

Project Development Plan

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Sewing Machine Can Be As Popular As PC Printer.

When the first PC was released it did not gain immediate popularity in the mainstream. Many Industries did not need the assistance of a PC, not to mention a printer. Printers were rarely seen, but found in government and official organisations. They did not catch the interests of the consumer.

Many families owned a sewing machine and continued to use them a long time after PC printers were released. Using it to create and mend dresses, suits, handkerchiefs, coats, etc. Cloth has been part of human life for thousands of years, and altho there have been many improvements in sewing technology, they are mostly in factories. However, there has been very few advances in domestic sewing.

Compared to domestic printing, the once popular method of sewing has come to a halt.

The Sewing machine was once much popular and cheaper than PC printer.

Sewing helped human life and was once much popular than printing.

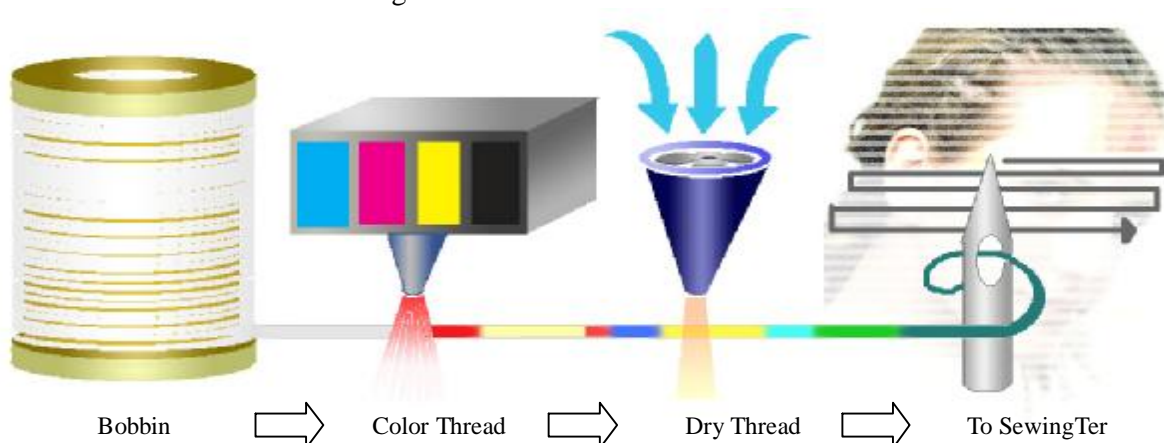
Why can't a sewing machine be as popular as a PC printer?

The answer is that the PC printer can easily output our creative artworks, where as a sewing machine cannot. So what if we made a sewing machine that was just as easy?

The only way to make sewing machine popular is to connect it to PC, drive it easily via PC and output creations easily via it. Let's name it as **Sewingter**. How?

Hardware Phase:

- I We will need to build a compact, lightweight structure as a normal mini electric sewing machine.
- I With a XY table motion control, or auto loading cloth to needle set.
- I Need only one bobbin of white or other color.
- I Need use Ink-Jet technology to color the running cotton thread, and dry the cotton thread in Real-Time before embroidering out.



