

AFIS Project

High Level Plan



AFIS Transactions workflows and
CCH to AFIS messages Definition
Oklahoma State Bureau of Investigation



Project Notes:

The current State AFIS is an Omnitrack series maintained by Safran MorphoTrack. This document will list all of the transactions that are currently supported in the current environment and the additional transactions that are required to be implemented in the new AFIS.

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EXECUTIVE SUMMARY

The Oklahoma State Bureau of Investigation (OSBI) provides the repository of criminal history data for the state. The criminal history data is supported by an Automated Fingerprint based Identification System (AFIS) to provide positive identification of criminals for processing and storing criminal and civilian data on the state’s Computerized Criminal History repository (CCH). Furthermore, the AFIS supports criminal cases by providing latent print search capability to solve crimes against a high quality finger and palm print database. At this time the State is looking to upgrade/replace this current 2nd generation AFIS with a much more robust and more accurate technology to provide the services outlined above.

This document serves as a guide to suppliers and serves as the main reference and requirement that outlines the transactional workflows needed to be supported by the new AFIS that is specified in the RFP. This document is referenced in the RFP and all transactional workflows are outlined in detail if they are currently in use and are listed in a separate section if they are a new requirement. Suppliers who will be participating in the responses to the RFP for the replacement/upgrade of the AFIS shall include in detail all of the workflows listed in this document in their proposal as a minimum. However, suppliers are encouraged to propose these workflows or other workflows in a creative approach if they believe it will enhance the AFIS operations of the OSBI.

The AFIS is specified to be fully integrated to the new CCH system in production, the AFIS to CCH transactional messages are also defined in this document. Suppliers shall incorporate those messages in their proposal and articulate the message processing interface they are proposing to accommodate each requirement.

AFIS TRANSACTIONAL TABLES

The OSBI NIST transaction types are presented in Table 1.0 below. These transactions names are contained in a field of the type-2 NIST data file. They are also used as the type of transaction (TOT) in the 1.04 field of the type-1 record for NIST file submissions to the AFIS data exchange services.

Table 1.0 Transaction Types

TOT	Description	Workflow
CR	Criminal TenPrint Card, can be submitted via US Mail and processed at OSBI HQ.	TenPrint Card
CRN	Criminal TenPrint Card, can be submitted via US Mail and processed at OSBI HQ. However, this transaction is not retained in AFIS.	TenPrint Card (except record is not retained)
CRW	Criminal <u>Wanted</u> TenPrint Card, can be submitted via US Mail and processed at OSBI HQ.	TenPrint Card

TOT	Description	Workflow
CRDA	Criminal TenPrint Card, can be submitted using dissimilar AFIS via NIST standard and processed at OSBI HQ. Once received, it is processed as a CR transaction.	Dissimilar AFIS
CRCS	Criminal TenPrint Card, can be submitted via Internet, or other means, and processed at OSBI HQ	CardScan
CV	Civilian applicant TenPrint Card can be submitted via US Mail and processed at OSBI HQ.	TenPrint Card
CVN	Civilian applicant TenPrint Card can be submitted via US Mail and processed at OSBI HQ. However, this transaction is not retained in AFIS.	TenPrint Card (except record is not retained)
CCW	Civilian applicant TenPrint Card can be submitted via US Mail and processed at OSBI HQ. For obtaining concealed weapon license in Oklahoma.	TenPrint Card
LV	Criminal TenPrint Card, can be submitted via remote LiveScan device and processed at OSBI HQ.	LiveScan
LVJ	Criminal Juvenile TenPrint Card, can be submitted via remote LiveScan device and processed at OSBI HQ.	LiveScan
LVA	Civilian Police applicant TenPrint Card can be submitted via remote LiveScan device and processed at OSBI HQ.	LiveScan
JUV	Criminal Juvenile TenPrint Card, can be submitted via US Mail and processed at OSBI HQ.	TenPrint Card
LP	Local Latent Print transaction processed at HQ.	Latent
LPR	Remote Latent Print transaction processed at HQ and remote Workstation.	Latent
PP	Local Palm Print transaction processed at HQ.	TenPrint Card
PPR	Remote Palm Print transaction processed at HQ and remote LiveScan.	LiveScan
PLP	Local Palm Latent Print processed at HQ.	Latent
PLPR	Remote Palm Latent Print processed at HQ and remote Workstation.	Latent
NLP	NIST based latent print transaction submitted from the ULW	ULW
ULC	Reverse TenPrint transaction processed at HQ.	Reverse Search
ULP	Reverse Palm Print transaction processed at HQ	Reverse Search
IC	Image Conversion transaction used to add image to an existing AFIS record.	Image Conversion
MSA	Mugshot Add transaction used to add Mugshot/SMT data to mugshot database for an existing AFIS record.	Mugshot Add

TOT	Description	Workflow
LVB	Civilian billable TenPrint Card, can be submitted via remote LiveScan device and processed at OSBI HQ.	LiveScan -
LVN	Criminal TenPrint Card, can be submitted via remote LiveScan device and processed at OSBI HQ. However, this transaction is not retained in AFIS.	LiveScan – New
CRM	Criminal two finger search – non retainable	Mobile Device – New
CRF	Criminal Facial Search – FBI NGI search only	WKS – New
LVBN	Civilian Billable in state search only	Livescan – New
LVCW	Civilian Billable SDA applicant – from livescan device	Livescan - New

Transactional clarification including TOT translations for civilian transactions that are currently processed by AFIS are listed below in Table 2.0. This table lists details as implemented in the current AFIS, the supplier is required to use this as a reference and specify mappings compliant to the FBI NGI EBTS version 10.2 standard. For transactional compatibility the flags that determine transactional paths are provided in this table to provide clarity of the requirement.

Table 2.0

Civilian Transactions that are Billable & FBI Processing Specifications					
Source	TOT	TOT – Type-2	Billable	FBI	NGI TOT
Horse, Guard, Teachers, Bail bonds, Public, DHS, Consumer credit	CV	CVB	Y	Y	NFUF
Taxis, Masseuse, Sanitation workers, City workers, Volunteers	CVN	CVN	N	N	N/A
SDA Applicants,	CCW	CCW	Y	Y	NFUF
Law Enforcement Agency Any	LVA	LVA	N	Y	MAP
Livescan Billable	LVB	LVB	Y	Y	NFUF
Livescan Billable State only	LVBN	LVBN	Y	N	N/A
Livescan SDA Applicant*	LVCW	LVCW	Y	Y	NFUF

* This transaction will be queued up after submission from the livescan pending decision by an operator.

New transactions not listed in the above table are listed in Table 3.0 below. These transactions are new or a variation of transactions that will originate from the AFIS that is deployed at Oklahoma city police department and processed through the interface that is to be implemented as requirement of the new state AFIS.

Table 3.0

#	TOT	Description	Workflow
1	TPN	Ten print identification search non keeper for non-serious offenses only	New
2	LPO	Latent print search submission with minutia and image	New
3	PPO	Palm latent print search submission with minutia and image	New
4	LPOK	Latent print search submission with minutia and image retainable	New
5	PPOK	Palm latent print search submission with minutia and image retainable	New
6	LPF	Latent print search submission to NGI with minutia and image retainable	New
7	PPF	Palm latent print search submission to NGI with minutia and image retainable	New
8	LTR	Reverse search hits	New

AFIS TRANSACTIONAL PRIORITIES

AFIS shall support eight pre-defined search priorities, including all numbered priorities listed in Table-1. The system administrator shall assign the default transaction priorities. These shall be able to be modified by an authorized, local user from any workstation. All transactions, including LiveScan transactions shall be assigned a priority. All LiveScan transactions shall be assigned a priority greater than or equal to the priority for criminal TenPrint transactions. AFIS requires a priority for every print transaction; Mobile two finger searches (CRM) and LiveScan (LV, LVA, LVJ, LVB, LVN) transactions will be run at a priority higher than the various criminal TenPrint transactions (e.g., priority 0 is the highest priority CR transactions are run as priority 1).

Table-1. AFIS Default Transaction Priorities

Transaction Type	Priority	Remarks
Criminal TenPrint	2	CR, CRW, JUV, CRN, CRCS, CRDA,
Civilian TenPrint	3	CV, CVN, CCW
Latent Print	2*	LP, LPR, PLP, PLPR, NLP
Ten /Palm Print Reverse	4**	ULC, ULP
LiveScan	1	LV, LVA, LVJ, LVB, LVN, LVBN, LVCW
Mobile 2 Finger device	0***	CRM

* This default priority is for a Latent Print Search, where the pattern type, sex or the finger number is known. When none of the parameters are known, the default priority is 3.

** This default priority is for Reverse Searches that will not start until the TenPrint Searches are done.

*** This is indicating that the Criminal check mobile (CRM) transactions are processed at a fixed rate of up to 2 minutes per transaction regardless of what is in the priority queue.

AFIS ID NUMBER DEFINITIONS

The following sections define the different types of ID numbers auto-generated by the AFIS.

Offender Tracking Number (OTN)

The format of the OSBI OTN shall be a 10-character field where the first 9 characters are numeric and the 10th is an alphabetic suffix representing the calculated check digit. Leading zeros shall be added if less than 9 numerics are entered. The check digit algorithm shall be provided upon request. The OTN shall be generated by LiveScan and CardScan stations and is contained in the type-2 data field of the NIST record.

Transaction Control Number (TCN)

The TCN shall be an auto generated 9-digit numeric identifier. The TCN shall mean the same as the 'Incident ID' as used in AFIS. For the LiveScan and CardScan workflows, the TCN shall be auto generated by the AFIS. For Card processing, the TCN barcode will be generated by the CCH and placed on the card where it will be scanned in at the MultiPrint Station. For latent input, the TCN shall be generated by the AFIS, a prefix shall be added to the TCN depending on the type of transaction and whether the TCN is generated by AFIS or the CCH. The TCN format is shown below.

[S]-[TOT][nnnnnnnnn]

where *S* is A for AFIS generated TCNs and C for CCH generated TCNs

TOT is the type of transaction *nnnnnnnnn* is a nine-digit numeric

for example,

C-CRnnnnnnnnn represents a Criminal Card TCN generated by the CCH

A-LVnnnnnnnnn represents a LiveScan Criminal TCN generated by AFIS

A-LP CCYYSIII
nnnnnnnniiiss represents a local latent TCN generated by AFIS at the Latent station

Transaction/Workflow	TCN Generation
LiveScan	AFIS
CardScan	AFIS
TenPrint Card	CCH
Latent	AFIS
ULW	AFIS

State ID Number (SID)

The SID shall be automatically generated by the AFIS as an 8-digit numeric. However, the AFIS shall be capable to accommodate a much larger number for the SID in the internal database design. The SID shall mean the same as the 'Person ID' as used in AFIS. For cases submitted to NGI, the AFIS shall add a two-character Oklahoma state prefix (OK) to the SID field in the type-2 record. This field is also contained in the SRE NIST file returned from NGI. In the new AFIS any reference to NGI shall be replaced with the new FBI NGI system specification as outlined in the RFP.

Latent ID Number Format

The format of the latent ID number is defined as shown below.

Latent case ID = "CCYYSIII
*nnnnnnnniii*ss"

a 16 byte field with the following breakdown.

CC - century,

YY - year,

S - Statue of limitation number,

III - Latent examiner ID,

nnnnnnnn – sequential case number

iii – 3 digit sequential image number for given case number

ss – 2 digit sequential search number for each image for the given case number

AFIS WORKFLOWS – NARRATIVES & DIAGRAMS

The workflows listed in this section are the result of joint development of the OSBI staff and the vendor who provided AFIS services in the current system that were developed as part of the requirement of the current AFIS that is in production.

1.0.0. OSBI NIST Archive and eDocument Flow

OSBI has a NIST Archive System (Aware BioSP version 8.7) that is used to archive the NIST Data in an SQL Database. LaserFiche version 8.3 is currently used to store/archive each fingerprint card processed in a PDF format. Currently, all of the transactions received via Livescan are stored in the NIST Archive System and the LaserFiche document imaging system. This process shall be integrated in to the AFIS workflows listed below.

AFIS MUST have the capability to generate the NIST File and create a fingerprint PDF file.

For Livescan Transaction

1. AFIS will save the NIST File that is received from Livescan into OSBI's NIST Archive System before it is processed by AFIS.
2. Once the transaction is completed, AFIS MUST create a fingerprint card image in PDF form with the SID and TCN added and save it into a network folder for further processing into the OSBI's LaserFiche document imaging system.
The file naming convention will be provided by OSBI later on, for example: <SID Number>-<OTN Number>-<Date-Time>.PDF

For CR Transaction

1. Once a CR transaction is completed state processing, AFIS MUST create a NIST File (type-1, type-2, type-4, type-15 and possibly type-10) and add the file to the OSBI's NIST Archive System via a web service.
2. Once the CR transaction is completed, AFIS MUST create a fingerprint card image in PDF from ORIGINAL FingerPrint card (both sides if side 2 is available) with the SID and TCN added and save it into a network folder for further processing into the OSBI's LaserFiche document imaging system.
The file naming convention will be provided by OSBI later on, for example: <SID Number>-<OTN Number>-<Date-Time>.PDF

1.1.0. LiveScan Workflow

The LiveScan workflow can include mugshot capture and PalmPrint capture as well as fingerprint capture. The image processing and feature extraction is performed at the LiveScan. All descriptor entry is performed at the LiveScan. The information shall be transferred to the AFIS using TCP/IP protocol. As a minimum, the information shall include descriptor data and fingerprint images. PalmPrint images and mugshots shall also be included if they are captured at the LiveScan. This workflow shall be used for the LV, LVJ and LVA type of transactions. The LVA workflow differs in that the OTN is not generated and the filing and disposition forms are not printed.

1) At the Livescan Device:

- a) The operator shall select the booking profile (Criminal, Juvenile, Applicant)
- b) The operator shall enter the booking number.
- c) The operator shall enter the descriptors, and the OTN is automatically generated (LV and LVJ only, not LVA).
- d) The operator shall capture the fingerprints.
- e) The operator shall capture the PalmPrints (if applicable).
- f) The operator shall capture the mugshots (if applicable).
- g) The NIST file containing the type-1, type-2, type-4, and possibly type-10 and type-15 shall be created.
- h) The LV, LVJ or LVA type of transaction shall be submitted to the AFIS DES.
- i) The OSBI Filing and Disposition forms shall be printed (LV and LVJ only, not LVA).
- j) The operator may select to print cards (OSBI/FBI formats).

2) At the AFIS DES:

- a) The NIST file shall be received.
- b) The type-2 data shall be validated.

If the data is invalid, proceed to step 3.

If valid continue at step 4.

3) At the AFIS DES:

- a) The ERRT shall be generated
- b) The ERRT shall be sent to the LSS

4) At the AFIS DES:

- a) The TCN shall be generated.
- b) The type-2 data shall be sent to the CCH.

5) At the CCH:

- a) The type-2 data and TCN shall be received.
- b) The record shall be added to the CCH database.

Based on certain criteria, the AFIS Server shall determine if Quality Control shall be performed.

- 6) If Quality Control is to be performed, the operator at the Review Station selects the Quality Control application. The record shall automatically be displayed using 'push' case management. The operator shall review the fingerprints during Quality Control. If the operator determines one or more fingers need to be rescanned, the reject option shall be selected. Otherwise, the operator shall select to edit the classification and minutiae data, if necessary, and processing shall continue at step 9.
- 7) If the reject option was selected during Quality Control:
 - a) The reject message specifying the booking ID and the fingers to be rescanned shall be sent to the LiveScan.
 - b) The reject indicator shall be sent to the CCH.
 - c) The TCN shall be closed out
- 8) At the CCH:
 - a) The reject message shall be received.
 - b) Insert the reject statistical information into the reject table.
 - c) The record shall be deleted from the database.

END OF PROCESS

- 9) At the AFIS Server:
 - a) The record shall be added by the TCN. The search shall be performed against the TPF.
 - b) The matching logic shall be performed.

If there is a 'hit', go to step 13.

If there is a possible 'hit', go to step 10.

If there is a 'no-hit', go to step 12.

- 10) At the AFIS Server:
 - a) The record shall be placed in the verification queue to be processed using 'blind verification.
 - b) The 'In progress at OSBI' message shall be emailed to the submitting LiveScan.

