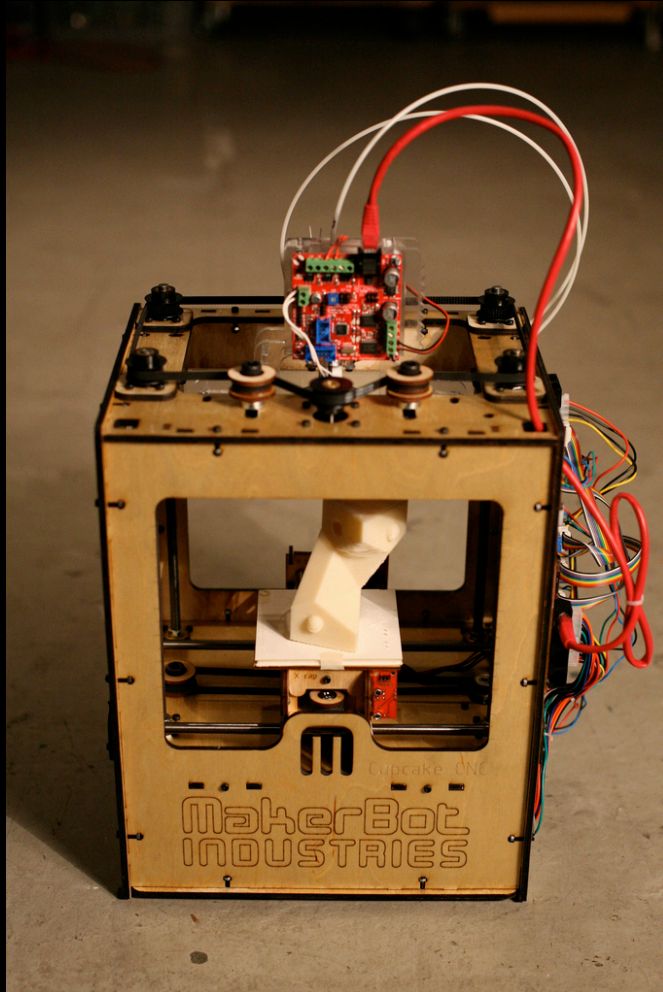


+ #Frontiers



Bre Pettis
MakerBot Industries
@makerbot @bre





Warning! Disclaimer! Alert!

I'm very manufacturing hardware focused.
You may have very different opinions about what frontiers
deserve attention.
Twitter using the hashtag #Frontier





#SpareCycles





#Frontier: Open 3D Printing



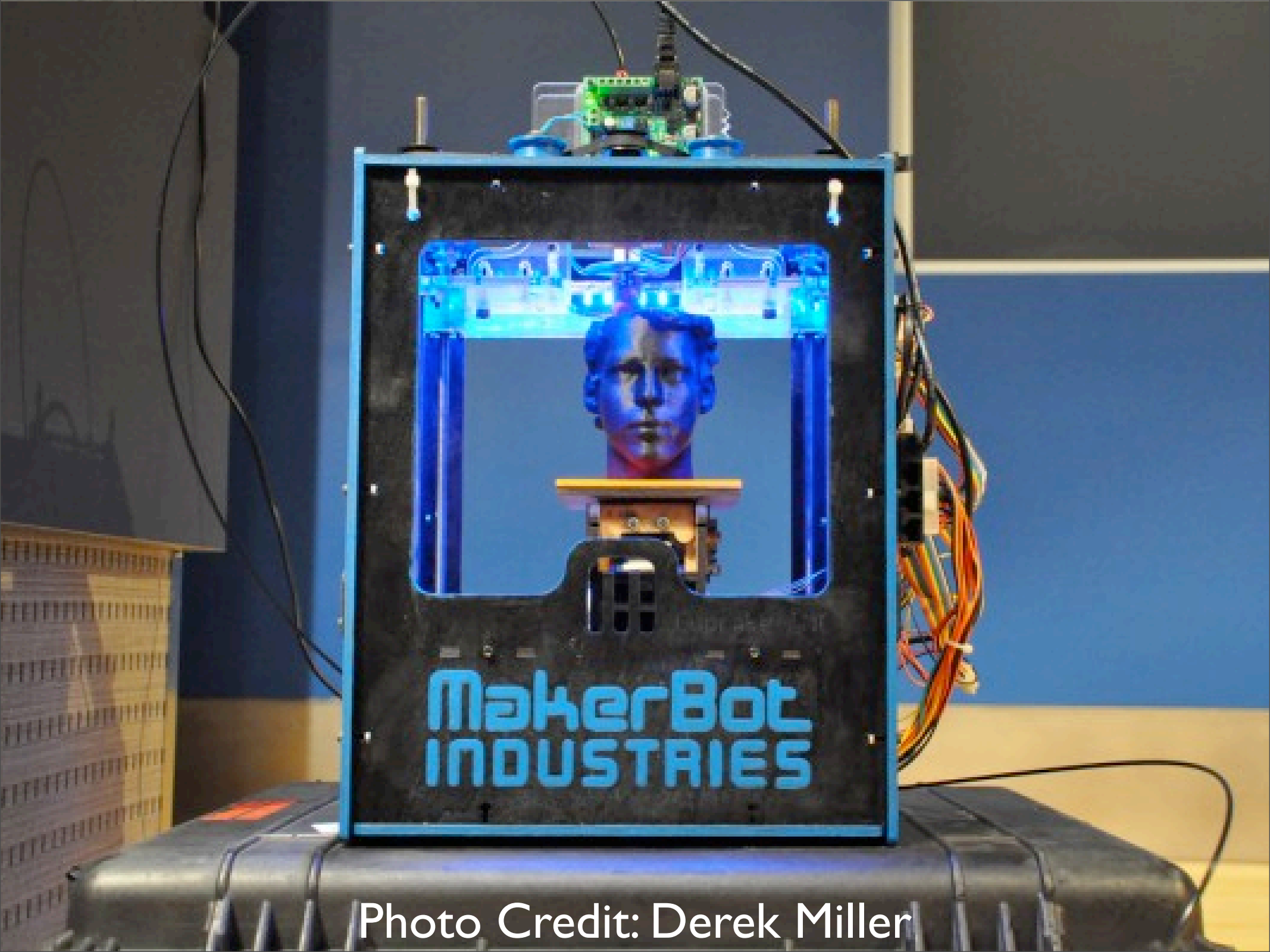
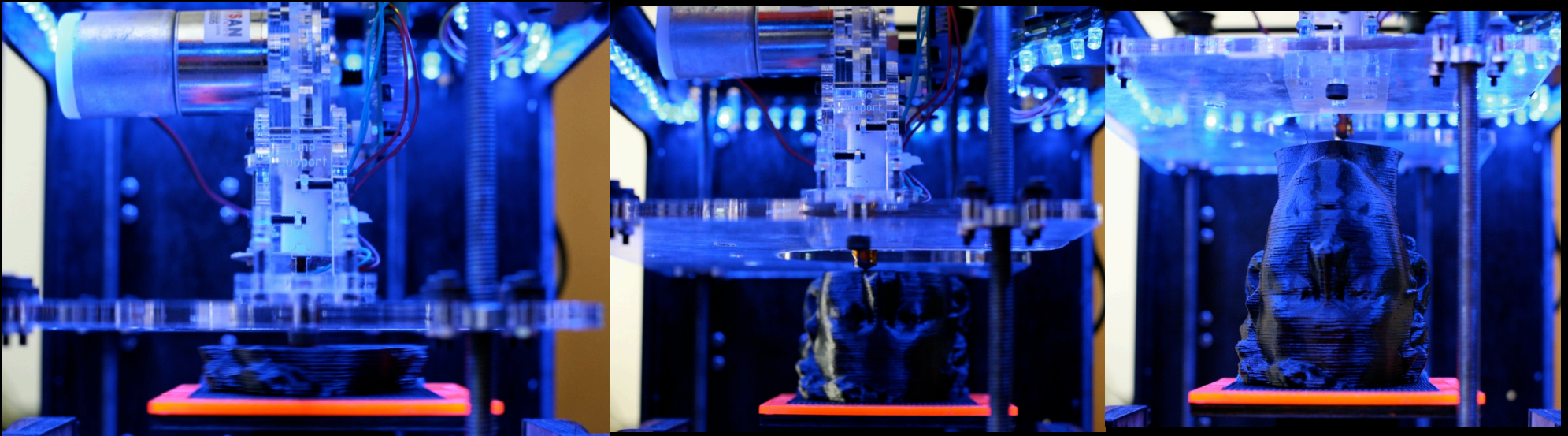


Photo Credit: Derek Miller

3D printed objects



layer by layer

Note: A small anti-consumerism rant.

