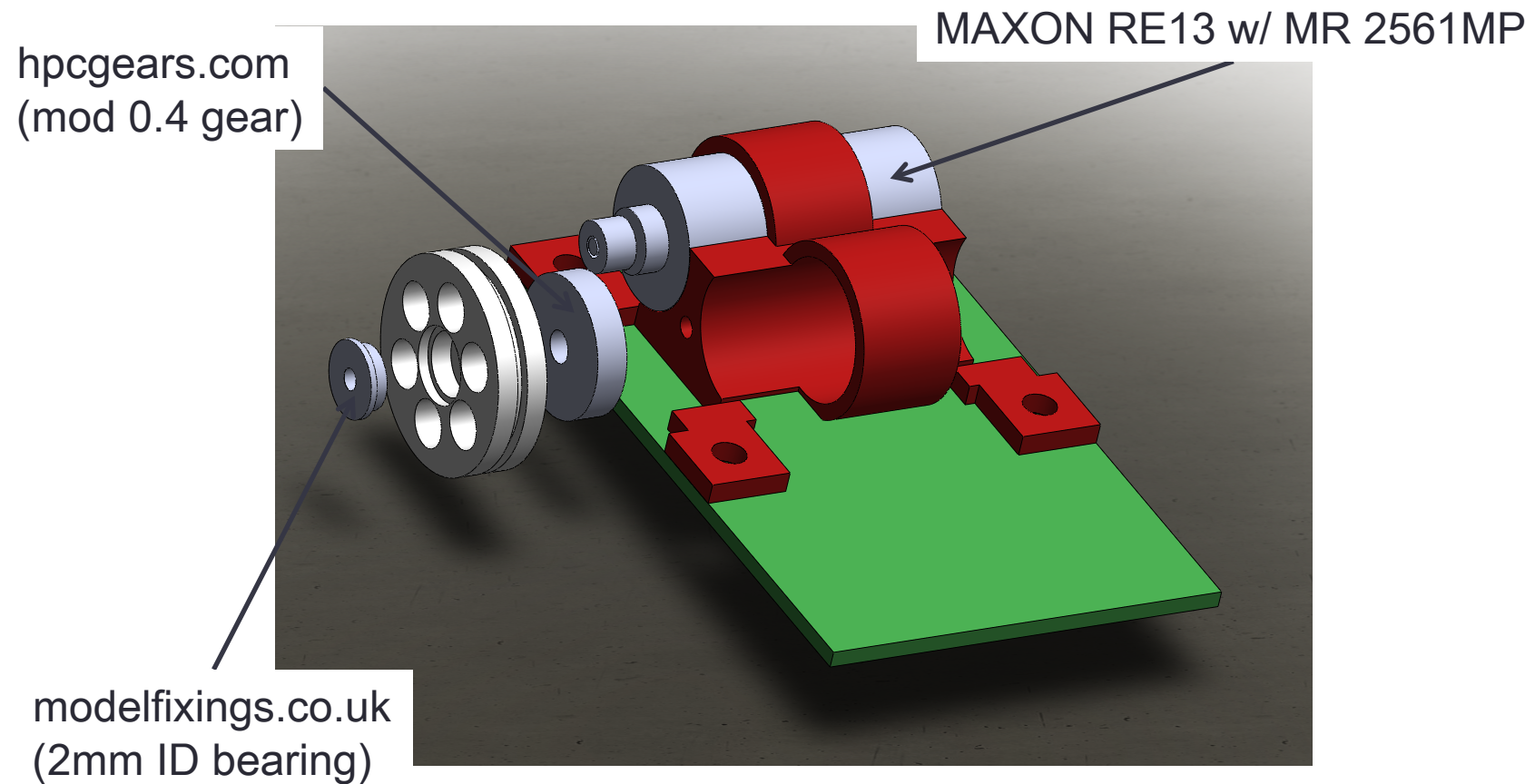


RAPID PROTOTYPING ROBOT PARTS

Introduction

- Rapid Prototyping
 - Shapeways
 - Materials & Processes
 - Software
-
- + Hands on examples

