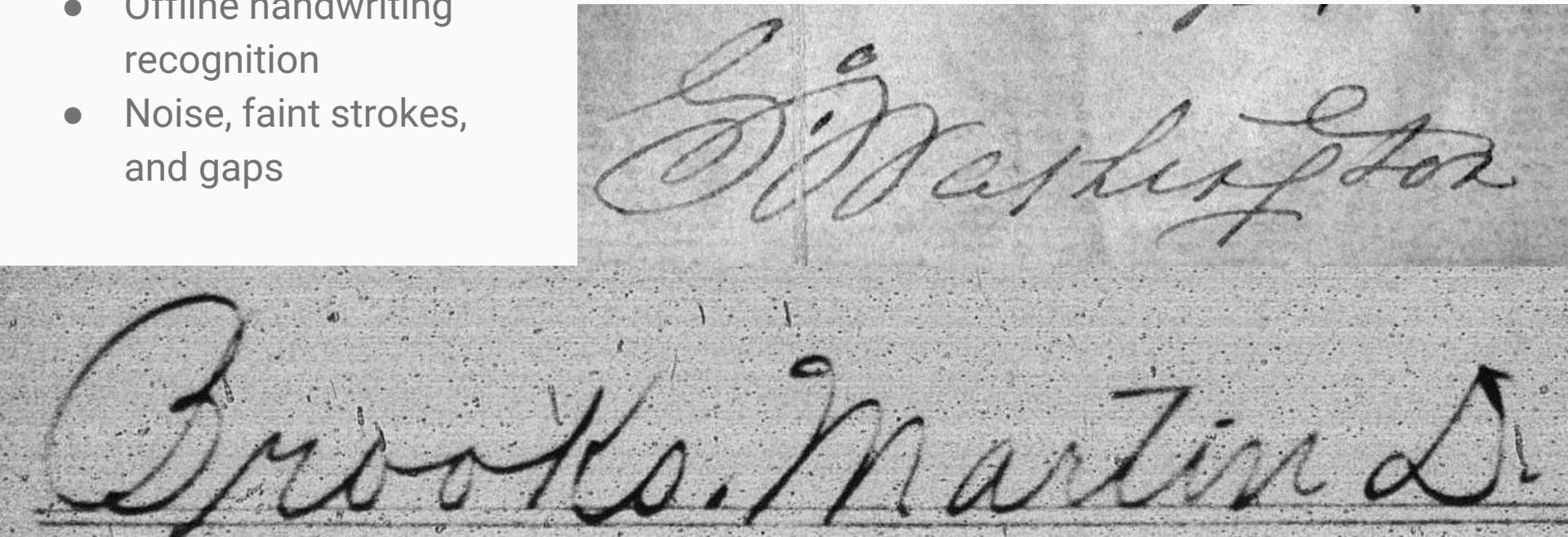
Stroke Extraction

- Offline handwriting recognition
- Noise, faint strokes, and gaps



Related Work

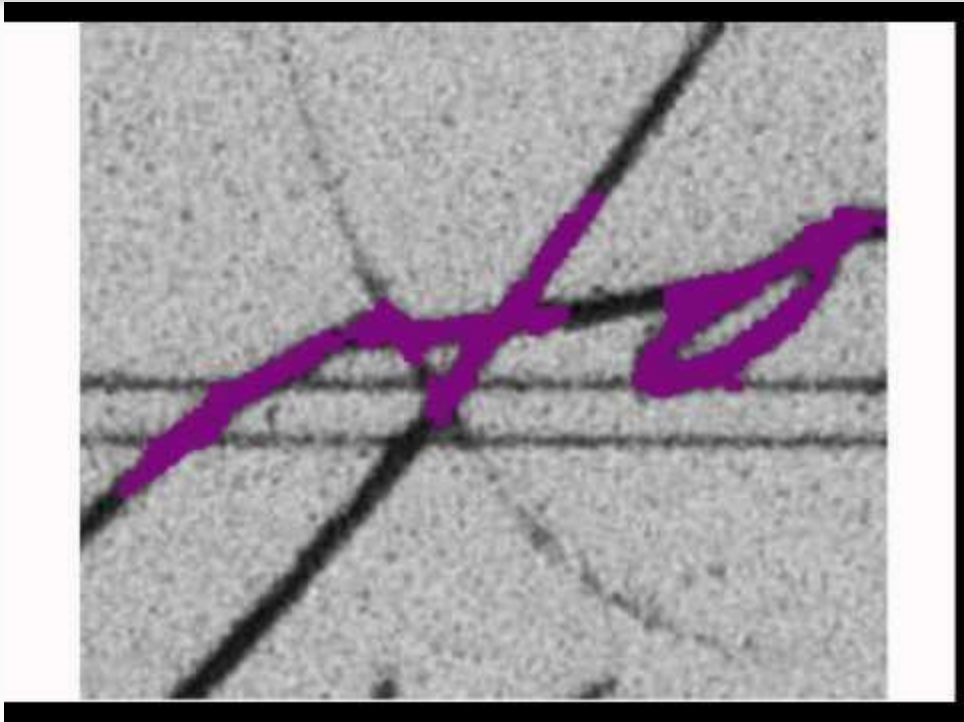
- Skeletonization
- Local Search
- Graph Search