Derivative Credit: Nate True

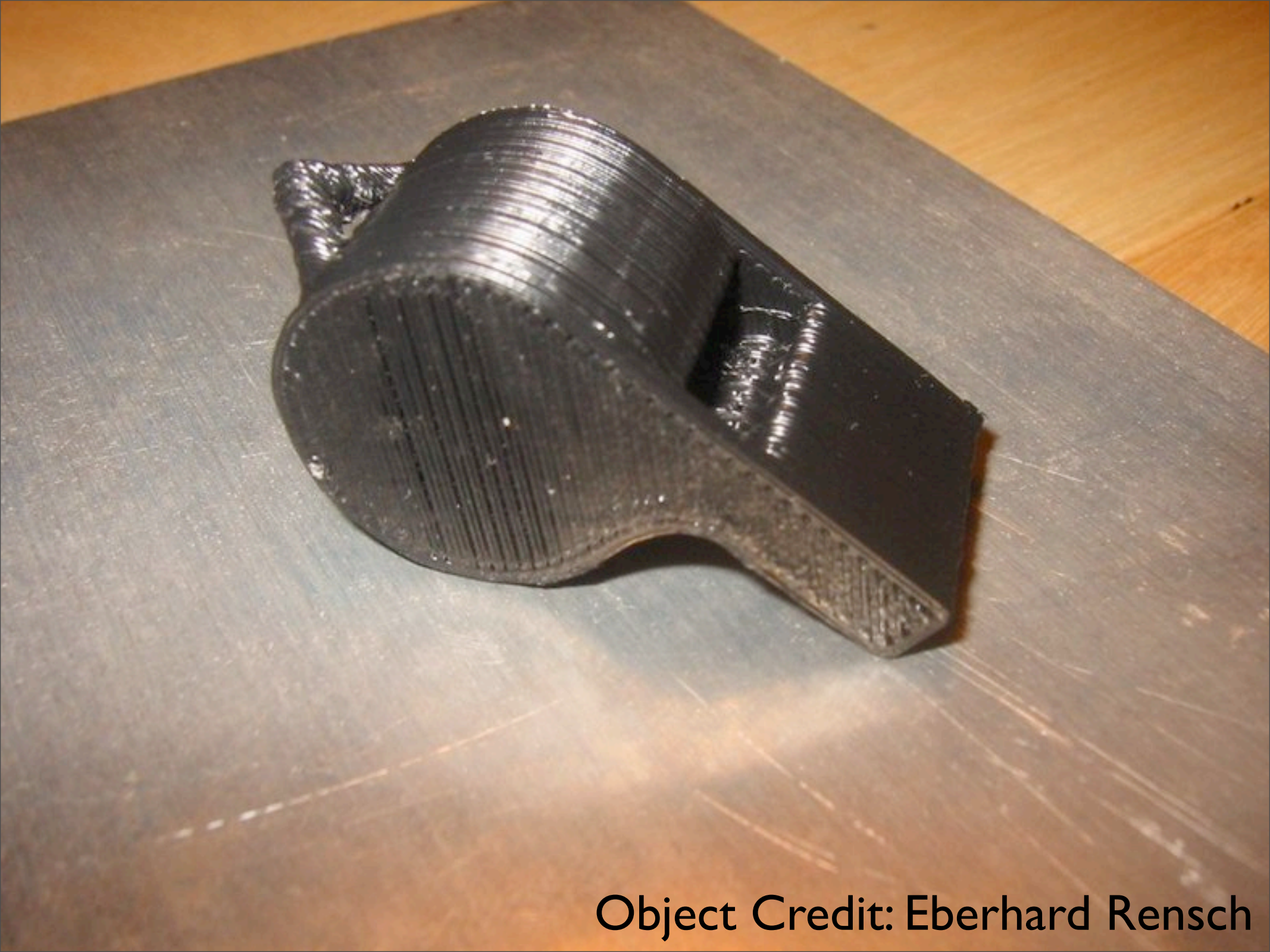




Object Credit:
Dominic Murén



Object Credit: Will Langford



Object Credit: Eberhard Rensch



Object Credit: Adam Elkins



Share.





When one person solves a problem they solve
it for everyone in their community.

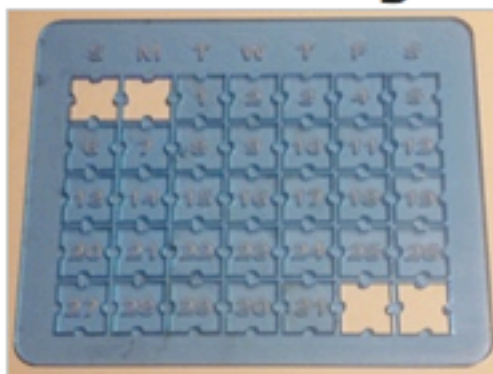




Welcome to the Thingiverse.

This is a place to share digital designs that can be made into real, physical objects. Let's create a better universe, together!

Newest Things



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By: [unwiredben](#) 4 hours ago



[Turner's Cube](#)

By: [seph](#) 6 hours ago



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[quad-ellipse gears](#)

By: [stickoutrock](#) 10 hours ago

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[OpenSCAD Helical Gears](#)

By: [catarina](#) 5 days ago

Thingiverse Blog

Recent Posts

Thing of the Week:
Great Gears!



Things of the Week:

name	age	message	history
 .classpath	November 19, 2009	* fix eclipse build issues * cleanup tweet pack... [makerbot]	
 .project	November 03, 2009	* Oops. Properly checking in build-to-file. * ... [makerbot]	
 .settings/	November 11, 2008	-> Java 1.5 [kintel]	
 ReplicatorG.launch	October 31, 2008	Added support for asserts [kintel]	
 ant.includes/	September 11, 2009	Adding alternate property files [phooky]	
 build.xml	November 13, 2009	successfully patched RepG 0009 with miles light... [Jordan Miller]	
 build/	November 13, 2009	successfully patched RepG 0009 with miles light... [Jordan Miller]	
 changelog.txt	November 18, 2009	Support for heated build platform New machine.... [Eberhard Rensch]	
 dist-linux.sh	September 10, 2009	Many fixups to make the linux build sane. [phooky]	
 dist-mac.sh	April 19, 2009	building a dmg for mac is now working. [hoeken]	
 dist-windows.sh	April 17, 2009	shes almost ready for 0003 release. [hoeken]	
 docs/	August 13, 2008	more moving stuff. [hoeken]	
 firmware.xml.dist	October 02, 2009	adding v1.6 firmware to distribution [phooky]	
 firmware/	October 02, 2009	adding v1.6 firmware to distribution [phooky]	
 license.txt	August 13, 2008	more moving stuff. [hoeken]	
 machines.xml.dist	November 16, 2009	added Eberhard Rensch's patches for heated buil... [Jordan Miller]	
 readme.txt	November 08, 2009	Changelog and version updates [makerbot]	
 resources/	November 08, 2009	adding images for go-home and set-home buttons [makerbot]	
 skeinforge/	November 19, 2009	Bundling the new skeinforge [makerbot]	
 src/	about 6 hours ago	rotation/panning by mouse drag on STL preview [makerbot]	
 todo.txt	September 14, 2009	changes to distribution files for 0008 [phooky]	

readme.txt

ReplicatorG is an open-source GCode based controller for RepRap / CNC machines. It has 3 main goals:

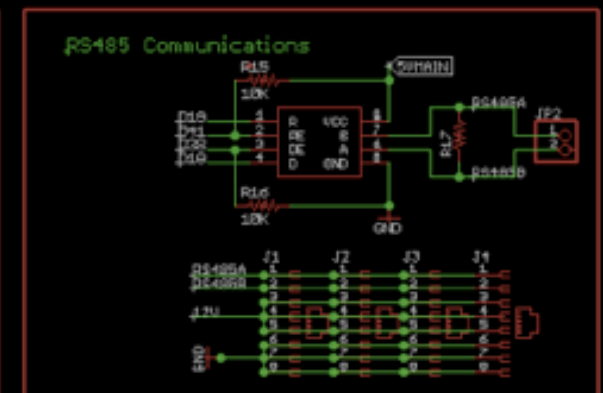
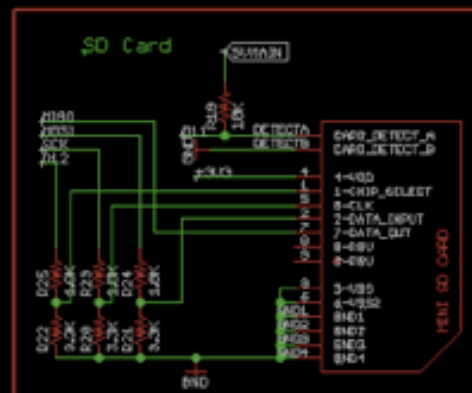
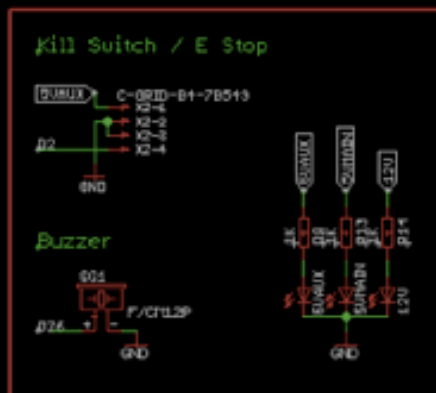
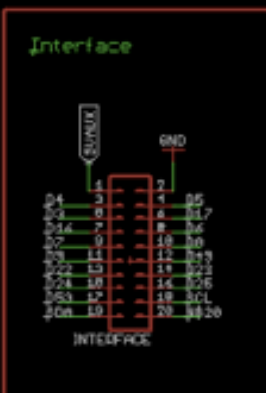
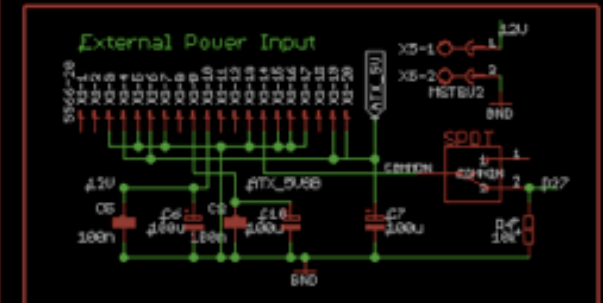
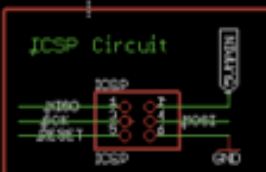
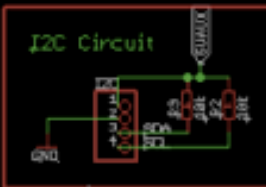
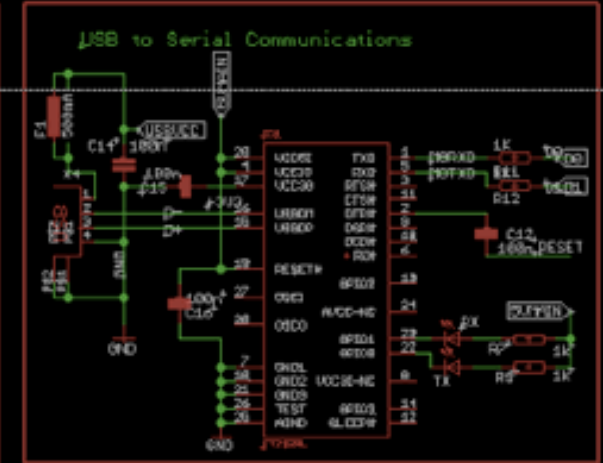
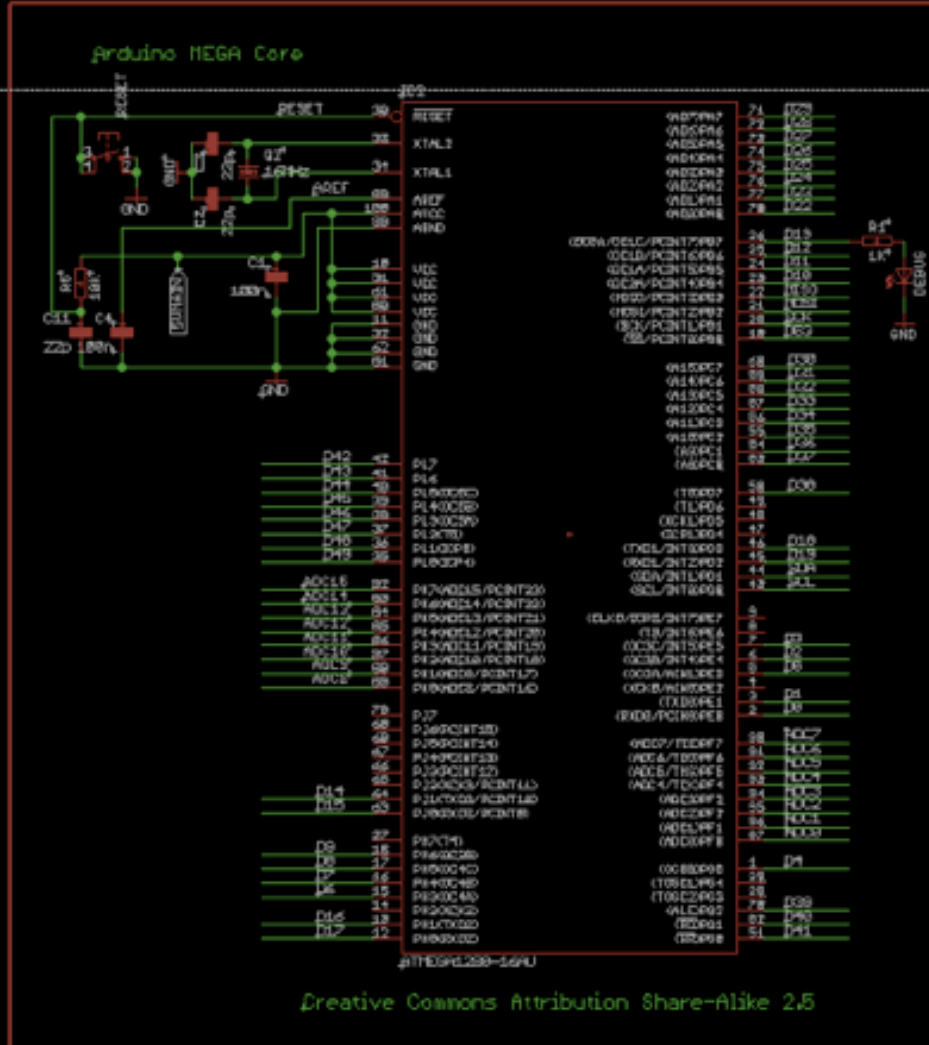
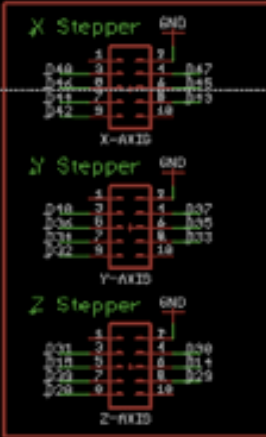
1. Be as simple to use, and as easy to install as possible.
2. Be driver oriented and abstract the GCode away, allowing users to easily create drivers for their own machine.
3. Support as much of the GCode specification as possible.

