

Matt Keeter



mattkeeter.com

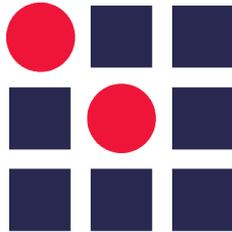


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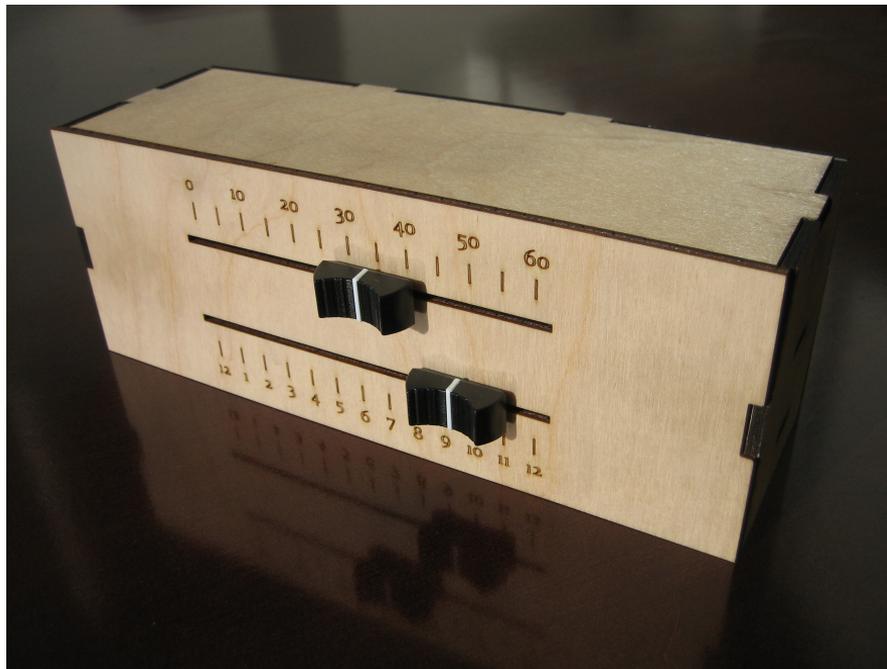






