

Open-source design  
ecosystems around

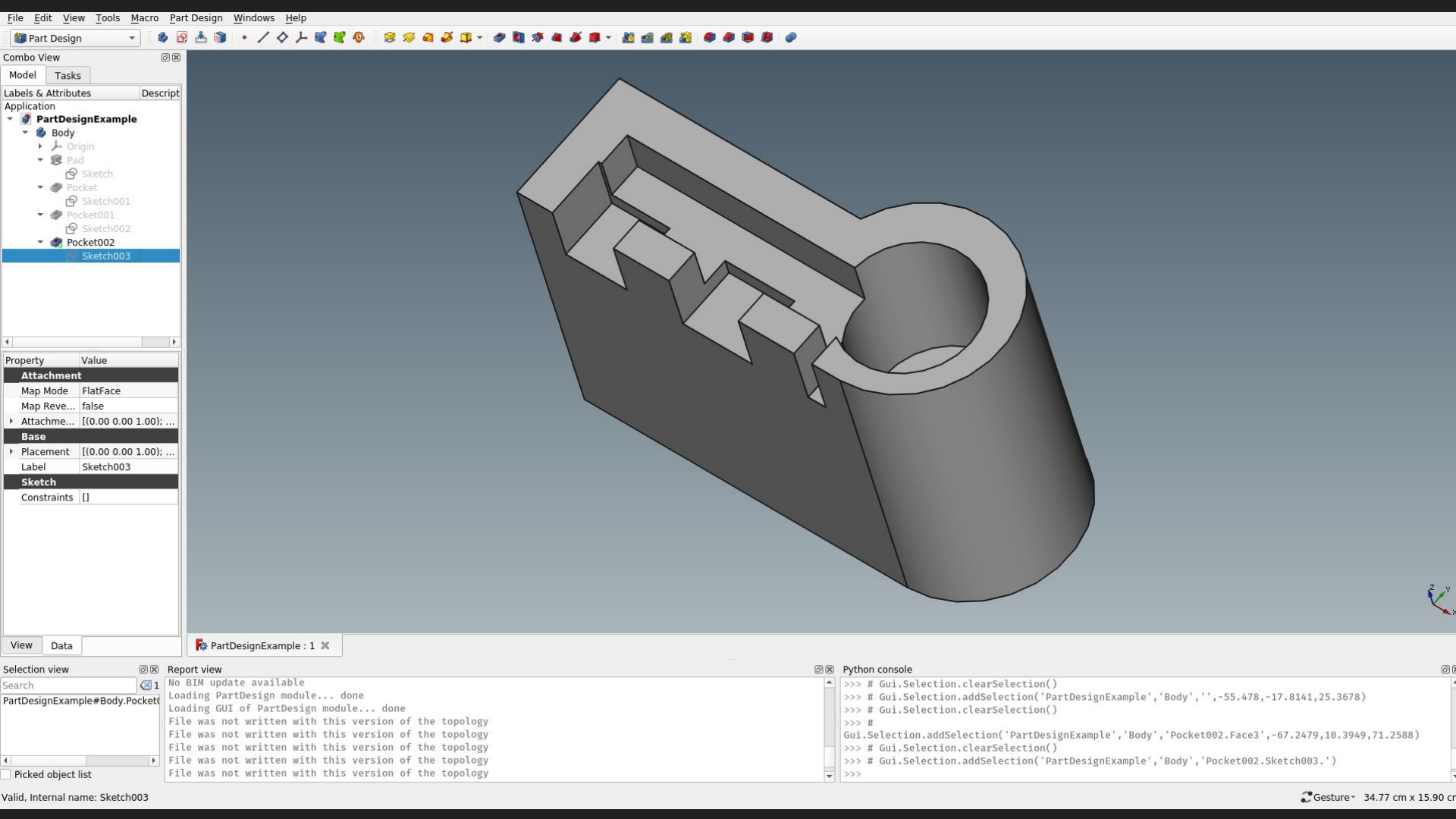
# FreeCAD

Your own 3D parametric modeler

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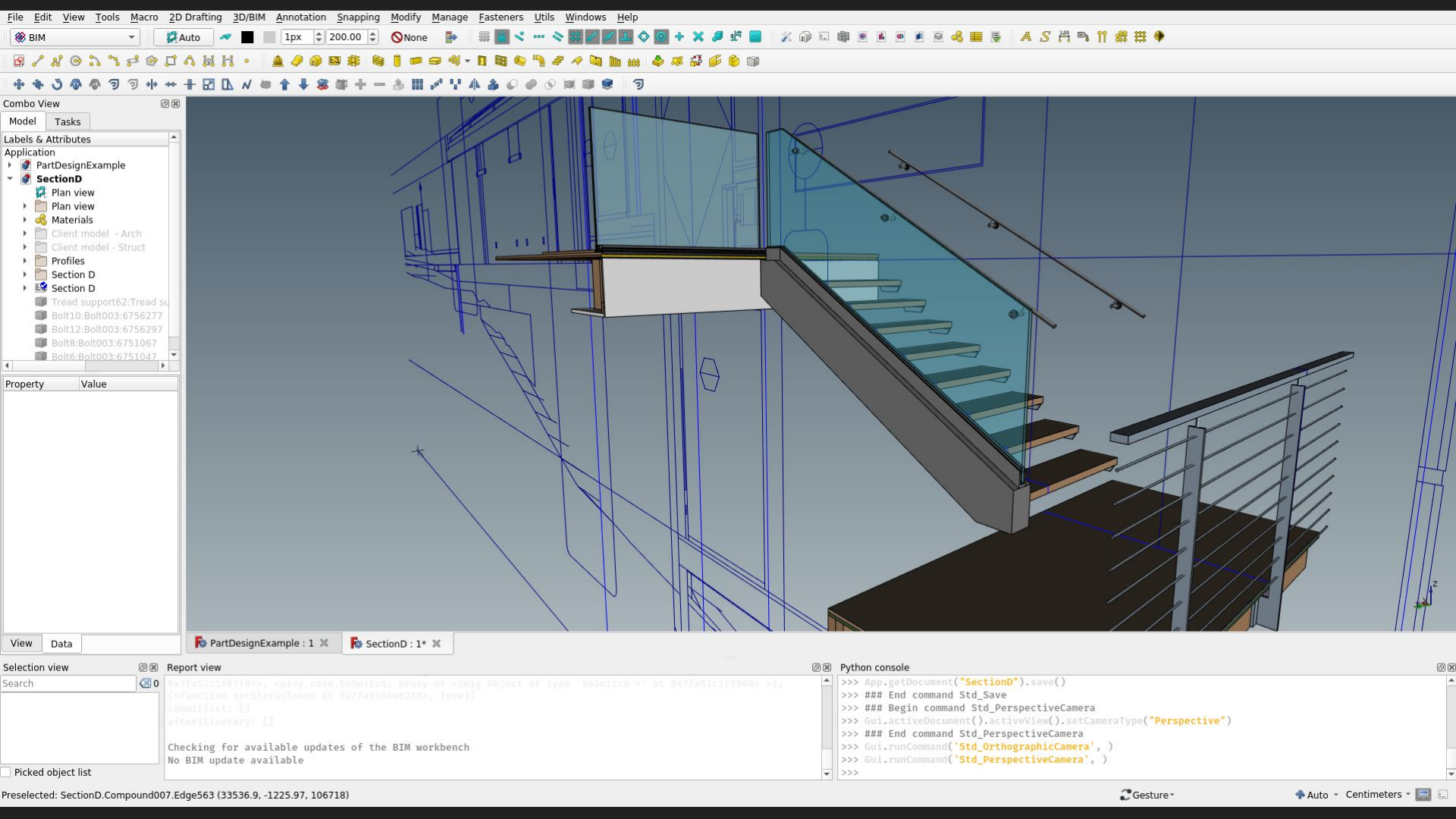
# Quick resume of FreeCAD

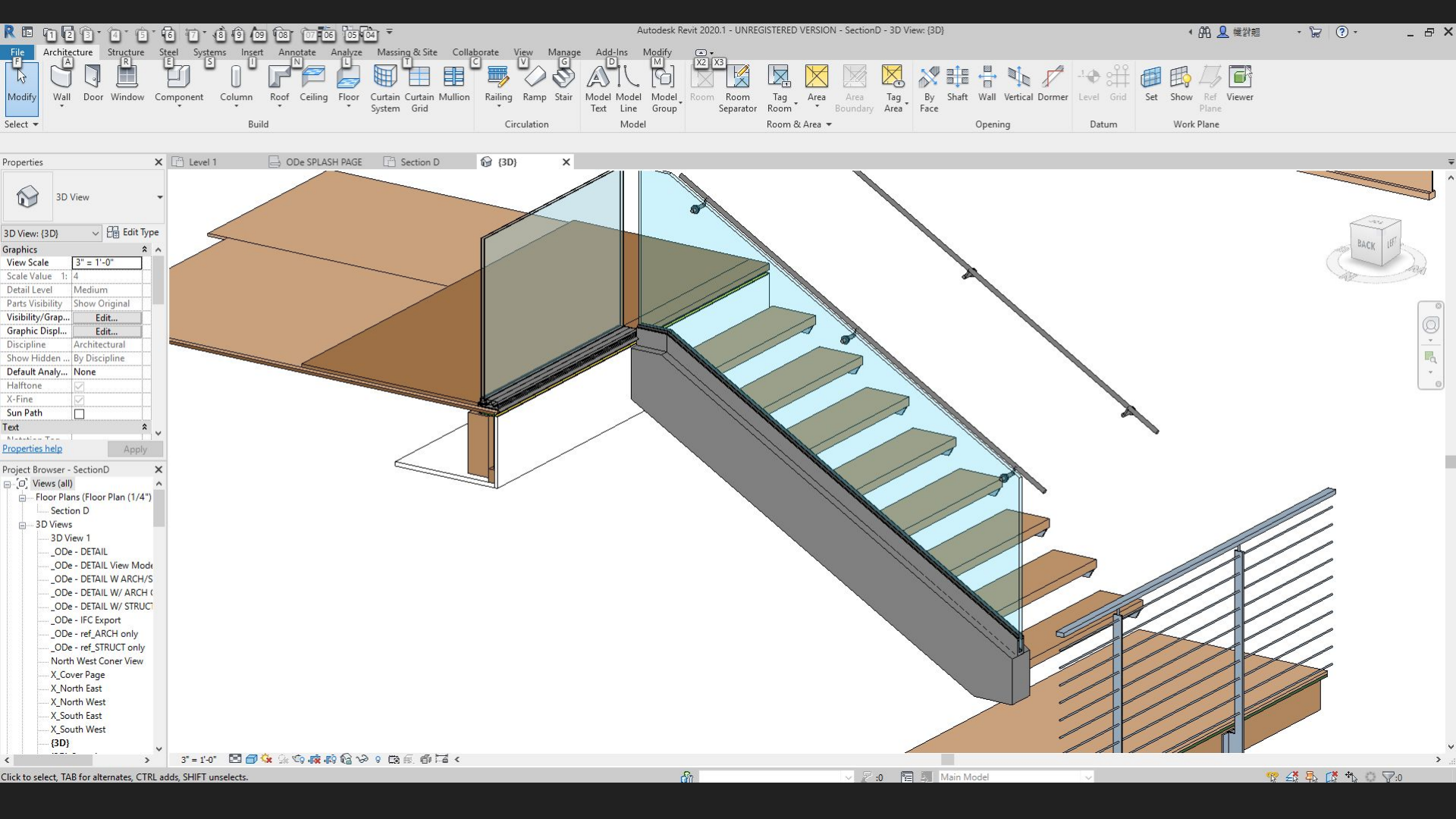
- Open-source 3D modelling application (GUI or console/python)
- “Precise”, NURBS-based parametric modeling
- Most suited to design objects to be built in the real world
- Started in 2002, now ~20 active developers
- Heavily modular (everything is a “plugin”)
- Big collage of open-source libraries and engines
- Large part of developers had no programming background
- No very clear separation between users and developers