MakerBot Motherboard v2.0

<http://wiki.makerbot.com/mv2>

Design by: Zach Hoeken / Makerbot.com

Based on the Arduino MEGA by the Arduino Team

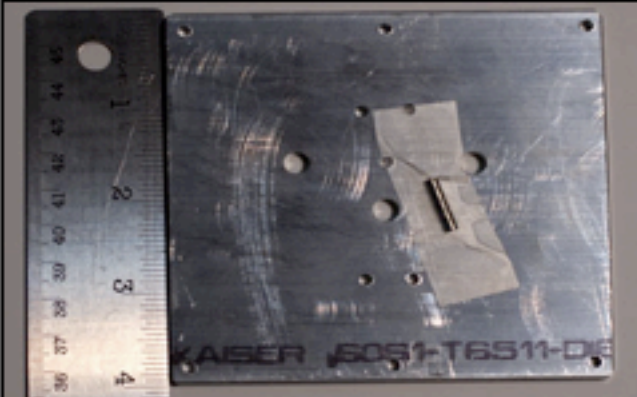


Deatrive Commons Attribution Share-Alike 2.5

~~uunet!nuchat!flatline!eriet~~

flatline.net

stuff for sale:

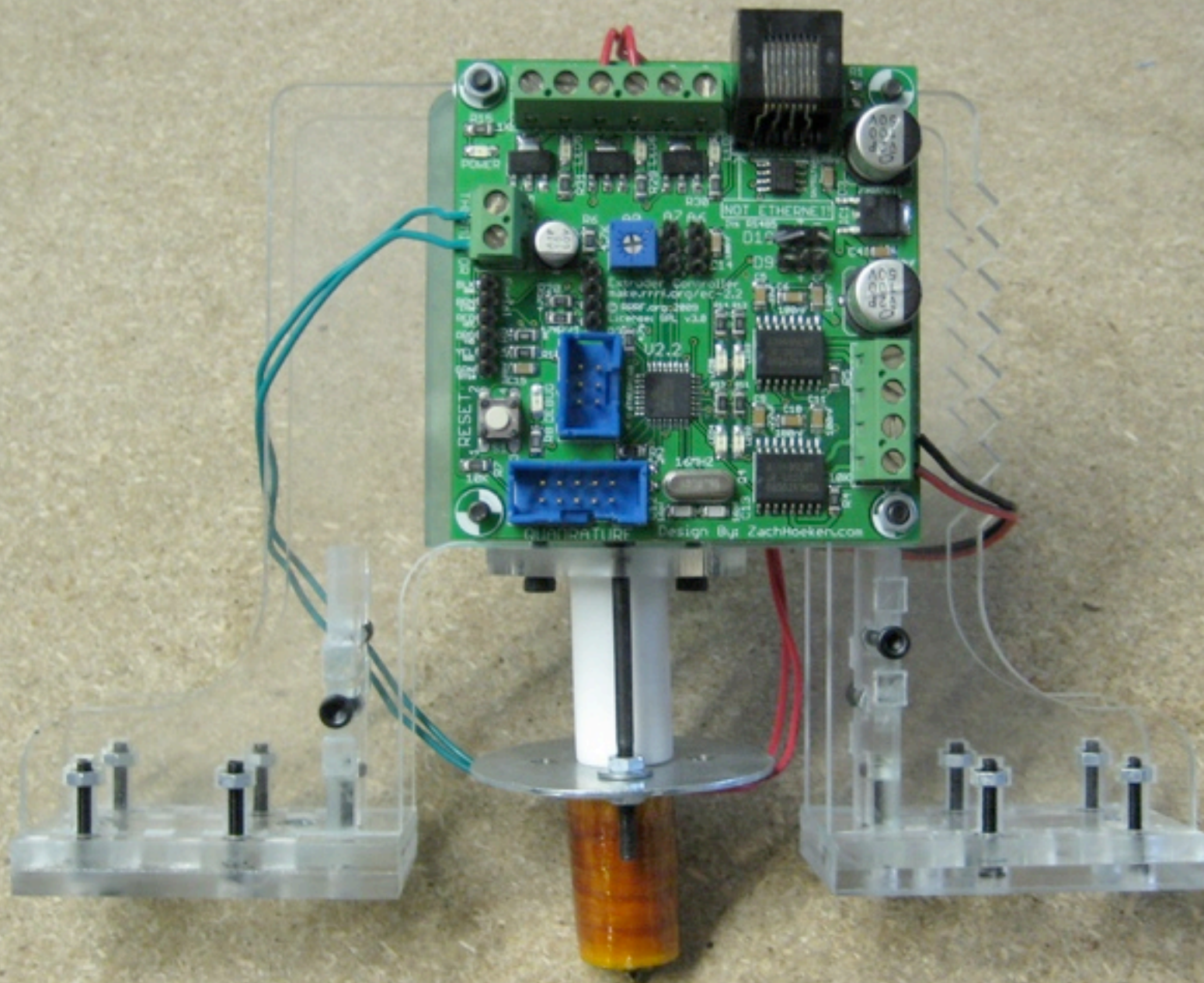
Item	Description	Photo	Buy
AL-1	This is a prototype Al platform for the MakerBot Cupcake printer. It is made out of 3/16" 6061 aluminum and comes with 5 magnets to be inserted in the proper orientation for your personal printer. The magnets are not a total friction fit, you will need to superglue or epoxy them into place. Please note that this is a prototype made by hand for use with the <u>MakerBot open-source hardware</u>. It fits my own printer just fine, but it might need some finish filing and fitting before it works perfectly with yours. USPS Priority Mail shipping is included in the price.	 (click to see a really huge image.)	US \$25.00 Add to Cart