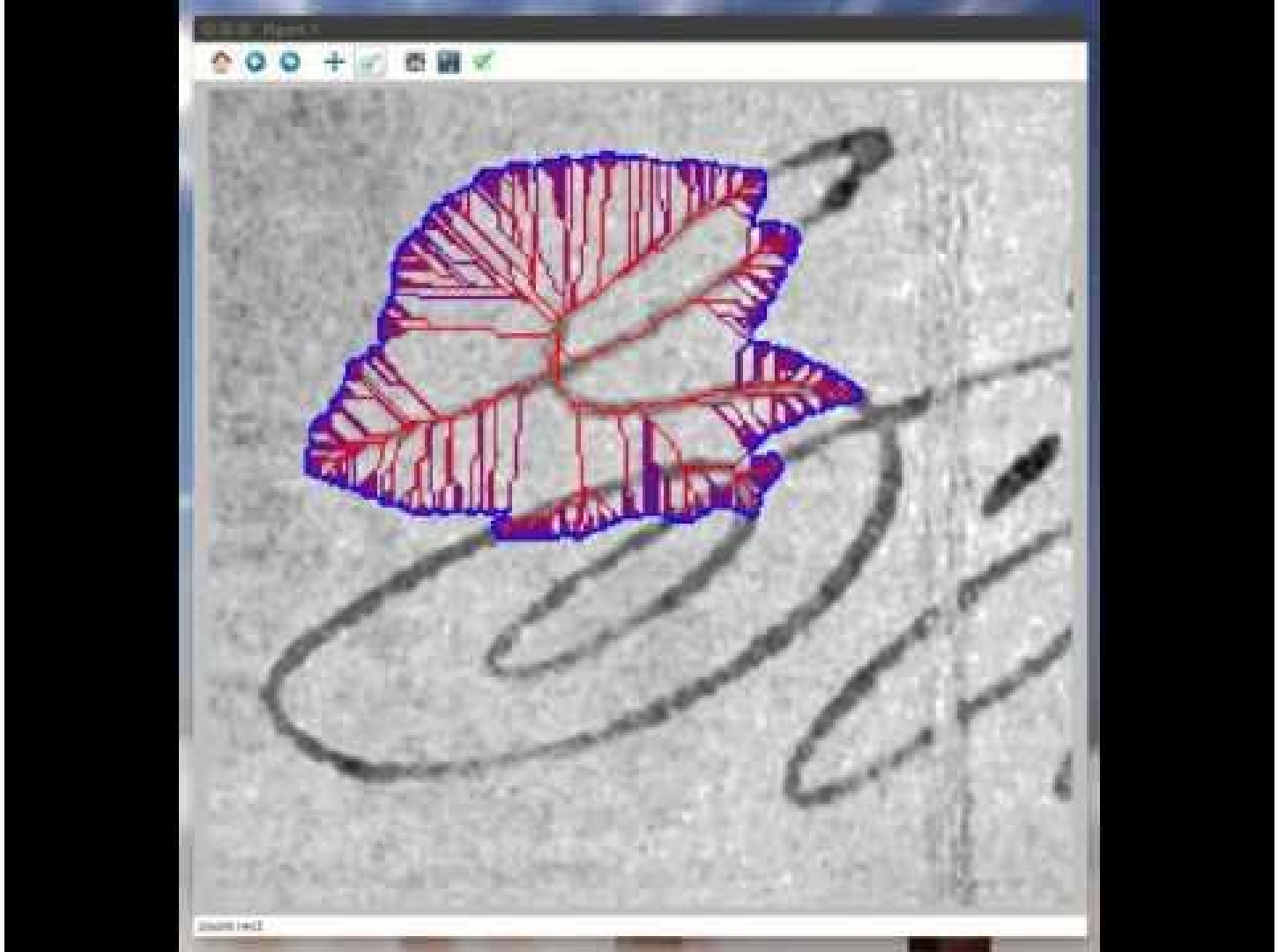
Intelligent Scissors

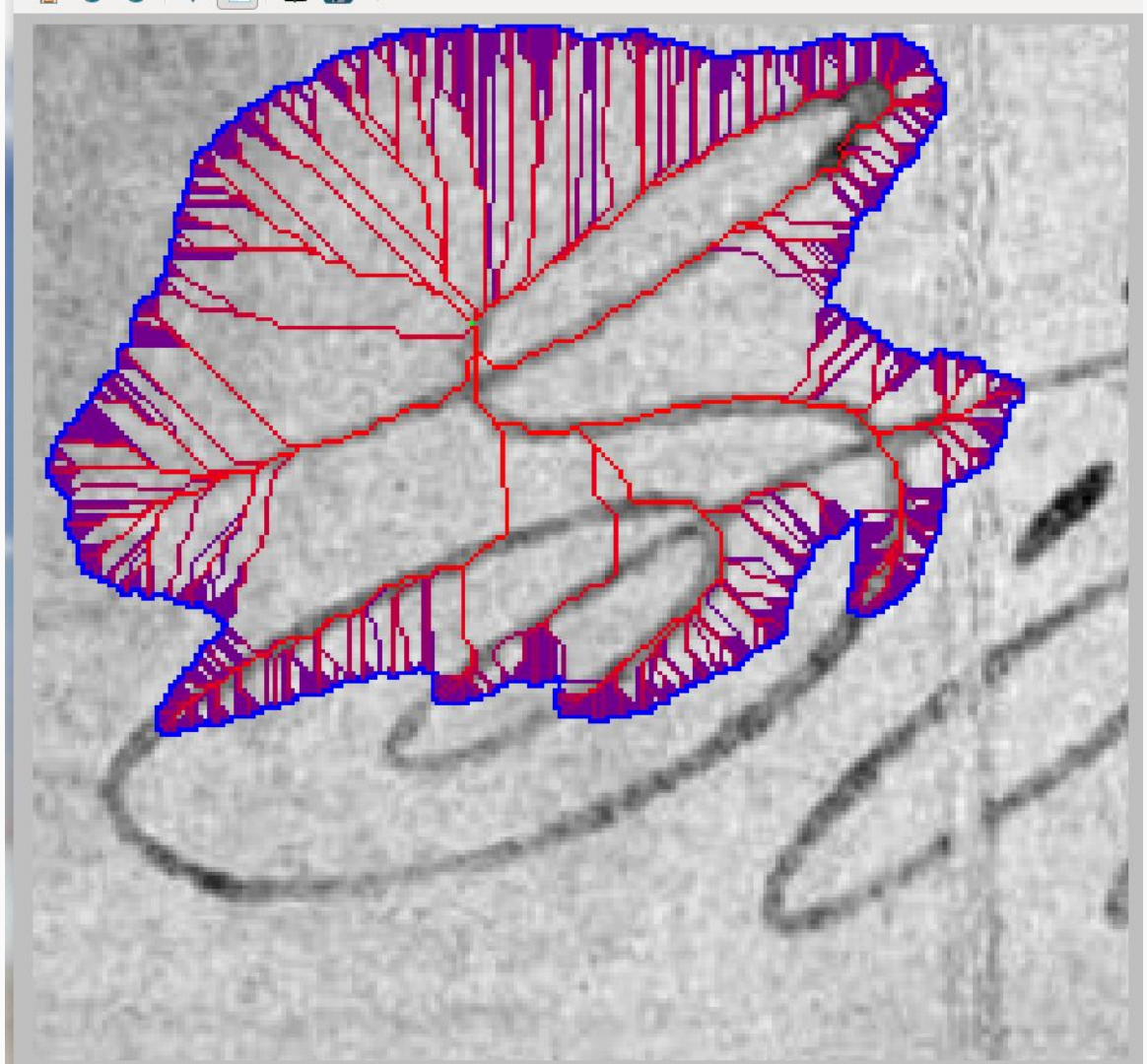
- Least-cost search of an image to find an edge
- Weighted sum of several gradient features
- Optimal path from seed point to every other point in the image