How to Make (Almost) Anything

Fall 2013

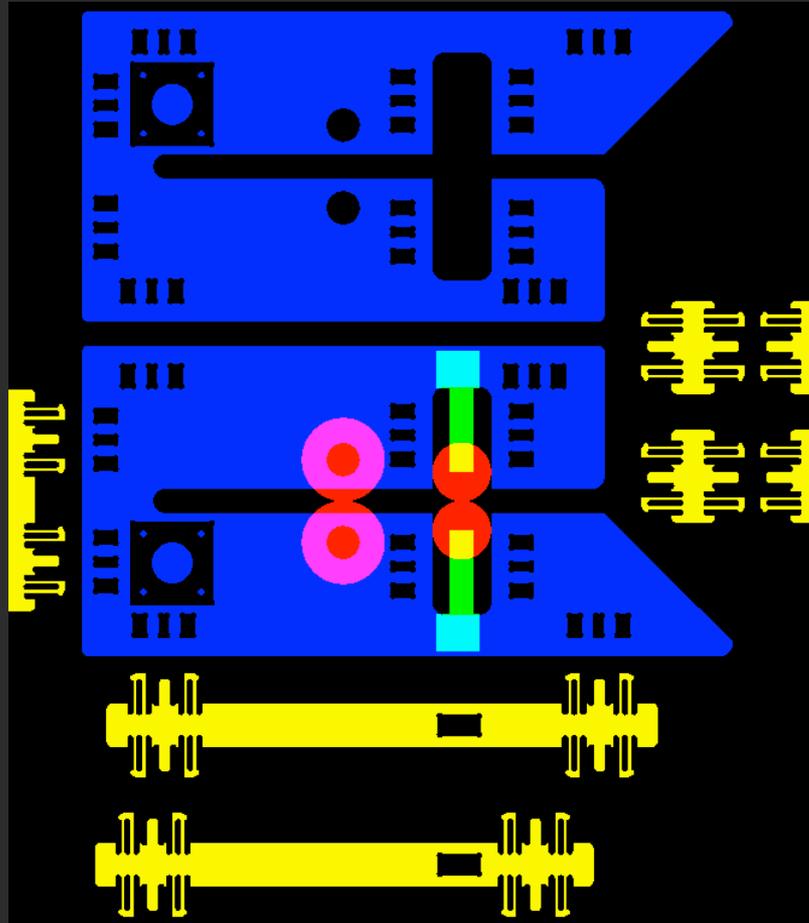


```

136 servo = rectangle(-.5*servo_l, .5*servo_l, -.5*servo_h, .5
137 servo += rectangle(-.5*mat_thick+servo_bias, .5*mat_thi
138 servo = move(servo, sxx-servo_bias, syy+.5*smush-servo_o
139 servo += reflect_y(servo, fabric_y)
140
141
142 cutout = filleted_rectangle(-.5*frd, .5*frd, -servo_offs
143 cutout = move(cutout, sxx, syy+2*mat_thick)
144 cutout += reflect_y(cutout, fabric_y)
145 rect = rect - cutout
146
147
148 #snaps
149 cross_back = filleted_rectangle(-.5*width, .5*width, 1.8
150 cross_back = move(cross_back, -.5*width-2*mat_thick, 0)
151 s = snap_male(-2*mat_thick, 2.5*mat_thick+.5*tot_snap_w
152 s = map(lambda x: x+reflect_y(x, fabric_y), s)
153 s = map(lambda x: x+reflect_x(x, -2*mat_thick-.5*width)
154 cross_back = cross_back + s[0] - s[1]
155
156 cross_bottom = filleted_rectangle(mat_thick, .9*(xx+cat
157 cross_bottom = move(cross_bottom, 0, -2*mat_thick)
158 s = snap_male(2*mat_thick+.5*tot_snap_w, -2*mat_thick, 0
159 s = map(lambda x: x+reflect_x(x, .45*(xx+cattle)), s)
160 s = map(lambda x: x+reflect_y(x, -2*mat_thick-.5*width)
161 servo_cut = dogboned_rectangle(-.5*servo_l, .5*servo_l,
162 servo_cut = move(servo_cut, sxx-servo_bias, -.5*width-2*
163 cross_bottom = cross_bottom + s[0] - s[1] - servo_cut
164
165
166 cross_top = filleted_rectangle(.5*mat_thick, xx-.5*mat
167 cross_top = move(cross_top, 0, -2*mat_thick-width-4*mat
168 s = snap_male(1.5*mat_thick+.5*tot_snap_w, -2*mat_thick
169 s = map(lambda x: x+reflect_x(x, .5*xx), s)
170 s = map(lambda x: x+reflect_y(x, -6*mat_thick-1.5*width
171 servo_cut = dogboned_rectangle(-.5*servo_l, .5*servo_l,
172 servo_cut = move(servo_cut, sxx-servo_bias, -1.5*width-6
173 cross_top = cross_top + s[0] - s[1] - servo_cut
174
175 mid_x = .5*(sx+ssx)
176 cross_mid = filleted_rectangle(mid_x-.5*width, mid_x+.5
177 s = snap_male(mid_x+.5*width, .5*(fabric_y-.5*throat)+.
178 s = map(lambda x: x+reflect_x(x, mid_x), s)
179 cross_mid = cross_mid + s[0] - s[1]
180 cross_mid += reflect_x(cross_mid, sxx)
181 cross_mid += reflect_y(cross_mid, fabric_y)
182 cross_mid = move(cross_mid, xx-mid_x+2*width, 2*width)