- 11) At the Review Station:
 - a) The operator shall select the TenPrint Verification application. The verification record shall automatically be displayed with the search images and respondent images using 'push' case

management. The operator shall compare the images and select ident or non-ident. The record shall be available for Secondary Verification.

- b) A different operator shall select the TenPrint Verification application. The secondary verification record shall automatically be displayed using 'push' case management . The operator shall compare the images and select ident or non-ident. If the results are not the same as the primary verification, the record shall be placed in the verification supervisor queue and the supervisor shall perform TenPrint Verification using 'pull' case management.

If 'non-ident' processing continues at step 12;

If 'ident' processing continues at step 13;

12) At the AFIS Server:

- a) AFIS shall auto generate the new SID.
- b) The no-hit message shall be sent to the CCH referenced by the TCN.
- c) The no-hit message shall be E-mailed to the submitting LiveScan.
- d) The AFIS database shall be updated with the new SID and the mugshot shall be added to the Mugshot database.

Proceed to step 14.

13) At the AFIS Server:

- a) The Auto Ident state shall be set.
- b) The Hit SID shall be sent to the CCH.
- c) The hit message (Hit SID) shall be emailed to the submitting LiveScan.
- d) The TP and PP databases shall be updated with the best quality prints merged from the search and 'hit' case and the mugshot shall be added to the Mugshot database. If the new record contains amputated or scared fingers that did not exist in the replaced record, the UPD flag shall be set for NGI FIS submissions.

14) At the AFIS Server:

- a) The ULC search shall be automatically launched. (see section 0)
- b) The ULP search shall be automatically launched. (see section 0)

Applicant (LVA) cases shall always be submitted to NGI with a TOT of MAP. For criminal cases (LV, LVJ) the AFIS Server shall check the III flag and the NGI flag. If neither flag is set, the record shall be submitted to the FBI and processing shall continue at step 15. If either flag is set, the AFIS server shall check the UPD flag to determine if a Fingerprint Image Submission (FIS) request shall be submitted to the FBI. If the UPD flag is set, processing shall continue at step 15. If the record is not to be submitted to the FBI, processing continues at DOCCON.

- 15) At the AFIS DES, the NIST file for NGI submission shall be placed in the NGI queue and submitted to NGI. The type of transaction (TOT) shall be a Criminal Answer Required (CAR) for criminal submissions, Miscellaneous Applicant (MAP) for applicants, or a Fingerprint Image Submission (FIS) for updating images for an existing criminal record. The NGI flag shall be set for CAR submissions.

- 16) The Submission Results – Submission Results Electronic (SRE) or Error TenPrint (ERRT) NGI response for CAR and MAP submissions and Fingerprint Image Submission Response (FISR) or Image Transaction Error (ERRI) for FIS submissions shall be received at the AFIS DES. For all responses, SRE, FISR or ERRT, processing continues at step 15. If the ERRT or ERRI response is received, processing also continues at step 19.

- 17) At the AFIS DES:
 - a) The SRE, FISR or ERRT response shall be forwarded to the CCH.
 - b) The case shall be deleted from the NGI queue

- 18) At the CCH:
 - a) The SRE, FISR or ERRT shall be received.
 - b) The database shall be updated.Processing shall continue at DOCCON.

- 19) For an ERRT or ERRI being returned at the AFIS Server:
 - a) The error shall be placed in the NGI error queue.
 - b) The operator shall select the record to edit, view the error, and update the record. The operator shall select to re-submit the record to NGI.
 - c) The CAR, MAP or FISR transaction shall be re-submitted to NGI.
 - d) If the CCH descriptor data requires updating, the operator shall manually update the CCH descriptors at the CCH terminal.
Proceed to step 16.

DOCCON (End of Process)

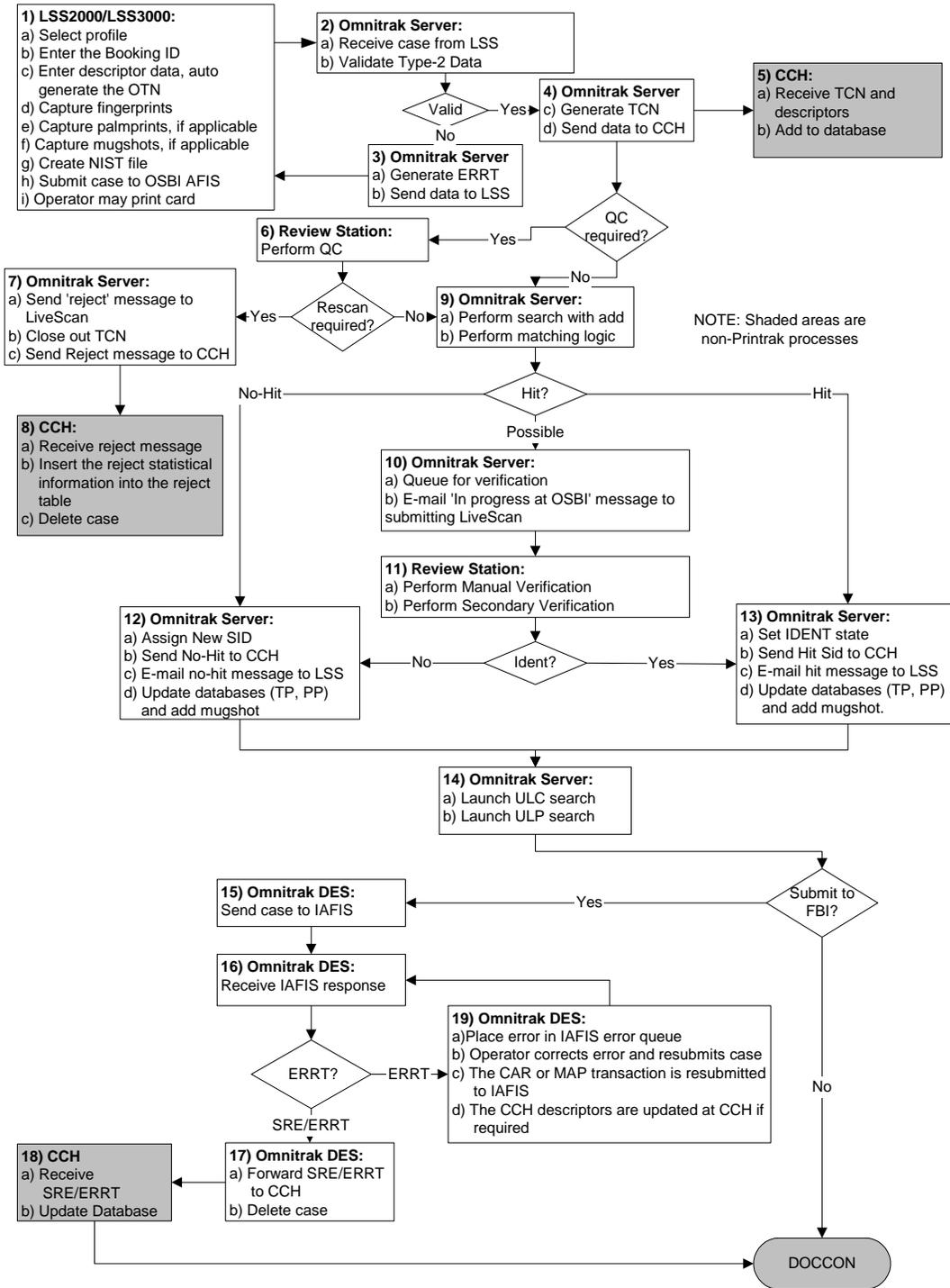


Figure -1. LiveScan Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.2.0. TenPrint Card Workflow

The TenPrint card workflow supports the transaction types from Table 1 of CR, CRW, CV, FHA, CCW, JUV and PP. The workflow is essentially the same for these workflows with the following exceptions.

- a. For the CRW and JUV transactions, no arrest information is entered just the identification information only.
- b. CRW transactions shall not include submissions to NGI.
- c. CV, CCW and FHA transactions shall not include PalmPrints.

The TCN is generated at the CCH for all the TenPrint Card transactions and all the type-2 descriptor data is entered at the CCH. Refer to Figur-2 for the TenPrint Processing workflow.

1) At the CCH:

- a) The mail-in process shall be started.
- b) The TCN shall be generated and the barcode shall be printed.
- c) The TCN state shall be set to 'Mail-In QC'.
- d) The TCN state shall be checked.
- e) Mail-In QC shall be performed.
- f) The AFIS descriptors shall be entered.
- g) The descriptor data shall be validated
- h) The TCN state shall be set to AFIS auto read.

2) At the MultiPrint Station:

- a) The operator shall select the PrintScan application, and select the workflow profile. The operator shall then place the fingerprint card on the scanner. The fingerprint card shall be scanned, including the barcode.
- b) The operator may rescan card if for some reason the card is not scanned properly.
- c) The operator shall view the fingerprints and re-center if required.
- d) If the PalmPrint card is available, the operator shall place it on the scanner. The front side of the PalmPrint card shall be scanned including the barcode. The system shall verify that the fingerprint and PalmPrint barcodes are the same. The operator shall flip the PalmPrint card and the other PalmPrint is scanned. (NOTE: for PrintScan workstations using the batch scanner, both sides of the PalmPrint card shall be scanned without flipping the card.)
- e) The operator shall place the 5.5" X 5.5" box over the portion of the palm to be processed.
- f) The operator shall select to submit the record.
- g) The MultiPrint Station shall automatically extract the feature data.
- h) The record shall be submitted to the AFIS.

- 3) At the AFIS:
 - a) The request shall be received.
 - b) The TCN state shall be checked to verify it is in the 'Autoread' state
 - c) The AFIS descriptors shall be retrieved from the CCH by TCN.
 - d) The record shall be added by the TCN. The search shall be performed against the TPF.
 - e) The matching logic shall be performed.

- 4) If a 'hit' was determined, the AFIS performs the following:
 - a) The Auto Ident state shall be set.
 - b) The Hit SID shall be sent to the CCH.

- 5) If a possible hit was determined, the record shall be placed in the verification queue to be processed using 'blind verification'.
 - a) At the Review Station, the operator shall select the TenPrint Verification application. The verification record shall automatically be displayed with the search images and respondent images using 'push' case management. The operator shall compare the images and select ident or non-ident. The record shall be available for Secondary Verification.
 - b) At the Review Station, a different operator shall select the TenPrint Verification application. The secondary verification record shall automatically be displayed using 'push' case management. The operator shall compare the images and select ident or non-ident. If the results are not the same as the primary verification, the record shall be placed in the verification supervisor queue and the supervisor shall perform TenPrint Verification using 'pull' case management.

Based on certain criteria, the AFIS shall determine if Quality Control shall be performed.

- 6) If Quality Control is to be performed, the operator at the Review Station selects the Quality Control application. The record shall automatically be displayed using 'push' case management. The operator shall review the fingerprints during Quality Control. If the operator determines the record is of insufficient quality, the reject option shall be selected, and the TCN state shall be set to Mail-in QC. Otherwise, the operator shall select to edit the classification and minutiae data, if necessary.

- 7) If the reject option was selected during Quality Control:
 - a) The reject indicator shall be sent to the CCH
 - b) The TCN record shall be deleted from AFIS

- 8) At the CCH:
 - a) The reject message shall be received.
 - b) The operator shall add the descriptor data at Mail-in QC

- c) The reject message shall be added to the reject table.
- d) The DOCCON process shall be completed automatically and the TCN closed.

End of Process

- 9) If the record passed Quality Control, the TenPrint database shall be updated with the possible edited classification and minutiae performed by the operator during Quality Control.

If Quality Control is not required or if Quality Control is not rejected, steps 10 through 20 shall be performed.

- 10) At the CCH, the Cards are manually separated.
- 11) At the CCH, Type – 2 data entry (basic descriptors) shall be performed.
- 12) At the CCH, Type – 2 data entry (charge/arrest information) shall be performed, except CRW and JUV transactions that do not require charge/arrest information.
- 13) At the CCH, the CCH shall prepare the Type 2 descriptor data for FBI submission to NGI.

If submitting to FBI, proceed to step 17.

else, proceed to DOCCON.

- 14) If a no-hit was determined:
 - a) AFIS shall auto generate the new SID.
 - b) The no-hit message shall be sent to the CCH referenced by the TCN.
 - c) The AFIS database shall be updated with the new SID. Processing shall continue at step 16.
- 15) If a hit was determined:
 - a) The state shall be set to IDENT.
 - b) The hit SID shall be sent to the CCH.
 - c) The TP and PP (if available) databases shall be updated with the best quality prints merged from the search and 'hit' case. If the new record contains amputated or scared fingers that did not exist in the replaced record, the UPD flag shall be set for NGI FIS submissions.
- 16) At the AFIS:
 - a) The ULC search shall be automatically launched (refer to section 0).
 - b) The ULP search shall be automatically launched (refer to section 0).

Applicant (CV, FHA and CCW) cases shall always be submitted to NGI as NFUF. For criminal cases (CR and JUV) the AFIS shall check the III flag and the NGI flag. If neither flag is set, the record shall be submitted to the FBI and processing shall continue at step 17. If either flag is set, the AFIS shall check the UPD flag to determine if a Fingerprint Image Submission (FIS) request shall be submitted to the FBI.

If the UPD flag is set, processing shall continue at step 17. If the record is not to be submitted to the FBI, processing continues at DOCCON.

17) At the AFIS DES:

- a) The TCN state shall be checked for descriptor data complete from CCH.
- b) The descriptor data shall be retrieved from the CCH.
- c) The NIST file for NGI submission shall be placed in the NGI queue and submitted to NGI. The type of transaction (TOT) shall be a Criminal Answer Required (CAR) criminal submissions, Miscellaneous Applicant (MAP) for applicant submissions, Non-Federal Applicant User Fee (NFUF) for non-federal applicants with fee submissions or a Fingerprint Image Submission (FIS) for updating images for an existing record. The NGI flag shall be set for CAR submissions.

18) The Submission Results – Submission Results Electronic (SRE) or Error TenPrint (ERRT) NGI responses for CAR, MAP and NFUF submissions and Fingerprint Image Submission Responses (FISR) or Image Transaction Error (ERRI) for FIS submissions shall be received at the AFISDES. If the SRE or FISR response is received, processing continues at step 19. If an ERRT or ERRI response is received, processing continues at step 21.

19) At the AFIS DES:

- a) The SRE or FISR response shall be forwarded to the CCH.
- b) The case shall be deleted from the NGI queue.