Intelligent Pen - Kevin Bauer

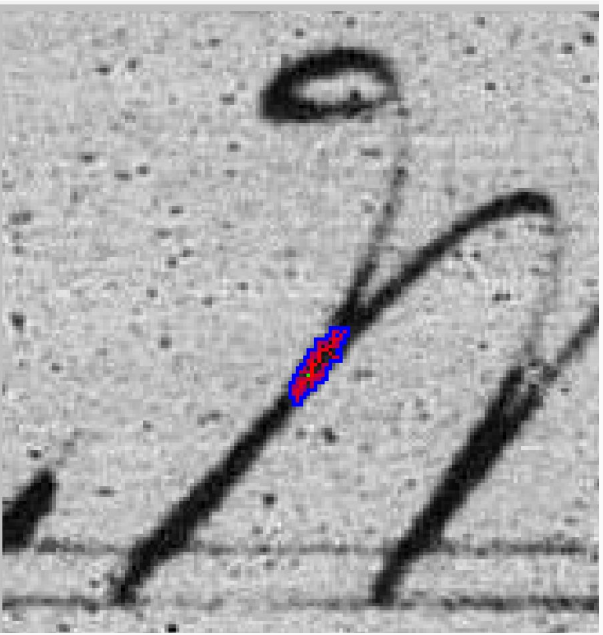
- Like Intelligent Scissors but without user interaction
- Multiple expanding wavefronts
- Creates new seeds on the fly as it builds out