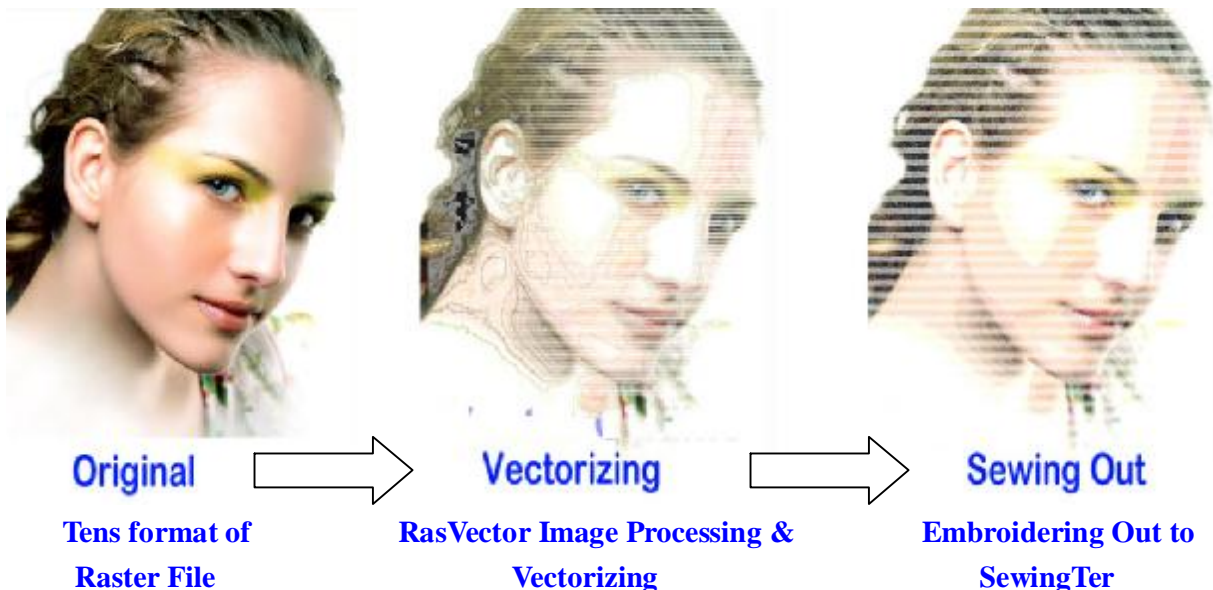
Software Phase:

- | Capable of load kinds format of raster file. EX. Jpg, Bmp, Gif, Tga, Pcx.....etc.
- | Shrink or enlarge raster image to fit the resolution of **Sewingter** (stitches / per inch).
- | With dichotomy image-processing (for use in **Implementation Stage 1**) or colorful image-processing (for use in final stage) to create monochrome or colorful vectors data for **Sewingter**.
- | Before generate vectors data, software should be flexible in setting the vector width in any actual thread size, helpful to reduce the vectors amount.
- | Supply many Image-Process functions to let users easily finish their creative artwork.
- | Fast converting raster image to vectors data in a flash.
- | Click just one button to easily output vectors data to **SewingTer**.

Present, software was done already. Seeking for cooperate hardware manufacture

Potential Challenge:

- | XY table motion control and alignment should be no problem.
- | Thread-Coloring Set can get idea or cooperation form Ink-Jet printer manufacture. Dry Set, may need special chemicals to dye and dry the thread in very short time.
- | Software need revising to map the screen resolution (dots / per Inch) to resolution (Stitches / per Inch) to change the vectors width in software.
- | Color thread in a counted length will need accurate thread-running speed control.



Implementation Procedure

Stage 1: Build a Sewing Machine without Thread-Coloring set.

1. Build a new one or revised from an exist programmable Electrical Sewing Machine, add XY Motion-Control table, drive it to move the cloth without moving needle set.
2. Not yet embed a Thread-Coloring Set, use just only one color of a bobbin.
3. Need the auto alignment to move the table in a start position, to match the start xy on screen.
4. Try to embroider image vectors data on cloth from RasVector by loading a image file and convert it to monochrome vectors data.
5. If works, go to Stage 2.

Stage 2: Embedding Thread-Coloring Set to Sewing Machine.

1. Color the thread and control the running speed to accurately get a counted length of colorful thread.
2. Need to count the pre-running length of thread from Coloring Set to Needle Set for auto loading before embroidering.
3. Try and try and fine-tuning the Mechanical parameters to work it smoothly and stably.
4. Try to embroider image vectors data on cloth from RasVector by loading a image file and convert it to colorful vectors data.

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Kind Regards,

Daniel