20) At the CCH:

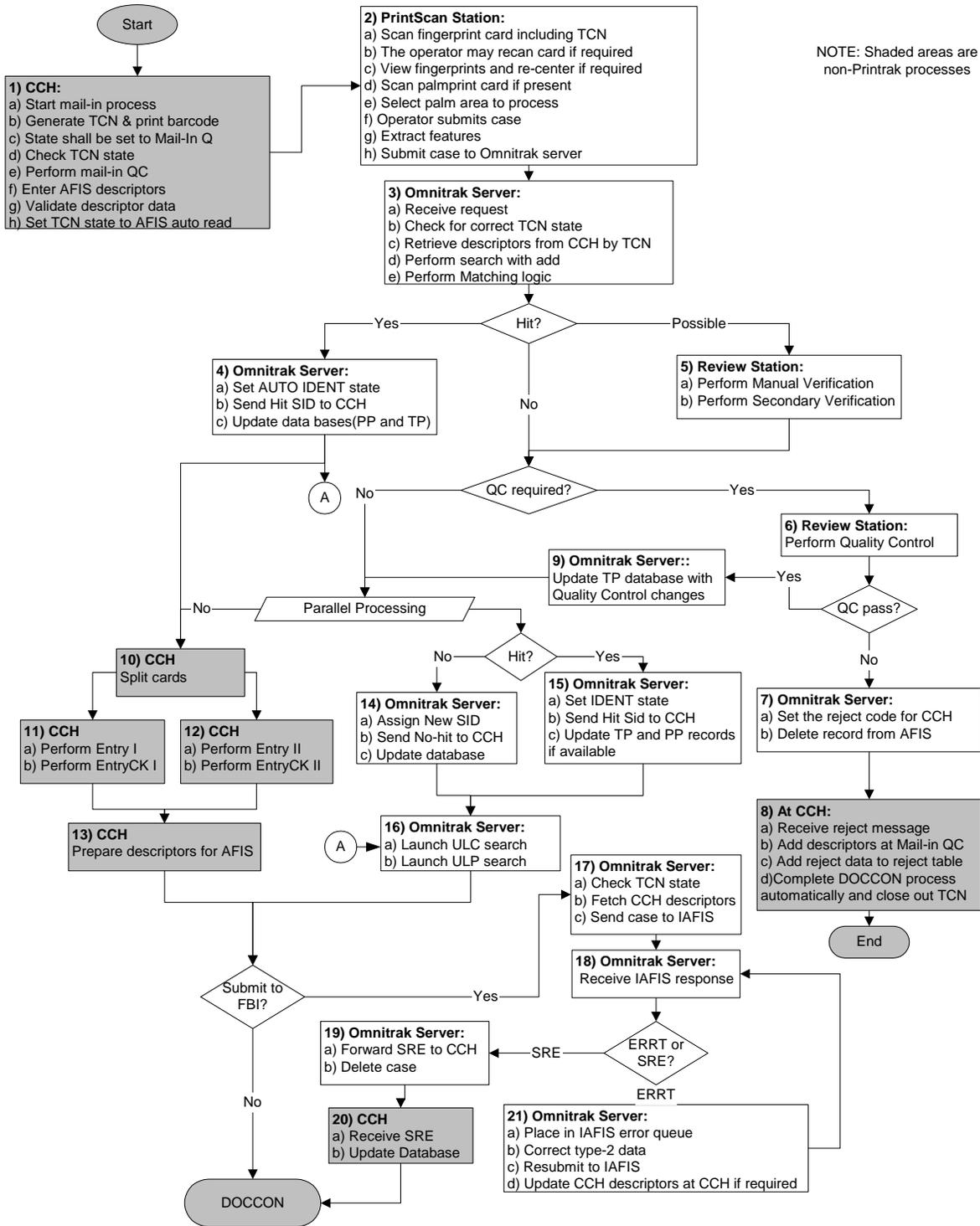
- a) The SRE or FISR shall be received.
 - b) The database shall be updated.
- Processing shall continue at DOCCON.

21) For an ERRT or ERRI being returned at the AFIS:

- a) The error shall be placed in the NGI error queue.
- b) The operator shall select the record to edit, view the error, and update the record. The operator shall select to re-submit the record to NGI.
- c) The CAR, MAP, NFUF or FISR transaction shall be re-submitted to NGI.
- d) If the CCH descriptor data requires updating, the operator shall manually update the CCH descriptors at the CCH terminal.

Proceed to step 18.

DOCCON (End of Process)



Figur-2. TenPrint Card Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.3.0. TenPrint Card CVN and CRN Workflow

The TenPrint Card CVN and CRN Workflow are search only workflows. The only descriptors entered are the AFIS descriptors. There are no submissions to NGI. PalmPrints only apply to the CRN workflow if they are available. The CVN cases will not have PalmPrints. The TenPrint Card CVN and CRN Workflow is shown in Figure0-3.

- 1) At the CCH:
 - a) The mail-in process shall be started.
 - b) The TCN shall be generated and the barcode shall be printed.
 - c) The TCN state shall be set to 'Mail-In QC'.
 - d) The TCN state shall be checked.
 - e) Mail-In QC shall be performed.
 - f) The AFIS descriptors shall be entered.
 - g) The descriptor data shall be validated
 - h) The TCN state shall be set to AFIS auto read.

- 2) At the MultiPrint Station:
 - a) The operator shall select the PrintScan application, and select the workflow profile. The operator shall then place the fingerprint card on the scanner. The fingerprint card shall be scanned, including the barcode.
 - b) The operator may rescan card if for some reason the card is not scanned properly.
 - c) The operator shall view the fingerprints and re-center if required.
 - d) If the PalmPrint card is available, the operator shall place it on the scanner. The front side of the PalmPrint card shall be scanned including the barcode. The system shall verify that the fingerprint and PalmPrint barcodes are the same. The operator shall flip the PalmPrint card and the other PalmPrint is scanned. (NOTE: for PrintScan workstations using the batch scanner, both sides of the PalmPrint card shall be scanned without flipping the card.)
 - e) The operator shall place the 5.5" X 5.5" box over the portion of the palm to be processed.
 - f) The operator shall select to submit the record.
 - g) The MultiPrint Station shall automatically extract the feature data.
 - h) The record shall be submitted to the AFIS server.

- 3) At the AFIS Server:
 - a) The request shall be received.
 - b) The TCN state shall be checked to verify it is in the 'Autoread' state
 - c) The AFIS descriptors shall be retrieved from the CCH by TCN.
 - d) The record shall be added by the TCN. The search shall be performed against the TPF.
 - e) The matching logic shall be performed.

- 4) If a 'hit' was determined, the AFIS Server performs the following:
 - a) The Auto Ident state shall be set.
 - b) The Hit SID shall be sent to the CCH.
 - c) The TP and possibly PP database shall be updated with the best quality prints merged from the search and 'hit' case. If the new record contains amputated or scared fingers that did not exist in the replaced record, the UPD flag shall be set for NGI FIS submissions.
 - d) The statistics shall be updated.

- 5) If a possible hit was determined, the record shall be placed in the verification queue to be processed using 'blind verification'.
 - a) At the Review Station, the operator shall select the TenPrint Verification application. The verification record shall automatically be displayed with the search images and respondent images using 'push' case management. The operator shall compare the images and select ident or non-ident. The record shall be available for Secondary Verification.
 - b) At the Review Station, a different operator shall select the TenPrint Verification application. The secondary verification record shall automatically be displayed using 'push' case management. The operator shall compare the images and select ident or non-ident. If the results are not the same as the primary verification, the record shall be placed in the verification supervisor queue and the supervisor shall perform TenPrint Verification using 'pull' case management.

- 6) If a 'nohit' was determined, the AFIS Server shall update the statistics.

- 7) At the AFIS Server:
 - a) The ULC search shall be automatically launched (refer to section 0).
 - b) The ULP search shall be automatically launched (refer to section 0).

- 8) At the AFIS Server, the record shall be deleted from AFIS.
- 9) DOCCON End of Process

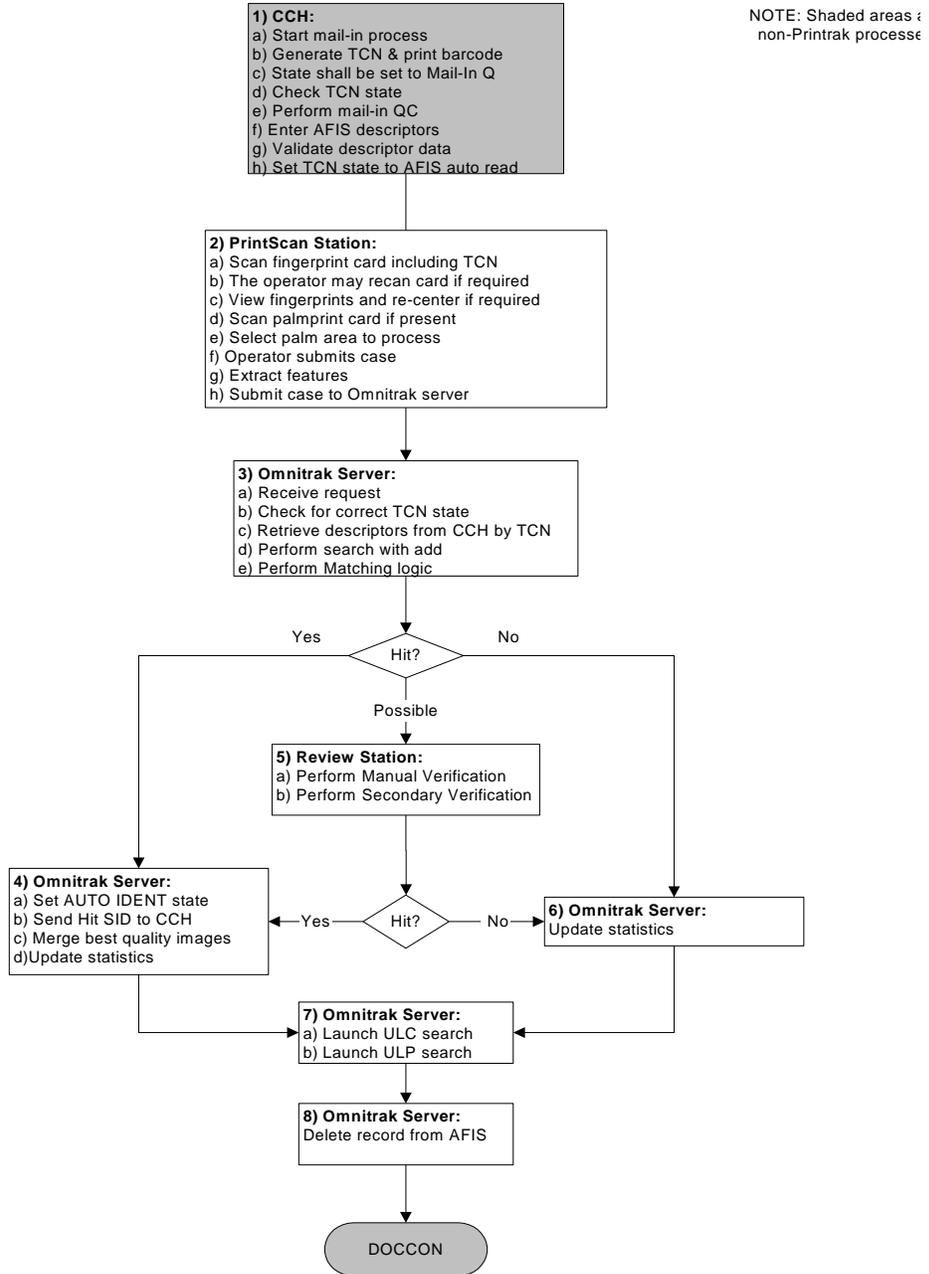


Figure0-3. TenPrint Card CVN and CRN Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.4.0. TenPrint Card CVBN/CVNN Workflow

The TenPrint Card CVBN/CVNN Workflow is an applicant search only workflows similar to the CVN workflow except that NFUF transactions shall be submitted to NGI. In order to submit to NGI, mandatory type-2 descriptors must be entered at the CCH and sent to AFIS to be included in the NFUF for CVBN or MAP for CVNN NIST file sent to NGI. The TenPrint Card CVBN/CVNN Workflow is shown in Figure -4.

- 1) At the CCH:
 - a) The mail-in process shall be started.
 - b) The TCN shall be generated and the barcode shall be printed.
 - c) The TCN state shall be set to 'Mail-In QC'.
 - d) The TCN state shall be checked.
 - e) Mail-In QC shall be performed.
 - f) The AFIS descriptors shall be entered.
 - g) The descriptor data shall be validated
 - h) The TCN state shall be set to AFIS auto read.

- 2) At the MultiPrint Station:
 - a) The operator shall select the PrintScan application, and select the workflow profile. The operator shall then place the fingerprint card on the scanner. The fingerprint card shall be scanned, including the barcode.
 - b) The operator may rescan card if for some reason the card is not scanned properly.
 - c) The operator shall view the fingerprints and re-center if required.
 - d) The operator shall select to submit the record.
 - e) The MultiPrint Station shall automatically extract the feature data.
 - f) The record shall be submitted to the AFIS server.

- 3) At the AFIS Server:
 - a) The request shall be received.
 - b) The TCN state shall be checked to verify it is in the 'Autoread' state
 - c) The AFIS descriptors shall be retrieved from the CCH by TCN.
 - d) The record shall be added by the TCN. The search shall be performed against the TPF.
 - e) The matching logic shall be performed.

- 4) If a 'hit' was determined, the AFIS Server performs the following:
 - a) The Auto Ident state shall be set.
 - b) The Hit SID shall be sent to the CCH.
 - c) The TP database shall be updated with the best quality prints merged from the search and 'hit' case. If the new record contains amputated or scared fingers that did not exist in the replaced record, the UPD flag shall be set for NGI FIS submissions.

- d) The statistics shall be updated.
- 5) If a possible hit was determined, the record shall be placed in the verification queue to be processed using 'blind verification'.
 - a) At the Review Station, the operator shall select the TenPrint Verification application. The verification record shall automatically be displayed with the search images and respondent images using 'push' case management. The operator shall compare the images and select ident or non-ident. The record shall be available for Secondary Verification.
 - b) At the Review Station, a different operator shall select the TenPrint Verification application. The secondary verification record shall automatically be displayed using 'push' case management. The operator shall compare the images and select ident or non-ident. If the results are not the same as the primary verification, the record shall be placed in the verification supervisor queue and the supervisor shall perform TenPrint Verification using 'pull' case management.
- 6) If a 'nohit' was determined, the AFIS Server shall update the statistics.
- 7) At the AFIS Server, the ULC search shall be automatically launched (refer to section 0
- 8) At the CCH, Entry I and EntryCk I (basic descriptors) shall be performed.
- 9) At the CCH, the CCH shall prepare the type 2 descriptor data (NFUF) for FBI submission to NGI.
- 10) At the AFIS DES:
 - a) The TCN state shall be checked for descriptor data complete from CCH.
 - b) The descriptor data shall be retrieved from the CCH.
 - c) The Non Federal Applicant User Fee (NFUF) NIST for CVBN or Miscellaneous Applicant (MAP) NIST file for CVNN file shall be placed in the NGI queue and submitted to NGI.
- 11) The Submission Results – Electronic (SRE) or Error TenPrint (ERRT) NGI response shall be received at the AFIS DES. If the SRE response is received, processing continues at step 19. If the ERRT response is received, processing continues at step 21.
- 12) At the AFIS DES:
 - a) The SRE shall be forwarded to the CCH.
 - b) The case shall be deleted from the NGI queue.
- 13) At the CCH:
 - a) The SRE shall be received.
 - b) The database shall be updated.
 - c) Processing shall continue at DOCCON.

14) For ERRRT being returned, at the AFIS Server:

- a) The error shall be placed in the NGI error queue.
- b) On a local OSBI workstation, the operator shall select the record to edit, view the error, and update the record. The operator shall select to re-submit the record to NGI.
- c) The NFUF or MAP transaction shall be re-submitted to NGI.
- d) If the CCH descriptor data requires updating, the operator shall manually update the CCH descriptors at the CCH terminal.

Proceed to step 18.