Rapid Prototyping



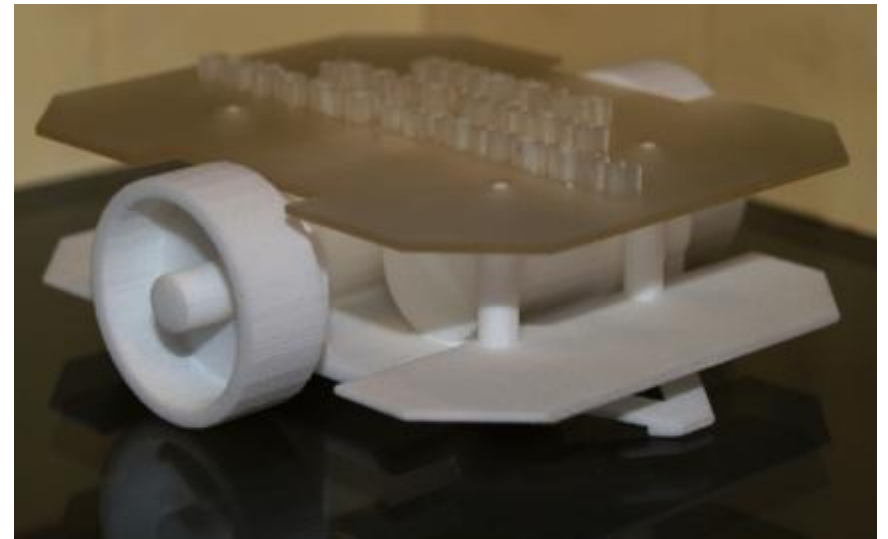
Shapeways

- Wide Range of materials
 - Plastics
 - Stainless Steel
 - Ceramics
 - Glass
- Pricing by volume
- Large community
- There are others!
 - 3dprint-uk.co.uk
 - 3dcreationlab.co.uk
 - (See google/bing/lycos)



White, Strong and Flexible

- Nylon 12
- Price \$1.50 setup + \$1.40 per cm³
- 0.7mm minimum wall thickness
- 0.2mm minimum detail level
- Max size 660x350x550mm
- *The* engineering material
- BUT...



White, Strong and Flexible Process

- <http://www.youtube.com/watch?v=aBNGnfoGGfQ&list=UUjq8uE1Ca4q0JDIfZB6VHSA&index=22&feature=plcp>

Detail

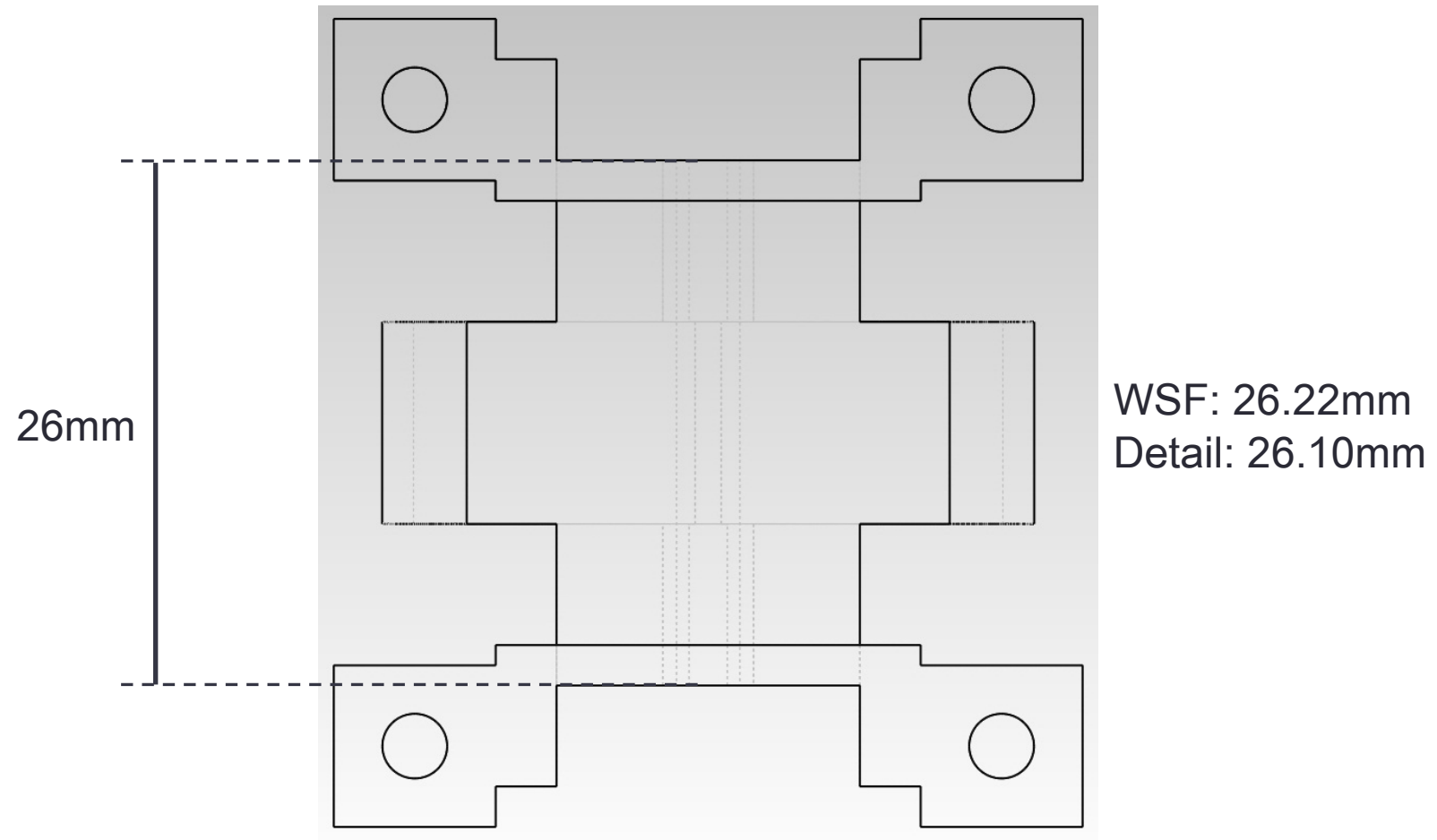
- VeroWhite FULLCURE 830
- Price \$2.50 setup + \$2.99 per cm³
- 1.0mm minimum wall thickness
- 0.2mm minimum detail