Distributed Manufacturing Crowdsourced Production

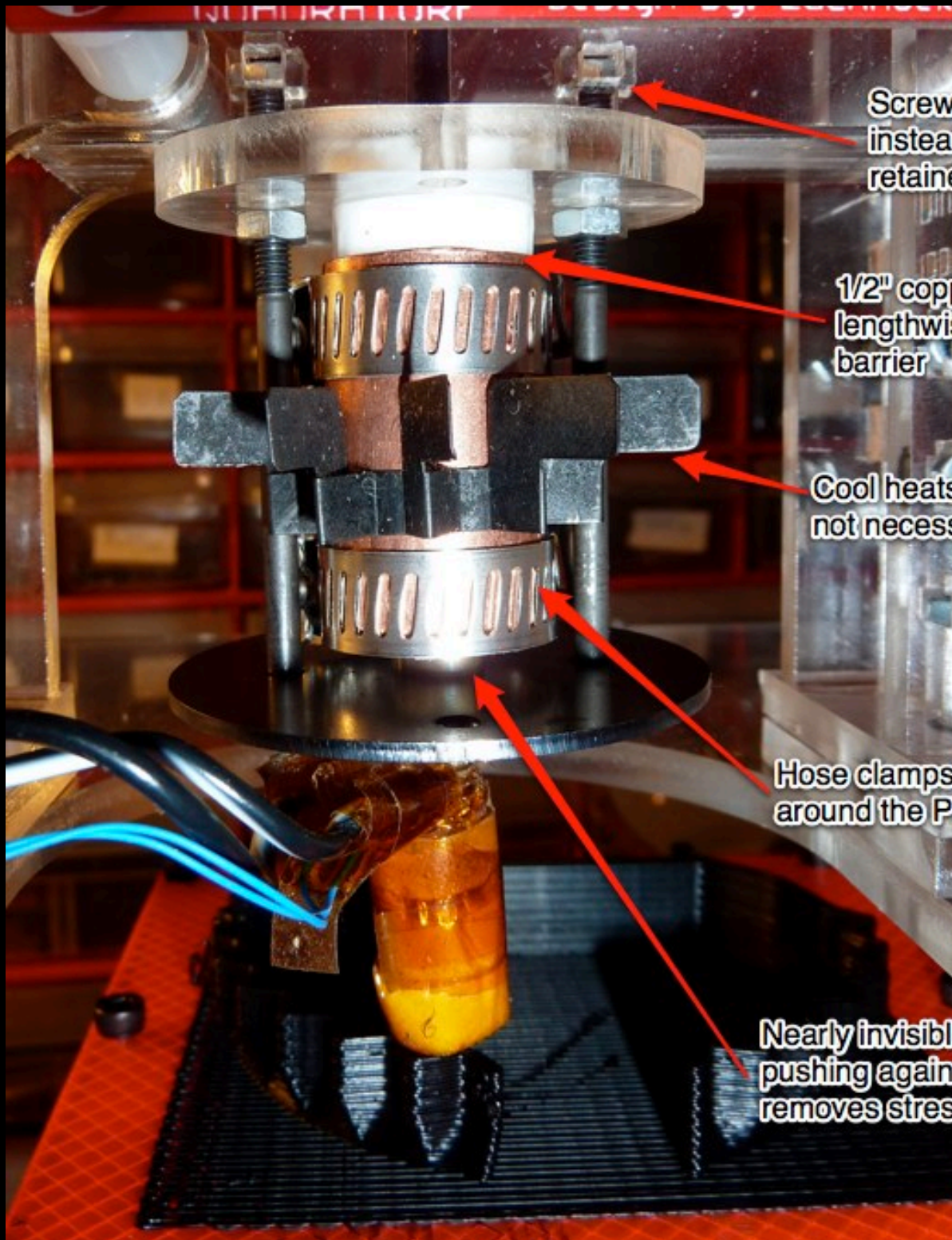


Production Credit: Lindsay

MakerBot MK4 Plastruder



Note: Dad helped



Screws going into body of extruder instead of stressing the acrylic retainer plate

1/2" copper joiner with a slot cut lengthwise in it slipped around PTFE barrier

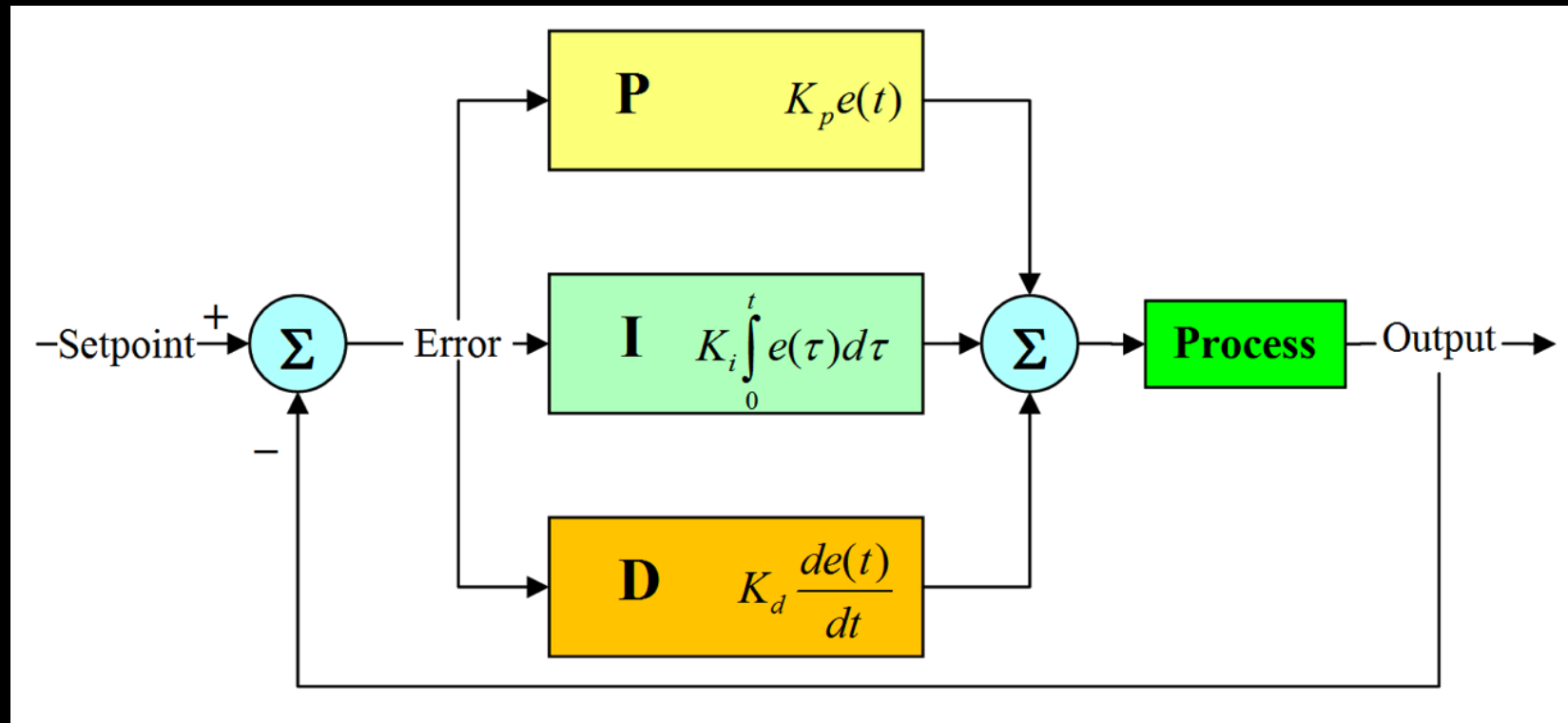
Cool heatsink that is probably not necessary

Hose clamps holding the copper tube around the PTFE very, very tightly

Nearly invisible improvised M6 nut pushing against the washer, which removes stress from the PTFE threads

Improvement Credit:
Nate True

proportional–integral–derivative controller (PID controller) is a generic control loop feedback mechanism (controller) widely used in industrial control systems. A PID controller attempts to correct the error between a measured process variable and a desired setpoint by calculating and then instigating a corrective action that can adjust the process accordingly and rapidly, to keep the error minimal.