DOCCON (End of Process)

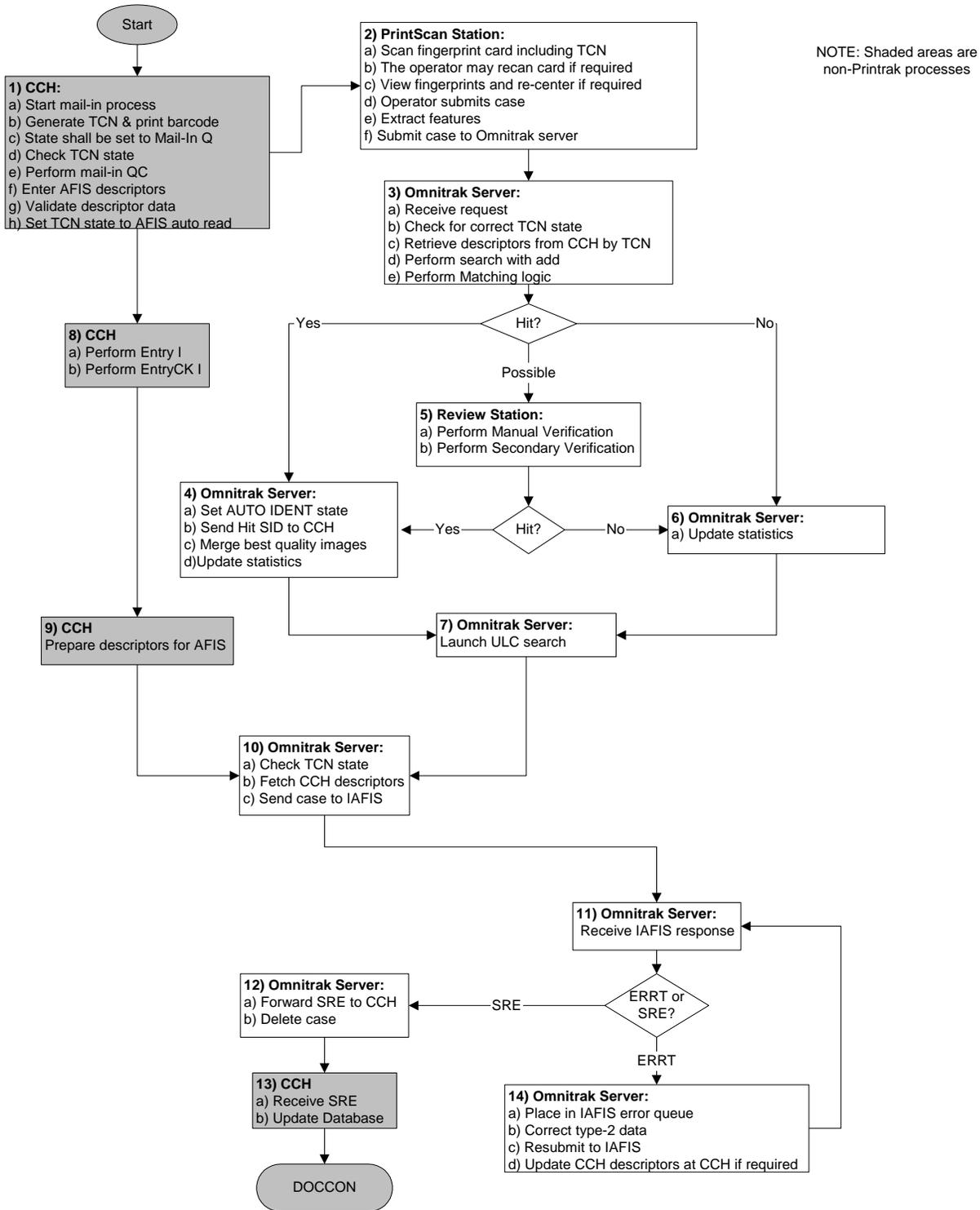


Figure -4. TenPrint Card CVBN Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.5.0. CardScan Workflow

The CardScan workflow is similar to the LiveScan workflow. The major difference is that the CardScan submissions shall need to be sent to AFIS Data Processing Services (part of the AFIS Server subsystem) for automatic processing. The transaction type is CRCS for a Criminal TenPrint Card submitted via NIST standards (type-1, type-2, type-4 and possibly type-10 and/or type-15) over the Internet or other means. Refer to Figure-5 for the CardScan Processing workflow.

1) At the CardScan Station:

- a) The operator shall initiate a new transaction with a new booking number.
- b) The operator shall place the card on the scanner and scan the fingerprints.
- c) The operator shall place the PalmPrint and mugshot cards if available on the scanner and scan PalmPrints and mugshots sequentially.
- d) The operator shall enter the Case ID number and the OTN followed by the descriptor information.
- e) A NIST file (type-1, type-2, type-4 and possibly type-10 and/or type-15) file shall be created from the fingerprint, PalmPrint and descriptor data for submission to OSBI.
- f) The NIST file shall be transmitted to the OSBI AFIS Data Exchange Services (DES) server.

2) At the AFIS Server:

- a) The NIST file shall be received.
- b) The TCN shall be generated (The TCN prefix shall be CS).
- c) The type-2 data shall be validated.
If invalid, continue at step 3
If valid continue at step 4

3) At the AFIS Server

- a) A NIST ERRT message shall be created containing the invalid data.
- b) The NIST ERRT file shall be emailed to the CardScan station.
- c) The rejected type-2 record shall be sent to the CCH
- d) All the data for the TCN shall be deleted and the TCN shall be closed out.
Proceed to step 20

4) At the AFIS Server

- a) The type-2 data shall be sent to the CCH.
- b) The type-4 and type-15 data shall be processed.
- c) The features shall be extracted

- 5) At the CCH:
 - a) The type-2 data is received.
 - b) The record is added to the CCH database

Based on certain criteria, the AFIS Server shall determine if Quality Control shall be performed.

- 6) If Quality Control is to be performed, the operator at the Review Station selects the Quality Control application. The record shall automatically be displayed using 'push' case management. The operator shall review the fingerprints during Quality Control. If the operator determines the record is of insufficient quality, the reject option shall be selected. Otherwise, the operator shall select to edit the classification and minutiae data, if necessary, and processing shall continue at step 9.
- 7) If the reject option was selected during Quality Control:
 - a) An error message with the Case ID shall be emailed to the CardScan station.
 - b) The CardScan case reject indicator shall be sent to the CCH.
 - c) The TCN shall be closed out
- 8) At the CCH:
 - a) The reject message shall be received.
 - b) The reject demographic data shall be inserted into reject table.
 - c) The record shall be deleted from the database.

END OF PROCESS

- 9) At the AFIS Server:
 - a) The record shall be added by the TCN. The search shall be performed against the TPF.
 - b) The matching logic shall be performed.

If there is a 'hit', go to step 13.

If there is a possible 'hit', go to step 10.

If there is a 'no-hit', go to step 12.

- 10) At the AFIS Server - The record shall be placed in the verification queue to be processed using 'blind verification.
- 11) At the Review Station:
 - a) The operator shall select the TenPrint Verification application. The verification record shall automatically be displayed with the search images and respondent images using 'push' case management. The operator shall compare the images and select ident or non-ident. The record shall be available for Secondary Verification.

- b) A different operator shall select the TenPrint Verification application. The secondary verification record shall automatically be displayed using 'push' case management. The operator shall compare the images and select ident or non-ident. If the results are not the same as the primary verification, the record shall be placed in the verification supervisor queue and the supervisor shall perform TenPrint Verification using 'pull' case management.

If 'non-ident' processing continues at step 12;

If 'ident' processing continues at step 13;

12) At the AFIS Server:

- a) AFIS shall auto generate the new SID.
- b) The no-hit message shall be sent to the CCH referenced by the TCN.
- c) The no-hit message shall be E-mailed to the submitting CardScan.
- d) The AFIS database shall be updated with the new SID and the mugshot shall be added to the Mugshot database.

Proceed to step 14.

13) At the AFIS Server:

- a) The Auto Ident state shall be set.
- b) The Hit SID shall be sent to the CCH.
- c) The hit message (Hit SID) shall be emailed to the submitting CardScan.
- d) The TP and PP database shall be updated with the best quality prints merged from the search and 'hit' case and the mugshot shall be added to the Mugshot database. If the new record contains amputated or scared fingers that did not exist in the replaced record, the UPD flag shall be set for NGI FIS submissions.

14) At the AFIS Server:

- a) A ULC search shall be automatically launched. (see section 0)
- b) A ULP search shall be automatically launched. (see section 0)

The AFIS Server shall check the III flag and the NGI flag. If neither flag is set, the record shall be submitted to the FBI and processing shall continue at step 15. If either flag is set, the AFIS server shall check the UPD flag to determine if a Fingerprint Image Submission (FIS) request shall be submitted to the FBI. If the UPD flag is set, processing shall continue at step 15. If the record is not to be submitted to the FBI, processing continues at DOCCON.

- 15) At the AFIS DES, the NIST file for NGI submission shall be placed in the NGI queue and submitted to NGI. The type of transaction (TOT) shall be a Criminal Answer Required (CAR) for criminal submissions or a Fingerprint Image Submission (FIS) for updating images for an existing record. The NGI flag shall be set for CAR submissions.

- 16) The Submission Results – Submission Results Electronic (SRE) or Error TenPrint (ERRT) NGI response for CAR submissions or a Fingerprint Image Submission Response (FISR) or Image Transaction Error (ERRI) for FIS submissions shall be received at the AFIS DES. If the SRE or FISR response is received, processing continues at step 17. If the ERRT or ERRI response is received, processing continues at step 19.
- 17) At the AFIS DES:
- a) The SRE or FISR response shall be forwarded to the CCH.
 - b) The case shall be deleted from the NGI queue.
- 18) At the CCH:
- a) The SRE or FISR shall be received.
 - b) The database shall be updated.
- Processing shall continue at DOCCON.
- 19) For an ERRT or ERRI being returned at the AFIS Server:
- a) The error shall be placed in the NGI error queue.
 - b) The operator shall select the record to edit, view the error, and update the record. The operator shall select to re-submit the record to NGI.
 - c) The CAR or FISR transaction shall be re-submitted to NGI.
 - d) If the CCH descriptor data requires updating, the operator shall manually update the CCH descriptors at the CCH terminal.
- Proceed to step 14.

DOCCON (End of Process)

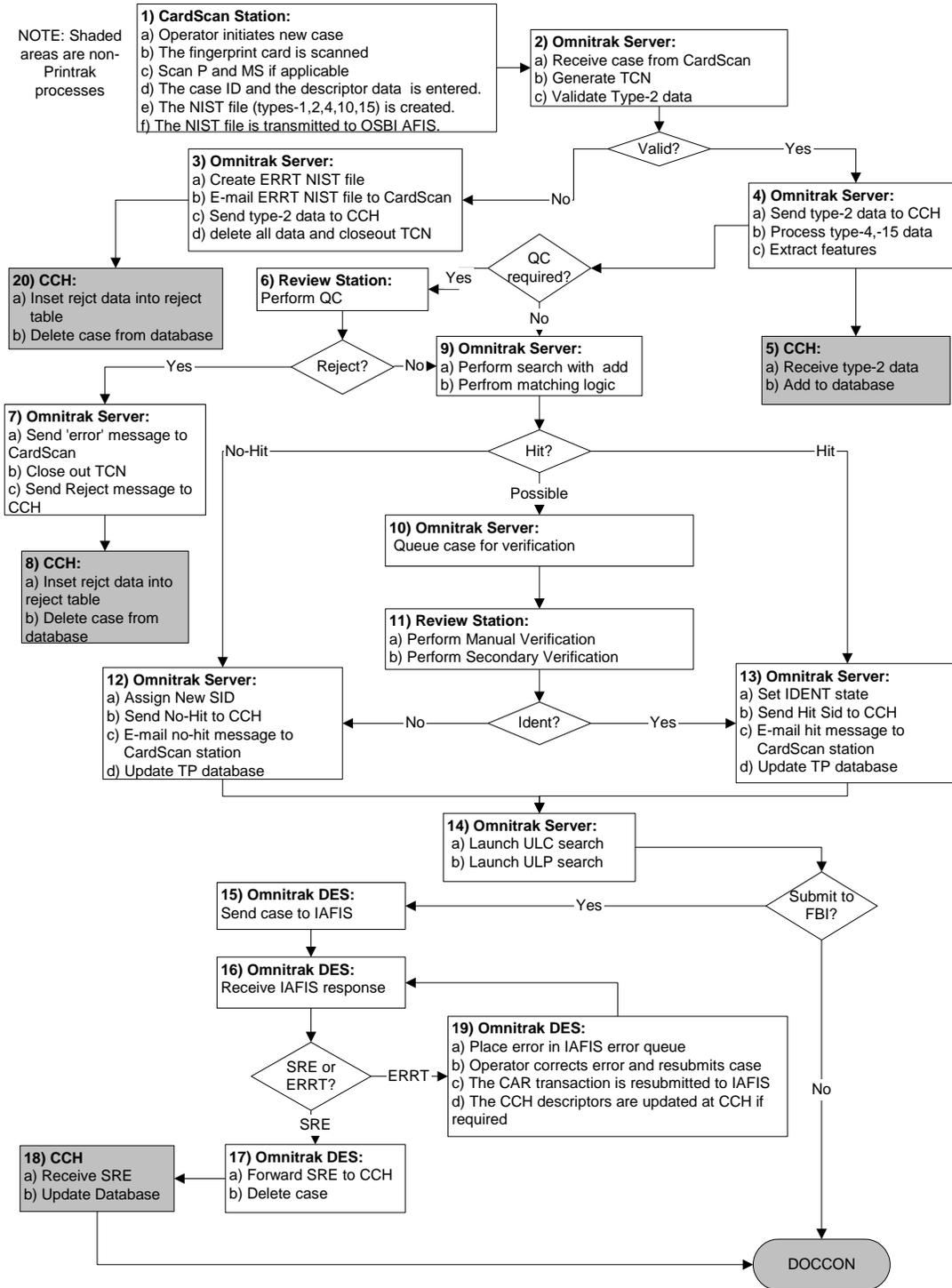


Figure-5. CardScan Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.6.0. Dissimilar AFIS Workflow

The Dissimilar AFIS workflow is essentially identical to the CardScan workflow. These submissions shall need to be sent to AFIS Data Processing Services (part of the AFIS Server subsystem) for automatic processing. The transaction type is CRDA for a Criminal TenPrint Card submitted via NIST standards (type-1, type-2, type-4, type-10, and type-15) from a dissimilar AFIS. Refer to Figure0-6 for the Dissimilar AFIS workflow.

- 1) At the Dissimilar AFIS:
 - a) A case will be entered and processed at the Dissimilar AFIS.
 - b) A NIST file (type-1, type-2, type-4 and possibly type 10 and/or type-15) file shall be created from the fingerprint, PalmPrint and descriptor data for submission to OSBI.
 - c) The NIST file shall be transmitted to the OSBI AFIS Data Exchange Services (DES) server.

- 2) At the AFIS Server:
 - a) The NIST file shall be received.
 - b) The TCN shall be generated (The TCN prefix shall be RTP).
 - c) The type-2 data shall be validated.
 - i) If invalid, continue at step 3
 - ii) If valid continue at step 4

- 3) At the AFIS Server
 - a) A NIST ERRT message shall be created containing the invalid data.
 - b) The NIST ERRT file shall be emailed to the Dissimilar AFIS.
 - c) The rejected type-2 record shall be sent to the CCH
 - d) All the data for the TCN shall be deleted and the TCN shall be closed out.Proceed to step 20

- 4) At the AFIS Server
 - a) The type-2 data shall be sent to the CCH.
 - b) The type-4 and type-15 data shall be processed.
 - c) The features shall be extracted

- 5) At the CCH:
 - a) The type-2 data is received.
 - b) The record is added to the CCH database

Based on certain criteria, the AFIS Server shall determine if Quality Control shall be performed.

- 6) If Quality Control is to be performed, the operator at the Review Station selects the Quality Control application. The record shall automatically be displayed using 'push' case management. The operator shall review the fingerprints during Quality Control. The operator shall review the fingerprints during Quality Control. If the operator determines the record is of insufficient quality, the reject option shall be selected. Otherwise, the operator shall select to edit the classification and minutiae data, if necessary, and processing shall continue at step 9.
- 7) If the reject option was selected during Quality Control:
 - a) An error message with the Case ID shall be emailed to the Dissimilar AFIS.
 - b) The Dissimilar AFIS case reject indicator shall be sent to the CCH.
 - c) The TCN shall be closed out
- 8) At the CCH:
 - a) The reject message shall be received.
 - b) The reject message shall be inserted into the reject table.
 - c) The DOCCON process shall be completed automatically and the TCN closed.

END OF PROCESS

- 9) At the AFIS Server:
 - a) The record shall be added by the TCN. The search shall be performed against the TPF.
 - b) The matching logic shall be performed.

If there is a 'hit', go to step 13.
If there is a possible 'hit', go to step 10.
If there is a 'no-hit', go to step 12.

- 10) At the AFIS Server - The record shall be placed in the verification queue to be processed using 'blind verification.

- 11) At the Review Station:
 - a) The operator shall select the TenPrint Verification application. The verification record shall automatically be displayed with the search images and respondent images using 'push' case management. The operator shall compare the images and select ident or non-ident. The record shall be available for Secondary Verification.
 - b) A different operator shall select the TenPrint Verification application. The secondary verification record shall automatically be displayed using 'push' case management. The operator shall compare the images and select ident or non-ident. If the results are not the same as the primary verification, the record shall be placed in the verification supervisor queue and the supervisor shall perform TenPrint Verification using 'pull' case management.

If 'non-ident' processing continues at step 12;

If 'ident' processing continues at step 13;

12) At the AFIS Server:

- a) AFIS shall auto generate the new SID.
- b) The no-hit message shall be sent to the CCH referenced by the TCN.
- c) The no-hit message shall be E-mailed to the submitting Dissimilar AFIS.
- d) The AFIS database shall be updated with the new SID and the mugshot shall be added to the Mugshot database.

Proceed to step 14.

