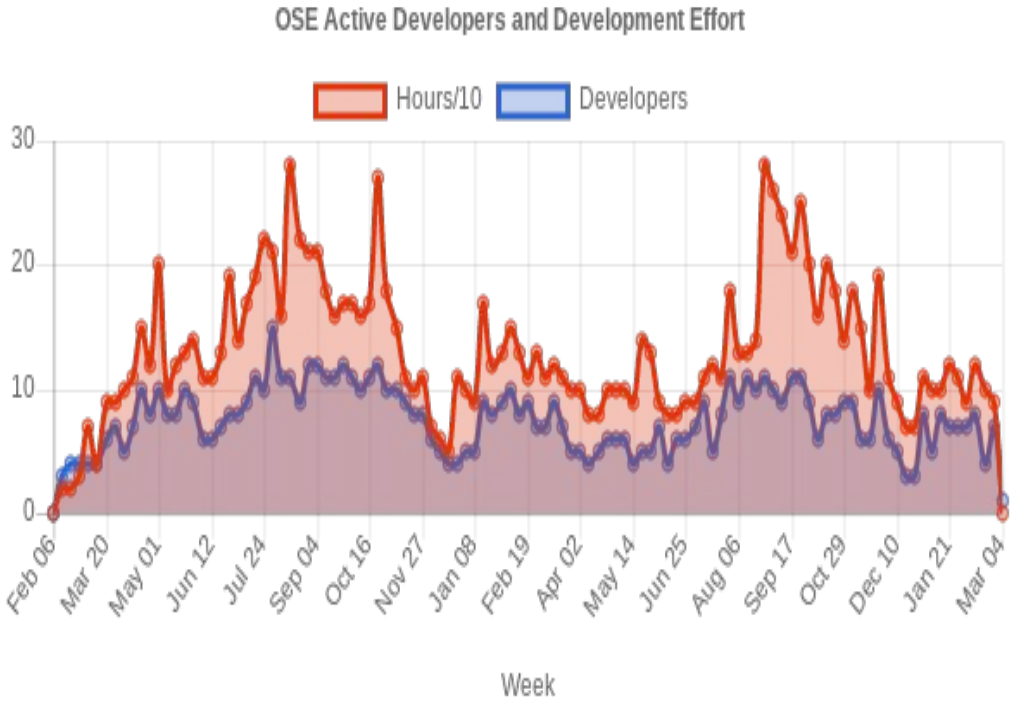
OSE Dev Team Meeting Agenda

Tues March 5, 2019

2 PM CST USA time

1. Agenda - Progress Reports
   a. **Marcin** - OS Golf Cart; D3D v19.02; MIG Casting; Heated Enclosure
   b. Jon -
   c. Abe - D3D PVC Mini Assembly
   d. **Nathan** - 17 modules done, added part library to wik; sample printsi
   e. Jen-

2. **Meeting Maintainer/Jen**
   i. Embed meeting on Dev Team Log, including YT, notes, and edit link
   ii. Insert current Effort Graph-
   iii. Post notes and video on OSE Workshops FB page
   iv. Organize old meetings - hide older than 1 mont
   v. Assign Roles and Introduce the meeting