Improvement Credit: Tim Myrtle



MakerBot Discussion Group
<http://bit.ly/makerbotgroup>

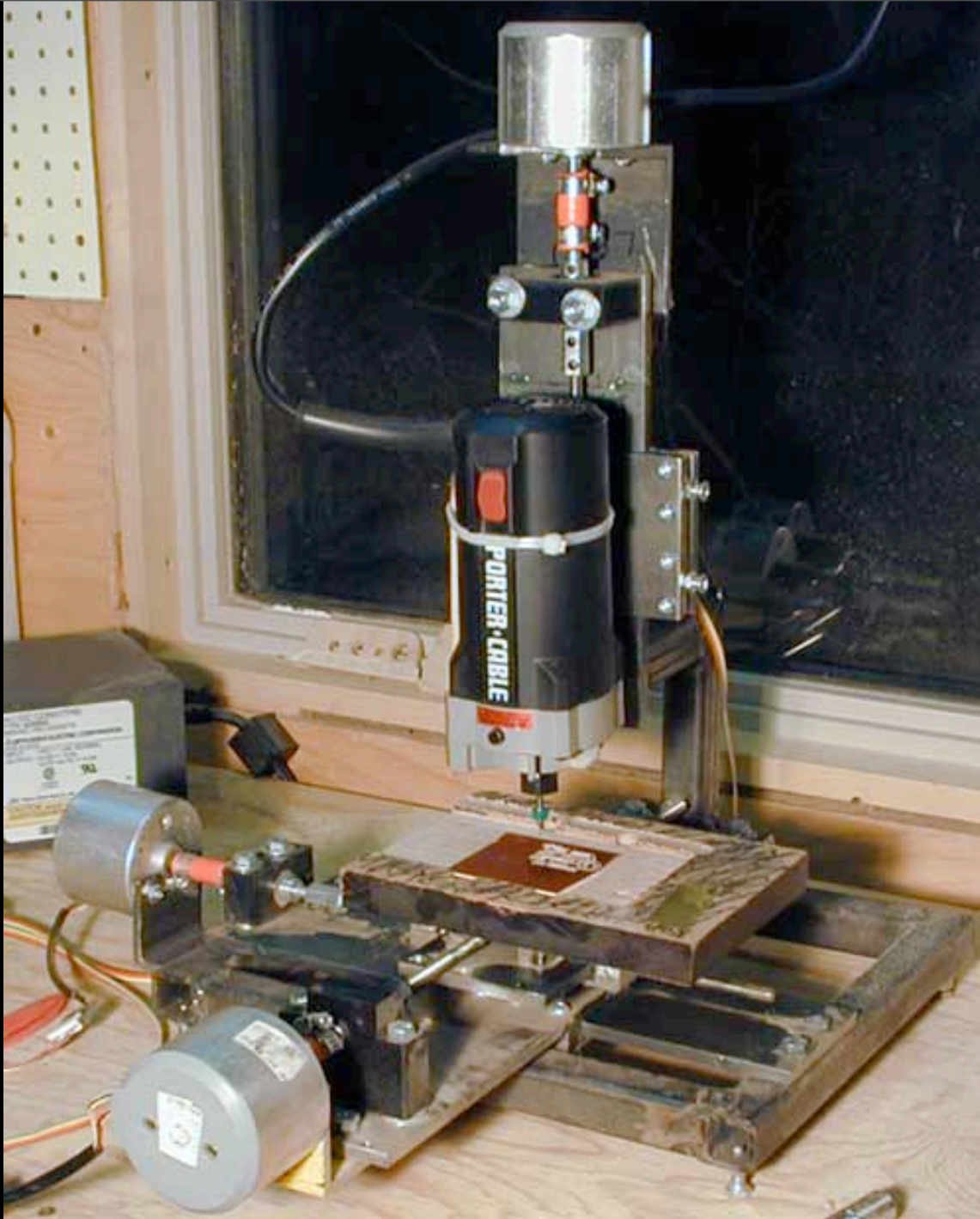




#Frontier: Open CNC Mill

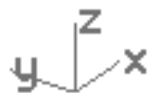
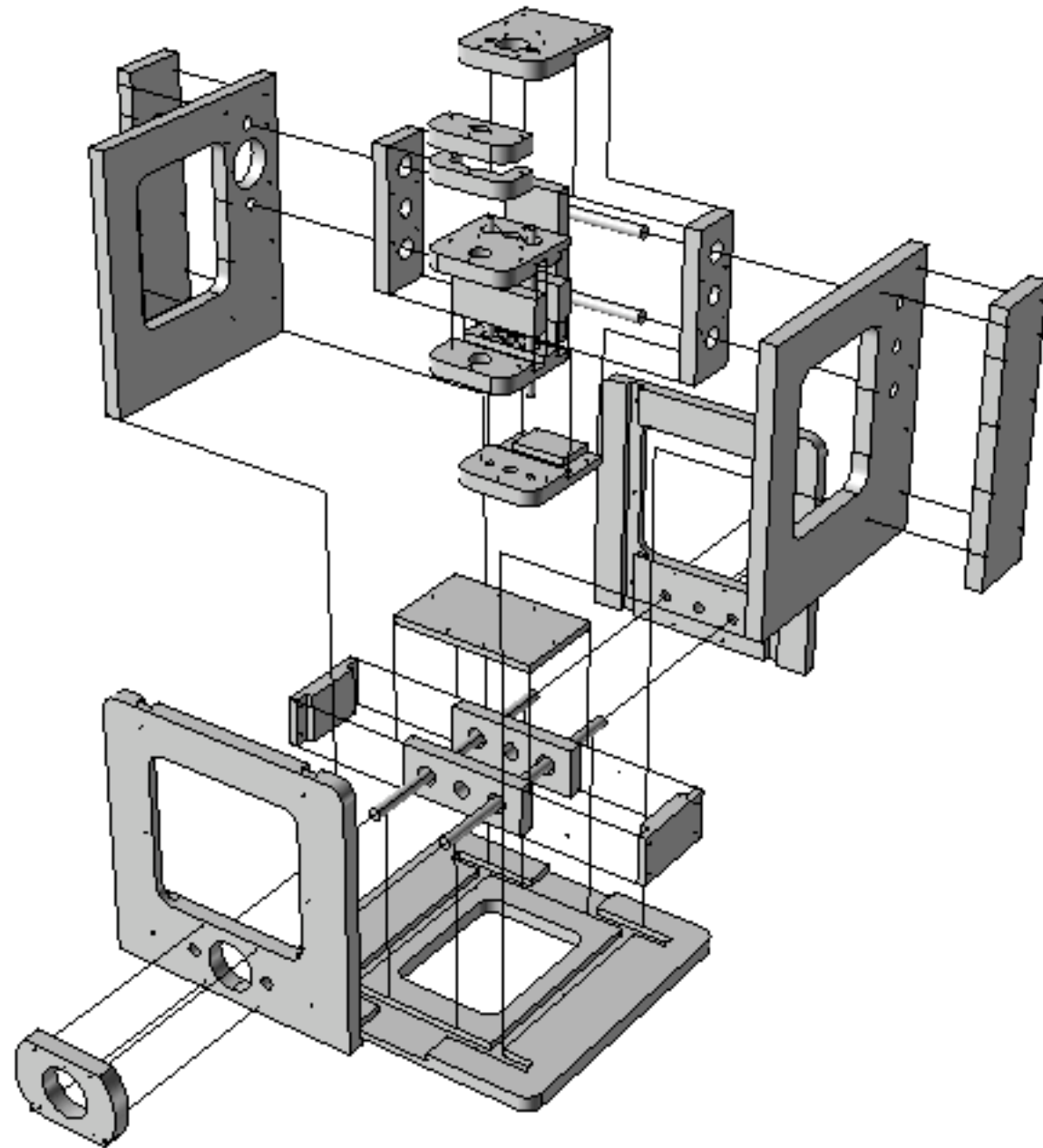


Jonathan Westhues' PCB mill

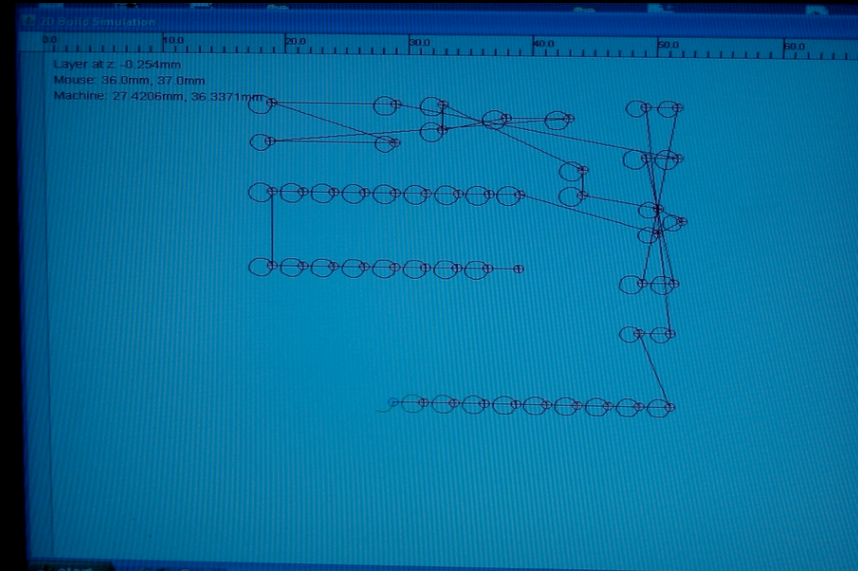
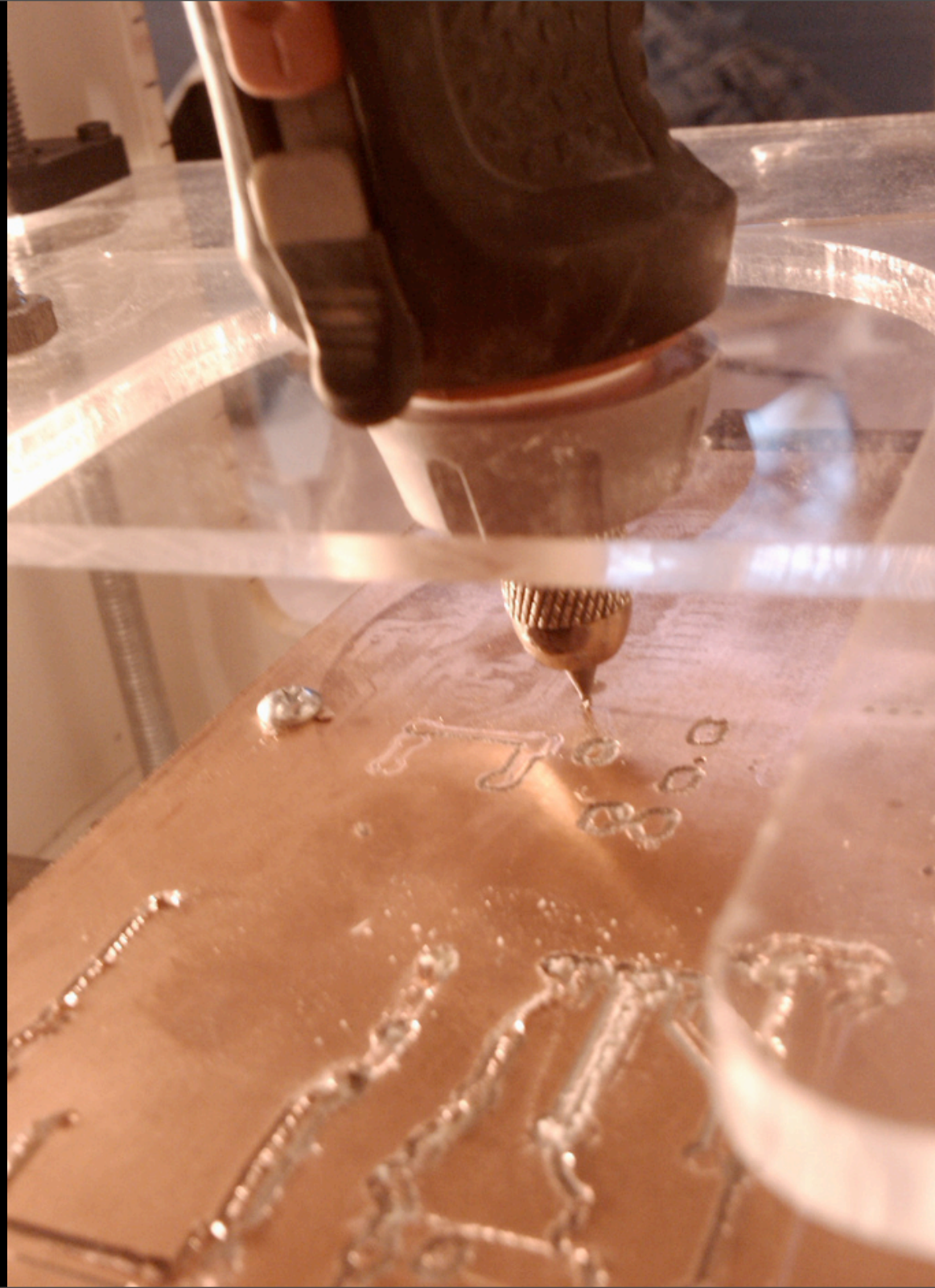