13) At the AFIS Server:

- a) The Auto Ident state shall be set.
- b) The Hit SID shall be sent to the CCH.
- c) The hit message (Hit SID) shall be emailed to the submitting Dissimilar AFIS.
- d) The TP and PP databases shall be updated with the best quality prints merged from the search and 'hit' case and the mugshot shall be added to the Mugshot database. If the new record contains amputated or scared fingers that did not exist in the replaced record, the UPD flag shall be set for NGI FIS submissions.

14) At the AFIS Server:

- a) The ULC search shall be automatically launched. (see section 0)
- b) The ULP search shall be automatically launched. (see section 0)

The AFIS Server shall check the III flag and the NGI flag. If neither flag is set, the record shall be submitted to the FBI and processing shall continue at step 15. If either flag is set, the AFIS server shall check the UPD flag to determine if a Fingerprint Image Submission (FIS) request shall be submitted to the FBI. If the UPD flag is set, processing shall continue at step 15. If the record is not to be submitted to the FBI, processing continues at DOCCON.

15) At the AFIS DES, the NIST file for NGI submission shall be placed in the NGI queue and submitted to NGI. The type of transaction (TOT) shall be a Criminal Answer Required (CAR) for first time criminal submissions or a Fingerprint Image Submission (FIS) for updating images for an existing record. The NGI flag shall be set for CAR submissions.

16) The Submission Results – Submission Results Electronic (SRE) or Error TenPrint (ERRT) NGI response for CAR submissions or a Fingerprint Image Submission Response (FISR) or Image Transaction Error (ERRI) for FIS submissions shall be received at the AFIS DES. If the SRE or FISR response is received, processing continues at step 17. If the ERRT or ERRI response is received, processing continues at step 19.

17) At the AFIS DES:

- c) The SRE or FISR response shall be forwarded to the CCH.
- d) The case shall be deleted from the NGI queue.

18) At the CCH:

- c) The SRE or FISR shall be received.
 - d) The database shall be updated.
- Processing shall continue at DOCCON.

19) For an ERRT or ERRI being returned at the AFIS Server:

- e) The error shall be placed in the NGI error queue.
- f) The operator shall select the record to edit, view the error, and update the record. The operator shall select to re-submit the record to NGI.
- g) The CAR or FISR transaction shall be re-submitted to NGI.
- h) If the CCH descriptor data requires updating, the operator shall manually update the CCH descriptors at the CCH terminal.

Proceed to step 14.

DOCCON (End of Process)

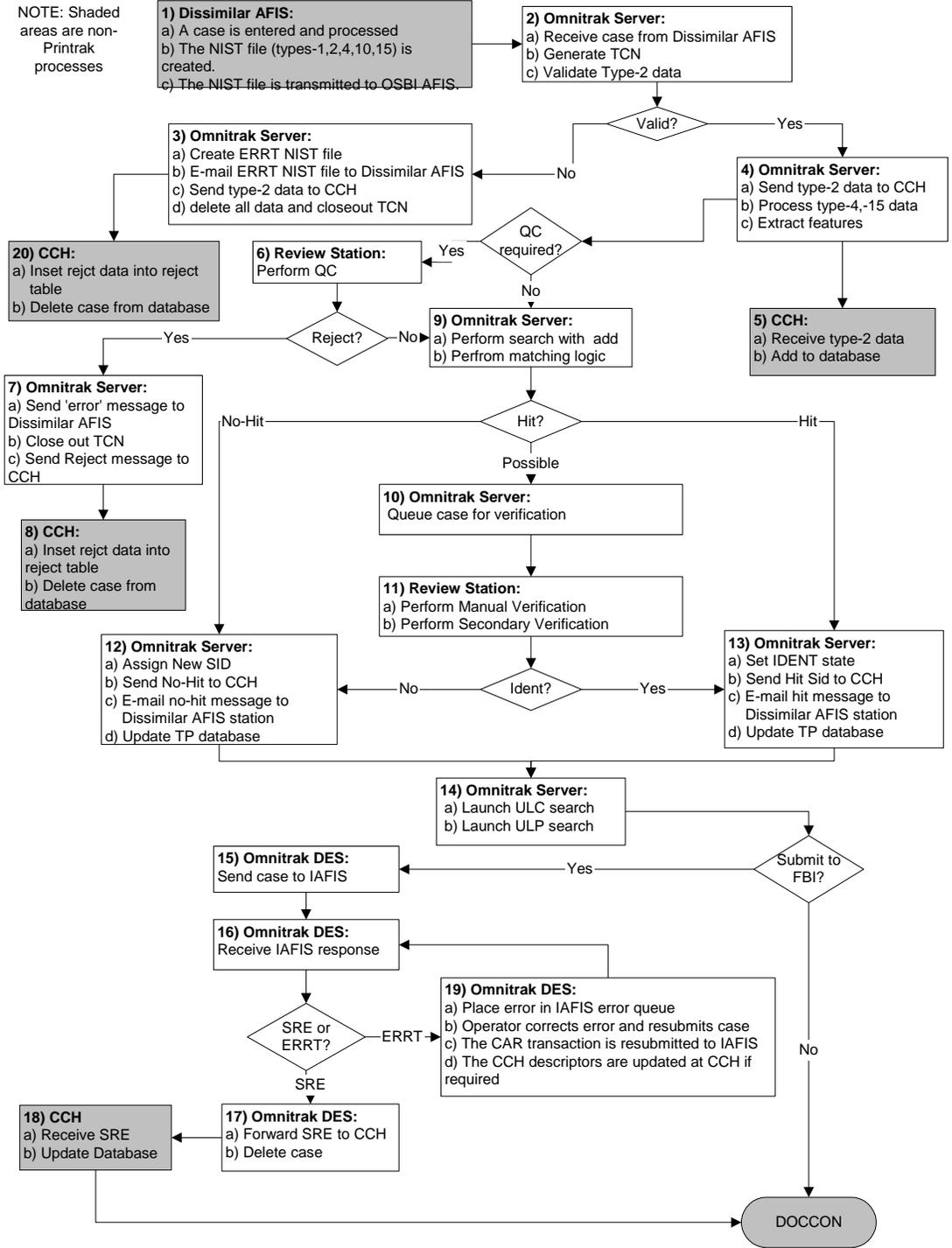


Figure0-6. Dissimilar AFIS Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.7.0. Latent Workflow

The standard AFIS Latent Station shall allow entry of latent fingerprints, latent PalmPrints, or unknown latent impressions. It shall not be necessary to make a menu selection to indicate the type of latent being entered. The target database for search shall be selected at the time of search submission. This workflow supports the LP, LPR, PLP, and PLPR transactions. Refer to Figure0-7 for the Latent Processing Workflow (fingerprint or PalmPrint).

- 1) At the Latent Station:
 - a) The operator shall enter the Latent Case number.
 - b) The operator shall capture the latent print.
 - c) The operator shall enhance the impressions.
 - d) The operator shall either select to have the system generate the minutiae automatically which can then be edited by the operator, or the operator manually enter the minutiae.
 - e) The operator shall enter the descriptor data.
 - f) The LP, LPR, PLP, or PLPR type of transaction shall be submitted to the AFIS Server for search.
NOTE: The case can be saved at the local latent database and submitted for search at a later time.

- 2) At the AFIS Server:
 - a) The request shall be received.
 - b) The TCN shall be automatically generated. The TCN shall be used to track the transaction in the AFIS.
 - c) The search shall be performed.
 - d) Matching logic shall be performed.

If the match score is above threshold, go to step 3.
If the match does not exceed threshold, go to step 8.

- 3) At the AFIS Server:
 - a) The respondent list shall be created and placed in the respondent database.
 - b) The record shall be queued for verification (LATVER).

- 4) At the Latent Station:
 - a) The latent operator shall select the Latent Verification application. The latent operator shall select the case to be verified using 'pull' case management.
 - b) The operator shall compare the images and select ident or non-ident.

If the system is configured for secondary verification, continue at step 5.

- c) The operator shall disposition the latent case as 'retain' or 'discard'. **NOTE:** The operator shall only be able to disposition the case if the system is configured with secondary verification turned off.

If 'ident', continue at step 6

If 'non-ident' continue at step 8

5) At the Latent Station:

- a) A different latent operator shall select the Latent Verification application to perform secondary verification. The latent operator shall select the case to be verified using 'pull' case management. The operator shall compare the images and select ident or non-ident.
- b) The latent operator shall disposition the latent case as 'retain' or 'discard'

If 'ident', continue at step 6

If 'non-ident' continue at step 8

- 6) At the AFIS Server, the results of the search are sent to the CCH with a request to print two copies of the rapsheet of the ident respondent.

- 7) At the CCH, two copies of the rapsheet are printed if selected by operator.

- 8) At the AFIS server, the TCN is closed out.

- 9) At the CCH, the statistics are updated.

If the case is to be edited and resubmitted for search, proceed to step 10.

If the case is not to be edited, End of Process.

10) At the Latent Station,

- a) The operator selects to perform latent encoding from the latent case database.
- b) The operator selects the existing case to open.
- c) The operator edits the case by modifying the minutiae, enhancing the image and changing the search parameters.
- d) The operator resubmits the case with the same case number, with the search number field portion of the latent ID number incremented by one.

Proceed to step 2

END OF PROCESS

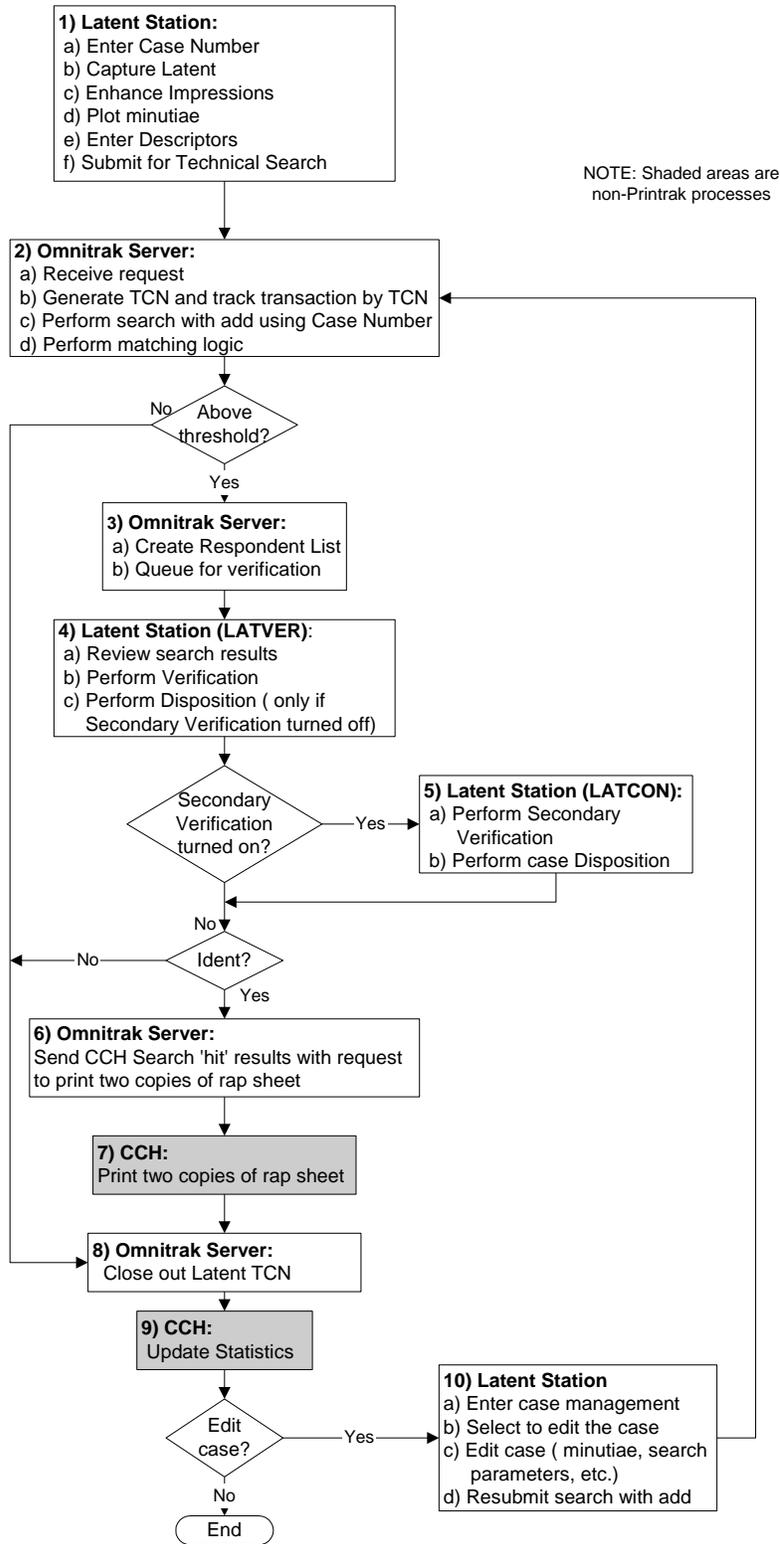


Figure0-7. Latent Processing Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.8.0. Universal Latent Workflow

The AFIS Server shall accept NIST LFFS submissions from the latest version of the Universal Workstation Workstations (ULW) for OSBI AFIS processing as well as managing the submission to the FBI for NGI processing. The destination agency defined in the type-1 record shall be used to determine what searches to perform. If the destination agency is set to OSBI, the latent shall only be searched against the OSBI database. If the destination agency is set to the FBI, the latent shall be first searched against the OSBI database. If the OSBI search did not result in a 'hit', the latent operator can then select to send the latent to the FBI for search. Submission management shall include monitoring the number of such searches submitted to NGI against the quota limit for the state of Oklahoma on a daily basis. The monitoring shall be provided by the workflow management component in the AFIS Server subsystem, which shall alert the system administrator if the daily limit is exceeded. The NGI system is currently underutilized, and the FBI is allowing states to submit an unlimited number of searches to NGI until such time as the system is used to capacity. If NGI is not at capacity when the OSBI AFIS is installed, then the monitoring feature described above shall be turned off. It shall be turned on at such time as the FBI implements search limits for states. The quota limit shall be configurable by the System Manager. The workflow assumes that the NGI features are submitted as part of the NIST file from the ULW and that the ULW has e-mail capability. Refer to Figure-8 for the Universal Latent Workstation Processing Workflow.

- 1) At the Universal Latent Workstation:
 - a) The operator shall enter the Latent Case number, descriptor and case data.
 - b) The operator shall capture the latent print.
 - c) The operator shall enhance the impressions.
 - d) The operator shall either select to have the system generate the NGI minutiae automatically which can then be edited by the operator, or the operator shall manually enter the minutiae.
 - e) An LFFS request (type-1, type-2, type-7, NGI type-9) shall be e-mailed to the AFIS server.
- 2) At the AFIS Server:
 - a) The LFFS request shall be received.
 - b) If the Destination Agency (DAI) in the type 1 record is equal to FBI, a NLP TCN shall be automatically generated and the LFFS NIST file shall be placed in the AFIS NGI queue to be submitted at a later time.
 - c) The case shall be transferred to the Latent Case Management. (LCM).
- 3) At the Latent Station (LCM):
 - a) The case shall be parsed
 - b) The NGI minutiae shall be converted to state AFIS format.
 - c) The operator shall create the case in LCM.
 - d) The operator shall submit the search.
- 4) At the AFIS Server:

- a) The LP TCN shall be automatically generated. The LP TCN shall be used to track the transaction in AFIS.
- b) The search with supersede add shall be performed using the case number.
- c) Matching logic shall be performed.

If the match score is above threshold, go to step 5.

If the match does not exceed threshold, go to step 12.

5) At the AFIS Server:

- a) The respondent list shall be created and placed in the respondent database.
- b) The record shall be queued for verification (LATVER).

6) At the Latent Station:

- a) The latent operator shall select the Latent Verification application. The latent operator shall select the case to be verified using 'pull' case management.
- b) The operator shall compare the images and select ident or non-ident.

If the system is configured for secondary verification, continue at step 7.

- c) The operator shall disposition the latent case as 'retain' or 'discard'. **NOTE:** The operator shall only be able to disposition the case if the system is configured with secondary verification turned off.

If 'ident', continue at step 8.

If 'non-ident', continue at step 12.

