Charlie

I finally got around to creating the CAD file for the slip number 3D print.

I use Fusion 360, as did Gary M.  The file I have attached is a Fusion 360 file (\*.f3d).  You can file it any place convenient.



Unfortunately, 3D printing is not (yet) as standardized as just sending a resume/etc to an HP laser printer.

The overall process would be as follows:

Fusion 360 is a CAD program.  A CAD program is the starting point for all “technical” 3D prints (meaning functional parts, not sculptures).  In the F360 file, a person would edit the “sketch” that contains the slip number and it will automatically complete the CAD model.

Then the person would create an .STL file from this using the “create mesh” function.  STL used to mean “stereo lithography”.  Most 3D print files out there are saved as STL files, which are not changeable.  An STL file uses a series of linked triangles (known as tessellation) to describe the surface geometry of a 3D design.

The next step is that the person with a 3D printer uses a “slicer” program that converts the STL file into “GCODE” for his specific printer.  In my case, I use a slicer called CURA.  This outputs a text file with the \*.gcode extension.  If you are interested, I can send you a GCODE file so you can read it……it is a bunch of commands similar to CNC that means “move to this location at this speed at this temperature and blah blah”.  Basically, it slices it into layers first, then each layer into lines of extruded plastic.

For this file, there is an extra effort in the slicer step.  Most 3D printers only use one color at a time.  So, you must tell the slicer to pause the printer at the correct height so you can change the filament to the other color.

And, FINALLY, that GCODE file is loaded into the 3D printer.  The printer has firmware that converts the GCODE to mechanical/electrical movements of the printer.

Too much info, I am sure.

If you have any questions, please let me know.

Cheers.

EC

Materials used in 2022 project (Amazon)

**HATCHBOX PETG 3D Printer Filament, Dimensional Accuracy +/-0.03 mm, Spool, 1.75 mm, Blue**

**HATCHBOX PETG 3D Printer Filament, Dimensional Accuracy +/-0.03 mm, Spool, 1.75 mm, White**