<http://cq.cx/pcb-router.pl>

http://mtm.cba.mit.edu/machines/mtm_az/index.html



MTM Mill



Roboteernat's
MakerBot Mill



Join the discussion:
<http://bit.ly/openmillgroup>

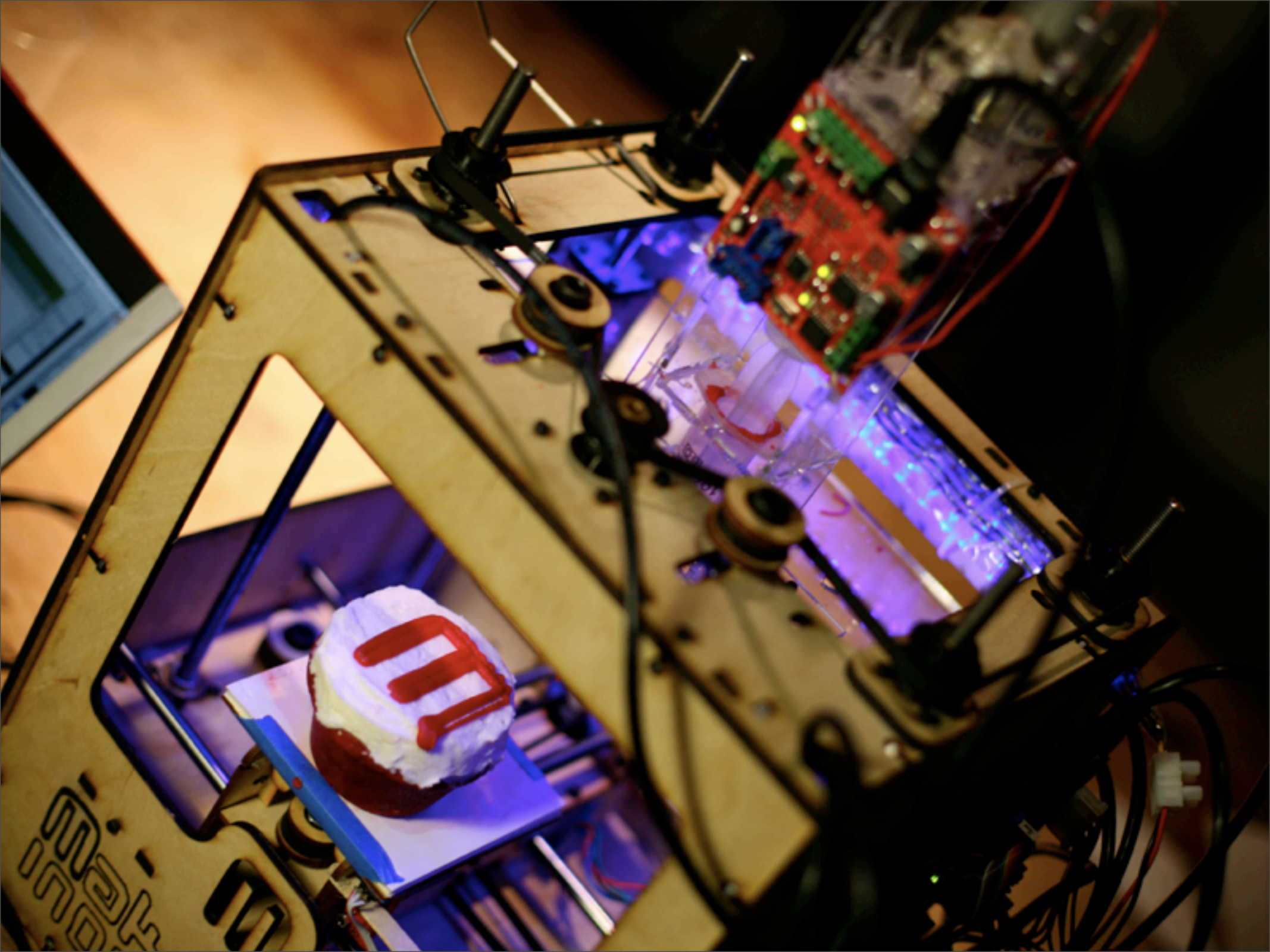
(Note: New Group)





#Frontier: Frostruder







MAKERBOL
INDUSTRIES

The
New
York
toast



At it's core, the New York Toast is an
API --> Image/Text --> G-Code --> Breakfast
Conversion tool!

You may call it GIF.
We call it JIF!

JPEG to JBREAD at 12.7 PBI
(Peanut Butter per Inch)

NOT PATENTED!!!!



Mark Tabry



What would you stick into a #frostruder?

