Subject: Levels of detail. Resolution
Posted by maldini83 on Tue, 14 Aug 2012 08:48:15 GMT
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Hello all,
See if anyone here can help me out with this.
I need a level of detail in my design of about 10-50microns, that is to say 0.01mm, which is at least one order of magnitude higher than the ones I found here or any other 3D printing company (and 100x for metals, which is the material I actually want).
It would be awesome if someone here recommend me a research group, that can deal with these demanding conditions? Truly appreciate it!

Thank you
-Manu

Subject: Re: Levels of detail. Resolution
Posted by pdb on Wed, 15 Aug 2012 19:30:44 GMT
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Hello
You could try lost wax casting. Sorry i dont have time to go into the process but if you google it im sure theres a wiki

Rapidshape specialise in 3d printing for this process, keep in mind the print is lost when casting.
Slice Thickness: 10 / 25 / 50 /100 Âµm
Native Voxel* ~60Âµ, roundish harmonizer on click

http://www.rapidshape.de/s60-maxi/articles/rapid-3d-generati
ve-prototyping-and-manufacturing-system-s60-maxi.html

Regards
PS 10 micron for a feature is a 'bit' small, even for the human eye

Subject: Re: Levels of detail. Resolution
Posted by BillBedford on Wed, 15 Aug 2012 22:21:21 GMT
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There are people who can do this level of detail, but I don't have details to hand. However this

company may be able to help.

Subject: Re: Levels of detail. Resolution
Posted by maldini83 on Thu, 16 Aug 2012 01:28:00 GMT
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Hello BillBedford and pdb!
Thank you so much for your help!!
In any case, I was wrong about the level of detail I needed. It's in fact even higher: around 1micron. Yes, I know, it's going to be difficult but let's see if somebody comes up with a useful idea! (Very likely not in 3D printing).

So far, best option I have is go to arc machining shop...but I'd like to see some other approaches (even better if they're cheaper!!).

Thanks!
-Maldini

Subject: Re: Levels of detail. Resolution
Posted by timday on Wed, 05 Sep 2012 22:27:51 GMT
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For fabicating things on micron scales, I'd have thought you'd need to be looking into photolithography (see also wpedia). While the process is normally associated with relatively flat silicon chips (albeit with multiple layers), there's also a whole world of microelectromechanical systems (MEMS) at similar scales; actually that page lists some other fabrication technologies besides lithography.