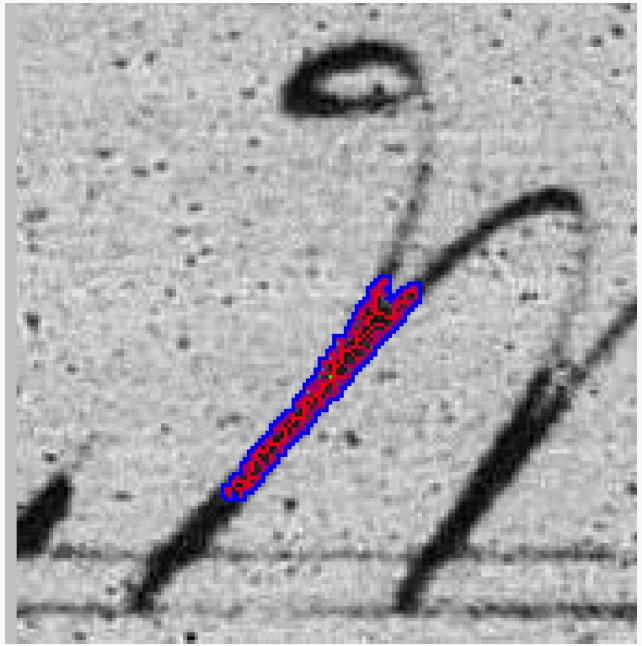


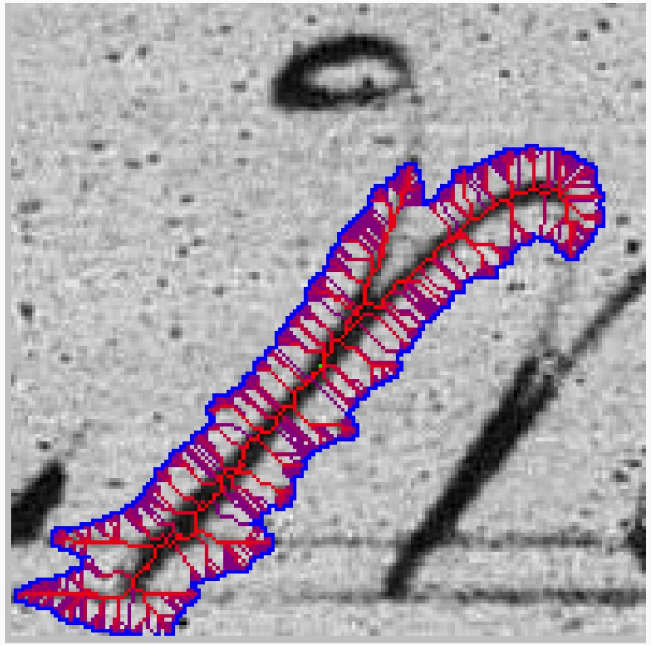


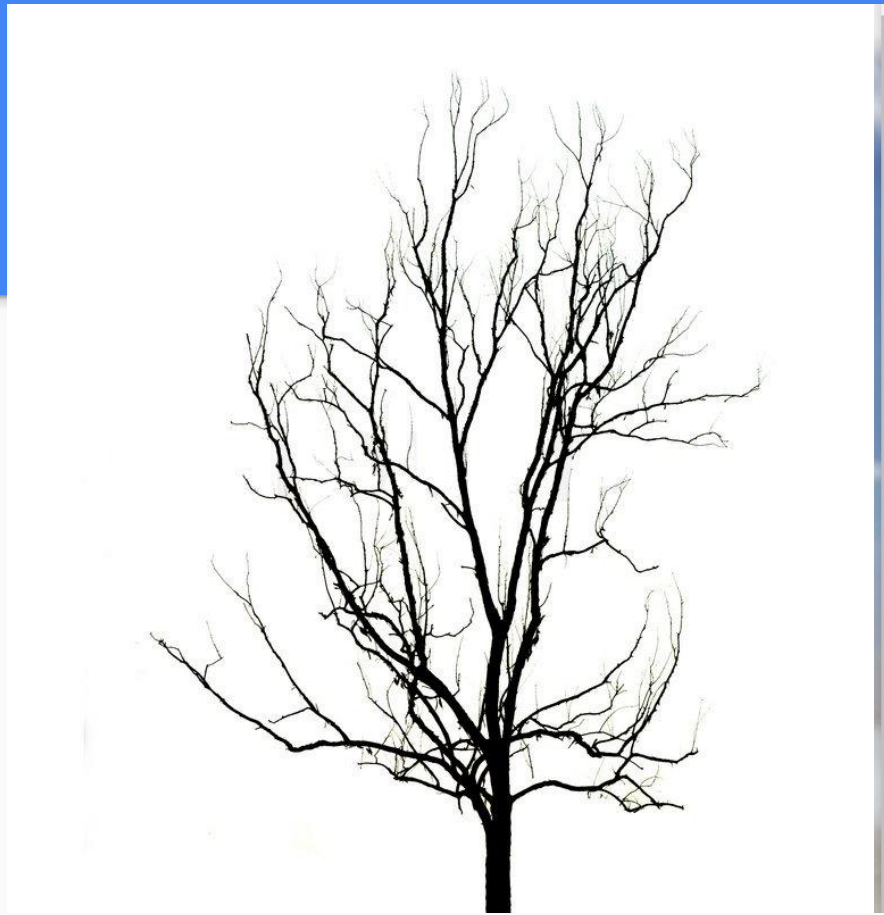


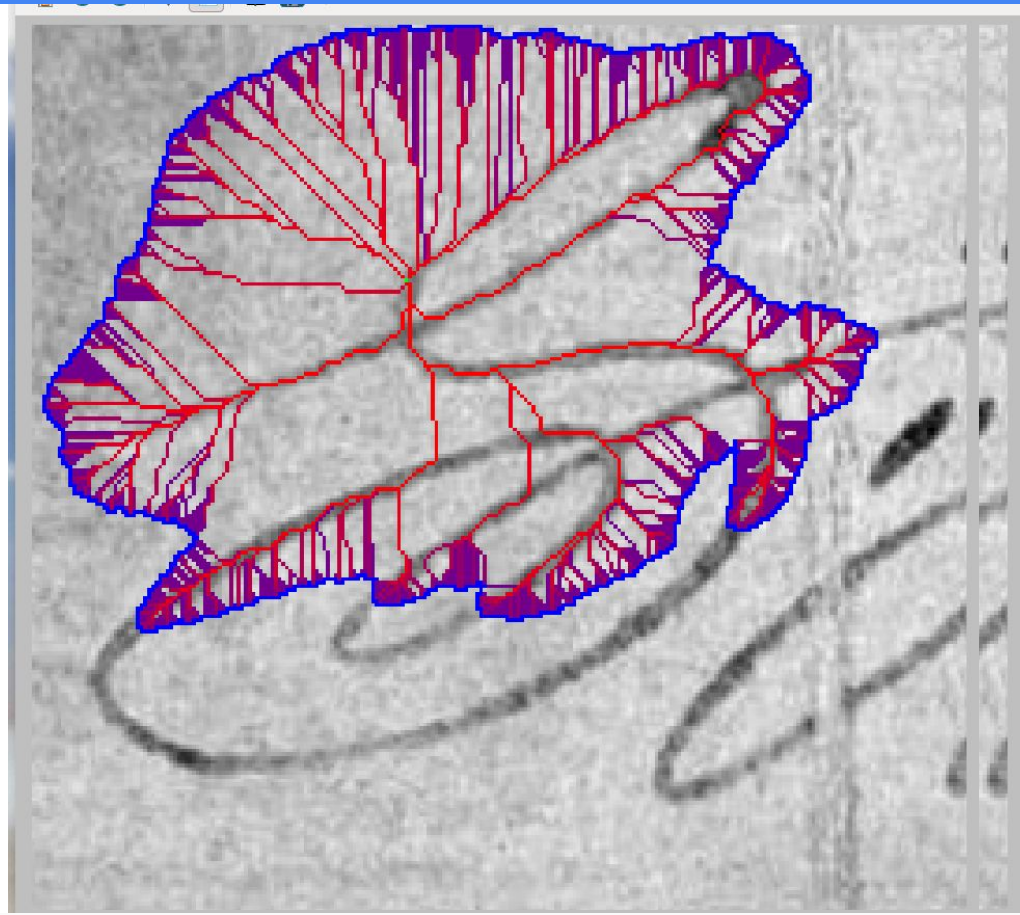
Intelligent Pen

