

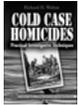
Considerations for Improving Latent Print Processing

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NIST Latent Fingerprint Testing Workshop
March 19, 2009

Credentials

- Over 20 Years AFIS Experience
- Chair, AFIS Committee, International Assoc. for Identification
- AFIS Lecturer and Consultant
- Author, *Automated Fingerprint Identification Systems (AFIS)*

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What Do I mean by Processing?

- Collect Latent Print
- Is it “of Value”
- Distill out the best image possible
- Identify features
- Search AFIS
- Look at candidates
- Do *Something*

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Single Thread Practices

- Single Thread (One examiner)
 - Collect Latent Print
 - Is it “of Value”
 - Distill out the best image possible
 - Identify features
 - Search AFIS
 - Look at candidates
 - Does *Something*

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Parallel Practices

- Parallel Threads (Many workers)
 - Tech Collects Latent Print
 - Examiner determines “of Value”
 - Examiner distills out the best image possible
 - Examiner identifies features
 - Examiner searches AFIS
 - LPE Looks at candidates
 - LPE Does *Something*

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The *Something*

- Make an Ident
- Re-search latent
 - change parameters
 - features
- Search Unsolved File
- Send to Unsolved File
- Put back into drawer

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Who Uses These Models

- Local Agencies
- State Agencies
- Federal Agencies
 - FBI
 - DHS
 - DoD
 - Other agencies
- Contractors

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Past Processing

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New Processing

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Like a (neuro) Surgeon...

- We expect a LPE to..
 - Prep the latent
 - Know and use photoshop
 - Know the AFIS system
 - Determine an Ident
 - Testify
- Would we expect a neurosurgeon to...
 - Schedule the patients?
 - Prep the operating room?
 - Conduct the surgery?
 - Clean up?
 - Bill the patient?

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Just the Facts

- Erosion of AFIS Experienced Personnel
- Expanded Use of AFIS systems
- Systems just get better
- Greater Scrutiny
 - Legal Profession
 - NAS Report
 - SABER Report

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Technical Improvements

- Fast Capture Devices
- Extended Fingerprint Feature Set
- Semi-automated LP Applications
- FBI CJIS will offer multi-modal features
- NIST Standards

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We Don't Know What We Don't Know

- No uniformity in data collection / terminology
- Do not follow a business model
- Many more Idents could be made
- AFIS not fully understood by users
- "We will give them what they ask for!"

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A Business Model

- What is the optimum LT/TP searches?
- Is the UL file really useful?
- What about LT/LT searches?
- When to search other systems?
- Why are some examiners better?
- How do I acquire, train and retain LPE?

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Business Success

- When you are doing something you are not doing something else!
- Emphasis those activities that will produce more identifications
- Idents processing uses rules of probability

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Some Say Why, Some Why not

- Continue searching until a score is achieved?
- Search old cases on nights and weekends
- Integrate access to other systems via ULW
- Establish a partnership with other agencies

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A Question

If I add a palm prints to my database, and increase the search database by 50%, will I make 50% more identifications if all else remains the same?

- If Yes, why?
- If No, why not?

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Recommendations

- More research in AFIS latent print processing
- Create national training and certification
- Develop a business model
- Make interoperability easier
- Move the political will to make it happen

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People & Technology

- Begins with good Investigative Work
- AFIS is only a Tool
- Latent Examiners make Idents, not AFIS
- Process Begins & Ends with People

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The Name of the Game is...

Idents
Idents
Idents

Richard Higgins
Chief of Identification Services (Ret.)
NYS Division of Criminal Justice Services

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Quis es tu?

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Thank You !

Questions?

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