Introduction to Quantitative Systems for Forensic Handwriting Comparisons

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Why Quantitation?

- *Daubert* challenges to validity of forensic handwriting comparisons
  - Objective measurements and statistical analysis are used to support the scientific basis of forensic handwriting identifications.
  - Addresses NRC 2009 recommendations

Why Automation?

- Individual characteristics of a person's handwriting have been used for writer identification for over 150 years.
  - Automated identification, extraction, and statistical analysis of handwriting's features is a (relatively) recent development.
  - Automation is needed to generate large amounts of quantitative data for statistical evaluation of the individuality of handwriting.

- Automated system(s) for FDEs similar to AFIS for LPEs
  - New capability will permit cross-case comparisons of handwriting, possibly identifying linked cases and serial crimes

Operational Impact

- Increased throughput/ backlog reduction
  - Sort and process large numbers of handwritten pages
  - Search through large databases of reference writers, identifying the most probable potential writers for manual examination
  - Identify multiple writers in a collection of documents
- Connect seemingly unrelated cases
  - Improving solvability
- Statistical support for continued court acceptance of handwriting comparisons

Automated Systems

- FISH
- Wanda
- FLASH ID
- CEDARFox and iFox
- D-Scribe
- SIFT
- Others?

Questions?

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