

## J27 "I am 99% Certain That Mr X Wrote This Document!" – An Introduction to Handling Uncertainty in Conclusions

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After attending this presentation, attendees will have a better understanding of the meaning, implications and requirements of the "probabilistic language" used in the ASTM standard E1658 on Standard Terminology for Expressing Conclusion of Forensic Document Examiners. This presentation is aimed to address these challenges and

provide the audience with some background knowledge and examples to be able to answer questions relative to error and uncertainty in their field.

This presentation will impact the forensic science community by increasing the level of understanding and readiness when addressing error and probabilistic questions from customers.

ASTM Standard E1658-2009 proposes a specific terminology for expressing conclusions of forensic examinations performed on questioned documents. The range of conclusions proposed in this standard certainly appeals to common sense. In addition, it is likely to be easily understood by the various actors of the criminal justice system and other customers of questioned document examiners.

Nevertheless, the proposed terminology has a specific meaning, and particular requirements and implications. These need to be fully understood in order to correctly handle and report the uncertainty underlying all forensic examinations (not to mention, defending it in Court...).

Indeed, are less-than-certain conclusions opening the door for questions on "errors?" And if so, what kind of "errors?" How should questioned document examiners express probability in the absence of reliable or validated statistics in their field? And in fact, what are these statistics really measuring, and how are they related to E1658?

This presentation will review the exact sense, the requirements and the implications underlying the terminology proposed in the ASTM standard E1658. Through the use of examples, the assignment and meaning of probabilities in conclusion statements will be investigated. And finally, how to address questions on errors and contextual bias will be presented.

## Uncertainty, Probability, Conclusion