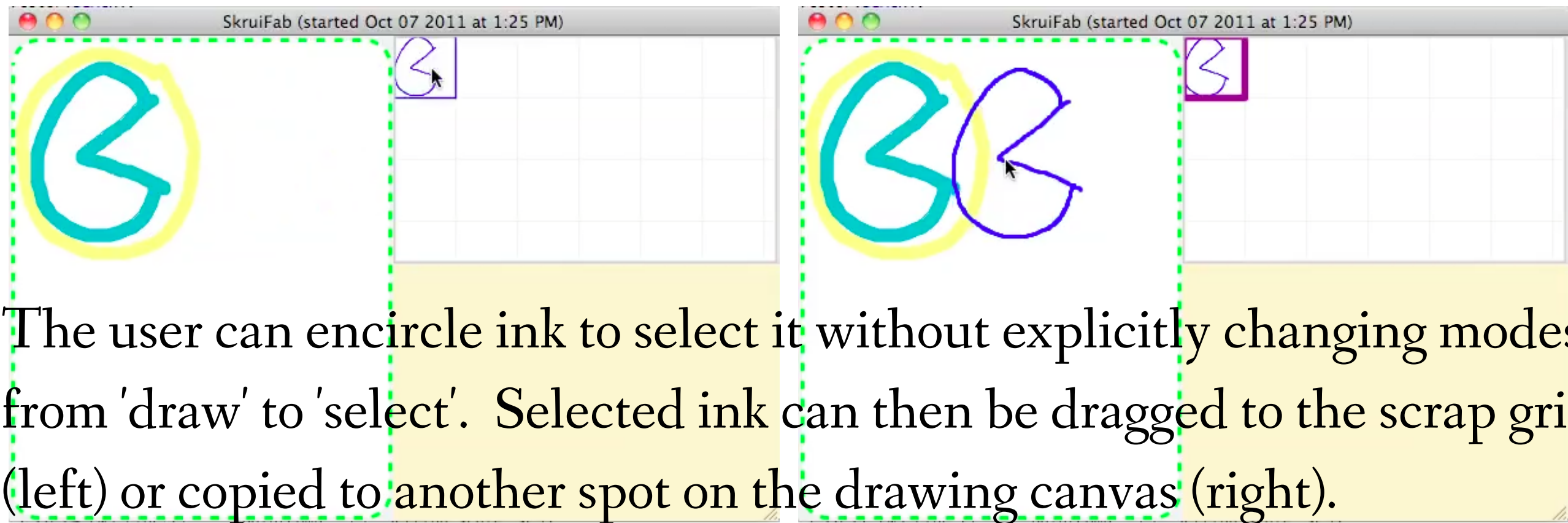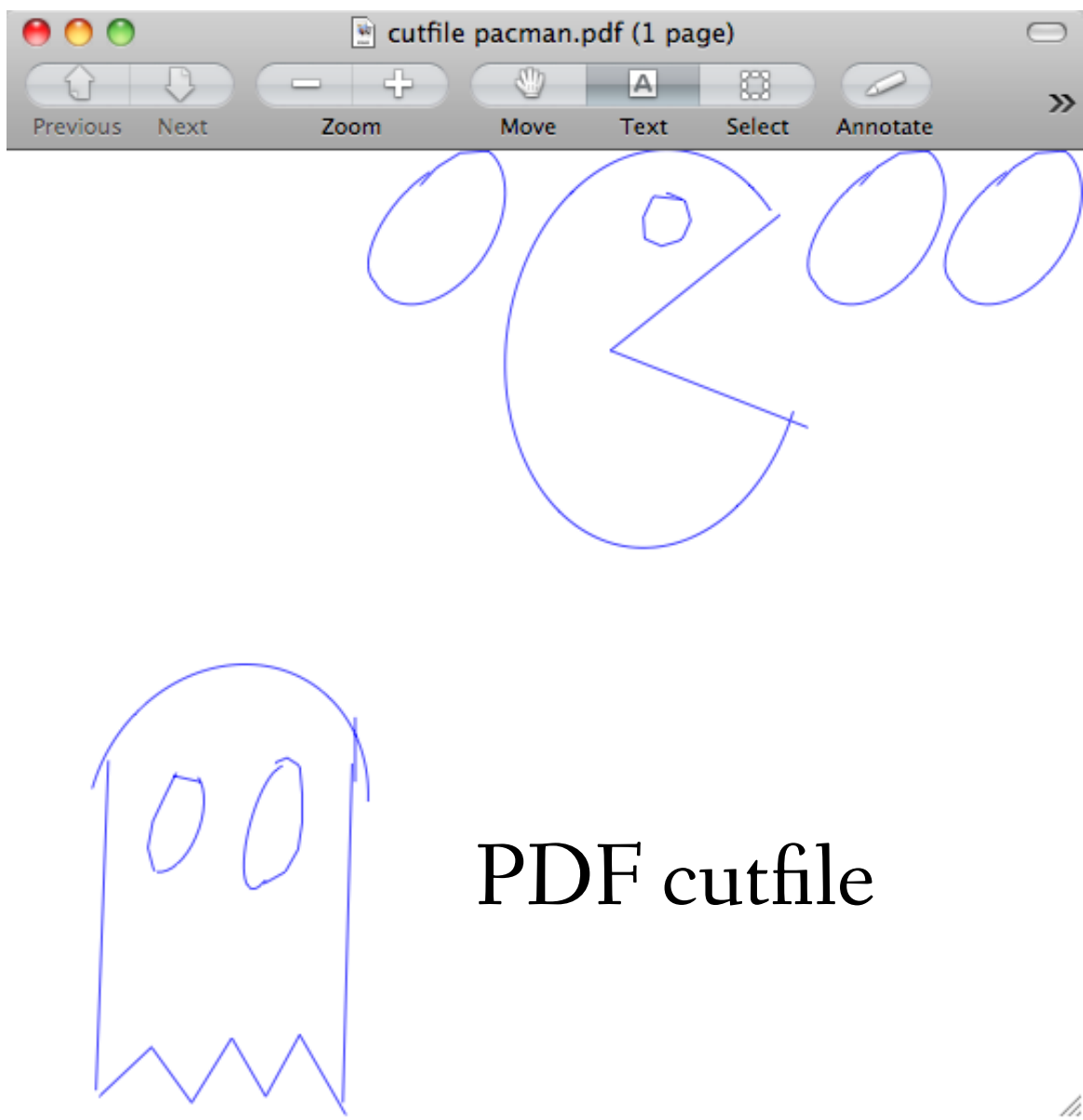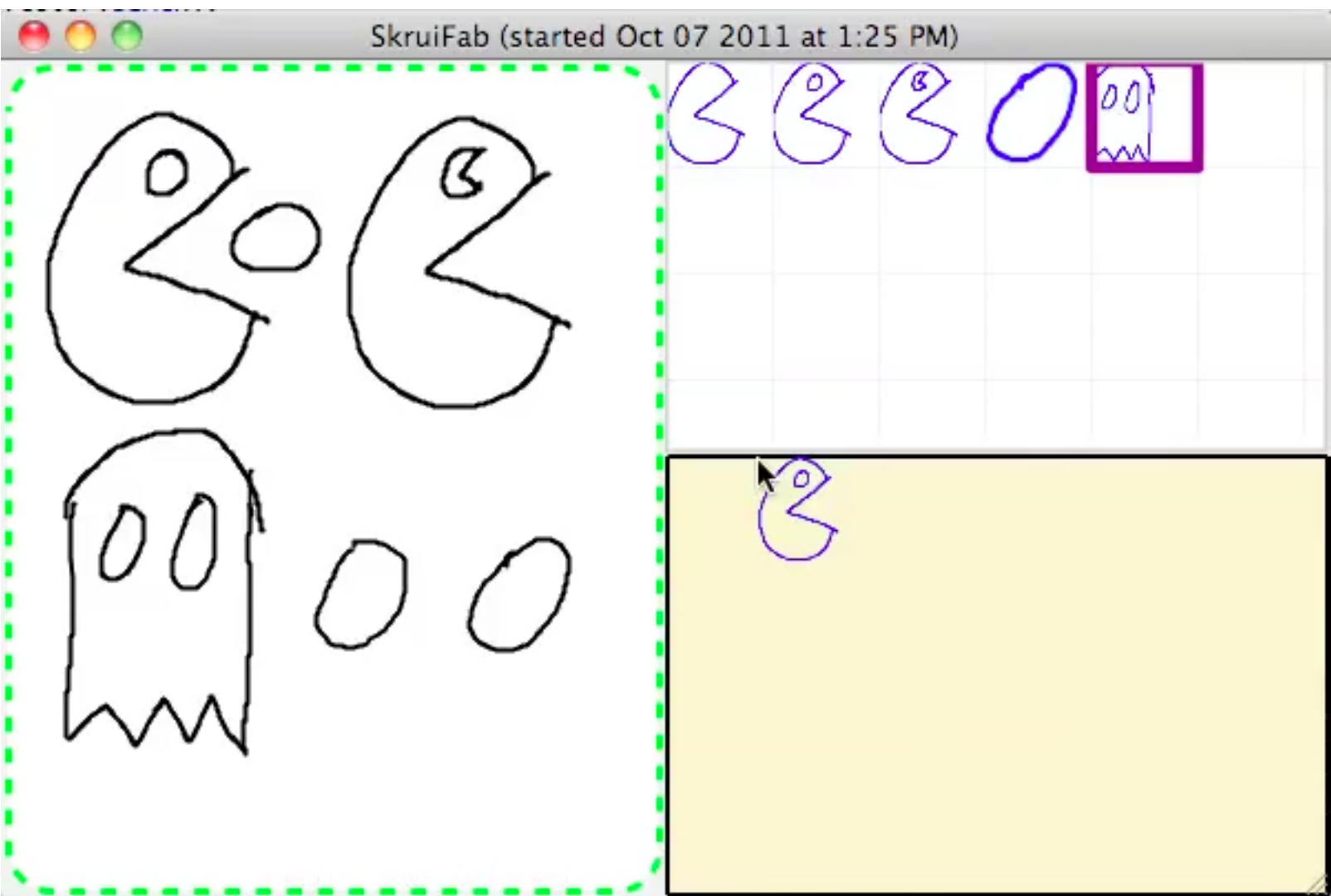This screenshot shows the user making a Pac Man stencil. (A) The area at the left is a freehand sketching pane. At right is (B) a Scrap Grid that holds references to sketches and stencils. Below that is (C) the Cutfile Pane, which arranges stencils for sending to a laser cutter.