7) At the Latent Station:

- a) A different latent operator shall select the Latent Verification application to perform secondary verification. The latent operator shall select the case to be verified using 'pull' case management. The operator shall compare the images and select ident or non-ident.
- b) The latent operator shall disposition the latent case as 'retain' or 'discard'

If 'ident', continue at step 8.

If 'non-ident', continue at step 12.

8) At the AFIS Server:

- a) The results of the search are sent to the CCH.
- b) The SRE NIST file including the hit indicator shall be e-mailed to the ULW.
- c) LCM shall be updated with the 'hit' result

9) At the CCH, two copies of the rapsheet are printed if requested by the operator.

10) At the AFIS server, the TCNs (LP and NLP) are closed out.

11) At the CCH, the statistics are updated.

END OF PROCESS

12) At the AFIS Server:

- a) LCM is updated with the 'no-hit' search result.
- b) The 'no-hit' message is sent back to the ULW.
- c) The LP TCN is closed out.

If the case is to be edited and resubmitted, proceed to step 13.

If the case is not to be resubmitted, and the DAI is FBI, proceed to step 14.

If the case is not to be resubmitted, and the DAI is OSBI, then

END OF PROCESS

13) At the Latent Station:

- a) The operator selects to perform latent encoding from the latent case database.
- b) The operator selects the existing case to open.
- c) The operator edits the case by modifying the minutiae, enhancing the image and changing the search parameters.
- d) The operator resubmits the case with the same case number.

Proceed to step 4.

14) At the Latent Station, the operator selects to submit the case to the FBI.

If the NGI submission limit quota has been reached, proceed to step 18.

If the NGI submission limit quota has not been reached, proceed to step 15.

15) At the AFIS DES, the original LFFS NIST file that was received from the Universal Latent Workstation shall be submitted to NGI.

16) At the AFIS DES:

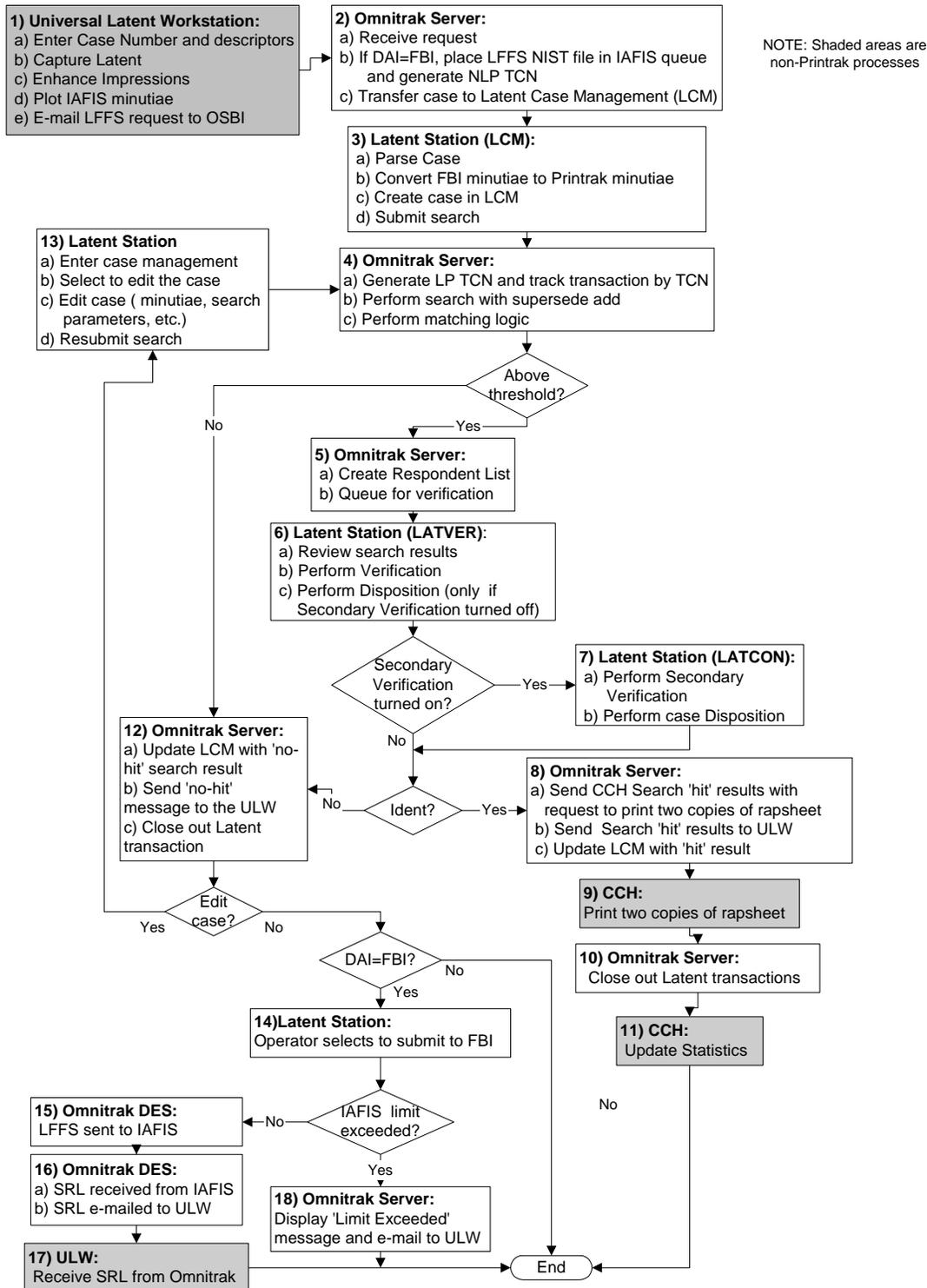
- a) The SRL shall be received from NGI.
- b) The SRL shall e-mailed to the submitting ULW.

17) At the ULW, the SRL shall be received from AFIS system.

END OF PROCESS

18) At the AFIS server, the 'NGI Submission Limit Exceeded' Message shall be displayed. An ERRT NIST file message stating the limit is exceeded shall be e-mailed to the ULW.

END OF PROCESS



NOTE: Shaded areas are non-Printrak processes

Figure-8. Universal Latent Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.9.0. Reverse Search Processing Workflow

Reverse searches are launched in accordance with the LiveScan and TenPrint workflows. The TenPrint search may have potential matches against multiple latent cases, and these multiple latent cases may be managed by different latent examiners. The match report shall be available for viewing by all latent examiners who have cases in the match report; however, when each latent examiner views the report, he or she shall only be able to see the latent(s) for which he or she is responsible. AFIS match reports do not always have to be made available to a particular workstation. A user who is authorized to review a particular match report shall be able to review this report from any location. During latent control, the latent examiner then updates the appropriate latent database. In the case of a hit, the latent examiner shall be able to choose to delete the unsolved latent, or alternatively may choose to retain it in the unsolved latent database. Refer to Figure-9 for the Reverse Search Processing Workflow.

- 1) At the AFIS Server:
 - a) The Reverse Search TCN shall be automatically generated with a TOT of ULC or ULP. This TCN may only be the root TCN if multiple latent examiners are required to do verification. In that case, a new TCN shall be generated for each latent examiner base on the root TCN. The TCNs will be prefixed with the TOT so that ULC and ULP transactions can be tracked independently.
 - b) The TenPrint/palms vs. unsolved latent file search shall be automatically initiated.
 - c) Expert matching shall be applied if there are respondents.
 - d) The match results shall be generated.

If there are no respondents proceed to step 7.

If there are respondent latents, proceed to step 2.

- 2) At the AFIS server:
 - a) The match results shall be queued based on the originating latent examiner for each latent in the respondent list.
 - b) A new transaction, TCN, shall be generated for each latent examiner required to verify search results.

NOTE: The remaining workflow steps shall be followed for each latent examiner required to verify search results under a unique TCN.

- 3) At the Latent Station (LATVER):
 - a) The match results shall be reviewed by the assigned latent examiner. The latent operator shall select the case to be verified using 'pull' case management.
 - b) The operator shall compare the images and select ident or non-ident.

If the system is configured for secondary verification, continue at step 4.

- c) The operator shall disposition the latent case as 'retain' or 'discard'. **NOTE:** The operator shall only be able to disposition the latent if the system is configured with secondary verification turned off.

If 'ident', continue at step 5.

If 'non-ident', continue at step 7.

4) At the Latent Station:

- c) A different latent operator with proper privileges shall select the case to be verified using 'pull' case management. The operator shall compare the images and select ident or non-ident.
- d) The latent operator shall disposition the latent as 'retain' or 'discard'.

If 'ident', continue at step 5.

If 'non-ident', continue at step 7.

5) At the AFIS Server, the results of the search are sent to the CCH.

6) At the CCH:

- a) Two copies of the rapsheet are printed if requested by the operator.
- b) The statistics are updated.

7) At the AFIS server, the reverse search TCN is closed out.

End of Process

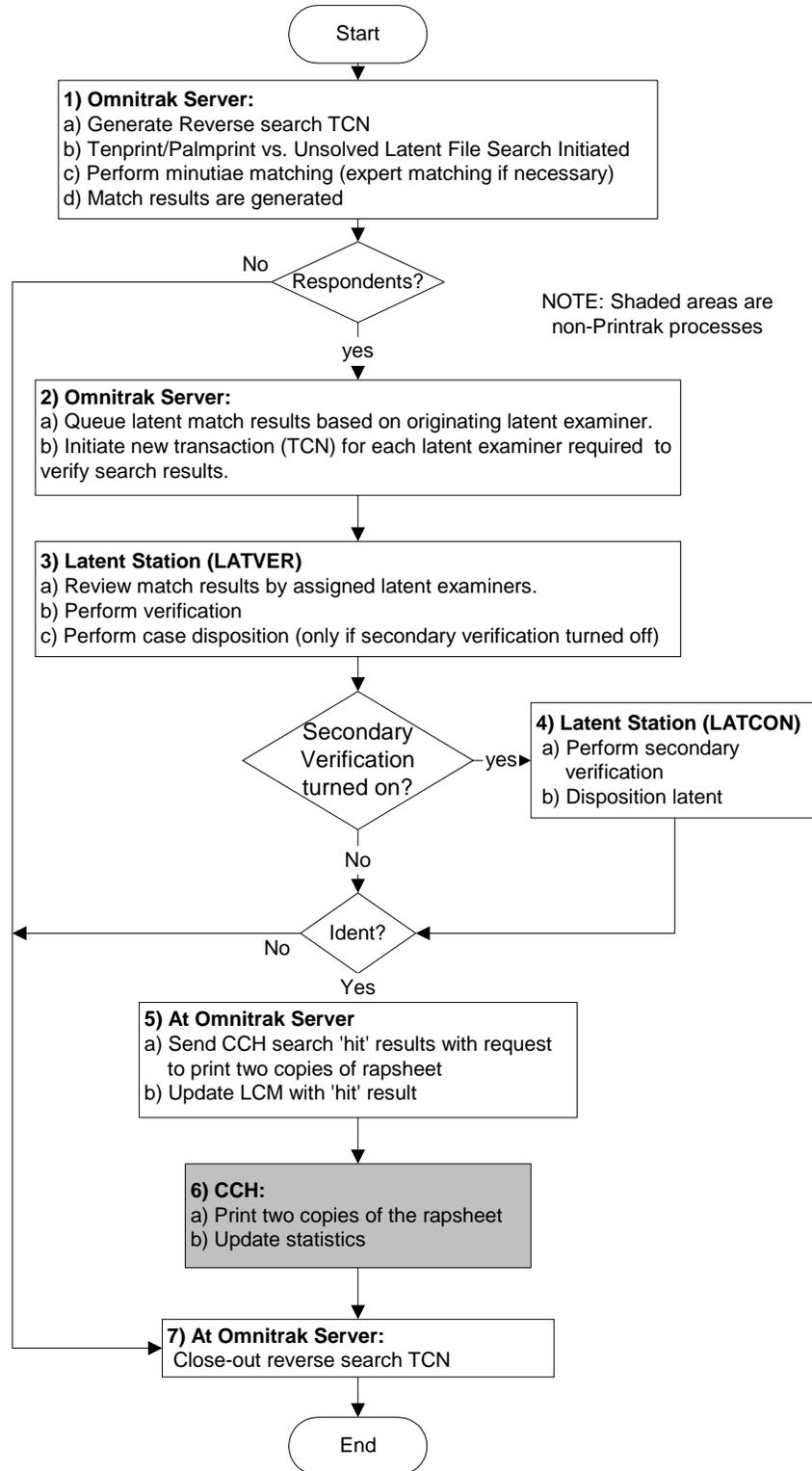


Figure-9. Reverse Search Processing Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.10.0 Image Conversion (IC) Workflow

The Image Conversion Workflow shall be used only for cases where the SID number is already known. It shall be used to perform a search with add of a TenPrint record of the AFIS database or to add a PalmPrint record to the PalmPrint database for an existing TenPrint record. The record, TenPrint and/or palm, would be entered using the existing SID number. The SID can be verified through database maintenance by displaying the TenPrint images and comparing them with the fingerprint images on the TenPrint card or for PalmPrint cards by comparing the index finger displayed with the index finger on the back of the PalmPrint card. A latent search could also be submitted using the index finger on the back of the PalmPrint card to verify the SID exists in the TenPrint database. Once the SID is known the IC transaction can be initiated. The Image Conversion Workflow is shown in Figure-10.

- 1) At the MultiPrint Station:
 - a) The operator shall select the PrintScan application, and select the Image Conversion Workflow.
 - b) The operator shall enter the SID and descriptor data.
 - c) If the TenPrint card is available, the operator shall then place the fingerprint card on the scanner. The fingerprint card shall be scanned.
 - d) The operator shall view the fingerprints and re-center if required.
 - e) If the PalmPrint card is available, the operator shall place it on the scanner. The front side of the PalmPrint card shall be scanned including the barcode. The system shall verify that the fingerprint and PalmPrint barcodes are the same. The operator shall flip the PalmPrint card and the other PalmPrint is scanned
 - f) The operator shall place the 5.5" X 5.5" box over the portion of the palm to be processed.
 - g) The operator shall select to submit the record.
 - h) The MultiPrint Station shall automatically extract the feature data for palm and TenPrint records.
 - i) The record shall be submitted to the AFIS server.
- 2) At the AFIS Server:
 - a) The request shall be received.
 - b) The TCN shall be generated and the IC transaction type will be used as a prefix to the TCN number to track the transaction.

If TenPrint Card transaction continues at step 4.
If PalmPrints only, continue at step 3
- 3) At the AFIS Server, add the PalmPrint by the SID number.
End of Process
- 4) At the AFIS Server:

- a) The record shall be added by the SID number. The search shall be performed against the TPF.
 - b) The matching logic shall be performed.
 - If match score above threshold, go to step 5
 - If match score below threshold,
 - then,
 - if QC required, go to step 6
 - if QC not required, go to step 8
- 5) At the AFIS Server - The record shall be placed in the verification queue to be processed using 'blind verification.'
- a) At the Review Station, the operator shall select the TenPrint Verification application. The verification record shall automatically be displayed with the search images and respondent images using 'push' case management. The operator shall compare the images and select ident or non-ident. The record shall be available for Secondary Verification.
 - b) A different operator shall select the TenPrint Verification application. The secondary verification record shall automatically be displayed using 'push' case management. The operator shall compare the images and select ident or non-ident. If the results are not the same as the primary verification, the record shall be placed in the verification supervisor queue and the supervisor shall perform TenPrint Verification using 'pull' case management.
 - If 'QC' required, processing continues at step 6;
 - If 'QC' not required and 'hit', go to step 9
 - If 'QC' not required and 'nohit', go to step 8
- 6) At the Review Station, perform Quality Control.
- 7) At the AFIS Server, update TP database with quality control changes
- 8) At the AFIS Server:
- a) Use entered ID
 - b) Update statistics
- Proceed at step 11
- 9) At the AFIS Server:
- a) The Ident state shall be set.
 - b) The Hit SID(s) shall be sent to the CCH for consolidation.
 - d) The TP and PP database shall be consolidated. If the new record contains amputated or scared fingers that did not exist in the replaced record, the UPD flag shall be set for IAFIS FIS submissions.

