FINGERPRINT DATABASES

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Requested Questions

What role do fingerprint examiners have in determining which fingerprints are searched in these databases? If an item of evidence has not been tested, can defense attorneys have it tested and any prints entered in these databases? Can error be associated with database matches?
Role fingerprint examiners have in determining which fingerprints are searched in these databases

Value – Comparison for identification or exclusion?

- Is the print of value?

The applying the appropriate methodology, ACE-V

- Analysis
- Comparison
- Evaluation
- Verification

Decision will typically be either Identification, Exclusion, or Inconclusive
Value?
Value?
Value?
Value?
State v. Hoff, 736 S.E.2d 204 (2012)
Unknown Finger  
Hoff #8 Finger  
Person County Sheriff's Office OCA #1001433
Unknown Finger
Person County Sheriff's Office OCA #1001433

Hoff #8 Finger
Unknown Finger
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Unknown Finger

Hoff #8 Finger

Person County Sheriff's Office OCA #1001433
tested, can defense attorneys have it tested and any prints entered in these databases?

The short answer is yes. You can hire an expert to examine the evidence for the presence of prints?

The complex answer is, How helpful will this be?

- Should you take possession of certain piece or evidence or make arrangements for the to be turned over?
- For normal items with limited evidentiary value, Should I have it processed or should I turn it over for law enforcement?
- Should I have my own expert review law enforcement findings after examinations?

How do I have prints run in the Database?
- Probably, you we have to request this through discovery or law enforcement request.
Error

There is a small amount of error.

[W]hen decisions were verified by an independent reviewer, examiners had a 0% false positive, or incorrect identification, rate and a 3% false negative, or missed identification, rate. (*Miami-Dade Research Study for the Reliability of the ACE-V Process: Accuracy & Precision in Latent Fingerprint Examinations. Office of Justice Programs*)

There is error, but it is so small so as to be discriminated.

- The odds of error mainly lie in inexperienced examiners or lack of ACE-V protocol (appropriate methodology).
Random Odds of Finding Two Prints That Match

The probability of two random minutiae matching when using 20 minutiae was 0.0000000000000000000000000000000368

- (Marrow, (2004) Fe-Fi-Fo-Thumb, University of Washington)
Types of Databases

Local
- Single or joint department maintained
- Various proprietary devices – NIST compliant

State – SAFIS
- CJIS point of contact

Federal – NGI / IAFIS
- Universal Latent Workstation
Universal Latent Workstation
Entering Latent Evidence
Minutia
Examining a potential AFIS hit
Questions?