facet normal 0 0 0
  outer loop
    vertex 9 15 0
    vertex 7.5 17.5964 4
    vertex 7.5 17.5964 0
  endloop
endfacet
facet normal 0 0 0
  outer loop
    vertex 7.5 17.5964 4
    vertex 9 15 0
    vertex 9 15 4
  endloop
endfacet
facet normal 0 0 0
  outer loop
    vertex 4.5 17.5964 0
    vertex 7.5 17.5964 4
    vertex 4.5 17.5964 4
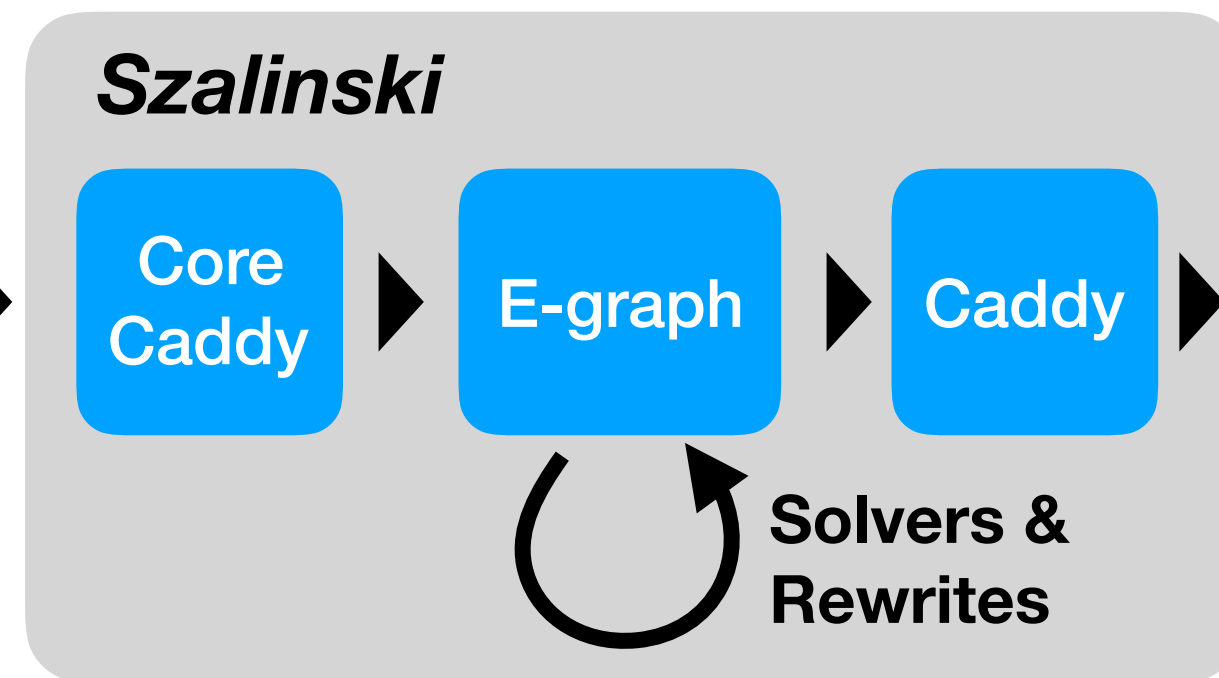 endloop
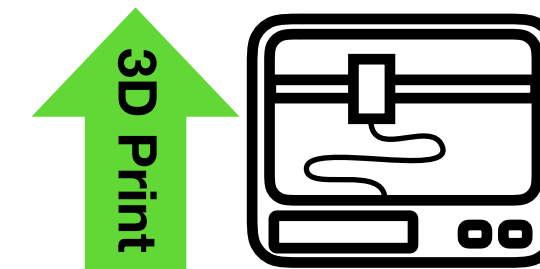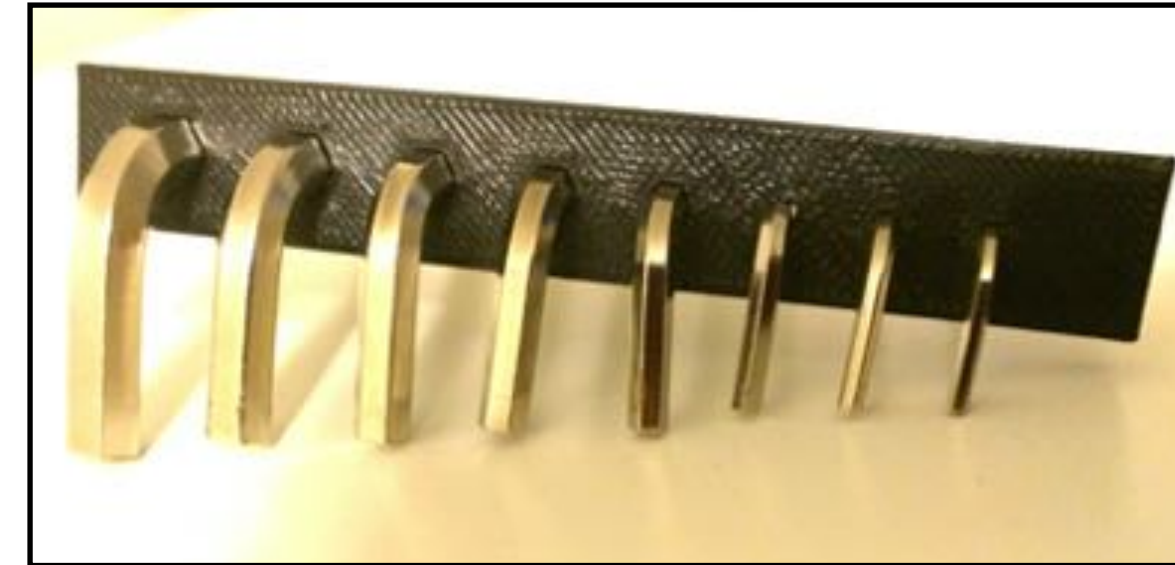endfacet
...

