Sharing parametric models as web apps with replicad
Hi, I’m Steve

https://github.com/sgenoud  @stevegenoud@toot.cafe
• Download the model
• Download the model
• Slice It
• Download the model
• Slice It
• Print It
<table>
<thead>
<tr>
<th>filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>wall-honeycomb-part.stl</td>
</tr>
<tr>
<td>wall-honeycomb-224x190size(mk3s).stl</td>
</tr>
<tr>
<td>wall-honeycomb-293x271-(big-printer).stl</td>
</tr>
<tr>
<td>wall-honeycomb-bambu-211x248-fixed.stl</td>
</tr>
<tr>
<td>wall-honeycomb-106x89-fixed.stl</td>
</tr>
</tbody>
</table>
Parametric models

Actually, it is more parametric software
• Download the model
• Download the model
• Find the hobby version of F360
• Download the model
• Find the hobby version of F360
• Download It
• Download the model
• Find the hobby version of F360
• Download It
• Get overwhelmed by a professional tool
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• Watch some videos about modeling with CAD
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• Watch some videos about modeling with CAD
• What did I want to do already?
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• Find the hobby version of F360
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• Get overwhelmed by a professional tool

• Watch some videos about modeling with CAD
• What did I want to do already?
• Abandon
• Download the model
• Download the model
• Download OpenSCAD
• Download the model
• Download OpenSCAD
• Wonder what to do with this code
• Download the model
• Download OpenSCAD
• Wonder what to do with this code

• Change the wrong line
• Download the model
• Download OpenSCAD
• Wonder what to do with this code

• Change the wrong line
• Feel dumb and abandon
Lower the bar
For the end user
• Configure the model
• Configure the model
• Download It
• Configure the model
• Download It
• Slice It
• Configure the model
• Download It
• Slice It

• Print It
Web generator / configurator
Building your own configurator
Does not seem that easy

• Maintaining my server
Building your own configurator

Does not seem that easy

- Maintaining my server
- Pay for my server
Building your own configurator

Does not seem that easy

- Maintaining my server
- Pay for my server
- Learn to work with a kernel directly
Building your own configurator
Does not seem that easy

• Maintaining my server
• Pay for my server
• Learn to work with a kernel directly
• Roll my own UI
Building your own configurator
Does not seem that easy

- Maintaining my server
- Pay for my server
- Learn to work with a kernel directly
- Roll my own UI
- Low level language and care about memory management
Lower the bar

For the maker
The online workbench
For code CAD
Code CAD in JS / TS
OpenCascade kernel
Builtin web configurator
Lower the bar

For myself
Lower the bar

For web devs
replicad is a library
• Configure the model
• Download It
• Slice It

• Print It
Start with a bunch of maths

• Configure the model
• Download It
• Slice It
• Print It
Honeycomb Storage Wall

Width and Height

Height (mm)
177

Width (mm)
171

7 rows, 8 columns
Honeycomb Storage Wall

**HEIGH (MM)**
- 177

**WIDTH (MM)**
- 171

7 rows, 8 columns
Honeycomb Storage Wall

Width and Height

HEIGHT (MM)
177

WIDTH (MM)
171

7 rows, 8 columns
CAD as another web API
Take home message
Take home message

• There is no wrong way to sharing your stuff
Take home message

• There is no wrong way to sharing your stuff
• We can lower the bar when sharing parametric model as a configurator
Take home message

• There is no wrong way to sharing your stuff
• We can lower the bar when sharing parametric model as a configurator
• If you are code cad curious maker, have a look at the replicad workbench
Take home message

• There is no wrong way to sharing your stuff
• We can lower the bar when sharing parametric model as a configurator
• If you are code cad curious maker, have a look at the replicad workbench
• If you are a web dev replicad as a library is worth having a look at