# Yorik

- OpeningDesign: An open architecture studio
  - Everything done collaboratively online
  - Most projects are open-source (client's personal details encrypted)
  - Heavy use of open-source development tools (Git, issue trackers, online meetings,...)
  - Worldwide, no physical location
- 
- WikiLab: an example of cross-disciplines work
  - Architecture, engineering, CNC, social experiment
  - Open-source project, evolves over time

















Yorik van Havre

Explore Filter

PEOPLE

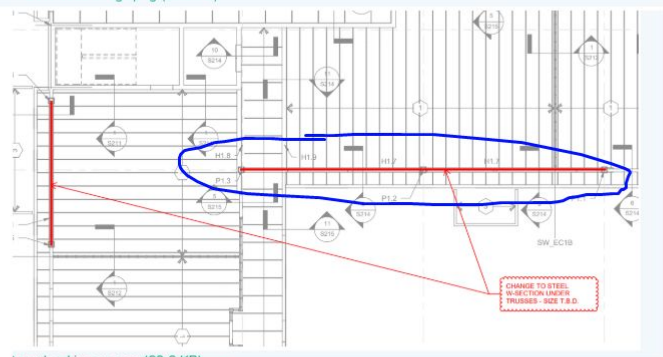
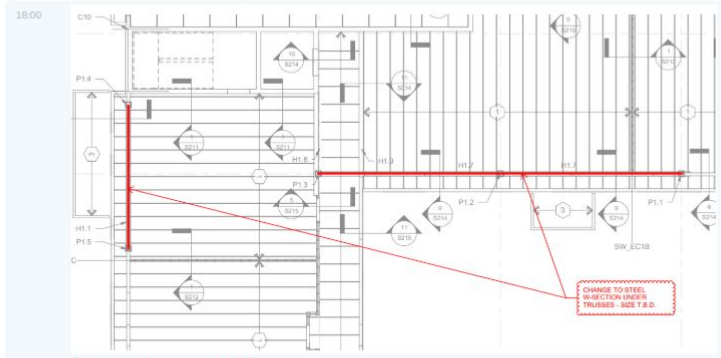
- chopingregis
- theoryshaw
- hdm\_dt\_fb
- moult
- Gitlab Notifications
- mairocas

ROOMS

- CTR - Arch
- CTR - Struct
- OD\_Workflow\_Discussions (P...
- ODe\_Santa\_Ana\_Residence
- aec\_coding
- Oakfire 2.0
- OD\_Workflow\_Discussions (Pr...
- Newport\_Beach\_Residence
- Aalseth\_Residence
- chopingregis and theoryshaw
- 15 N Hancock
- Facilities Building - 1810 S. Pa...
- Depula Residence
- Encryption Test

SYSTEM ALERTS

the garage door to the ramp, yes those beams are done. I was referring to these two locations...