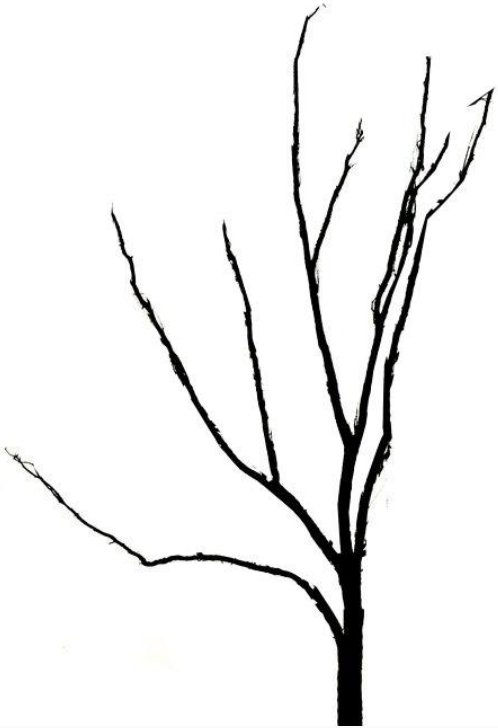






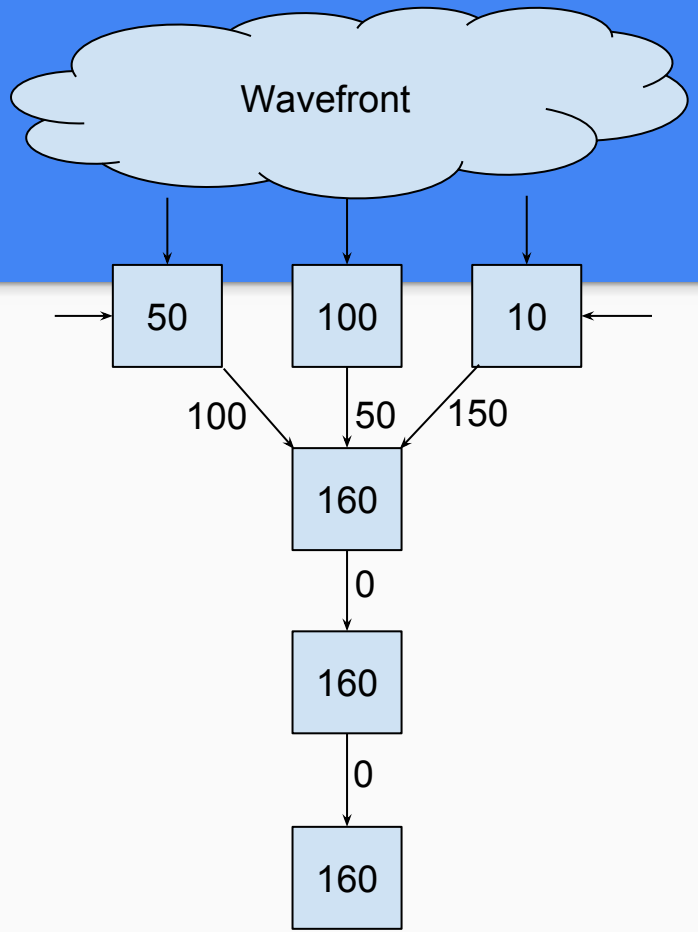


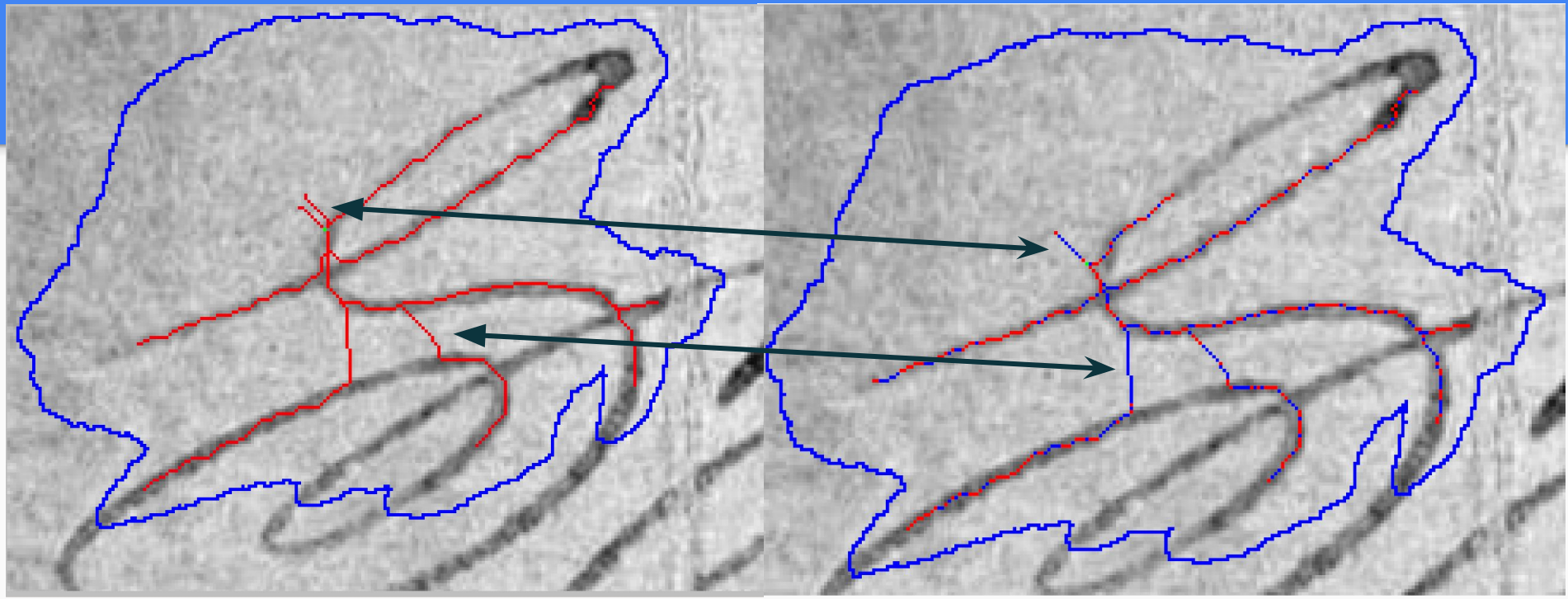


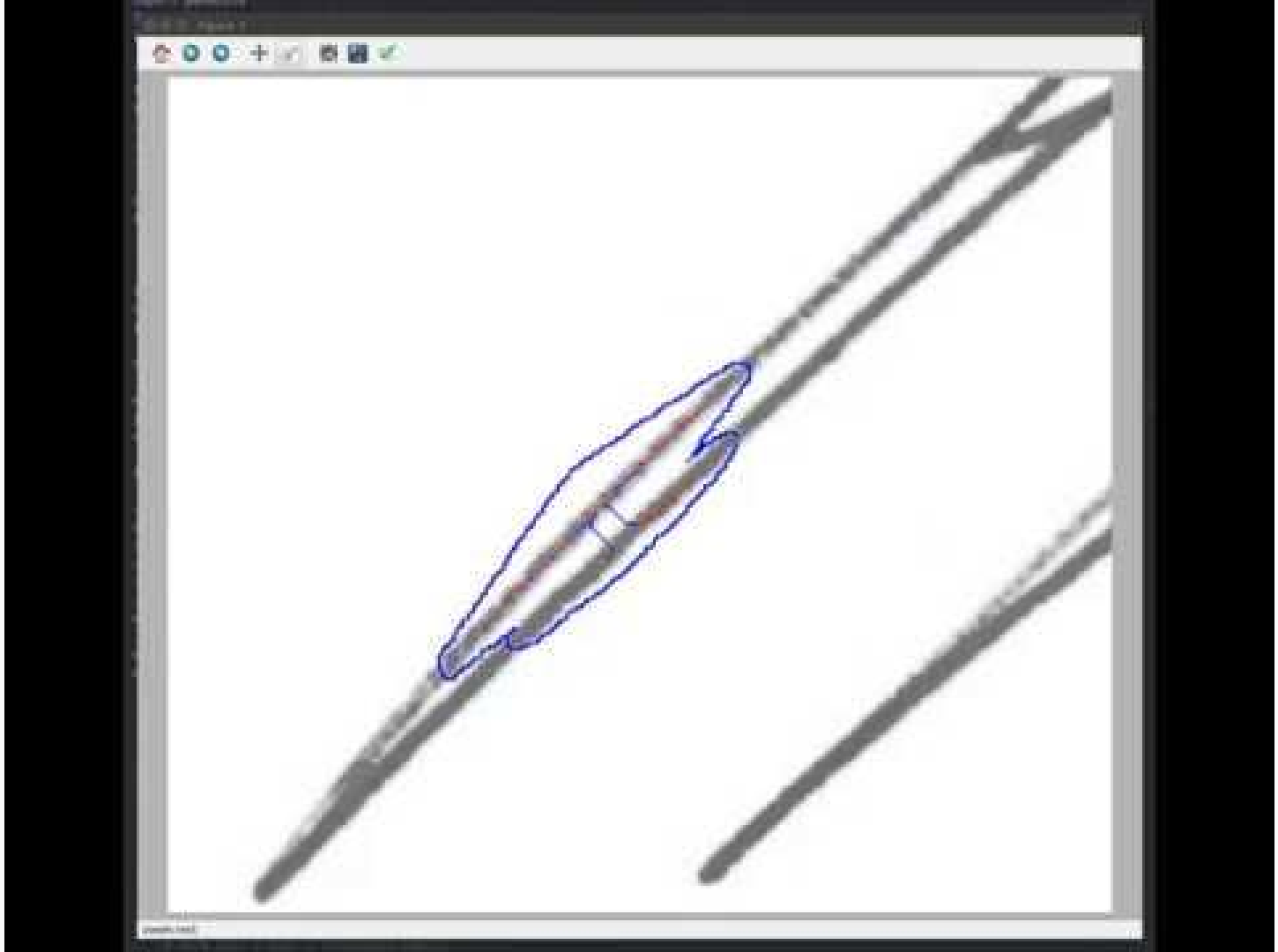


Finite Differences

- Think “edge detection on trees”
- Find the difference between the wavefront counts for two nodes
- Keep track of largest difference
- Threshold on differences

