# Stroke Based Pen to Text


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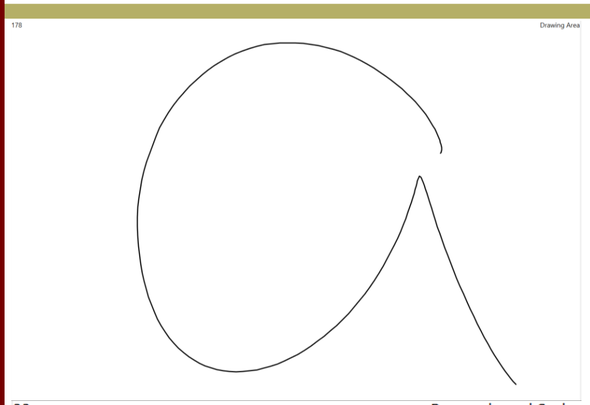
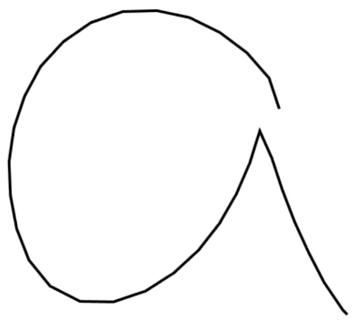
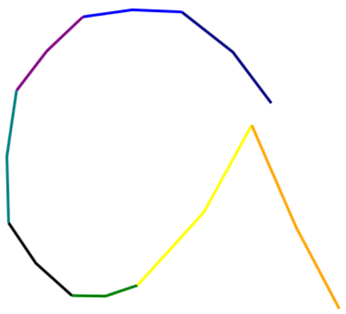


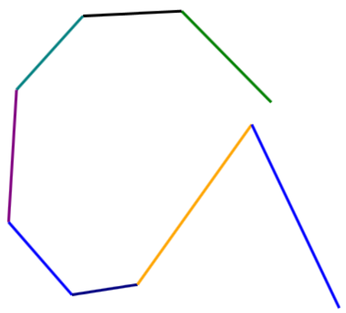

33 Resample and Scale



17 RDP Clean



9 Vector Sections



## Overview

We recognized that most solutions to pen input on modern tablets are extremely slow and inaccurate.
Most of these tools seemed focused around ocular character recognition (OCR), which attempts to compare input to stored output based on the observed shapes. While the inputs shapes is important, we thought that looking at how the input was written would be a better approach. By doing this we cleaned and broke down the input into its most basic components. We hoped this would increase speed, accuracy, and help people with trouble writing or typing such as those with active tremors.

## Approach

The input process was broken into 4 steps, recording, scaling while resampling, cleaning, and section breakdowns. Each step displayed to the left from top to bottom. This math was completed in fractions of a millisecond, faster than the user could write. We then set up the site KaseyPowers.com/Letterform to collect a large sample dataset to build our decision tree.

As of 3/23/15 we are continuing to improve upon the decision algorithms and will have relevant data displayed at showcase.

## Future Goals

We would like to write the core library in which we do the math and database operations into one that could be implemented in a wide variety of projects, such as web tools and mobile applications. We did not do this initially to more easily access the data at each step for this proof of concept.