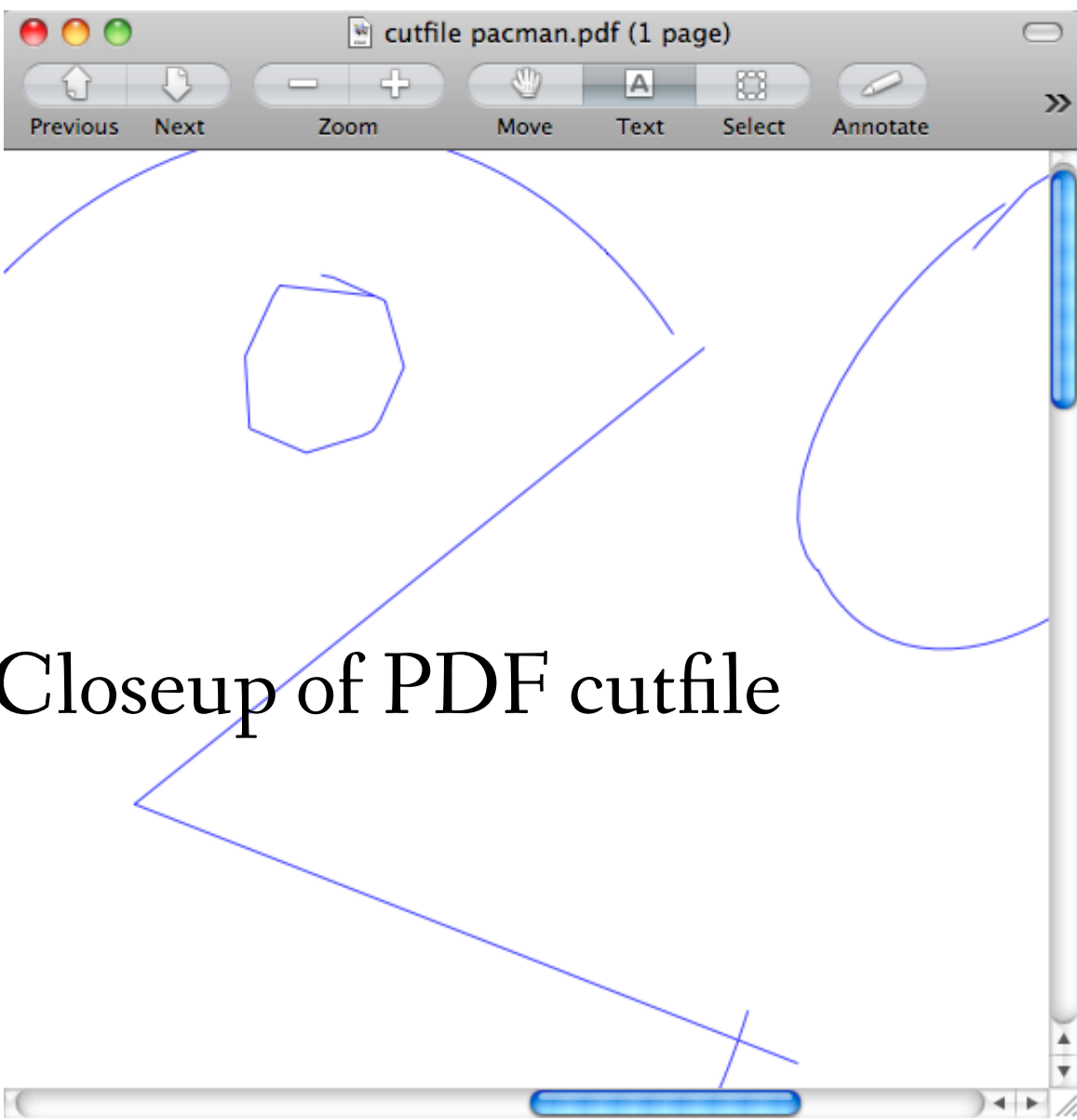

The user can encircle ink to select it without explicitly changing modes from 'draw' to 'select'. Selected ink can then be dragged to the scrap grid (left) or copied to another spot on the drawing canvas (right).

Items in the scrap grid can be moved to the Cutfile Pane for production on a laser cutter. The stencils in the Cutfile Pane are