there's garage doors to the community room at that wall

Lperezato

Combo View

Model Tasks

Labels & Attributes

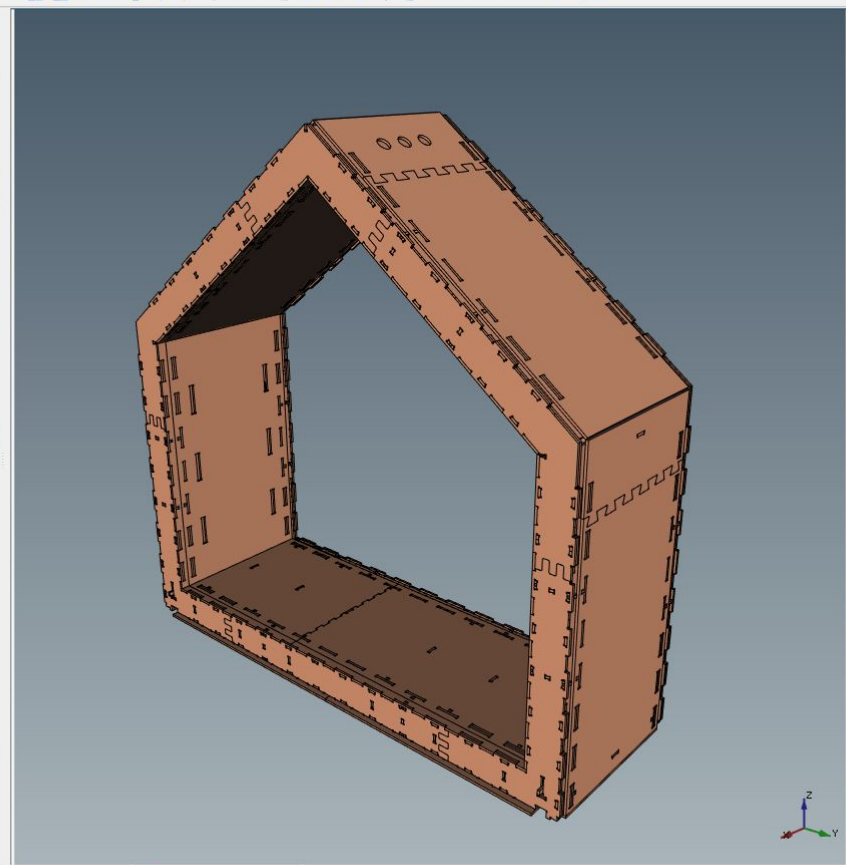
Application

- wikilab
  - modulo wren**
    - Wren component
      - Endcap - 52 peças
      - Base component - 90 peças
      - Window - 5 peças (+ 86)
      - Parafusos - 92 parafusos
      - Finição - 6 peças
    - Views endcap - 52 peças
    - Views module - 90 peças +
    - Views window - 91 peças +
    - PanelSheet
    - Section

