Latent Print Section

Operation of the Automated Fingerprint Identification System

1.   Scope
1.1   The Automated Fingerprint Identification System (AFIS) is a tool available to the latent print section to search the Tri-State (Maine-Vermont-New Hampshire) or the Maine only fingerprint and palm print reference database. Known finger and palm prints residing in the database can be retrieved for comparison.

1.2   Single fingerprints, clusters of fingerprints, and palm prints can be searched through the database.

1.3   AFIS is linked to the FBI's NGI (Next Generation Identification) database which allows for the search of fingerprints and palm prints through the Federal finger and palm print reference database. Known finger and palm prints residing in the database can be retrieved for comparison.

2.   Quality Assurance
2.1   AFIS is a database that is made of reference samples. The best impressions to search through the database have at least the core or delta visible.

2.2   Follow the manufacturer's recommendation for workstation operation.

2.3   Operators will be fully qualified latent examiners and it is also recommended that the operator has completed the AFIS training requirements.

2.4   A searched latent print that does not match a known on the candidate list does not mean the known is not in the database. There are several reasons a correlation is not made, such as the quality of the latent, quality of the tenprint card and search parameters entered. Latent examiners enter the prints using the best possible parameters to achieve a quality candidate list. The parameters chosen are left to the discretion of the examiner performing the search.

2.5   A test print will be searched through the system at least semi-annually to ensure the system is operating properly. The searched test print must return its mated candidate in the top position of the match list. If this does not occur, then further testing may be required to determine the source of the error.

3.   Maintenance
3.1   The AFIS station is maintained by the manufacturer.

3.2   The latent print examiners can delete latent prints from the ULF (Unsolved Latent File) as cases pass the statute of limitations.

3.3   A log of maintenance issues will be kept at the AFIS station or in Paradigm. Each time a problem occurs on AFIS the latent print examiner will notify the AFIS help desk and open a ticket.

3.4   A ticket number or work order number will be issued by the help desk. The ticket number will be recorded along with the problem in the maintenance log.

4.   Safety

4.1   The AFIS Workstation shall be operated only while connected to a UPS (Uninterruptable Power Supply) to avoid any damage because of power loss or power surge.

4.2   Every effort will be taken to protect the workstation from extreme heat or water damage.

4.3   Each operator may adjust the workstation using any of the workstation adjustment features, as they deem necessary to achieve optimum operator comfort.

5.   Procedure

5.1   Operation of the AFIS workstation will comply with all standard operating procedures set forth by the manufacturer.

5.2   All information about the functions and operation of the workstation needed by the latent print examiner are clearly and concisely outlined in the manuals.

   5.2.1   Forward Searches

      5.2.1.1 A forward search is any search of an unknown friction ridge skin impression against reference tenprint or palm print samples in the Tri-State or FBI database.

      5.2.1.2 A forward search is performed using AFIS and/or NGI. All cases are different. The search parameters are at the examiner's discretion and are automatically recorded in the database as part of the case documentation.

      5.2.1.3 It is the examiner's discretion as to how many times the latent is searched and how many candidates to be returned in the search que. The examiner should consider multiple searches if warranted. The examiner can re-enter latent prints periodically if desired.

      5.2.1.4 If a latent print search does not provide a person of interest in the Tri-State database the print can be searched in the NGI database as well.

5.2.1.5 Unless the examiner is certain of the anatomical location and pattern of the unknown impression being searched, it is best practice to search as an unknown digit and pattern type, and search using a 360-degree rotation (unknown orientation). Search parameters are at the examiner's discretion.

5.2.2 Saving Finger and Palm Prints to the Unsolved Latent File

5.2.2.1 Finger and palm prints not identified during a search of the AFIS and NGI databases can be saved to the Unsolved Latent File (ULF) if warranted (reasonable expectation that the fingerprint does not belong to the victim). Once the latent print is saved, the print will be continually searched against new known fingerprint and palm print cards being entered into the reference database by the State Bureaus of Identifications for Maine, New Hampshire and Vermont and the Criminal Justice Information Services (CJIS) who maintains the NGI database

5.2.2.2 Each latent impression should only be saved once to avoid duplication in the ULF. Exceptions to this would be if the impression location is unclear and it could possibly be from more than one location (e.g. a fingerprint or a palm print).

5.2.2.3 Consideration should be given to saving only those impressions that correspond with areas of friction ridge detail that are normally present on a fingerprint or palm print card.

      5.2.2.3.1 Examples of latent impressions that are not normally found on a finger or palm print card include extreme edges of fingerprints, finger tips, platform ridges, center of the palm, edges of the palm, and the upper palm areas (interdigital).

5.2.3 Reverse Searches

5.2.3.1 Any new tenprint or palm print exemplar that is added to the database (for example by SBI) is searched against the unknown impressions previously saved to the ULF (Unsolved Latent File). This is referred to as a "Reverse Search."

5.2.3.2 Any search resulting in a "score" at or above a minimum threshold value will appear in the Reverse Verification Queue (RVQ).

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5.2.3.3 The latent print examiners or trained SBI personnel will review the results appearing in the RVQ. The RVQ will be checked on a regular basis for new responses. Responses that are difficult, or personnel at SBI deems a latent examiner should review, will remain in the queue for a latent examiner to review.

5.2.3.4 All potential Reverse Search matches found by SBI personnel will be forwarded to the Latent Print Section for verification. If a Reverse Search results in an identification, the Latent Print Section will open a new General Forensic Latent Print Examination request in LIMS and report the identification to the submitting agency.

5.2.3.5 All three states in the Tri-State system presently add unknown impressions to the database. Efforts should be made to compare responses that have a "relatively high" correlation value regardless of which state entered the latent.

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