E6 Challenging Fingerprint Evidence — Legally and Scientifically: Is the Baby Being Thrown Out With the Bathwater?

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After attending this presentation, attendees will understand the scientific basis for challenging fingerprint evidence and be aware of the current status of legal challenges at trial stage. Attendees will be able to integrate the scientific method with the *Daubert* approach.

This presentation will impact the forensic science community by providing participants with a deeper understanding of the basis of the scientific method adhered to by all scientific witnesses and most expert witnesses, and echoed in standards for admissibility, including *Daubert*. Attendees should be able to integrate scientific knowledge with their legal or expert practices. Attendees will be in a position to critically evaluate this evidence and be aware of, mount, or guard against challenges, dependent on the nature of their brief. They will also be in a position to have a justifiable view on the question of whether there is any place for fingerprint evidence in a court and if so what that place is.

An international perspective on this vexed issue will be presented. The legal challenges will be explored with reference to the ACE-V
methodology (Analysis, Comparison, Evaluation, and Verification) and the Frye-Reed test (Maryland)).

In particular, questions of: (1) subjectivity (observer bias), (2) lack of objective criteria, (3) error rate, and (4) lack of independent review will be explored.

How these challenges are responded to and the variety of trial judges' decisions will be discussed, as well as the suggestions that problems with ACE-V method do not go to admissibility but are appropriate for cross-examination and go to the weight to be given to evidence.

This session also presents the scientific basis for challenges to fingerprint evidence. The claim by fingerprint examiners that fingerprint examination using ACE-V is critically examined:

- bases individualizations upon sound scientific principles
- gives conclusions are objective; based on faithful execution of this methodology, not mere observations or intuition
- assures validity and reliability of the conclusions.
- assures consistency & repetition of the methodology and
- embraces ***all the factors required by sound scientific practices.***

The justifications for the claim that no two fingerprints are the same is examined, and compare and contrast each step of the ACE-V method with the accepted scientific method approach. The psychological basis for the existence of observer bias and the impossibility of removing this from fingerprint comparisons carried out as they are and have been will be discussed and demonstrated to participants. The change in some jurisdictions to a global comparison of prints, as opposed to a points approach will be considered and evaluated. Does this assist in *Daubert*- proofing the comparison?

A sample cross-examination based on the scientific method will be used as illustration, and case illustrations will be provided, both from the United States and internationally.

The challenges currently facing fingerprint analysis are expected to be launched in other areas of evidence based on comparative analysis and therefore the discussion is helpful for a variety of disciplines.

This presentation is suitable for defense and prosecution attorneys, comparisons experts, and forensic educators.

Fingerprints, *Daubert*, Science

 ** Presenting Author*