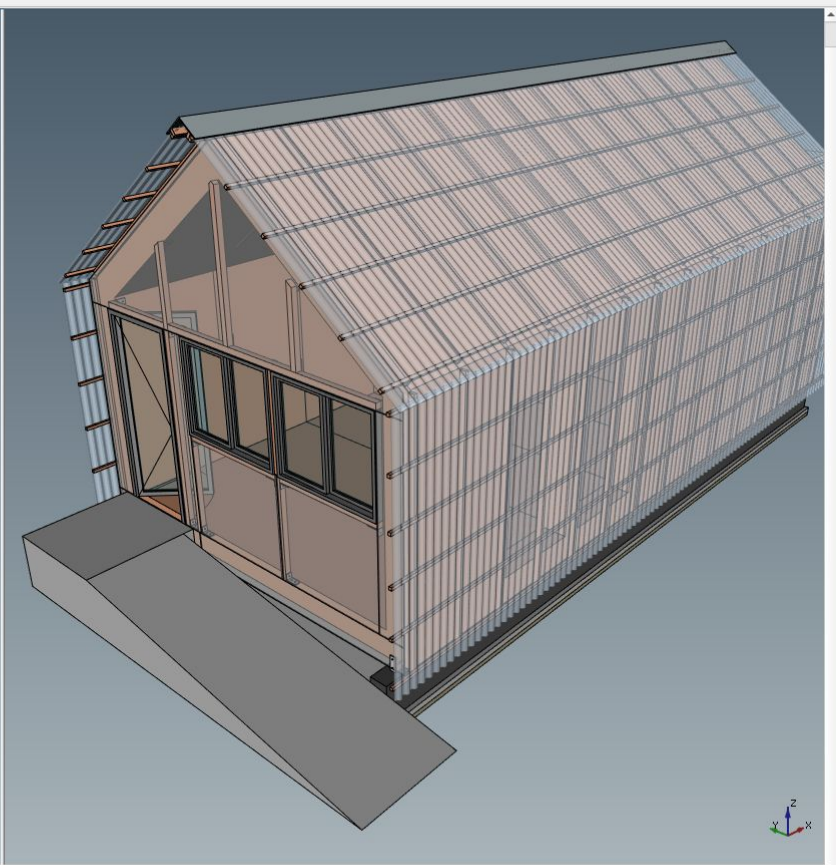
Property Value

Property	Value
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View Data



wikilab : 1 x modulo wren : 1 x





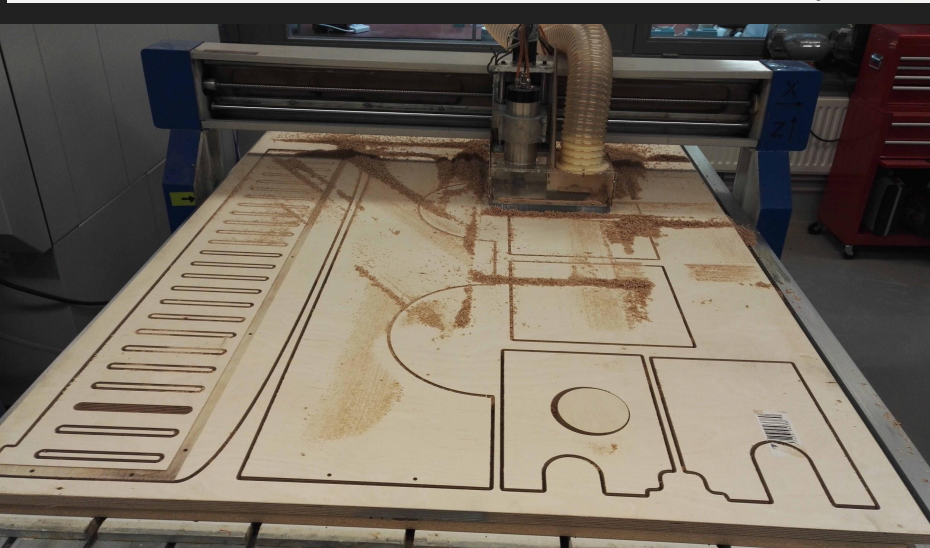
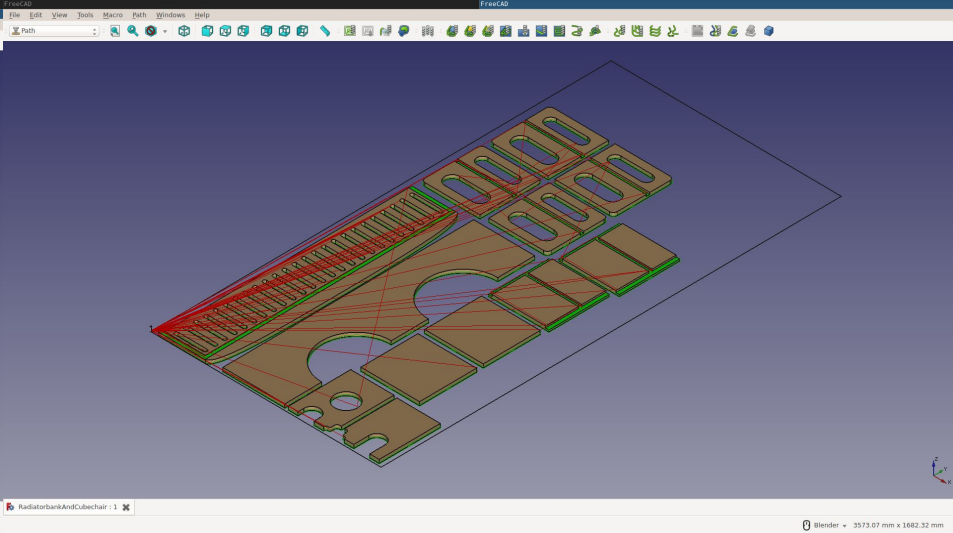
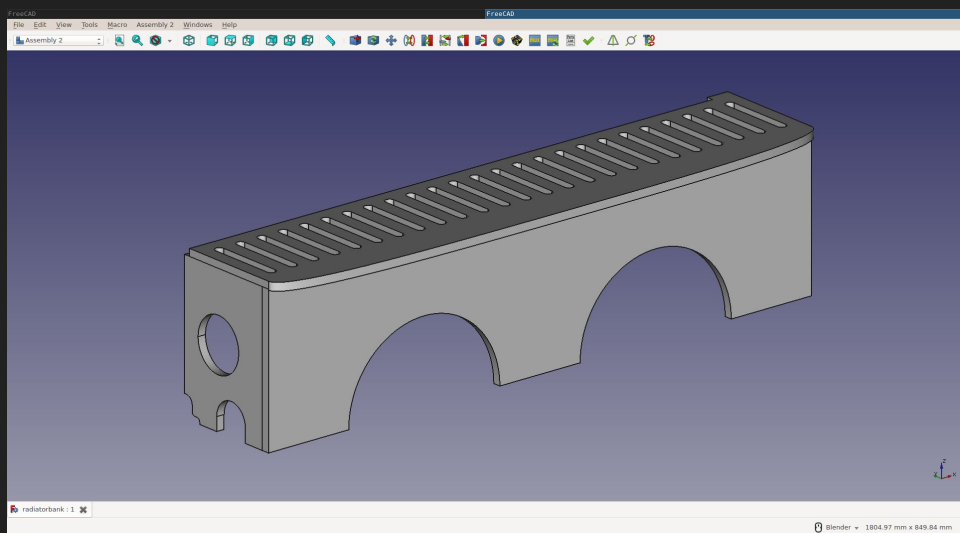