arranged automatically to fit on the laser cutter bed. A vector file (PDF format) is automatically created when stencils are added to the Cutfile Pane.
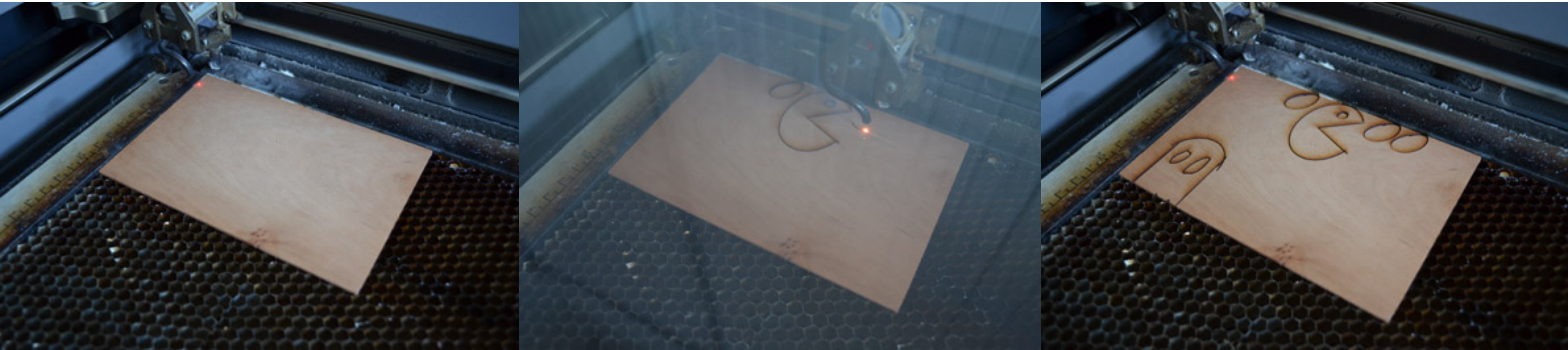

PDF cutfile

Closeup of PDF cutfile

The generated PDF can be given to a laser cutter without modification. Currently SkruiFab interprets rough input and converts it to geometric elements like lines, elliptical arcs, and splines. In the near future it will latch these elements together to form continuous stencils, rather than the disjoint linework shown here.

This Pac Man scene took about a minute to draw and 27 seconds to cut on the laser cutter in our lab. I didn't have the right size material, so the bottom of the ghost is cut off somewhat. All the parts have nice, smooth edges.