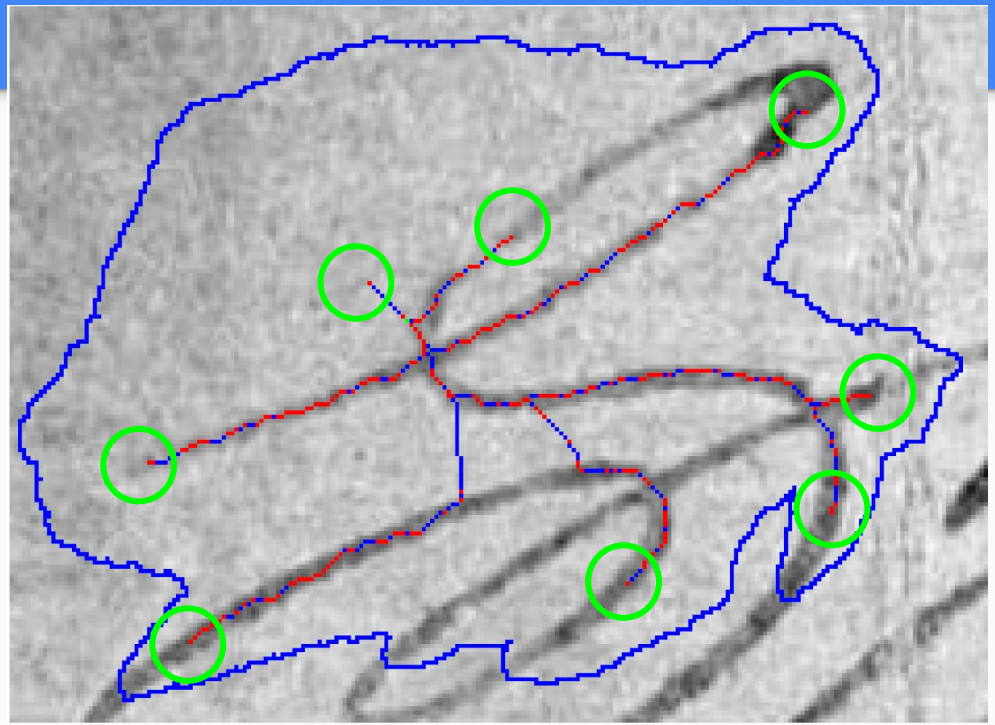


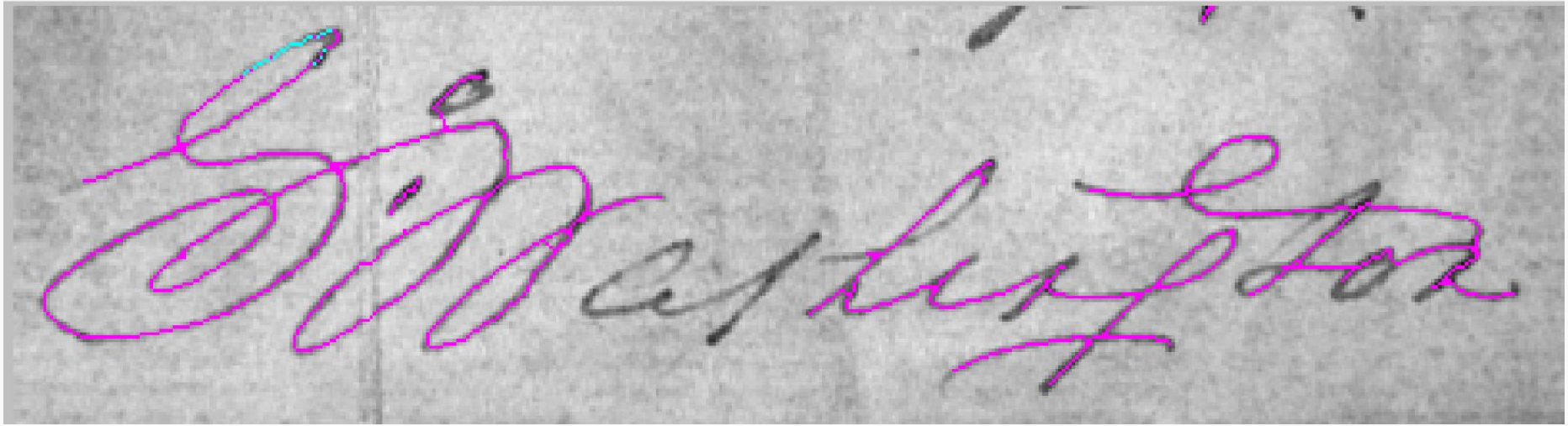


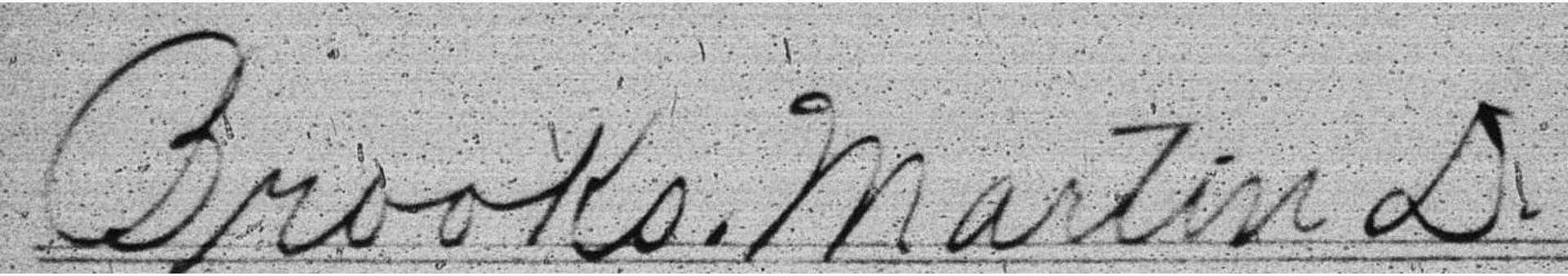


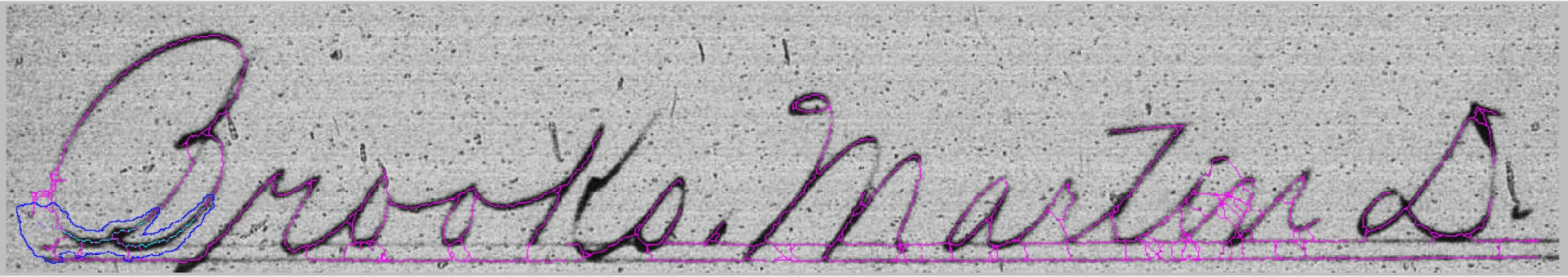
Path Cooling / New Seed

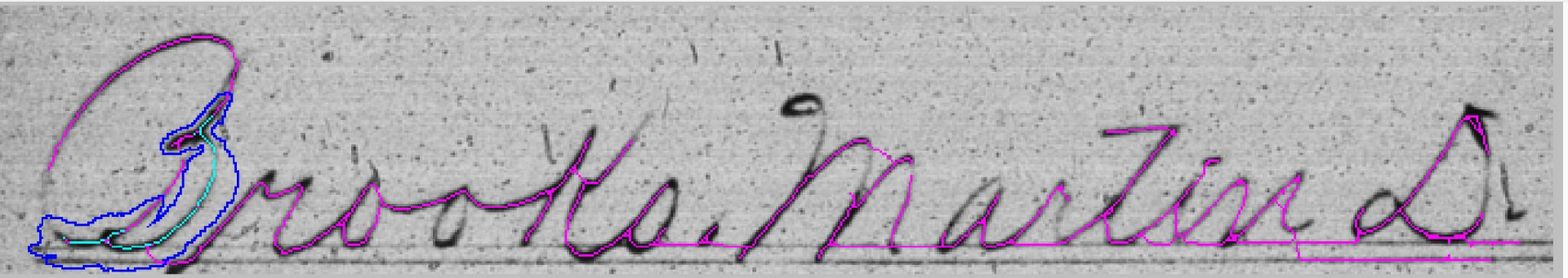
- Large wavefront are slow and error prone
- Instead, smaller wavefront
- Create new seeds at end points