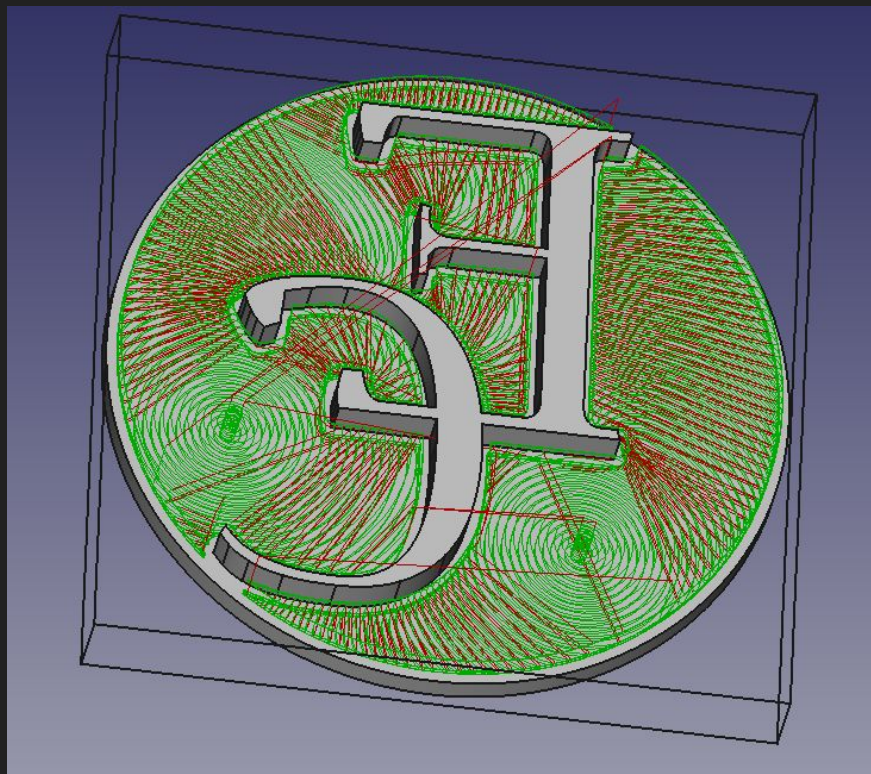
# Brad

## Path Workbench (CAM)

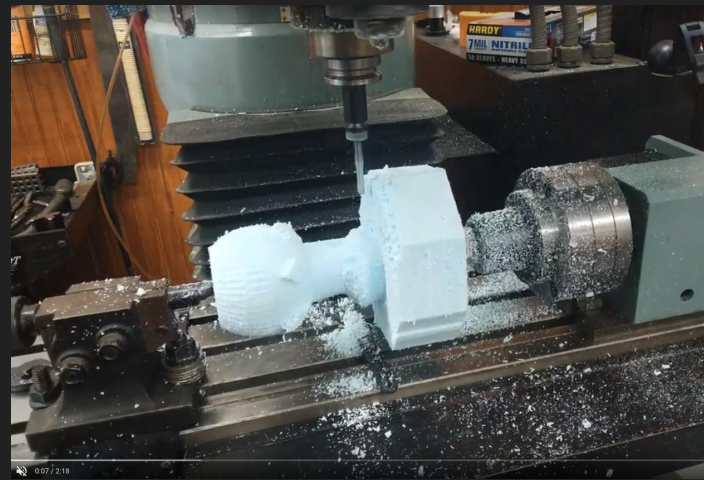
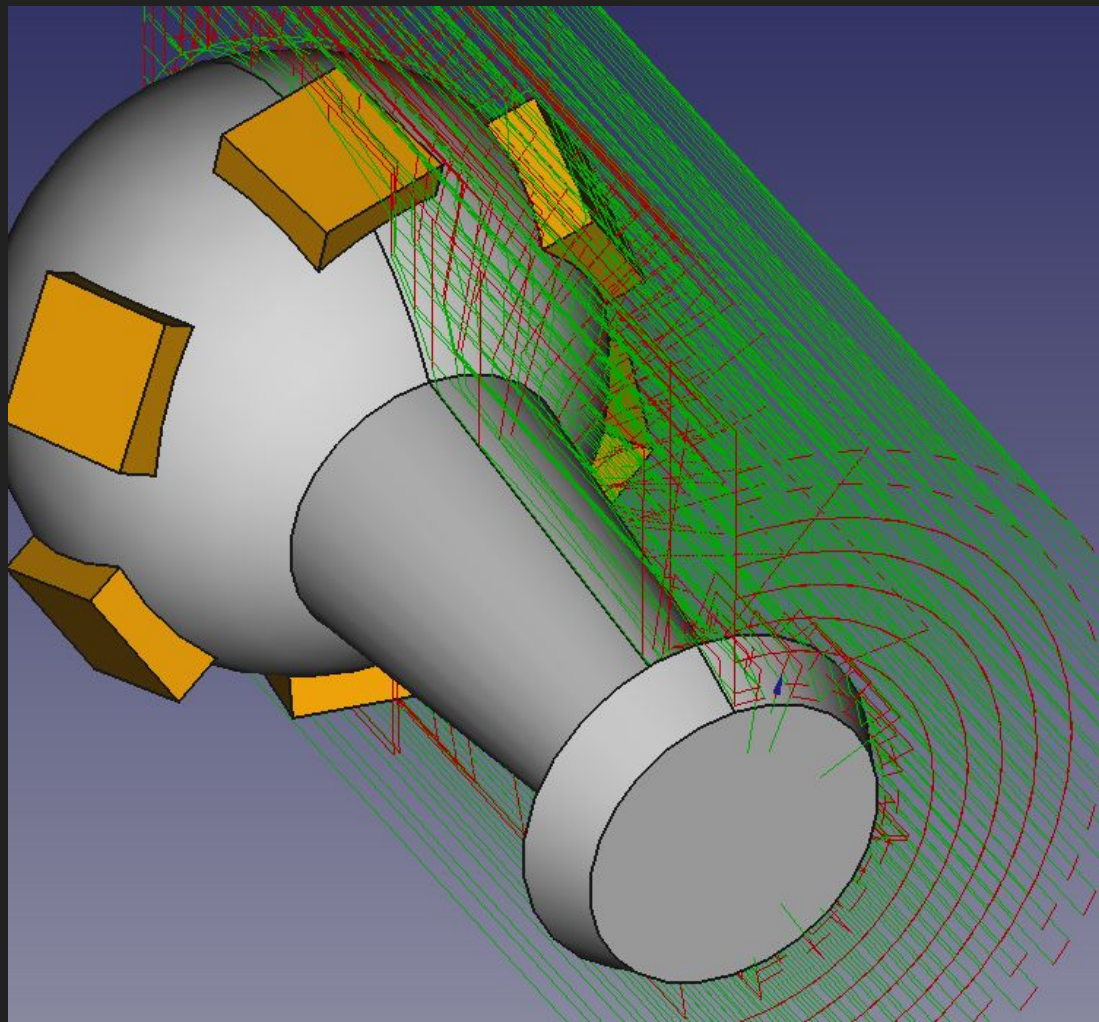
- Started in 2014
- Small C++ core for storage and visualization. Most functionality in Python
