and to make the rejection experience less frustrating for anyone that still receives that disappointing message.

Trust us, we know we're not quite there yet and we will continue to do everything in our power to accommodate your needs. Still, we wanted to take this opportunity, half a year down the line to reflect on where we came from and where we are now.

Some of the steps we took to reduce rejections

#1 Thin Wall Checking and Fixing.

When we looked into the data for why we had to reject certain designs, it became clear that the biggest issue preventing them from passing our manual checks was in their structural integrity: they had "thin walls" and weren't strong enough to withstand the whole production process. While a large part of the process your product goes through is just bits and bytes, after a product is taken out of the 3D printer, it is physically touched at least 5 times in cleaning, quality checks, packing, and more. While our printers can produce nearly anything, you can imagine when blasting excess material off your model with high pressured air, your model will need some strength to survive. Soon enough our team decided to surface critical checks of your models on upload; the thin wall checker was one of the first of these tools released on our website. Shortly followed by the thin wall fixer, which in many cases can help solve issues with your models that

would have otherwise caused the models to be rejected. We have lots of huge plans for this area, so we can show you the path, right at upload, to producing your model successfully.

#2 Print It Anyway.

Another feature many of our most loyal and seasoned community members have been requesting for a long time is the option to go ahead with manufacturing, even if the model doesn't pass manual checks. Print It Anyway is an option at checkout, that enables you to test your most complicated designs and learn from the actual, physical outcome. Our production crew will always do their very best to ship models in the desired level of quality, and this is no different when selecting Print It Anyway. If a feature on your model cannot make it through the whole production process without slight issues, we would still ship the model to you, so you can hold your model in your own hands, learn from it, and iterate. We learn from your PIAs too!

#3 Detailed Manual Checks.

While all of this work was in progress, our 3D printing engineers have been aiming to provide the complete feedback to slightly adjust your design if it failed thorough manual checks. Instead of surfacing just one issue, they now describe all the issues at once. In practice, this means you would not end up in an endless circle of rejection and updating your model. If you do experience a rejection, the reasons are also now available on your model edit page as well as in your original email.

#4 Checking Consistency & #5 Print Success Rates.

We know that the most infuriating thing is to get a rejection of a model that you printed before, and we have paid special attention to fixing that. Indeed we have had a few big hiccups (SORRY STONY!) managing these models along the way, but we have improved dramatically, down to < 0.3% of models, and we are still trying to make it better. The consistency of manual checks is continuously monitored and the print success rate of your model is now shown on your model edit page. This way you see the same metrics we look at to judge success through the process.

What's next?

We're happy to report that we've made some significant progress, reducing by half the number of times we have to tell you that we can't print your model. When we do have to give you the bad news, most of the time it's within 24 hours, and it's always accompanied by a detailed explanation from a trained 3DP engineer. While we think this improves your experience, we know this is just the tip of the iceberg, especially if you're someone who still can't get your product made. We promise that we're committed to helping you bring amazing products to life, and there are still lots of features and improvements lined up.

This caterpillar is not quite ready to come out of its chrysalis, at least not until we have found a solution that eradicates your frustration and disappointment, but we will continue to listen to your feedback and we will learn from you every day.

Thank you,

Team Caterpillar

With this update and all the improvements we've made, I'd like to close this thread and invite you to post your new suggestions here.

Looking forward to continuing to evolve with you,
Natalia