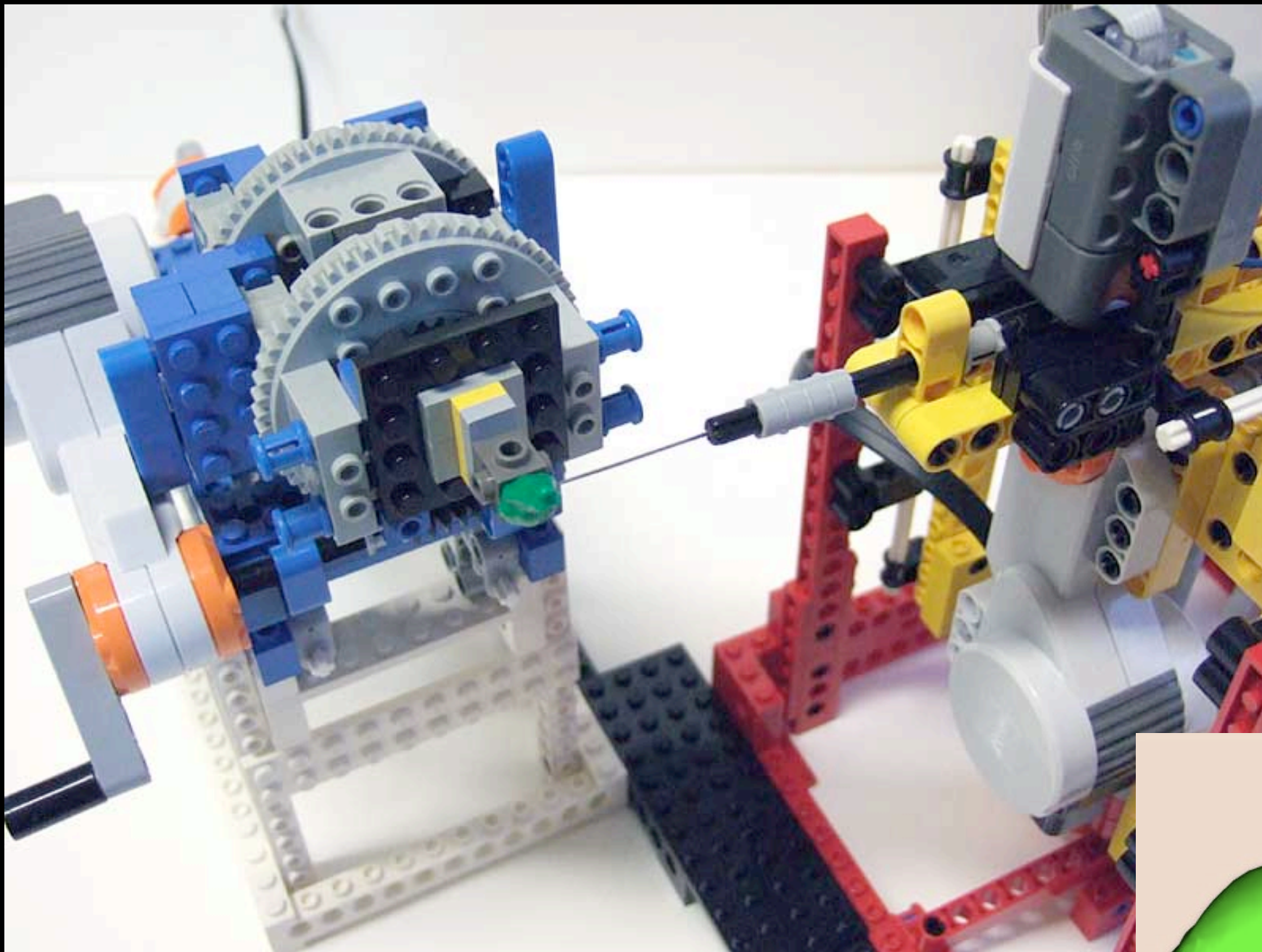




#Frontier: Open Scanner

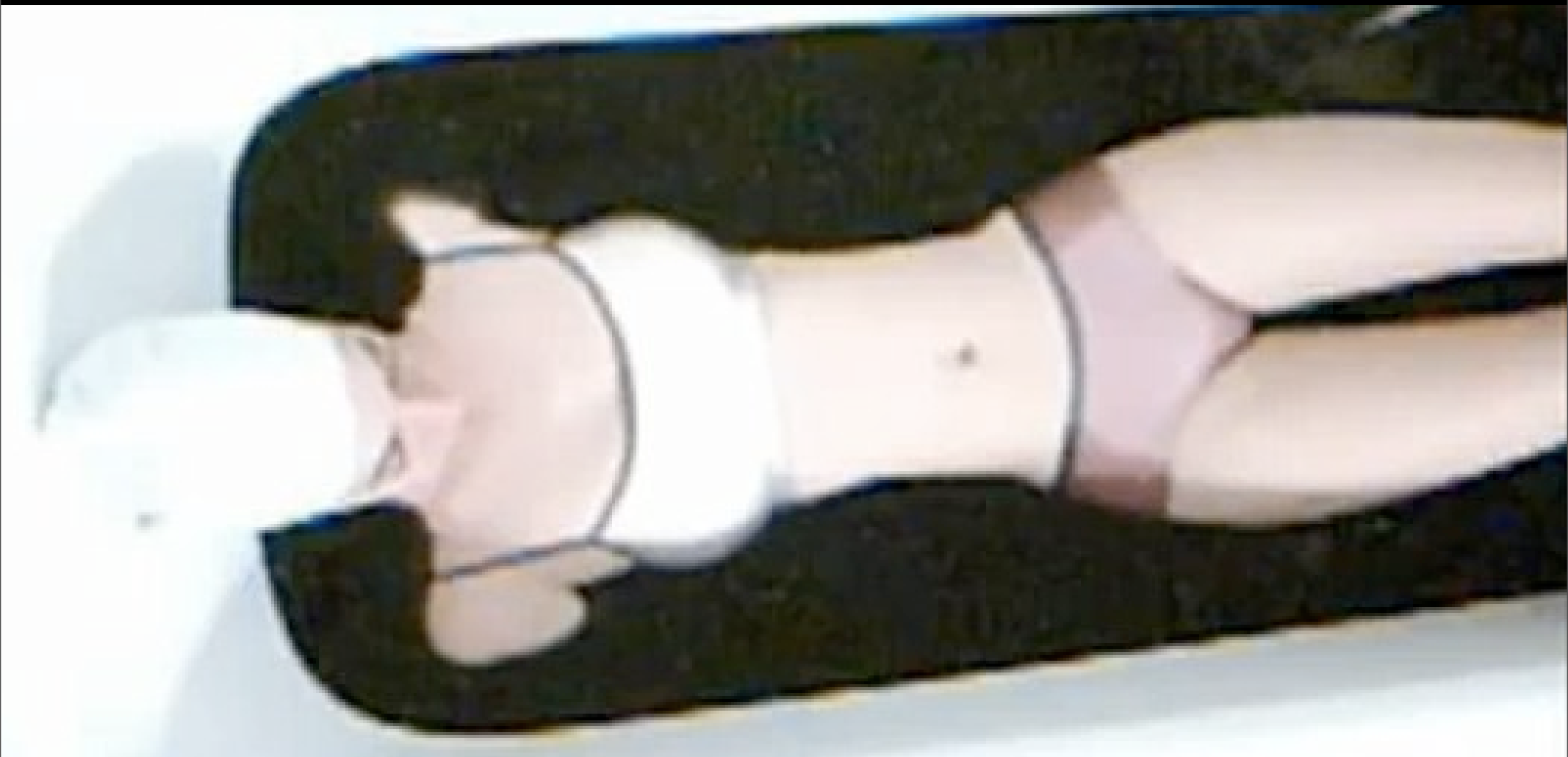


Lego



<http://philohome.com/scan3d/scan3d.htm>

Ink

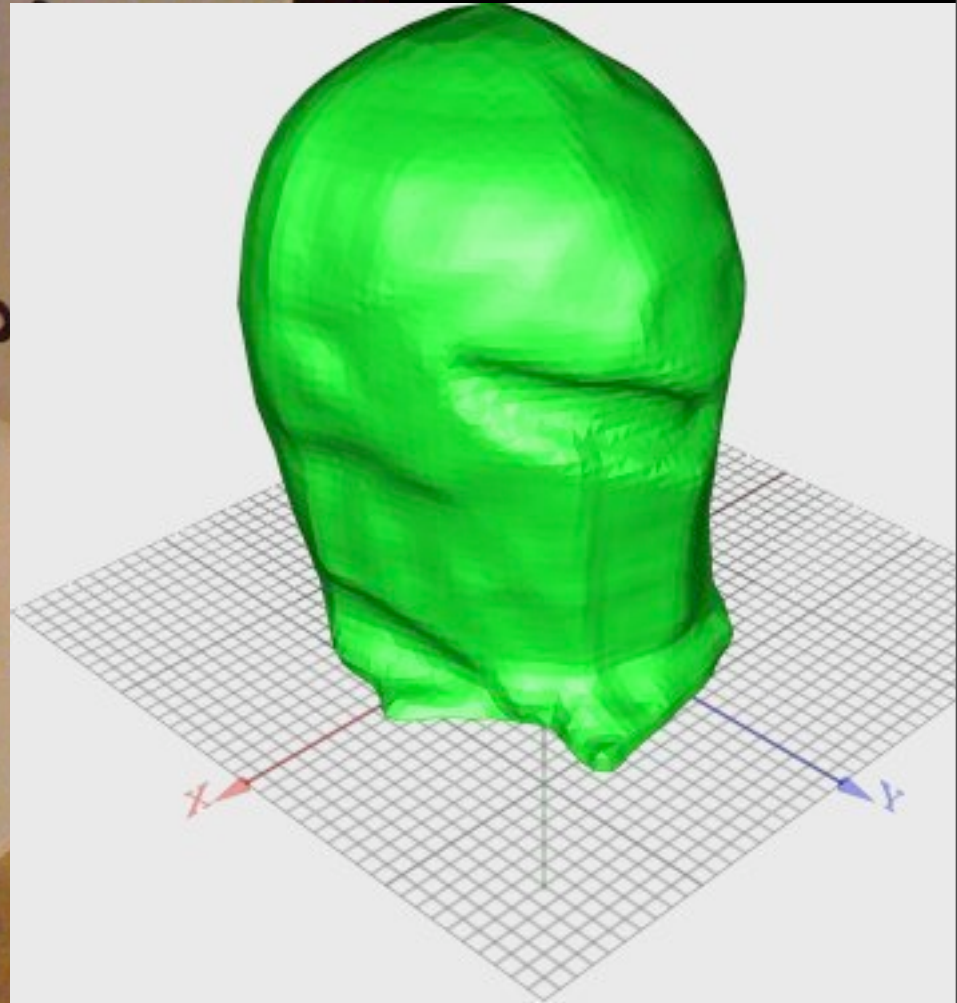


<http://inkscanner.moviesandbox.net/>

Microscribe

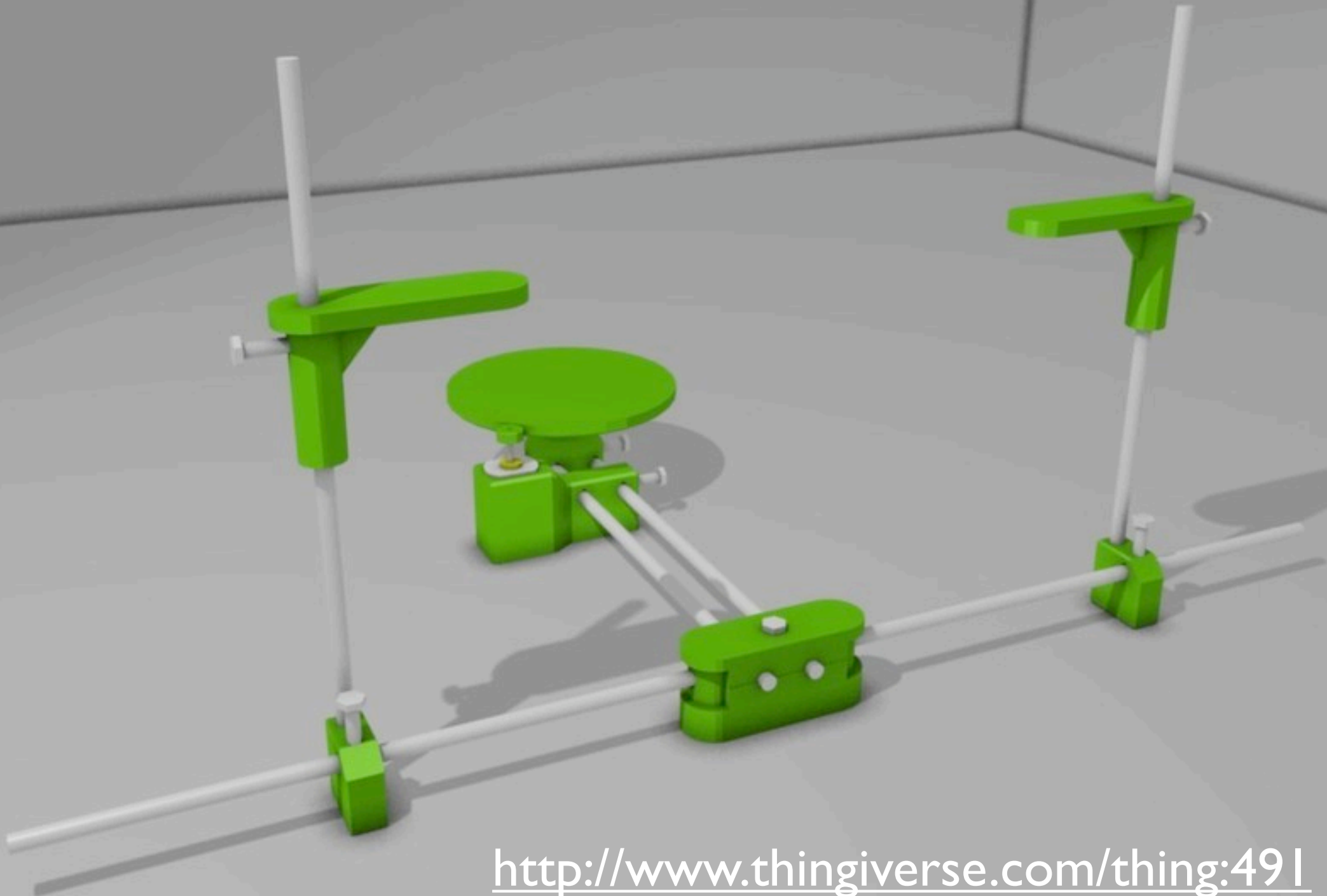


Bathsheba Grossman
<http://bathsheba.com>

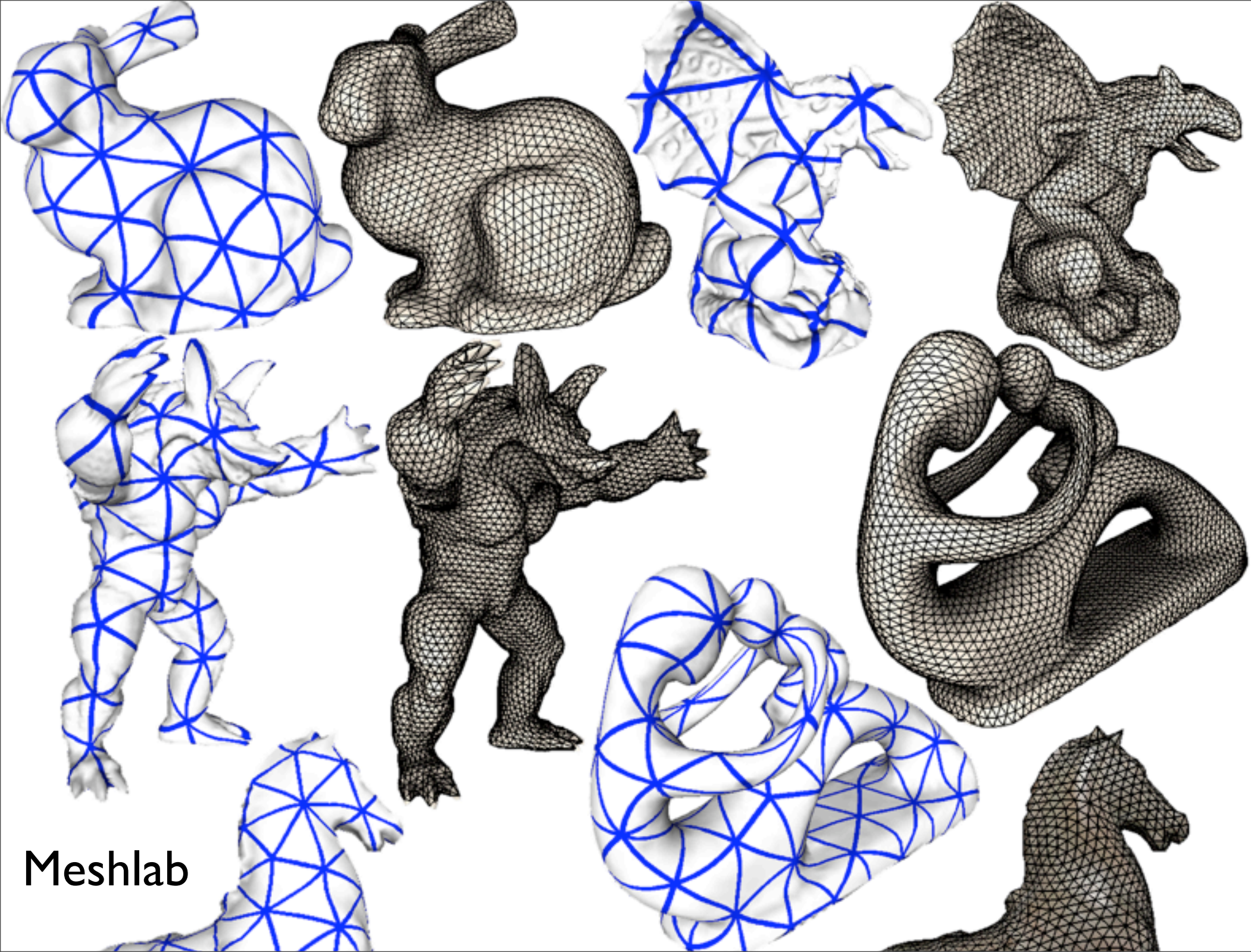


David Scanner

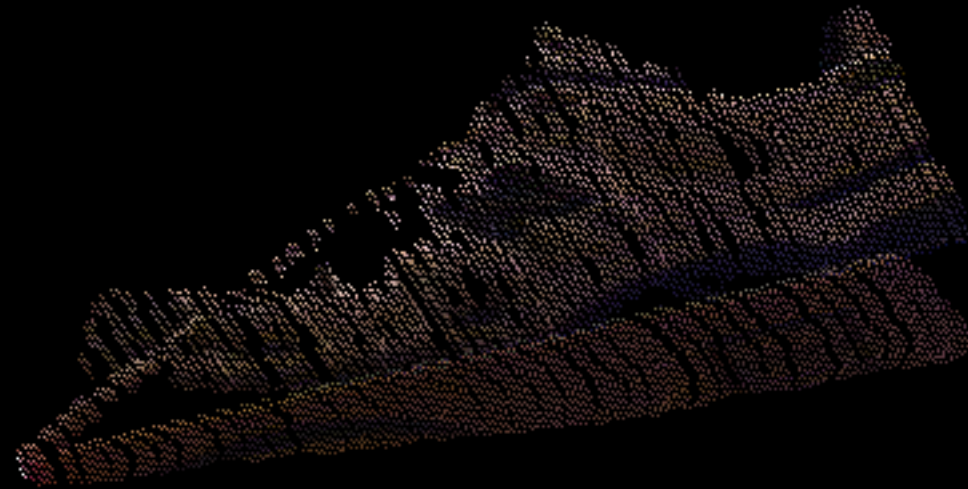
Zignig's prototype



<http://www.thingiverse.com/thing:491>