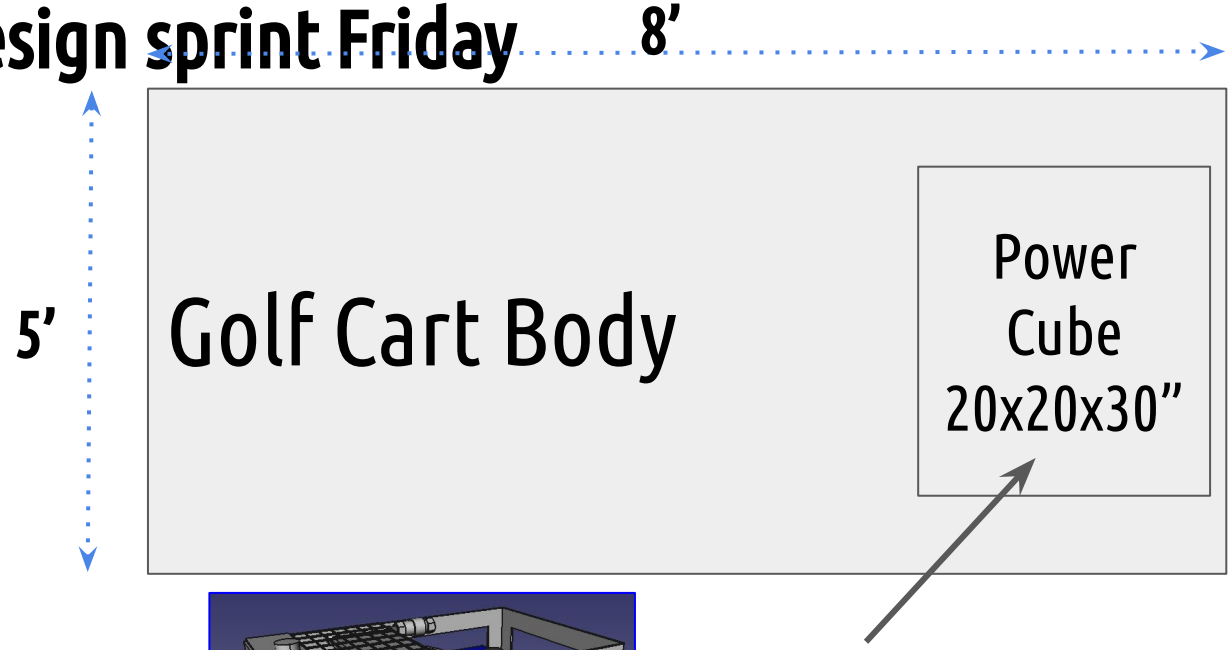


Open Source Golf Cart

design sprint Friday

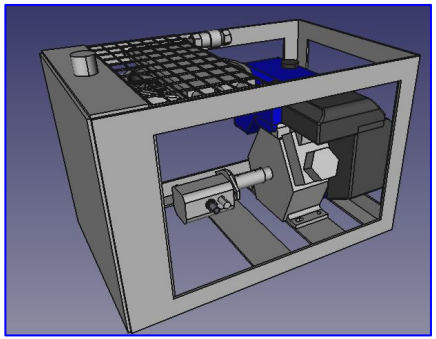
Specs:

- Max speed 20 mph for
- 14 or 15 typical industry standard
- Walking is 3 mph



Standard Dimensions: 4’x8’

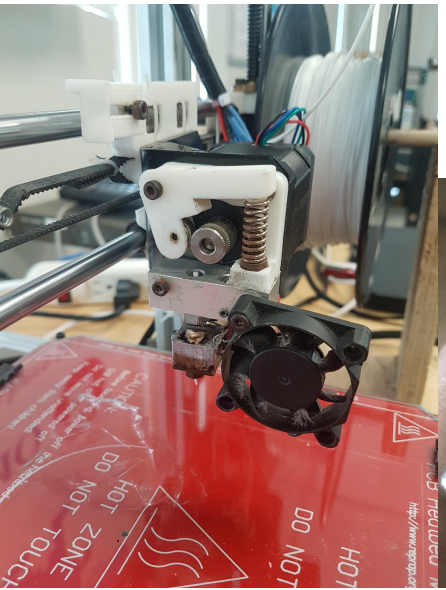
OSE skid steering golfcart: 5’x6’