10) At the CCH:

- a) The Ident SID(s) shall be received.
- b) The SID shall be consolidated based on criteria.
- c) A message shall be sent to III for consolidation.
- d) The TCN shall be closed out and DOCCON processed automatically.
- e) End of Process

11) At the AFIS Server:

- a) A ULC search shall be automatically launched. (see section 0)
- b) A ULC search shall be automatically launched (if applicable). (see section 0)

Applicant cases shall always be submitted to IAFIS as MAP or NFUF. For criminal cases the AFIS Server shall check the III flag and the IAFIS flag. If neither flag is set, the record shall be submitted to the FBI and processing shall continue at step 12. If either flag is set, the AFIS server shall check the UPD flag to determine if a Fingerprint Image Submission (FIS) request shall be submitted to the FBI. If the UPD flag is set, processing shall continue at step 12. If the record is not to be submitted to the FBI and processing continues at DOCCON.

12) At the AFIS DES:

- a) The TCN state shall be checked for descriptor data complete from CCH.
- b) The descriptor data shall be retrieved from the CCH.
- c) The NIST file for IAFIS submission shall be placed in the IAFIS queue and submitted to IAFIS. The type of transaction (TOT) shall be a Criminal Answer Required (CAR) for first time criminal submissions, Miscellaneous Applicant (MAP) for applicant submissions, Non-Federal Applicant User Fee (NFUF) for non-federal applicants with fee submissions or a Fingerprint Image Submission (FIS) for updating images for an existing record. The IAFIS flag shall be set for CAR submissions.

13) The Submission Results – Submission Results Electronic (SRE) or Error TenPrint (ERRT) IAFIS responses for CAR, MAP and NFUF submissions and Fingerprint Image Submission Responses (FISR) or Image Transaction Error (ERRI) for FIS submissions shall be received at the AFIS DES. If the SRE or FISR response is received, processing continues at step 16. If an ERRT or ERRI response is received, processing continues at step 14.

14) At the AFIS DES:

- a) The SRE or FISR response shall be forwarded to the CCH.
- b) The case shall be deleted from the IAFIS queue.

15) At the CCH:

- a) The SRE or FISR shall be received.
- b) The database shall be updated.

Processing shall continue at DOCCON.

16) For an ERRT or ERRI being returned at the AFIS Server:

- a) The error shall be placed in the IAFIS error queue.
- b) The operator shall select the record to edit, view the error, and update the record. The operator shall select to re-submit the record to IAFIS.
- c) The CAR, MAP, NFUF or FISR transaction shall be re-submitted to IAFIS.
- d) If the CCH descriptor data requires updating, the operator shall manually update the CCH descriptors at the CCH terminal.

Proceed to step 14.

DOCCON (End of Process)

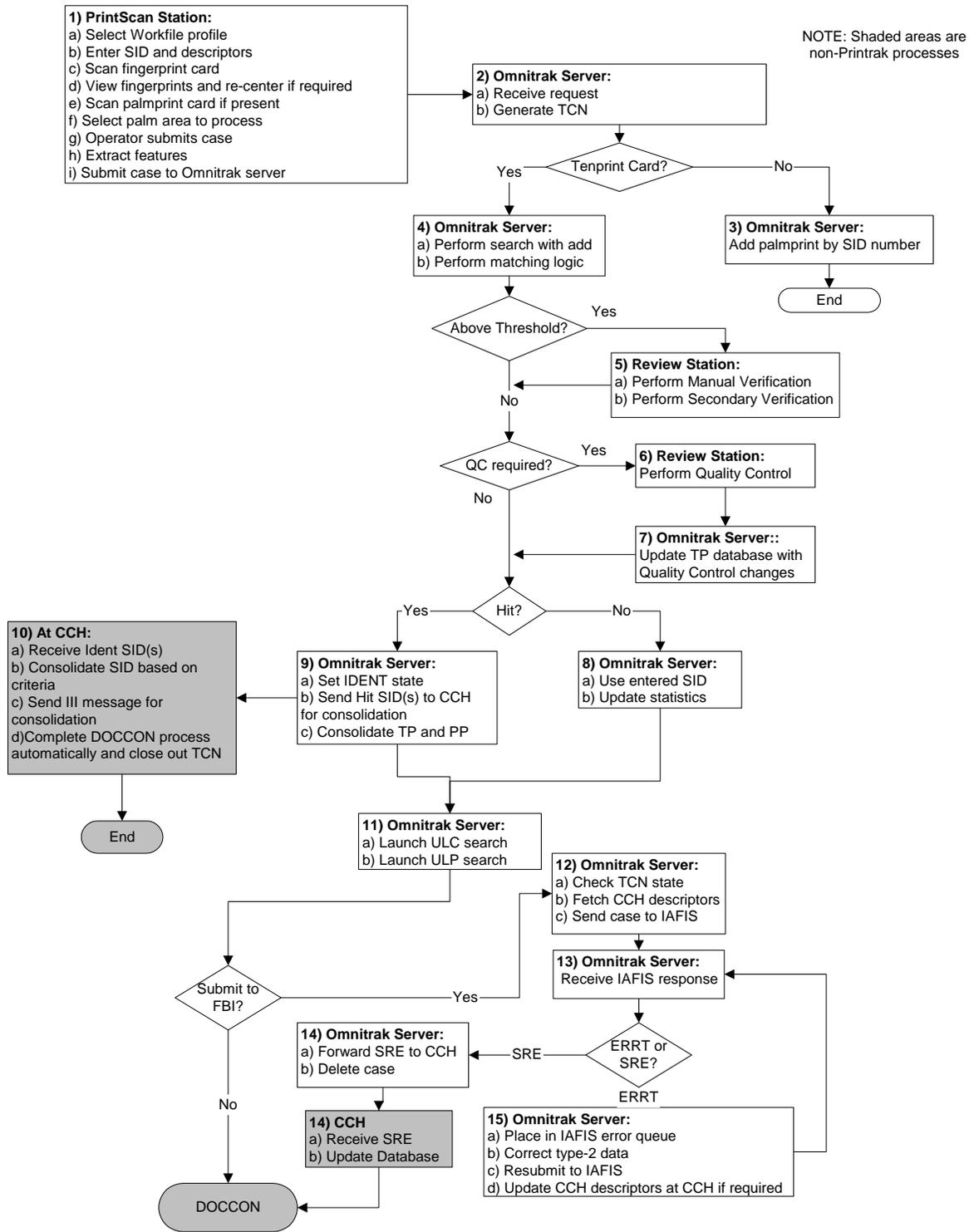


Figure-10. Image Conversion Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

1.11.0. Mugshot Add Workflow.

The mugshot add only workflow is shown in Figure-11. This workflow is used to send mugshots to the OSBI system for existing fingerprint records contained in the AFIS database. The NIST file submitted to the OSBI system must contain type-1, type-2 and type-10 records.

- 1) At Mugshot
 - a) The operator enters the unique booking ID.
 - b) The operator captures the mugshots and possibly SMT data.
 - c) The operator enters the type-2 data including the SID.
 - d) The type-1, type-2 and type-10 NIST file is created.
 - e) The NIST file is emailed to OSBI AFIS DES.

- 2) At the AFIS DES:
 - a) The NIST file shall be received.
 - b) The TCN shall be generated.
 - c) The type-2 data shall be validated.

If the data is invalid, proceed to step 3.

If the data is valid, proceed to step 4.

- 3) At the AFIS DES:
 - a) The ERRT NIST file is created.
 - b) The ERRT is emailed to mugshot
 - c) The NIST data shall be deleted and the TCN shall be closed out.

End of process

- 4) At the AFIS Server, the database is checked to see if SID exists.
 - If SID exists, proceed to step 6.
 - If SID does not exist, proceed to step 5.
- 5) At the AFIS Server, the case shall be deleted and the TCN shall be closed out.

End of Process

- 6) At the AFIS DES:
 - a) The Mugshot and descriptor data shall be sent to Mugshot database

7) At Mugshot, the record is added to the database.

8) At AFIS Server, the TCN shall be closed out.

END of Process

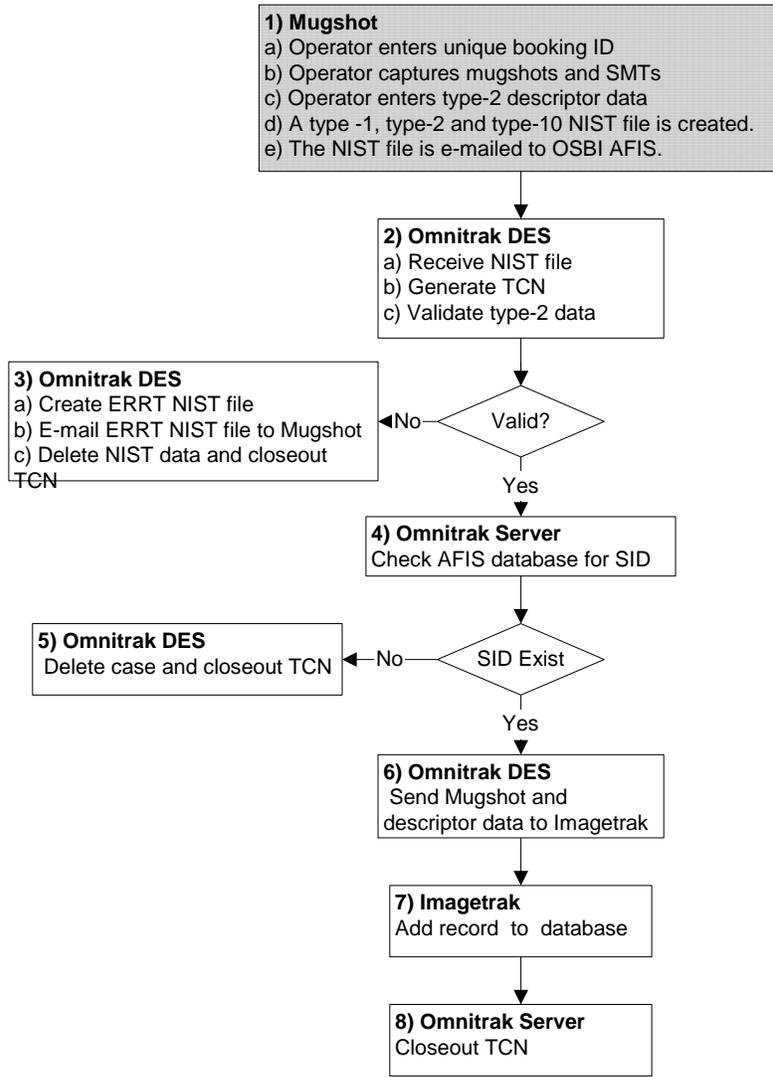


Figure-11. Mugshot Add Workflow

Note: LSS2000/LSS3000 and the AFIS are trademarks of Safran/MorphoTrak, they are listed here to provide reference for the transaction workflows that are in use in the current AFIS.

AFIS TO CCH TRANSACTIONAL MESSAGING SPECIFICATION

The following section describing the existing AFIS to CCH interface and the transactional messages used to complete transactions and move data between the two integrated systems.

2.0 AFIS/CCH Message Structure and Format

The transaction data file sent between Omnitrak and CCH shall adhere to XML data file standards. Each XML data file shall contain the XML version, header, and descriptor data.

2.1 XML Declaration

The XML file shall begin with an XML declaration that specifies the version of XML being used. Version 1.0 shall be used as follows:

```
<?xml version='1.0' encoding='UTF-8'?>
```

2.3 Data Elements

Each XML data file shall contain data elements. The data elements shall contain header information and descriptor data information. The data elements shall begin with the <message> tag and end with the </message> tag.

2.4 Header Definition

Each XML data file shall contain a header. The header describes generic information about the transaction, such as the message ID, message name, transaction control number, AFIS workflow transaction control number and the date/time. The header shall begin with the <header> tag and end with the </header> tag

Table 0-1 below describes the fields that are included in the header. The condition field indicates if the field is mandatory or optional.

Table 0-1. Header Definition

Field	XML Tag Name	Condition	Description
Message Identification	<message_id>	M	This element contains the message identification in the format CAID or ACID where CA is for messages going from CCH to AFIS and AC is for messages going from AFIS to CCH. The ID is the specific two digit message number.
Message Name	<message_name>	M	This element defines the message name
Transaction Control Number	<tcn>	M	This element contains the OSBI Transaction Control Number. A unique control number shall be assigned for each case. The OSBI Type of Transaction (TOT) and the system that generated the TCN. The format is S-TOTNNNNNNNNN where S is the system that generated the TCN (A for AFIS or C for CCH), TOT is the type of transaction and NNNNNNNNN is the 9 digit unique numeric.
Workflow Transaction Control Number	<wtcn>	O	This element is created by AFIS for messages sent from AFIS to CCH where a response is required. This field will also be included in the response message from CCH to AFIS with the same information. (i.e. descriptors returned from CCH to AFIS resulting from a fetch request from AFIS). The field contains the state ID and Workflow ID used by the Omnitrak Workflow Manager.
Date/Time	<date_time>	M	This element contains the current date and time in the format CCYYMMDD:HH:MM:SS

2.5 Descriptor Data

XML files can contain descriptor data such as name, date of birth, etc. The descriptor data shall begin with the <descriptor_data> element and end with the </descriptor_data> element. Refer to the Descriptor Data Dictionary for the fields that are included in the descriptor data.

2.6 Records

Each record element shall begin with the start tag <i.e. arrestCharge>. In the following example, <arrestCharge> is followed by up to nine record items where each record item is contained within the <arrestCharge> element. There can also be multiple records with the same tag in a message. In the following example, there are three <arrestCharge> records.

2.7 Empty Fields

If a field is not within a record, there is no need to include the field in the XML file when there is no value present (e.g. <eyeColor/>).

2.8 File Name

The XML file name shall include the message ID and the TCN. An example is shown below.

AC01_A-LV100003520.XML

2.9 XML File Example

The following is an example of an AC01 XML message.

```
<?xml version="1.0" encoding="UTF-8"?>
<message>
  <header>
    <message_id>AC01</message_id>
    <message_name>TP_DESC</message_name>
    <tcn>A-LV123456789</tcn>
    <wtcn>LV0-123456000</wtcn>
    <date_time>20010917:01:02:03</date_time>
  </header>
  <descriptor_data>
    <aka>a-aliaslast, aliasfirst</aka>
    <aka>a-aliaslast2, aliasfirst2</aka>
    <arrest>
      <ori>ALFBIBH00</ori>
      <doa>19961212</doa>
      <otn>000000002Y</otn>
      <oca>12345678</oca>
      <doo>20001010</doo>
    </arrest>
    <arrestCharge>
      <arrestChargeSequence>1</arrestChargeSequence>
      <ast>0200030062</ast>
      <aol>0200030062 UNLAWFUL HANDLING OF PESTICIDE</aol>
      <cac>N</cac>
      <cad>Y</cad>
      <cae>Y</cae>
      <dac>N</dac>
      <fom>F</fom>
      <adc>223</adc>
      <goc>A</goc>
    </arrestCharge>
    <arrestCharge>
      <arrestChargeSequence>2</arrestChargeSequence>
      <ast>0200060102</ast>
      <aol>0200060102 UNLAWFUL SALE OF BOVINE ANIMALS</aol>
      <cac>N</cac>
      <cad>N</cad>
      <cae>N</cae>
      <dac>N</dac>
      <fom>M</fom>
      <adc>223</adc>
      <goc>A</goc>
  </descriptor_data>
</message>
```

```

        <goc>A</goc>
    </arrestCharge>
    <arrestCharge>
        <arrestChargeSequence>3</arrestChargeSequence>
        <ast>0200060094</ast>
        <aol>0200060094 REMOVING TAG FROM BRUCELLOSIS </aol>
        <cac>N</cac>
        <cad>N</cad>
        <cae>N</cae>
        <dac>N</dac>
        <fom>M</fom>
        <adc>229</adc>
        <goc>A</goc>
    </arrestCharge>
    <dpr>20020313</dpr>
    <identification>
        <nam>SMITH, BOB JOE</nam>
        <dob>19851212</dob>
        <eye>BLK</eye>
        <hgt>601</hgt>
        <wgt>506</wgt>
        <hai>BAL</hai>
        <pob>AA</pob>
        <mnu>PP-10234567989</mnu>
        <mnu>PS-10234567989</mnu>
        <mnu>SS-10234567989</mnu>
        <ctz>TA</ctz>
        <ppa>Y</ppa>
        <pht>Y</pht>
        <dna>Y</dna>
        <smt>TAT ABDOM</smt>
        <res>U7T8TJTFJGFJGJ</res>
        <employment>
            <ocp>FFGFGFG</ocp>
            <ead>FGFGFG</ead>
        </employment>
    </identification>
    <ico>IDENT COMMENT</ico>
    <rfp>Y</rfp>
    <taa>Y</taa>
    <tcn>
        <systemGenerated>A</systemGenerated>
        <tot>LV</tot>
        <tcnNumber>123456789</tcnNumber>
    </tcn>
</descriptor_data>
</message>

```

2.10 Definition of Messages

This section shall list the messages required between AFIS and CCH. The message field description shall identify the transaction and what events in the transaction path trigger the use of the message.