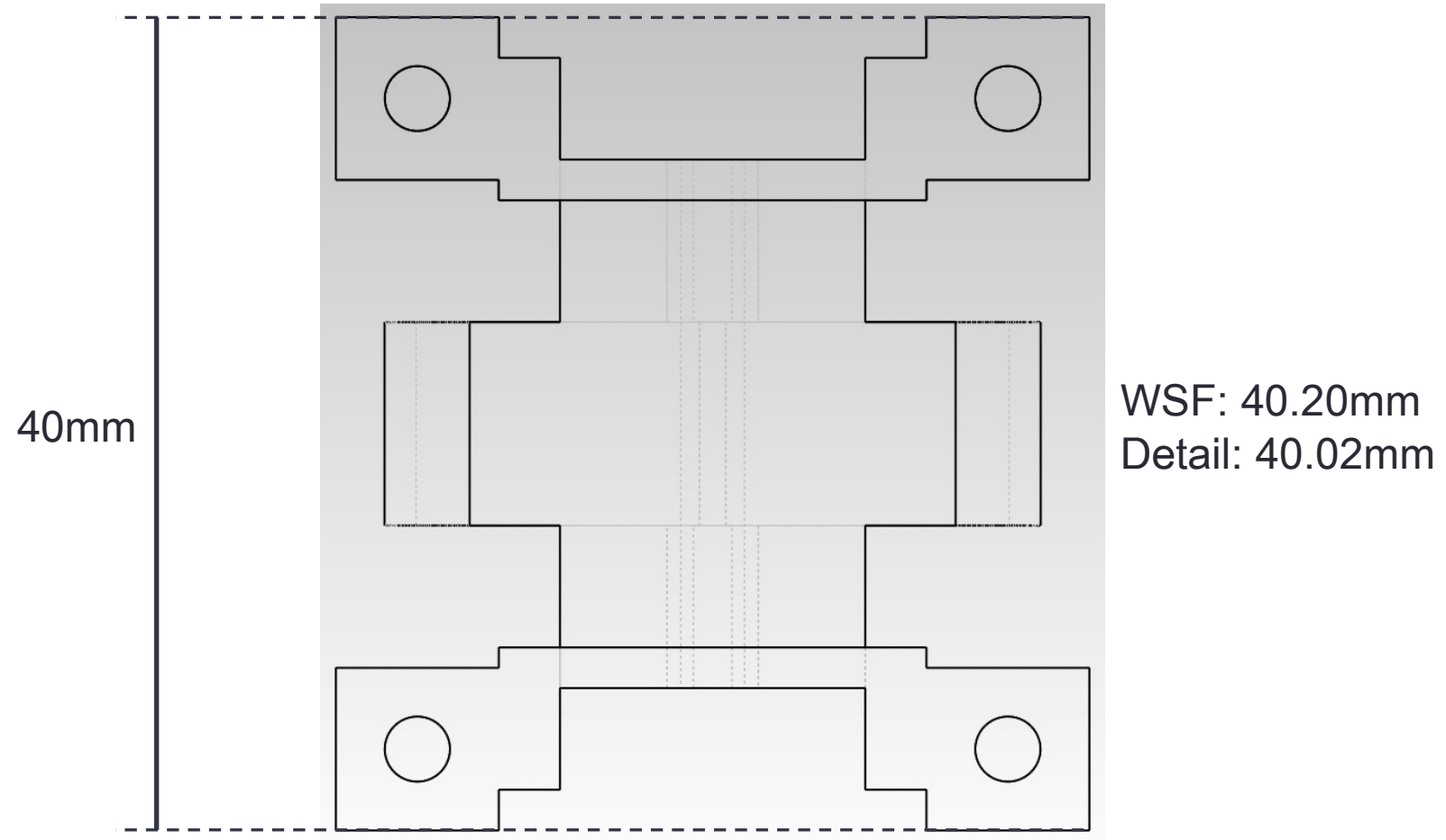
Detail Process

- <http://www.youtube.com/watch?v=IM8WU8Jfyl8&list=UUjq8uE1Ca4q0JDIfZB6VHSA&index=21&feature=plcp>