- Leverage 3rd party libraries for toolpath generation
- Many 'on-ramps' for contribution
- ~5-7 regular code contributors. Many more contributing to wiki, support, documentation

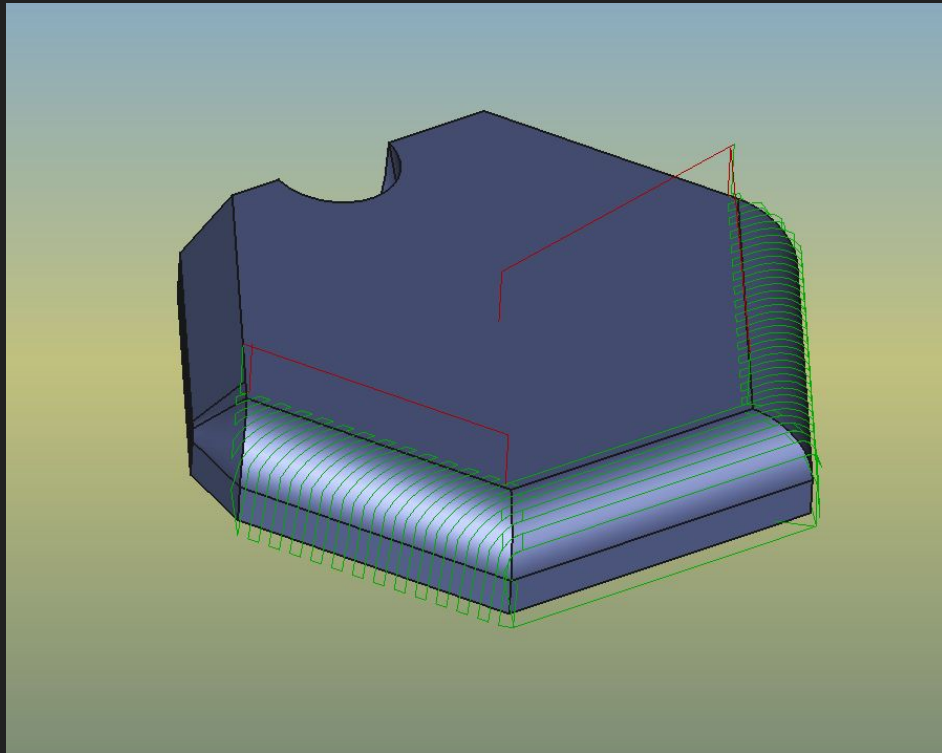
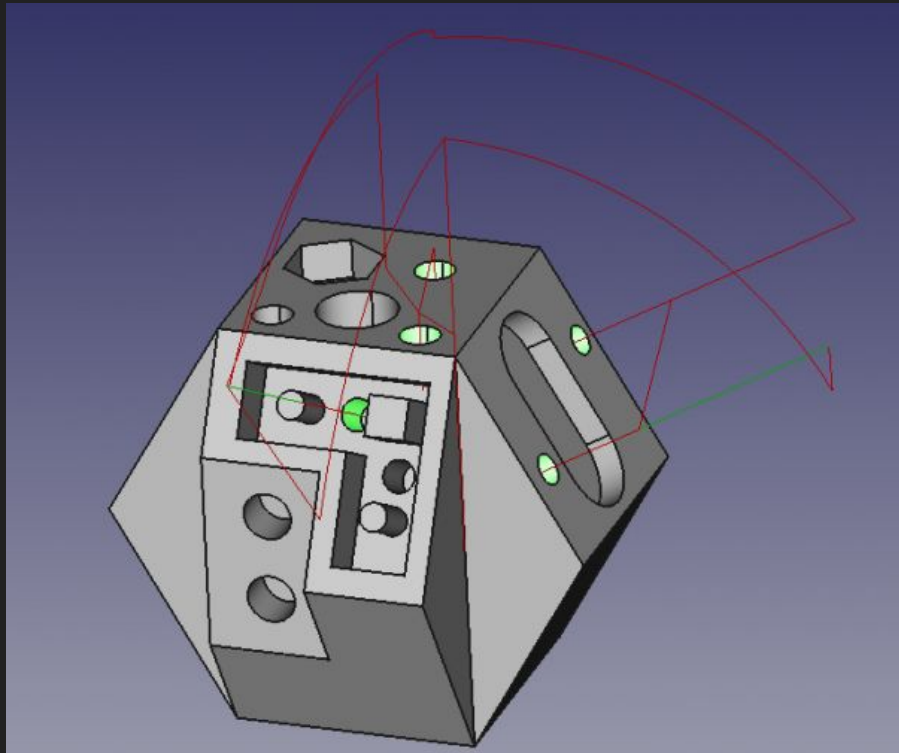