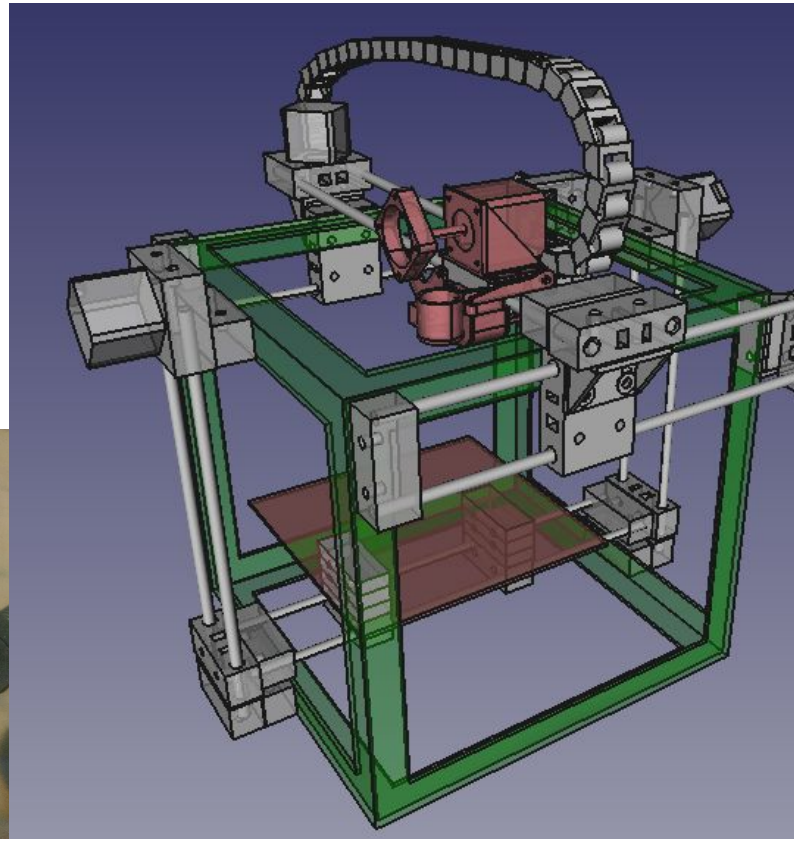


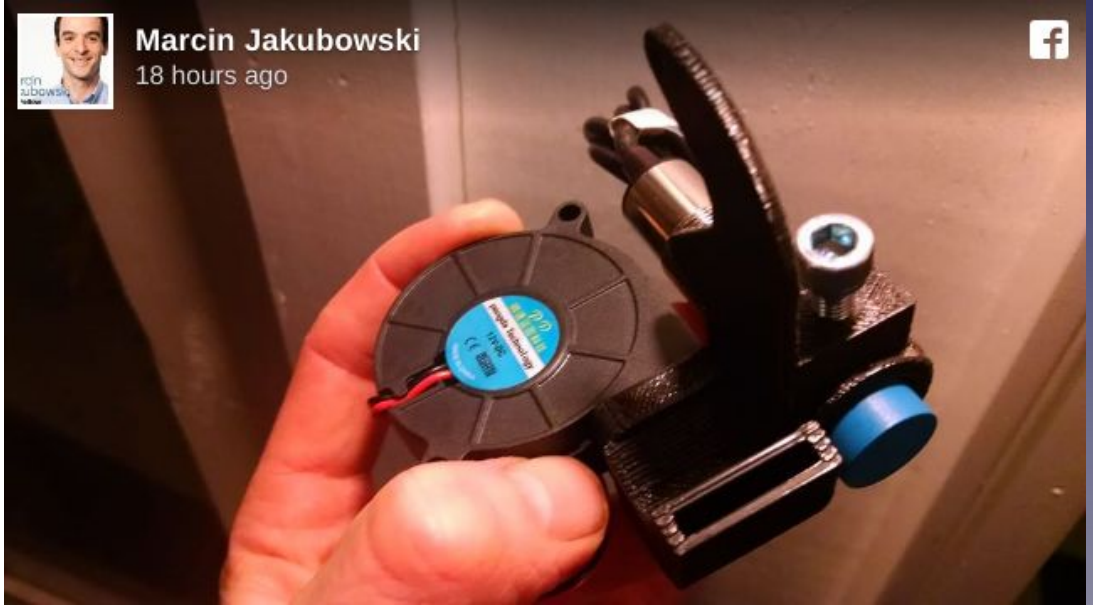
Notes

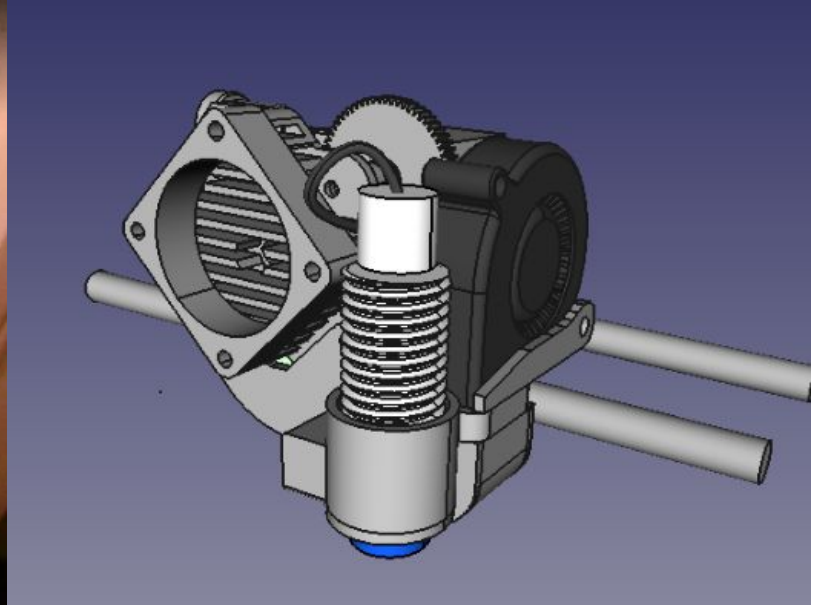
Marcin:

- D3D v19.02
- William - open source simple extruder
- Clamp





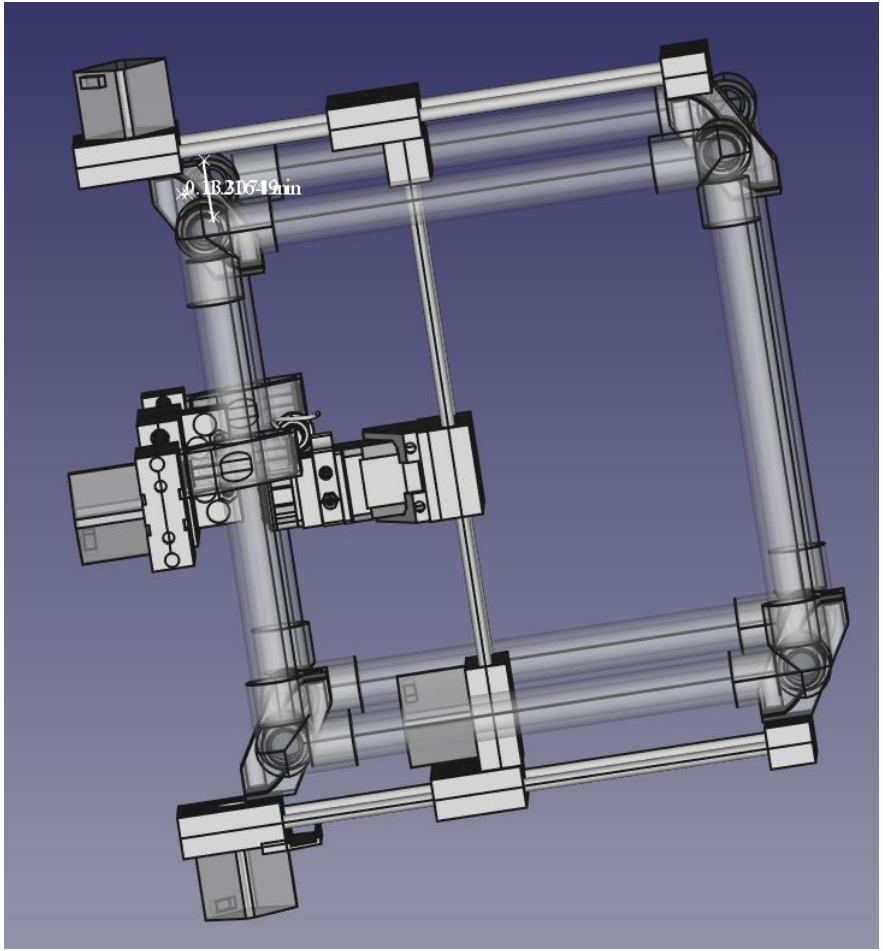




https://wiki.opensourceecology.org/wiki/D3D_v19.02

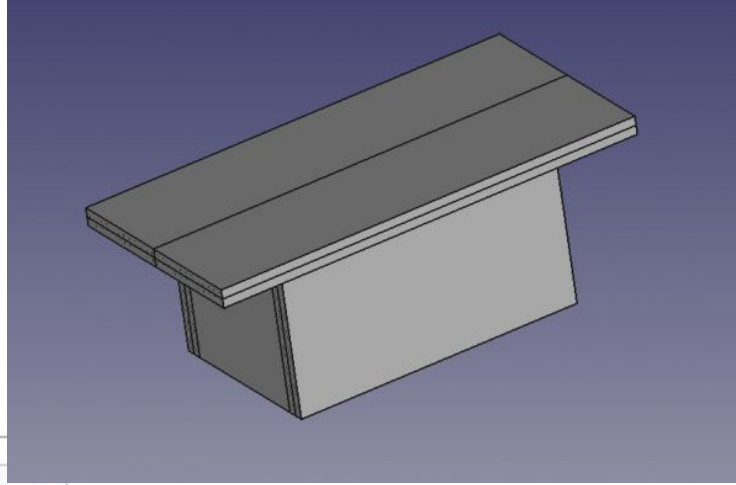
Abe

- Gitlab D3D Mini PVC Parts and Assembly
  - assymetrical clamp
  - 3D Print tested
  - Takacs: I thought of friction clamps using screws onto the PVC, then maybe magnetic hardpoints just like or similar to the actual uAxis. So, you would have a screw on clamp, then a magnetic hardpoint to easily attach uaxis. Thanks for your work on this Abe! The clamps look awesome!
  - Abe:I forgot about magnet points in trying to optimize the clamps they would be a good addition especially on a larger shape that could be printed with low infill.
- Next priorities
  - More D3D Mini PVC assembly testing in CAD
  - Continue exploring python for freecad
  -

