Title of research need: Reliability in Forensic Document Examination

Keyword(s): Accuracy, Reliability, Error Rates, Admissibility

Submitting subcommittee(s): Forensic Document Examination Date Approved: 

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

Background Information:

1. Description of research need:

Research testing the Accuracy and Reliability of Document Examiners. Most importantly the examination of handwriting, hand printing, signatures, and initials.

2. Key bibliographic references relating to this research need:

<table>
<thead>
<tr>
<th>Validity, Reliability, Accuracy, and Bias in Forensic Signature Identification Mara L. Merlino and Tierra M. Freeman, Veronica Blas Dahir and Victoria Springer, Derek Hammond, Adrian Dyer, Bryan Found. Kentucky State University, Frankfort, Kentucky. NIJ Grant No. 2010-DN-BX-K271.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gantz, D. Saunders, C. P. (2015), Quantifying the Effects of Database Size and Sample Quality on Measures</td>
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</tbody>
</table>


Hammond, D., "Forensic document examiners' expertise in the examination of text-based signatures', presented at the 2009 Annual Meeting of the American Academy of Forensic Sciences in Denver, CO.

Hammond, D., "Forensic document examiners' expertise in the examination of mixed style signatures', presented at the 2010 Annual Meeting of the Southeastern Association of Forensic Document Examiners in Atlanta, GA.


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

| Testing of this sort can help those document examiners who may be weak in specific areas strengthen their abilities. When an examiners abilities are tested and proven it makes for a more competent examiner. This increased competence in examiners will strengthen the field as a whole. |

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

| Results from empirical studies will need to be reflected in the standards created for the applicable forensic field. They should strengthen the foundations of the field and show areas in which examiners are reliable and areas where more research and training needs to be conducted. |

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

Any research that can further validate forensic examinations will be a positive to the criminal justice system. The judges, in their gatekeeping role, would have a more informed view of the strengths and weaknesses of Forensic Document Examination methods, techniques, and training.


<table>
<thead>
<tr>
<th>Major gap in current knowledge</th>
<th>Minor gap in current knowledge</th>
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<tbody>
<tr>
<td>No or limited current research is being conducted</td>
<td>I</td>
</tr>
<tr>
<td>Existing current research is being conducted</td>
<td>II</td>
</tr>
</tbody>
</table>

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:

Subcommittee Approval date: [Date]

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

SAC

1. Does the SAC agree with the research need? Yes [x] No

2. Does the SAC agree with the status assessment? Yes [x] No

   If no, what is the status assessment of the SAC: [Assessment]

   Approval date: 17-Mar-2016

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

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