File Edit View Tools Macro Machinekit Windows Help



Auto 2px 0.2000 None

Combo View

Model Tasks

Labels &amp; Attributes

Description

- Pocket006
  - Adapter
    - Origin005
    - Revolution003
    - Pocket
      - Sketch006

Property Value

Base	
Label	Pocket006
Part Design	
Refine	false

View Data

Supermax

Position / Offset

X	0.000	0
Y	0.000	0
Z	0.000	0



Jog



Continuous
1.000 mm
0.100 mm
0.010 mm

Jog To

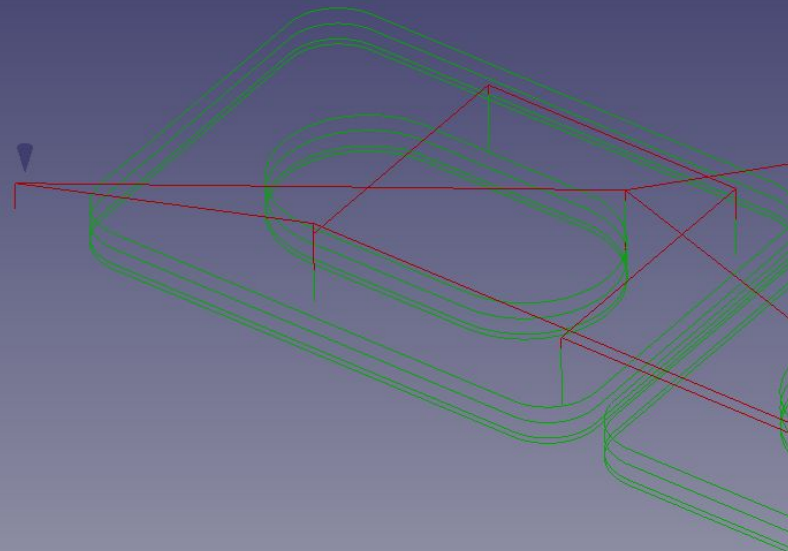
Scan

nacS

Jog Execute Status

Report view

X: -2.164  
Y: 5.683  
Z: 2.488



Start page wirefeeder-2:1\*

Python console

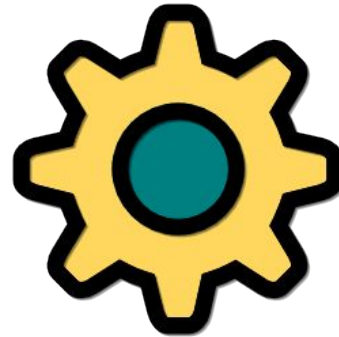
# Post-Processors



grbl



DynaPath





# Thanks for watching!



## FreeCAD

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See what's new

- FreeCAD: <https://www.freecadweb.org>
- Brad Colette: @sliptonic
- Kurt Kremitzki: @kkremitzki, @thekurtwk
- Yorik van Havre: @yorik, @yorikvanhavre