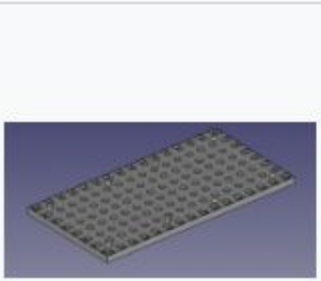


Nathan - Seed Eco Home Model

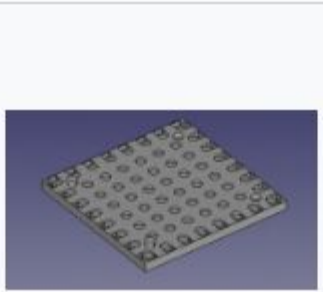
[Part Library]



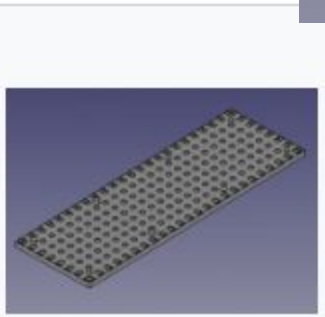
Part Library [edit]



4x8x6.5" Insulated Exterior Wall File:Wall-4x8x6.5.fcstd



4x4x6.5" Insulated Exterior Wall File:Wall-4x4x6.5.fcstd

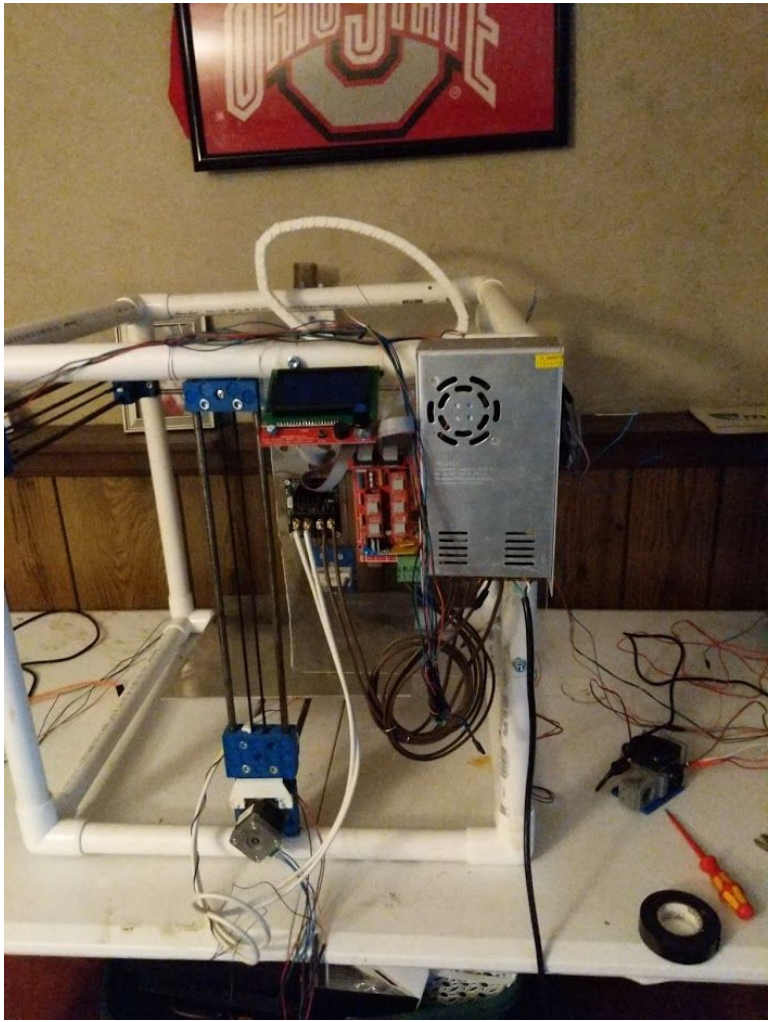


4x12x6.5" Insulated Roof Panel File:Roof-4x12x6.5.fcstd

My New House

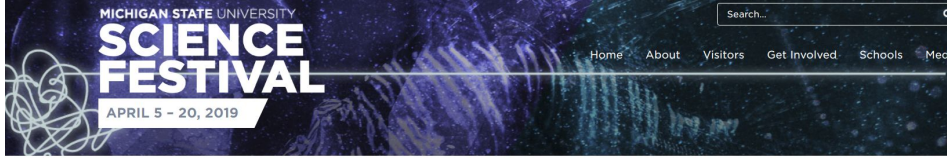
Takacs log

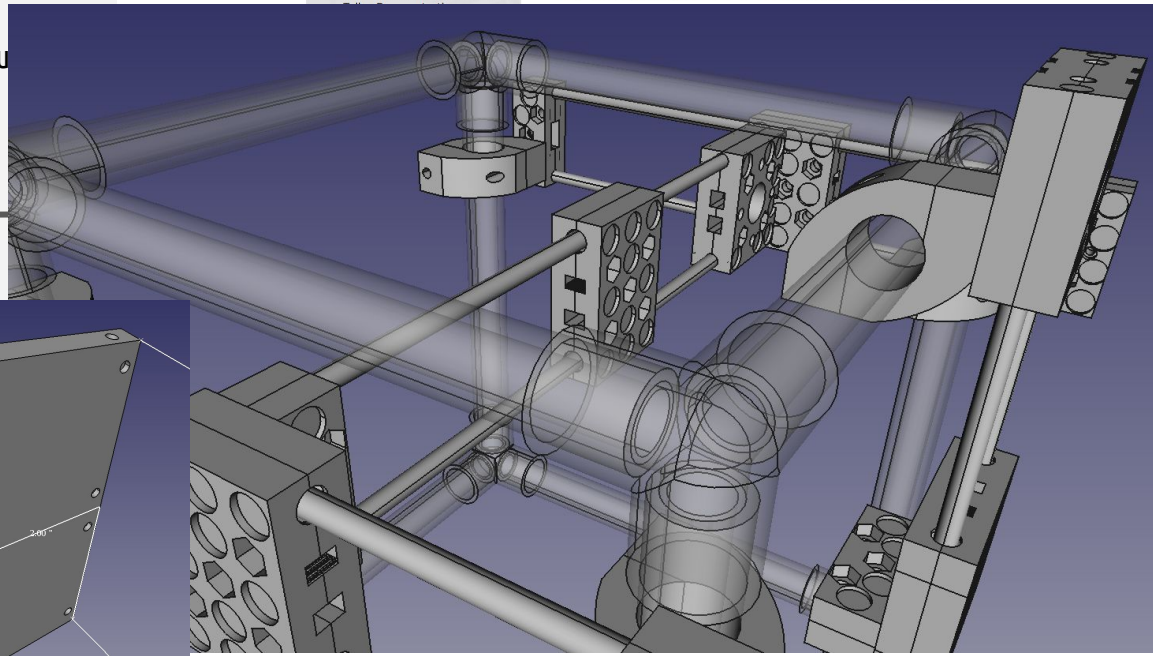
- NOT MUCH CHANGE
- D3D OH wiring and initial prints commencing (moved to the warm indoors)
    - 2/26 - Stepper motor for extruder was non-functional. Bought a pack of higher quality steppers. What steppers has the team had luck with? Please provide a link.
- Printer firmware configuration commencing.
    - Set the travel for xyz to reflect the full 12 inch travel. That's a big print!
    - Looking into getting the LCD and other features running as well.
- 4 other printers being refurbed so I can have a cluster
- Designing a website to start selling printed products
    - Do we know of any open source webstore formats?
- Work on a MES (manufacturing execution system) to track-
    - Factory inputs, outputs, and machine management.
    - Maybe get a GIT started for this / some wiki pages. 3D printer is first focus though. I think I have a MES page up somewhere on wiki
- Work on conveyance for automated, online print factory.
    - Eventually wiki for this. Hoping to use Uaxis parts as part of convayance system. More with Less!