Meshlab



Andy and Dan Barry have a start at
<http://abarry.org/stereo/>



What do you want to scan?





Get Involved!
Open Scanner Group:
<http://bit.ly/openscangroup>





Frontier: MakerBot Watch



<http://bit.ly/MakerBotWatchGroup>



#Frontier: Electric Bike

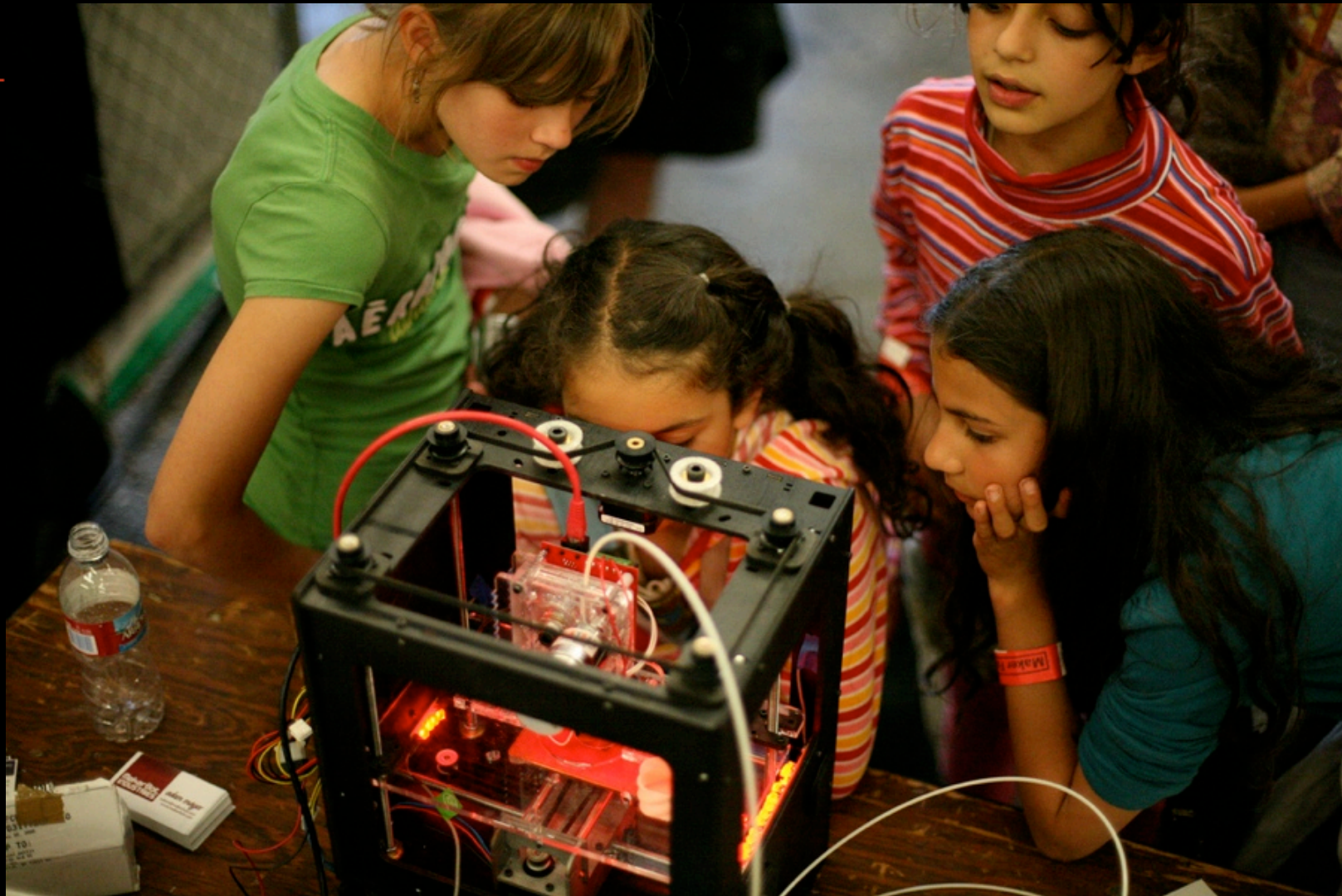




Raumfahrtagentur



<http://senseable.mit.edu/copenhagenwheel/>



#Frontier: Infrastructure for learning





Ok, what #frontiers get your #sparecycles ?

Bre Pettis @bre
MakerBot Industries @makerbot

