(CS488 Team 5) Original Use Cases

I am a hobby embroiderer that prefers to use a machine for my projects.

What I'd like is software that can do the following:

- 1. I want to be able to freehand draw an outline of what my design will look like.
- 2. I want to be able to use shapes for my outline. These shapes should be able to rotate, flip, scale up and down, and I should be able to change the height or width independently if I want to.
- 3. I want to be able to change chunks of the outline independently if I don't like the angle of a certain part.
- 4. I want to be able to make varied line segments to create an outline:
 - 1. straight
 - 2. curved
- 5. I want to be able to customize the length of the stitches used in my pattern.
- 6. I want to be able to draw the individual stitches within the pattern.
- 7. I want to be able to customize the direction of the stitches in my pattern:
 - 1. stitches should be either parallel to each other or
 - 2. radiate from a central point or
 - 3. be a series of small patterns both preset or customizable
- 8. I want to be able to get an image I like from another source like my camera, or an image file on my laptop, select the most prominent edges and lines on the picture, and turn that into an outline for my pattern.
- 9. I want to be able to make a border for my pattern, much like what you'd see on an applique.
- 10. I want to be able to change the thickness of the border.
- 11. I want to be able to customize the fill stitches how I like. StitchArtist can do this okay. So can SewArt.
- 12. I want to be able to save and open PES stitch files. SewArt can't do this. It's annoying.
- 13. I want to not have to cut off any extraneous thread tails at the end of the project.
- 14. I want to be able to adjust the tension of the thread I'm using.
- 15. I want to have a pattern with room for 15 different colors of thread.
- 16. I want the software to be able to show me exactly what the finished pattern will look like.
- 17. I want to be able to layer patterns on top of each other and be able to make holes in the sections to prevent the stitches from laying on top of each other in the finished pattern.