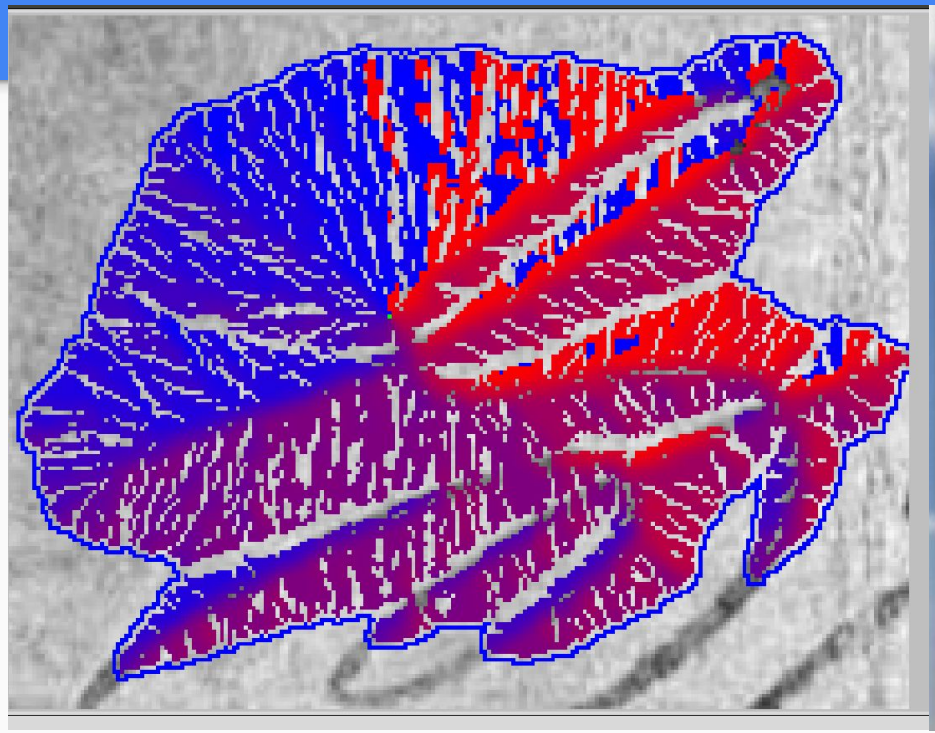


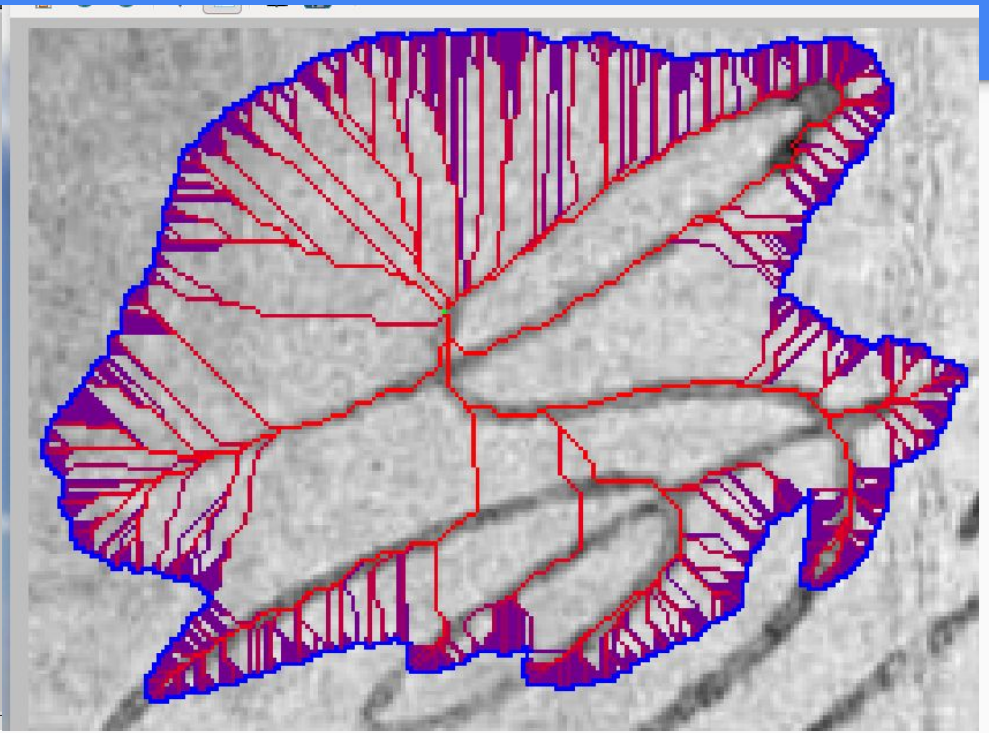

Brooks. Martin D.

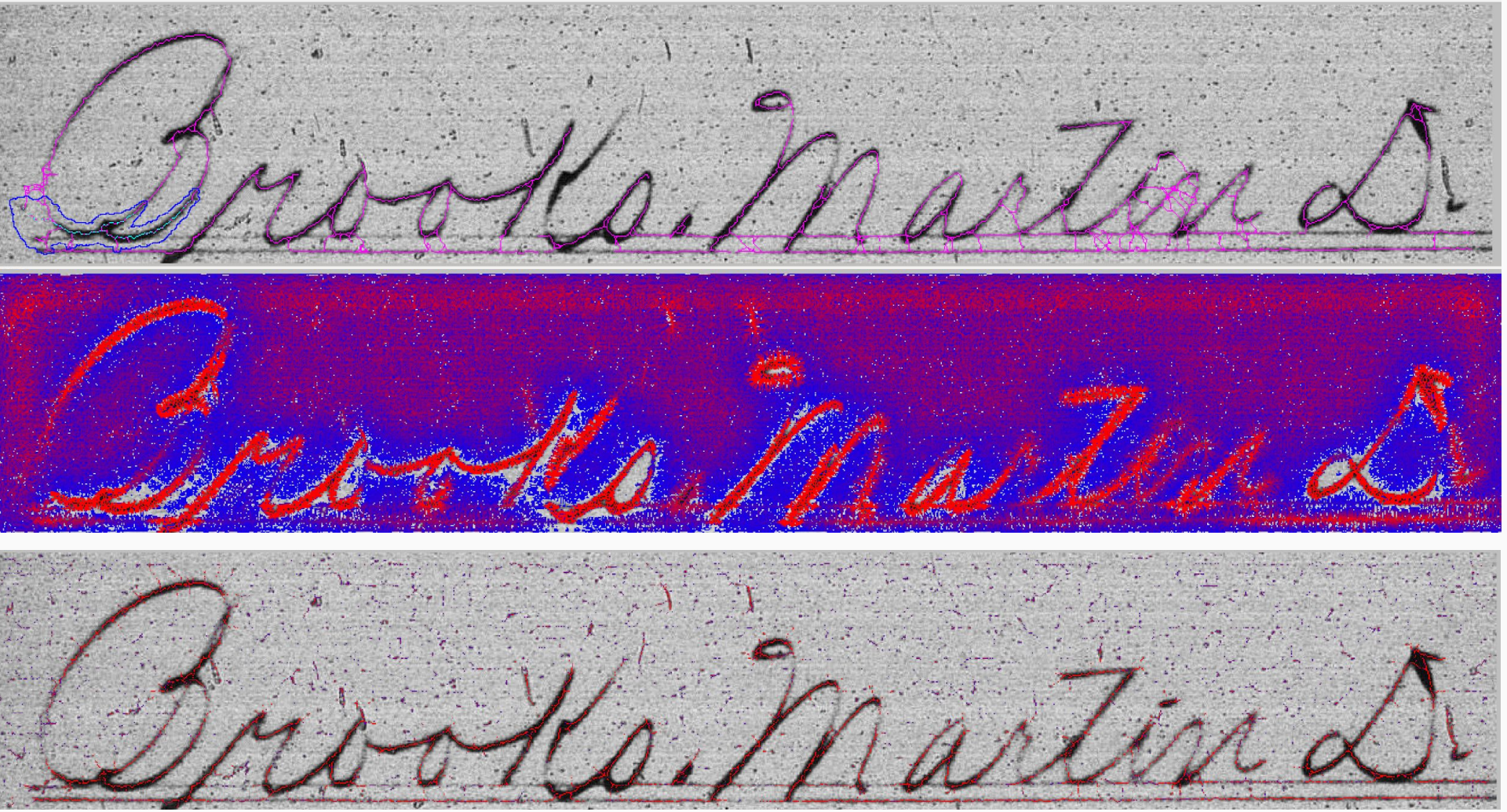

Brooks. Martin D.


Brooks. Martin D.

Future Work - Include Direction







Thank You