```

```
color(part, rgb)
```



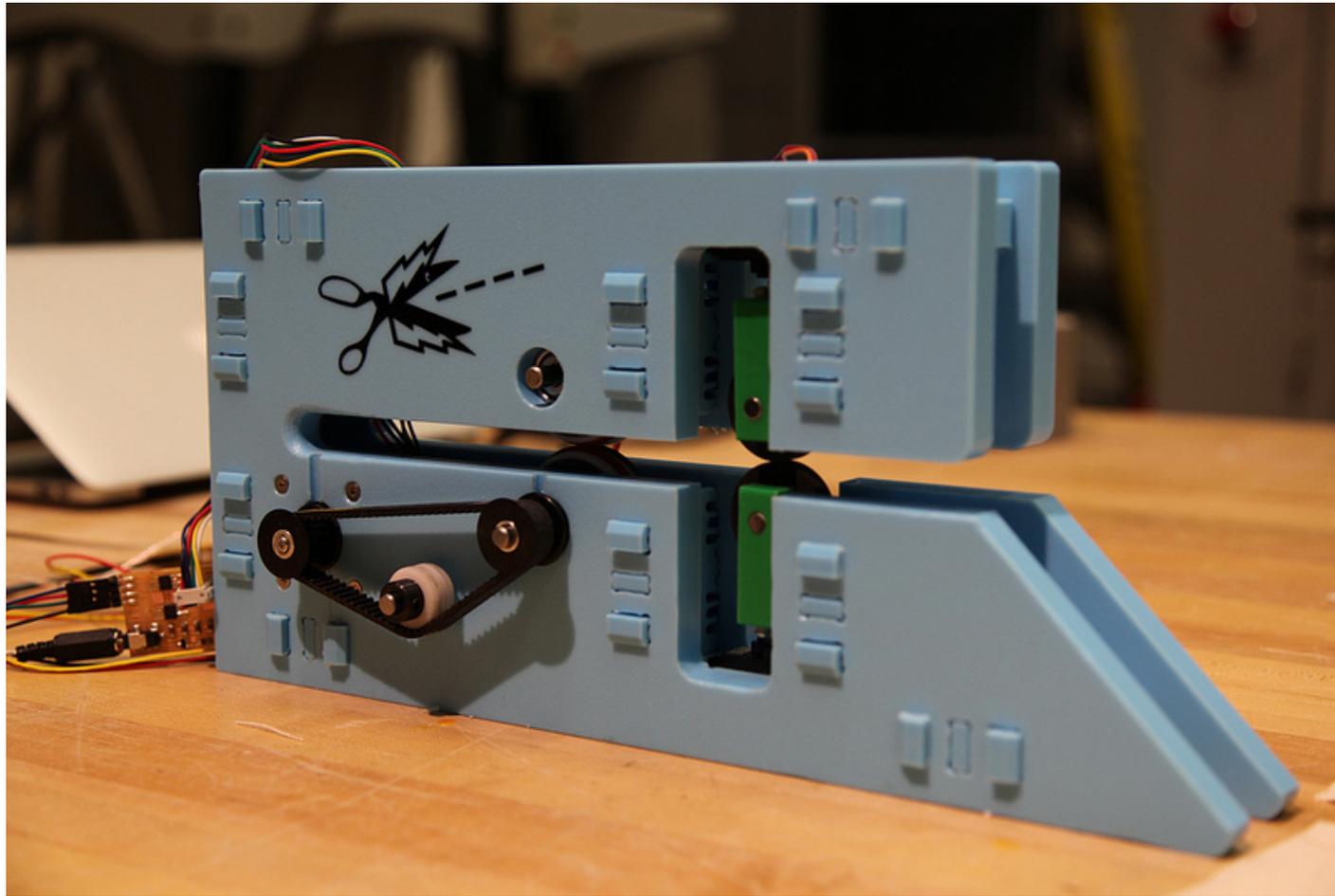
kokopelli

Script-based CAD
and CAM package

Python code defines
solid models

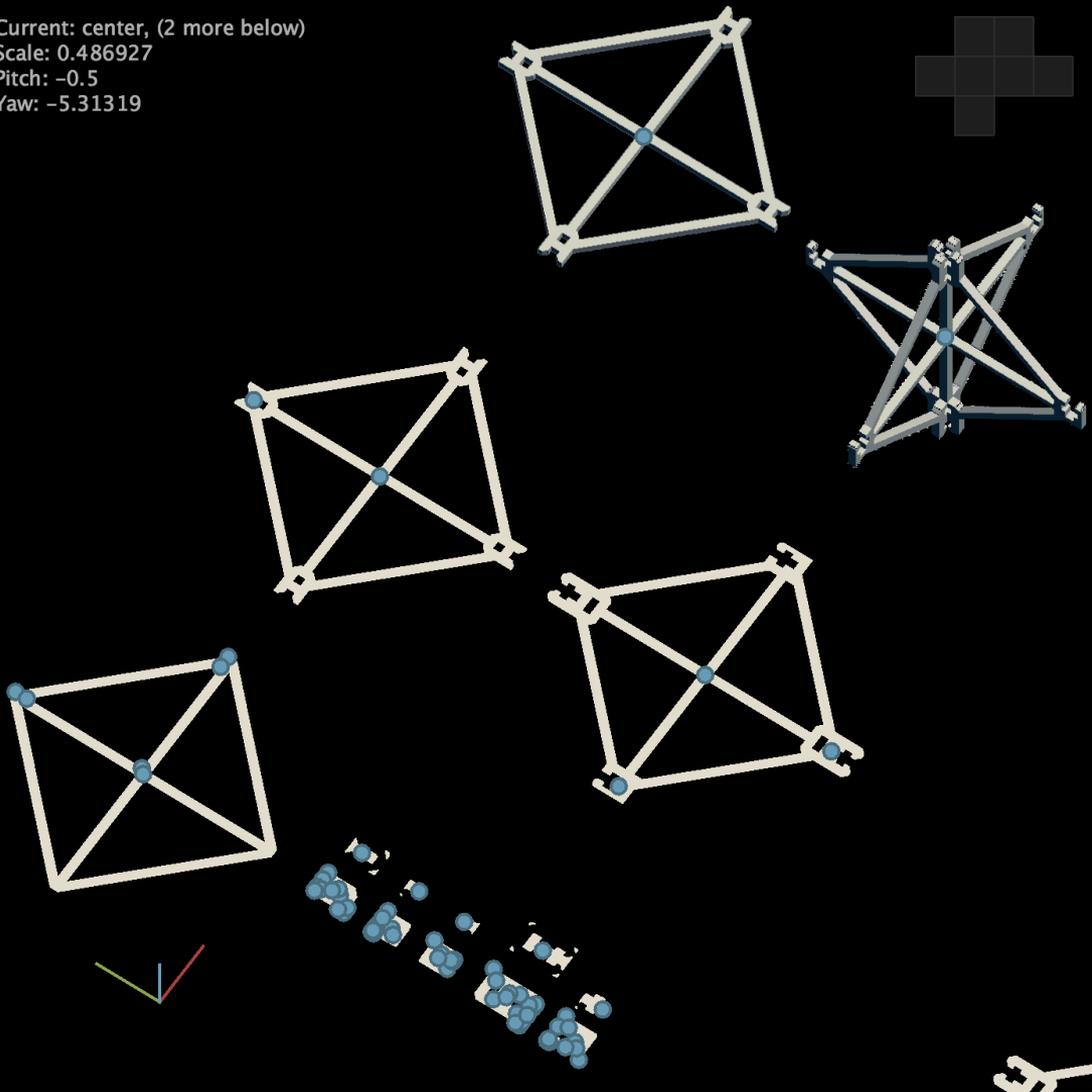