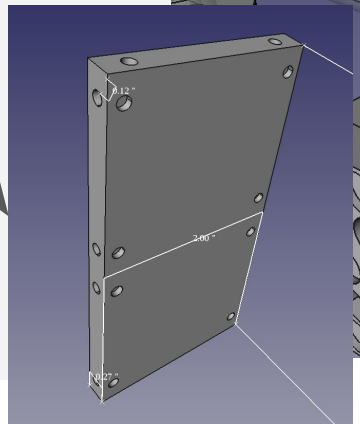


Notes

- **Nathan** - 3D printable OBI house models
  - Nathan Log
  - Small magnets as connectors
  - Scale - is called ½" scale - ½" = 1'
- **Eric** - https://sciencefestival.msu.edu/Event/View/1165
  - Going to build volcano heater nozzle
  - 70C for bed adhesion
- **Jen** - homeschool programs to join project
  - Open source hackathon in North Seattle Commu College
- **Abe**
  - D3D Mini PVC
  - Model to determine if axes are clear
  - Bolt length and nut catchers
- **Marcin**
  - Book - Solar Car
  - Golfcart open source. Motors.
  - Control Code

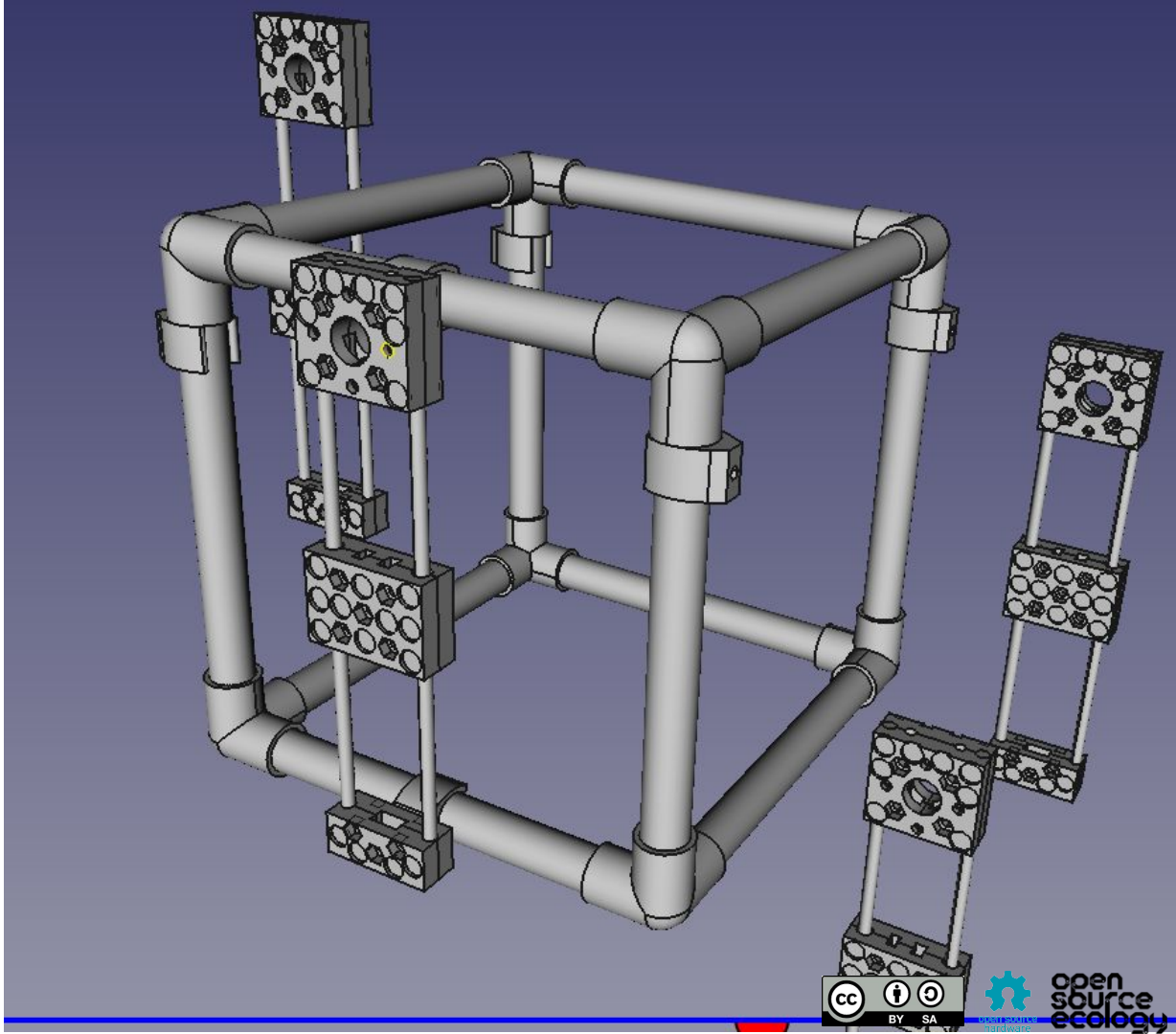






OSE Clubs

1. 1 Year Online Curriculum for High Schools, Home schools, Universities
    a. Many participants
    b. Used to recruit for OSE Clubs, Dev Team, Workshops
2. Can we achieve 10% conversion to OSE Clubs?
    a. Market this actively to local high schools and beyond