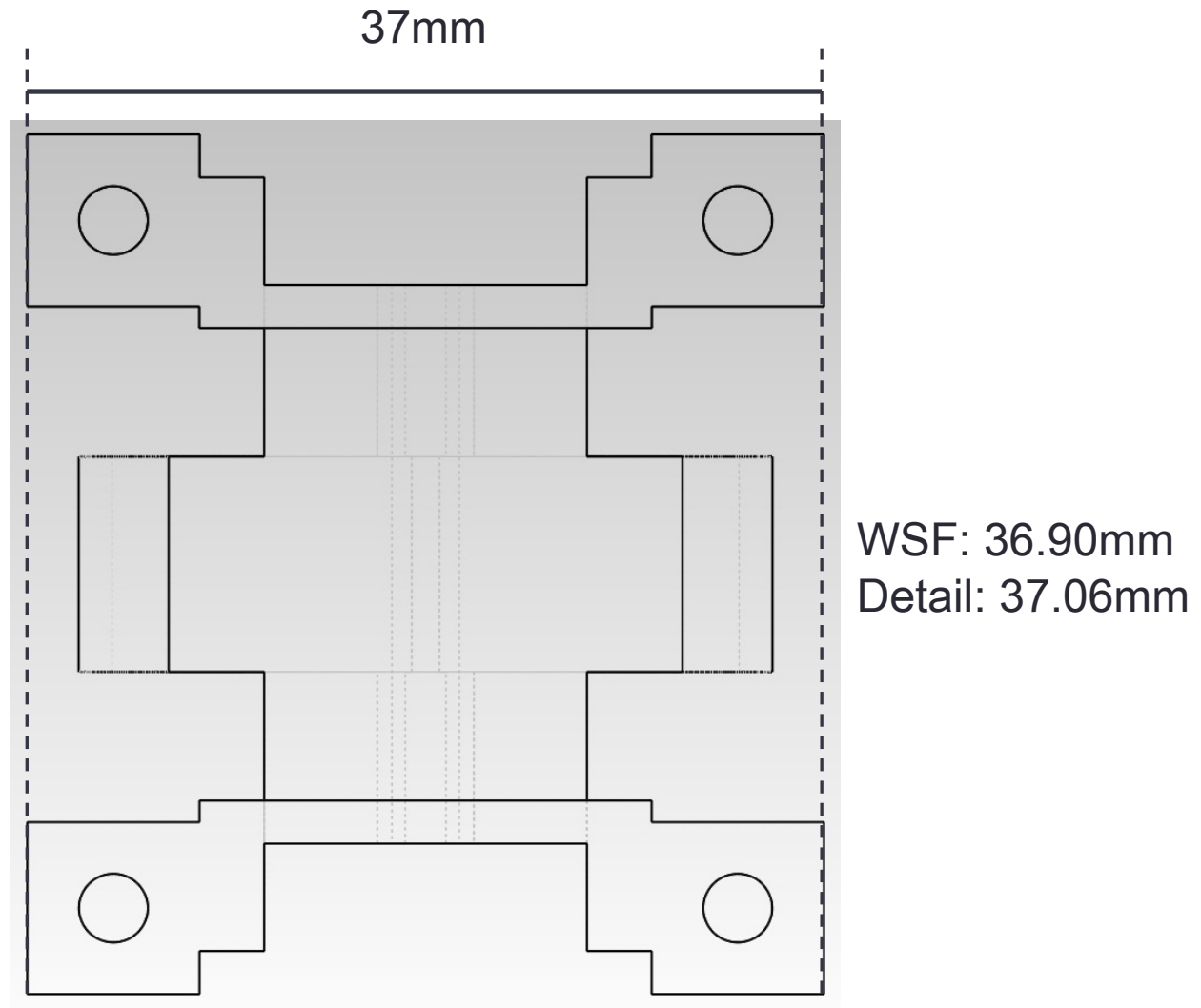
Rulers



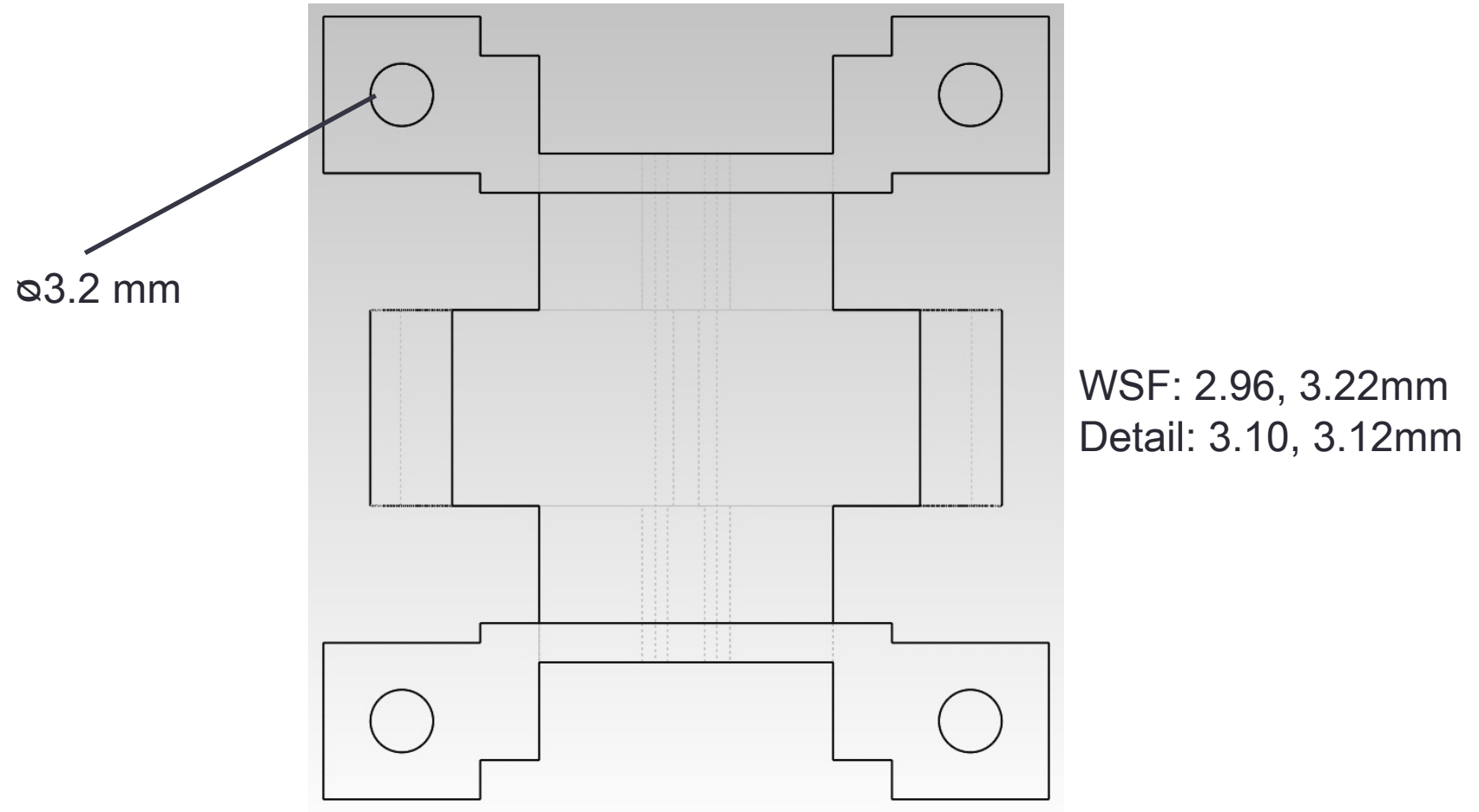
Rulers



Rulers



Rulers



Software

- Solidworks (Many Monies)
- Alibre (\$200+)
- ViCAD (\$99+)
- Google Sketchup (Free)
- Blender (Free)

Conclusions

- Detail is king... Use CAD software...
 - More next year?

Questions?

