



## OSAC RESEARCH NEEDS ASSESSMENT FORM

**Title of research need:**

**Keyword(s):**

**Submitting subcommittee(s):**  **Date Approved:**

*(If SAC review identifies additional subcommittees, add them to the box above.)*

### Background Information:

#### 1. Description of research need:

Forensic Document Examiners, FDEs, conduct handwriting comparisons, whether glyphs that comprise the writing are classified as cursive, printed, or mixed, or complex, or simplistic. Prior research has begun to subdivide writing groups, and further research into complexity, comparability, and FDE expertise is needed. Additional basic and applied research would further the body of knowledge about handwriting, handwriting comparisons, and the differentiation between FDE and layperson capabilities to conduct comparisons.

#### 2. Key bibliographic references relating to this research need:

1. Bird, C, Found, B., and Rogers, D., Forensic handwriting examiners' skill in distinguishing between natural and disguised handwriting behaviours. *Journal of Forensic Sciences*, 2010. 55: p. 1291-1295.
2. Boot, David, An Investigation into the Degree of Similarity in the Handwriting of Identical and Fraternal Twins in New Zealand, *Journal of the American Society of Questioned Document Examiners*, Vol. 1, No. 2, 1998
3. Johnson, Mark E., Vastrick, Thomas W., Boulanger, Michele, Schuetzner, Ellen, Measuring The Frequency Occurrence of Handwriting and Hand-Printing Characteristics, Final Report - NIJ Award 2010-DN-BX-K273
4. Kam, M., Wetstein, J., and Conn, R., (1994) Proficiency of Professional Document Examiners in Writer Identification, *Journal of Forensic Sciences*, Vol. 39, No. 1, pp. 5-14.
5. Kam, M., Fielding, G., and Conn, R., (1997) Writer Identification by Professional Document Examiners, *Journal of Forensic Sciences*, Vol. 42, No. 5, pp. 778-786.
6. Kam, M., Fielding, G., and Conn, R., (1998) Effects of Monetary Incentives on Performance of Nonprofessionals in Document-Examination Proficiency Tests, *Journal of Forensic Sciences*, Vol. 43, No. 5, pp. 1000-1004.
7. Kam, M., and Lin, E., (2003) Writer Identification Using Hand-Printed and Non-Hand-Printed Questioned Documents, *Journal of Forensic Sciences*, Vol. 48, No. 6, pp. 1391-1395.
8. Livingston, Orville B., A Handwriting and Pen-Printing Classification System For Identifying Law

Violators, *Journal of Criminal Law, Criminology and Police Science*, Vol. 49, p. 487.

9. Wooton, Elaine X., *A Preliminary Discussion of Research and Reference Materials Using the U.S. INS Collection of Handwriting from Other Countries*, paper presented at the annual meeting of the ASQDE, Long Beach, CA 1994.

3a. In what ways would the research results improve current laboratory capabilities?

Results would assist examiners in: understanding the intricacies of what they do in the “eye – brain” visual comparison process, explaining the training process to trainees, testifying in court, testifying in Daubert style challenges.

3b. In what ways would the research results improve understanding of the scientific basis for the subcommittee(s)?

Basic research would provide a means of articulating the complexity of attempting to classify each person’s writing with simplistic terms. Basic research could also potentially describe, in a gestalt view, some of the sub-processes that the human observer uses in the process of side by side comparisons. By way of application to FDE, applied research could further articulate the sub-processes involved in a side-by-side handwriting comparison.

3c. In what ways would the research results improve services to the criminal justice system?

Applied research could potentially serve as verification that printed writing is as identifiable as cursive writing. Any research that can further validate forensic examinations will be a positive to the criminal justice system.

4. Status assessment (I, II, III, or IV):

IV

	Major gap in current knowledge	Minor gap in current knowledge
No or limited current research is being conducted	I	III
Existing current research is being conducted	II	IV

*This research need has been identified by one or more subcommittees of OSAC and is being provided as an informational resource to the community.*

**Approvals:**

Approval date:

*(Approval is by majority vote of subcommittee. Once approved, forward to SAC.)*

SAC

1. Does the SAC agree with the research need?

Yes

No

2. Does the SAC agree with the status assessment?

Yes

No

If no, what is the status assessment of the SAC:

Approval date:

17-Mar-2016

*(Approval is by majority vote of SAC. Once approved, forward to NIST for posting.)*