~1600 LOC, Mesh
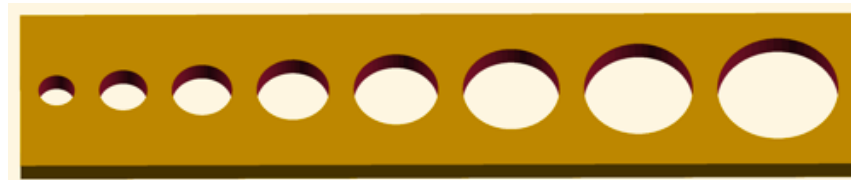
mesh decompiler ▶

(Diff
  (Translate (70 15 2)
    (Scale (140 30 4)
      (Translate (-0.5 -0.5 -0.5)
        (Cuboid (1 1 1)))))
  (Union
    (Translate (6 15 2)
      (Scale (6 5.196 4)
        (Translate (0 0 0)
          (Scale (0.5 0.577 1)
            (HexPrism (1 1))))))
    (Translate (125 15 2)
      (Scale (20 17.32 4)
        (Translate (0 0 0)
          (Scale (0.5 0.577 1)
            (HexPrism (1 1))))))
    (Translate (102 15 2)
      (Scale (18 15.588 4)
        (Translate (0 0 0)
          (Scale (0.5 0.577 1)
            (HexPrism (1 1))))))
    (Translate (81 15 2)
      (Scale (16 13.856 4)
...

~ 50 LOC, CSG

Szalinski

Core Caddy ▶ E-graph ▶ Caddy ▶

Solvers & Rewrites

(Difference
  (Cuboid [140, 30, 4])
  (Fold Union
    (Tabulate (i 8)
      (Translate $[i^2 + 10i + 6, 15, 2]$
        (HexPrism $[i + 3, 4]$)))))

6 LOC, Caddy

3D Print

edits

(Difference
  (Cuboid [140, 30, 4])
  (Fold Union
    (Tabulate (i 8)
      (Translate $[i^2 + 10i + 6, 15, 2]$
        Cylinder $[i + 3, 4]$)))))

(Difference
  (Cuboid [140, 30, 4])
  (Fold Union
    (**Tabulate (i 4)**
      (Translate $[i^2 + 38i + 6, 15, 2]$
        (HexPrism $[i + 3, 4]$)))))

(Difference
  (Cuboid [140, 30, 4])
  (Fold Union
    (**Tabulate (i 6)**
      (Translate [**20i + 20**, 15, 2]
        (**Rotate [0, 0, 45i]**
          Cuboid [12, 12, 4])))))

(Difference
  (Cuboid [140, 30, 4])
  (Fold Union
    (Tabulate (i 10)
      (Translate $[i^2 + 10i + 6, 15, 2]$
        (HexPrism [**(i + 3) / 2**, 4])))))