2.11 CCH AFIS Messages

Table 0-2 summarizes the messages that are required to be shared between CCH and AFIS. The CA02 message, DESC_RESPONSE, is sent by the CCH in response to the AC02 message, TP_SEARCH_RESULTS, the AC06 message, IC_SEARCH_RESULTS and the AC08 message DESC_FETCH. All other messages are considered as asynchronous and no explicit response is expected. The tables describing the messages only show the header and descriptor elements. These elements will be enclosed within the <message> and </message > tags as shown in the example.

Table 0-2. CCH/AFIS Messages

Message ID	Name	Description
CA01	SEARCH_DESC	Search Descriptors sent from CCH to AFIS.
CA02	DESC_RESPONSE	CCH to AFIS the type-2 descriptors for IAFIS submission. This message is sent as a response to the AC03, AC06 and the AC08 messages sent from AFIS to CCH, all requesting the type-2 descriptors for the given SID number.
AC01	TP_DESC	AFIS to CCH Message containing the type-2 descriptor data.
AC02	QC_REJECT	Send Reject Message from AFIS to CCH containing the reject indicator
AC03	TP_SEARCH_RESULTS	AFIS to CCH, contains search results and 'new SID' or up to three 'Hit SIDs' The CCH will respond to this message with the CA02 DESC_RESPONSE message with contains the information for IAFIS submission.
AC04	LT_SEARCH_RESULTS	AFIS to CCH, contains 'Hit ID' search results with request to print two copies of the RAP sheet.
AC05	REV_SEARCH_RESULTS	AFIS to CCH, contains 'Hit ID' search results with request to print two copies of the RAP sheet.
AC06	IC_SEARCH_RESULTS	AFIS to CCH, contains 'Hit ID' search results for record consolidation resulting from the Image Conversion workflow. The CCH will respond to this message with the CA02 DESC_RESPONSE message with contains the information for IAFIS submission.
AC07	IAFIS_SRE	AFIS to CCH containing the SRE returned from IAFIS
AC08	DESC_FETCH	AFIS to CCH requesting the type-2 data for a given SID number. This data to be used to print a fingerprint card.
CA03	DELETE_AFIS	CCH to AFIS delete request for the TenPrint record identified by the SID

Message ID	Name	Description
AC09	DELETE_CCH	AFIS to CCH delete request for the TenPrint record identified by the SID
AC10	ERROR_COND	AFIS to CCH error message. This message is used to report errors and contains an error code and in some cases a text error description.
AC11	IAFIS_ERRT	AFIS to CCH containing the ERRT returned from IAFIS

MESSAGE FORMAT DETAILS

Details of specific message content for the previously listed messages.

3.1.0. CA01 (SEARCH_DESC)

Table 0-1 shows the message sent from CCH to AFIS once the Card Mail-in process has been completed. The descriptor section contains the search descriptors (Sex, Race, DOB).

Table 0-1. SEARCH_DESC

<i>Element</i>	<i>Field</i>	<i>XML Tag Name</i>	<i>Description</i>
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as CA01.
	Message name	<message_name>	This field contains the message name for this case defined as SEARCH_DESC
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	Sex	<sex>	This field contains the sex
	Race	<race>	This field contains the race
	YOB	<yob>	This field contains the year of birth (CCYY)

3.2.0. CA02 (DESC_RESPONSE)

Table 0-2 shows the message sent from CCH to AFIS once the type-2 data has been generated for IAFIS submissions. The III flag is included as a descriptor field for IAFIS submissions.

Table 0-2. DESC_RESPONSE

<i>Element</i>	<i>Field</i>	<i>XML Tag Name</i>	<i>Description</i>
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as CA02.
	Message name	<message_name>	This field contains the message name for this case defined as DESC_RESPONSE.
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	This field contains the <wtcn> of the requesting AC03 TP_SEARCH_RESULTS message, the AC06 IC_SEARCH_RESULTS message or the AC08 DESC_FETCH message.
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	III flag	<iiiflag>	This field contains the iii flag (Y/N) NOTE: Only used in the in the response from the AC03 and AC06 messages. It is not required in the response from the AC08 message.
	Remaining descriptor data	<field_name>	See section 3.3.4 as an example and the OSBI XML Data Dictionary (reference j) for data field names and definitions.

3.3.0. AC01 (TP_DESC)

Table 0-3 shows the message sent from AFIS to CCH containing all the descriptor data entered from the workstation (Livescan, Cardscan, etc) where the case was originated.

Table 0-3. TP_DESC

Element	Field	XML Tag Name	Description
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC01.
	Message name	<message_name>	This field contains the message name for this case defined as TP_DESC.
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	Descriptor data	<field_name>	See section 3.3.4 as an example and the OSBI XML Data Dictionary (reference j) for data field names and definitions.

3.4.0. AC02 (QC_REJECT)

Table 0-4 shows the message sent from AFIS to CCH for Quality Control Rejected.

Table 0-4 QC_REJECT

Element	Field	XML Tag Name	Description
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC02.
	Message name	<message_name>	This field contains the message name for this case defined as QC_REJECT.
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYMMDD:HH:MM:SS.
<descriptor_data >	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	Reject Code and Description	<reject_code>	This field contains the reject code for quality control reject defined as “R - Illegible prints”

3.5.0. AC03 (TP_SEARCH_RESULTS)

Table 0-5 shows the message sent from AFIS to CCH for the TenPrint Search Results. The descriptor data includes the 'Ident' indicator and up to three 'Hit' SIDs for ident or the 'New' SID for non-idents. In the case of multiple idents, the multiple records shall be consolidated using the hit_sid1 ID number in the AFIS and CCH databases. The type of transaction is always included in the message.

Table 0-5. TP_SEARCH_RESULTS

Element	Field	XML Tag Name	Description
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC03.
	Message name	<message_name>	This field contains the message name for this case defined as TP_SEARCH_RESULTS.
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	The field contains the state ID and Workflow ID and shall be used as the <wtcn> in the CA02 DESC_RESPONSE message.
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	Ident Indicator	<ident_indicator>	This field contains the hit Nohit Indicator (I/N) where I designates Ident and N designates non-ident.
	New SID (see note below)	<new_sid>	This field contains the new sid (for non idents only).
	Hit SID1	<hit_sid1>	This field contains the first hit sid (for idents only).
	Hit SID2	<hit_sid2>	This field contains the second hit sid (if applicable).
	Hit SID3	<hit_sid3>	This field contains the hit sid third (if applicable).
	Type of Transaction	<tot>	This field contains the type of transaction, which is also contained in the Transaction Control Number <tcn> in the header of this message.

NOTE: The New SID field will always be blank for the search only transactions. The search only transactions are not added and can be identified by the type of transactions of CRN, CVN, CVBN and CVNN.

3.6.0. AC04 (LT_SEARCH_RESULTS)

Table 0-6 shows the message sent from AFIS to CCH for Latent Search Results for ‘hit’ cases. The descriptor data contains the TenPrint SID number of the Ident and the number of rap sheets to be printed.

Table 0-6. LT_SEARCH_RESULTS

Element	Field	XML Tag Name	Description
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC04.
	Message name	<message_name>	This field contains the message name for this case defined as LT_SEARCH_RESULTS.
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	Ident SID	<ident_sid>	This field contains the SID of the TenPrint record identified by the latent case.
	RAP Sheet	<rap>	This field contains the number of copies of the RAP sheet to be printed.

3.7.0. AC05 (REVERSE_SEARCH_RESULTS)

Table 0-7 shows the message sent from AFIS to CCH for Reverse Search Results for ‘Hit’ cases. The descriptor data contains the TenPrint SID number of the Ident and the number of rap sheets to be printed.

Table 0-7. REVERSE_SEARCH_RESULTS

<i>Element</i>	<i>Field</i>	<i>XML Tag Name</i>	<i>Description</i>
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC05.
	Message name	<message_name>	This field contains the message name for this case defined as REVERSE_SEARCH_RESULTS
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	Hit SID number	<hit_sid>	This field contains the SID number of the tenprint record determined to be a ‘hit’ resulting from the reverse search.
	RAP Sheet	<rap>	This field contains the number of copies of the RAP sheet to be printed.

3.8.0. AC06 (IC_SEARCH_RESULTS)

Table 0-8 shows the message sent from AFIS to CCH for Image Conversion Search Results for ‘Hit’ cases. The descriptor data contains the TenPrint SID number of the TenPrint card read-in and the SID number of up to three TenPrint cards ‘identified’ for consolidation on the CCH. In the case of multiple idents, the multiple records shall be consolidated using the hit_sid1 ID number in the AFIS and CCH databases.

Table 0-8. IC_SEARCH_RESULTS

<i>Element</i>	<i>Field</i>	<i>XML Tag Name</i>	<i>Description</i>
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC06.
	Message name	<message_name>	This field contains the message name for this case defined as IC_SEARCH_RESULTS.
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	The field contains the state ID and Workflow ID and shall be used as the <wtcn> in the CA02 DESC_RESPONSE message.
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	Case SID	<case_sid>	This field contains the SID of the card scanned
	Ident Indicator	<ident_indicator>	This field contains the hit Nohit Indicator (I/N) where I designates Ident and N designates non-ident.
	Hit SID1	<hit_sid1>	This field contains the first hit sid (for idents only).
	Hit SID2	<hit_sid2>	This field contains the second hit sid (if applicable).
	Hit SID3	<hit_sid3>	This field contains the hit sid third (if applicable).

3.9.0. AC07 (IAFIS_SRE)

Table 0-9 shows the message sent from AFIS to CCH for search results returned from IAFIS for TenPrint searches submitted to IAFIS. This table represents all the possible fields that can be returned from IAFIS. All the fields may not be included in the message. This message shall also be used for the IAFIS E1001 search results. The only field used for the E1001 response is the <srf> field. The mandatory field are noted and they shall always exist for the SRE response.

Table 0-9. IAFIS_SRE

<i>Element</i>	<i>Field</i>	<i>XML Tag Name</i>	<i>Description</i>
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC07.
	Message name	<message_name>	This field contains the message name for this case defined as IAFIS_SRE.
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data. See reference L, EFTS document for field specifications
	Attention Indicator	<atn>	Mandatory (SRE only)
	Send Copy To	<sco>	
	Originating Agency Case Number	<oca>	
	FBI Number	<fbi>	
	State Identification Number	<sid>	
	Name	<nam>	Mandatory (SRE only)
	Employer and Address	<ead>	
	Occupation	<ocp>	
	Residence of Person Fingerprinted	<res>	
	Search Results Findings	<srf>	Mandatory (SRE and E1001)
	Action To Be Taken	<acn>	
	Controlling Agency Identifier	<cri>	Mandatory (SRE only)
	Electronic Rap Sheet	<ers>	
	Civil Record Number	<crn>	
	Treat As Adult	<taa>	

3.10.0. AC08 (DESC_FETCH)

Table 0-10 shows the format of a descriptor fetch message sent from AFIS to CCH requesting the descriptor data for the given SID number.

Table 0-10. DESC_FETCH

<i>Element</i>	<i>Field</i>	<i>XML Tag Name</i>	<i>Description</i>
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC08.
	Message name	<message_name>	This field contains the message name for this case defined as DESC_FETCH.
	Transaction Control Number	<tcn>	There is no OSBI TCN related to this message. The contents of this field will be set to a default value.
	Workflow Transaction Control Number	<wtcn>	The field contains the state ID and Workflow ID and shall be used as the <wtcn> in the CA02 DESC_RESPONSE message.
	Date/Time	<date_time>	This field contains the current date in the format CCYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	SID Number	<sid>	State ID Number of the record to be fetched

3.11.0. AC09 (DELETE_CCH)

Table 0-11 shows the message sent from AFIS to CCH requesting a delete of a TenPrint record on the CCH that has already been deleted on the AFIS and mugshot databases.

Table 0-11. DELETE_CCH

Element	Field	XML Tag Name	Description
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC09
	Message name	<message_name>	This field contains the message name for this case defined as DELETE_CCH.
	Transaction Control Number	<tcn>	There is no OSBI TCN related to this message. The contents of this field will be set to a default value.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	SID number	<sid>	SID number of the record to be deleted.

3.12.0. CA03 (DELETE_AFIS)

Table 0-12 the message sent from CCH to AFIS requesting a delete of a record on the AFIS and mugshot databases that has already been deleted on the CCH.

Table 0-12. DELETE_AFIS

Element	Field	XML Tag Name	Description
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as CA03
	Message name	<message_name>	This field contains the message name for this case defined as DELETE_AFIS.
	Transaction Control Number	<tcn>	The TCN sent from CCH has the format C-XDnnnnnnnnn
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	SID number	<sid>	SID number of the record to be deleted.

3.13.0. AC10 (ERROR_COND)

Table 0-13 shows the message sent from AFIS to CCH to report an error condition that resulted at some point during the transaction. This message shall include an error code identifying the error and in some cases, a text field describing the error.

Table 0-13. ERROR_COND

Element	Field	XML Tag Name	Description
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC10.
	Message name	<message_name>	This field contains the message name for this case defined as ERROR_COND
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data.
	Error code	<err_code>	Error code Identifying the error Err01 - Expected search descriptor file not present Err02 – Not currently used Err03 – missing mandatory descriptor data
	Text message	<msg>	Text message identifying the missing mandatory fields. Example for Err03 <msg>descriptors[0].Sex[0],descriptors[0].Race[0],descriptors[0].Name[0],</msg>

3.14.0. AC11 (IAFIS_ERRT)

Table 0-14 shows the message sent from AFIS to CCH for an error message returned from the FBI for TenPrint searches submitted to IAFIS. This table represents all the possible fields that can be returned from IAFIS. All the fields may not be included in the message. The mandatory field is noted and they shall always exist.

Table 0-14. IAFIS_ERRT

<i>Element</i>	<i>Field</i>	<i>XML Tag Name</i>	<i>Description</i>
<header>	Header	<header>	This element includes the header information.
	Message Identification	<message_id>	This field contains the message ID for this case defined as AC11.
	Message name	<message_name>	This field contains the message name for this case defined as IAFIS_ERRT.
	Transaction Control Number	<tcn>	This field contains the OSBI Transaction Control Number. See Table 0-1 for the format of the TCN.
	Workflow Transaction Control Number	<wtcn>	Not applicable for this message
	Date/Time	<date_time>	This field contains the current date in the format CCYYMMDD:HH:MM:SS.
<descriptor_data>	Descriptor Data	<descriptor_data>	This element includes the descriptor data. See reference L, EFTS document for field specifications
	Attention Indicator	<atn>	Mandatory
	Send Copy To	<sco>	
	Originating Agency Case Number	<oca>	
	FBI Number	<fbi>	
	State Identification Number	<sid>	
	Misc. Identification Number	<mnu>	
	Status/Error Message	<msg>	Mandatory
	Controlling Agency Identifier	<cri>	

APPENDIX B – GLOSSARY

Item	Description
AFIS	Automated Fingerprint based Identification System
OCPD	Oklahoma City Police Department
OCSO	Oklahoma County Sheriff's Office
TOT	Type of Transaction
TCN	Transaction Control Number
NIST	National Institute of Standards and Technology
Type-1	NIST record type that defines transactional characteristics in the NIST standard for exchange of fingerprint data
Type-2	NIST record type that specifies State defined descriptor data as part of the NIST standard for exchange of fingerprint data
CJIS	Criminal Justice Information Systems
NGI	Next Generation Identification
DES	Data Exchange Services