Rendered in real time
as code changes

Design by Sam Calisch



Sam Calisch

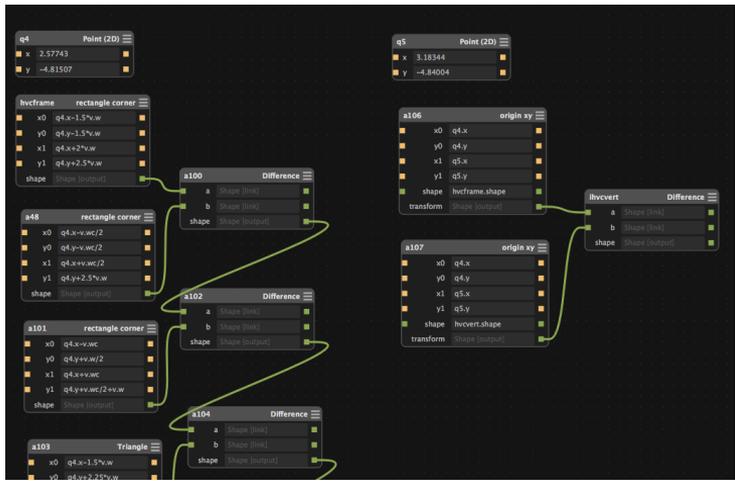
Current: center, (2 more below)
Scale: 0.486927
Pitch: -0.5
Yaw: -5.31319