DC/DC Converter Module

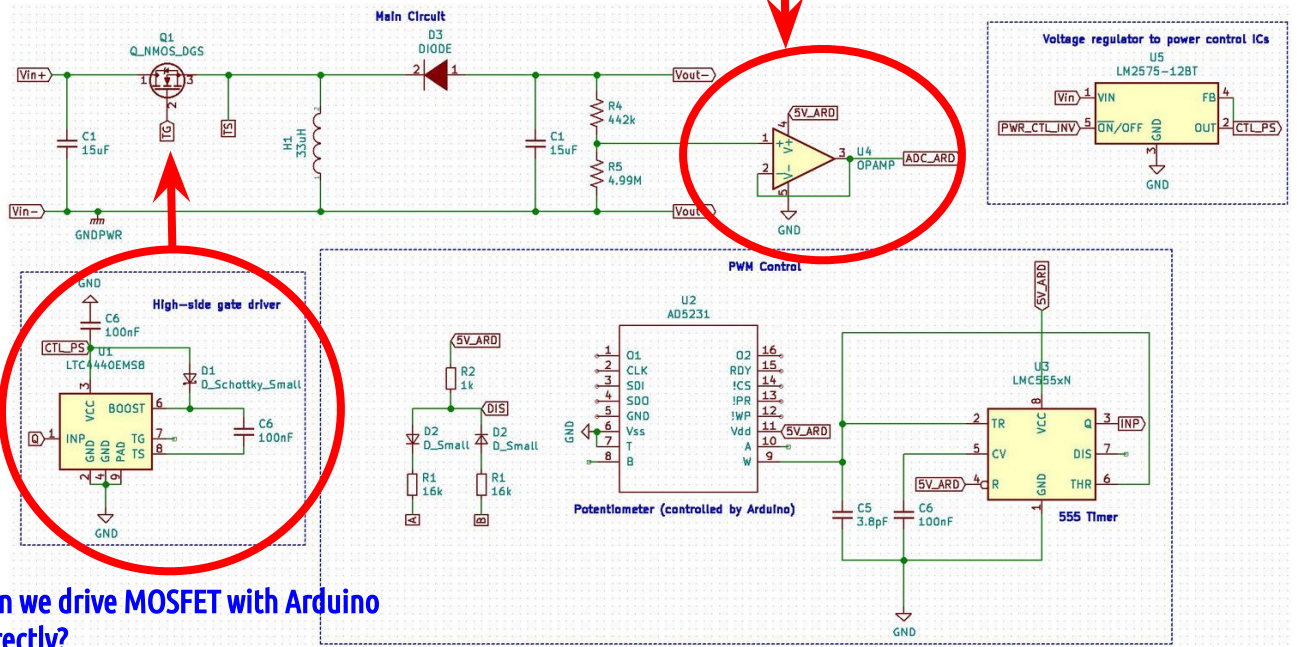
- ~$35 for parts shown here
- 5V - 60V input and output (can change input by factor of ~3)
- 30A max current

Next steps:
- order parts and build prototype
- choose microcontroller and display
  - ARM Cortex M0 with 7-segment display could work, cost ~$15
- write code for sensing voltage and controlling potentiometer

Instructable on Buck Boost Converter

https://wiki.opensourceecology.org/wiki/Adjustable_Power_Supply_v18.08#Buck-Boost_Converter

Can we measure here directly with Arduino?
- yes but input resistance of Arduino would be in parallel



Can we drive MOSFET with Arduino directly?
- Maybe with P-channel FET, but they tend to be slower and have more resistance to current flow

Jen update and questions

Homeschool communications and progress report

Alternative economic and governance projects

1. Cultu.re- not financial, blockchain based, free associations of individuals- I would like to invite Toni Lane to speak briefly at a meeting soon- It seems she's done a lot of the self-governance legwork. WE have the hardware to build the civilization. Her project has the structure.
2. Michael Tellinger's Ubuntu project- Can mesh cashless with current governance systems
3. https://wiki.opensourceecology.org/wiki/Alternative_Economy_Projects

Eric/Poli

Tweaking Z-height. Got decent print in PLA but have a lccked up axis.

Recieved poster for expo.

Going to use QR codes instead of handouts.