



## Questioned Documents Section – 2003

### J12 Harbor Pilots, Handwriting Examinations, and the Scientific Method

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The educational objective of this presentation is to suggest methods and applications that may increase the scientific presentation of hand-writing evidence and provide possible solutions to issues of validation and statistical uncertainty. To present a method for creating electronic work notes for handwriting examinations.

Several events over the past 13 years, including the Risinger et al. article [1], Starzepyzel trial [2] and the MacVeigh bombing trial [3], have raised questions about the scientific validity of the century-and-a-half-year old forensic discipline of handwriting examination.

For any subject to attain the coveted status of science three conditions must be met, reproducibility, reproducibility, and reproducibility [4]. The often used axiom, "... examiners of questioned handwriting are trained professionals who are confident that their conclusion in a given case is the same as the conclusion that would be given by any other similarly trained professional examiner..." implies that handwriting examination conclusions are reproducible and therefore scientific. Consequently different examiners with the same training should make the same observations and arrive at the same conclusions when looking at the same handwriting evidence. The numerous occurrences of opposing handwriting experts in court would suggest otherwise. What are the reasons for similarly trained experts arriving at different conclusions? Do they apply the same standard handwriting examination procedures when looking at the same evidence? Are the standard hand-writing examination procedures so often described in the literature [5,6,7,8,9] and referred to in handwriting training programs scientifically valid?

This presentation will describe a method to generate electronic handwriting work notes with embedded images of observations, thereby verifying the application of standard handwriting tests when assessing and comparing handwriting evidence. The scientific validity of these standard tests will be discussed together with reference to software programs (i.e., Limbic Systems) that may help to capture hard-to-illustrate observations (i.e., pen lifts and intersecting strokes).

The inclusion of images of observations for every handwriting tests applied to the evidence is synonymous with recording keeping methods used in conventional scientific investigations. Using this approach the handwriting report and accompanying work notes are presented in a more scientific framework. The results of all tests applied to the evidence are described with supporting images. This confirms that the appropriate test was administered as well as showing the results upon which the conclusion is based. This approach to recording handwriting examinations may help to reduce the occurrence of opposing handwriting conclusions in the courtroom and establish that standard handwriting tests results are reproducible. The scientific validity of handwriting examinations and the statistical uncertainty associated with handwriting examination conclusions will be discussed with reference to handwriting search data bases such as the Forensic Identification System for Handwriting (FISH) developed by the Bundeskriminalamt [10].

[1]. Risinger, D.M., M.P. Denbeaux, and M.J. Saks, University of Pennsylvania Law Review, Vol. 137, 1989, pp. 731-792.

[2]. United States v. Starzepyzel, 880 Fed. Sup. 1027, April 4, 1995.

[3]. United States v. MacVeigh, Criminal Action No. 96-CR-68.

[4]. Krull, Ira S., American Laboratory, Vol. 32, No. 22, November 2000.

[5]. Osborn, A.S., Questioned Documents, Sec. Ed., Patterson Smith Pub., 1973. Reprint of 1929 ed.

[6]. Harrison, W.R., Suspect Documents, Their Scientific Examination, Sweet & Maxwell Ltd., 1958.

[7]. Conway, J.V.P., Evidential Documents, Charles Thomas Pub., 1959.

[8]. Hilton, O., Scientific Examination of Questioned Documents, Elsevier North Holland, 1982.

[9]. Huber, R.A. and Headrick, A.M., Handwriting Identification: Facts and Fundamentals, CRC Press, 1999.

[10]. Hecker, M. and H.W. Eisermann, Forensic Identification of Handwriting (FISH), presented at the 44th Annual Meeting of the American Society of Questioned Document Examiners, 1986, Savannah, GA.

#### Handwriting, Validation, Scientific Method