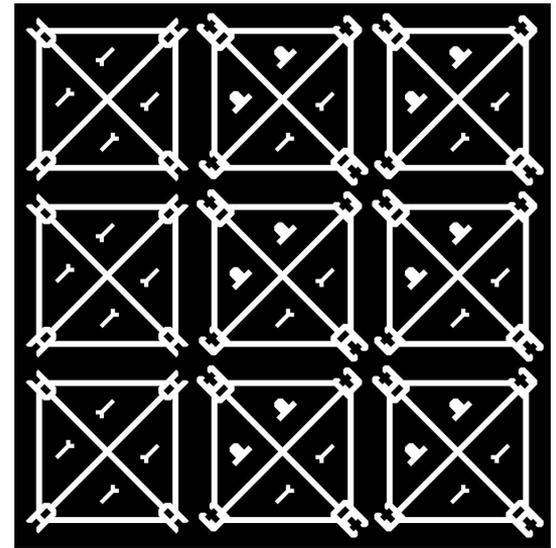
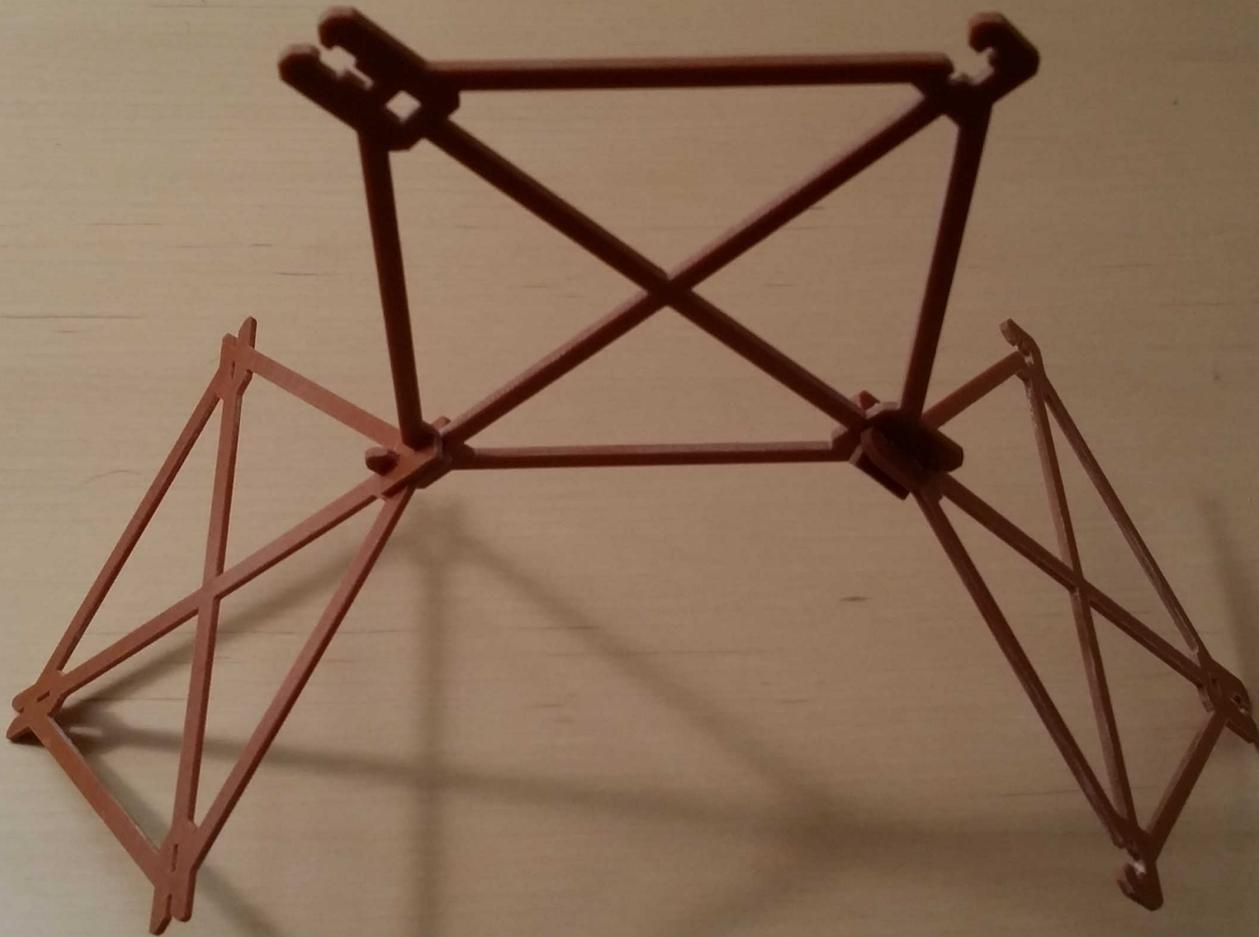
Antimony

Graph-based design tool

Every shape is code;
everything can be edited live



Design by Neil Gershenfeld



Reinforced
cellular structure

Neil Gershenfeld &
Benjamin Eric Jenett

Building tools for designers

Quick-turn prototypes

Parametric hardware

Tools to build other tools