

**Mississippi Department of Public Safety
Criminal Information Center**

***MCHS Palm Print Scanning
Certification
Test Procedures***

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OVERVIEW OF CERTIFICATION PHASES 1 AND 2

The Palm Print Scanner Certification process consists of multiple phases as described below.

Phase 1 is conducted at the CIC. Vendor brings scanning station(s), scanner(s), and printer. Tests include both ARRs and APPs. Transactions are evaluated in accordance with MCHS Tenprint Interface Control Document (ICD).

Phase 1 Palm Print Certification: Submit Test Transactions at CIC

- All items in the Certification Process in Section 2 of the Tenprint Scanning Station Certification Test Procedures apply to Palm Print Certification with the exception of item 7 regarding the TCN.
- CIC assigns a station id to use in the tests.
- In one test, transactions with Type 15 palm print records are processed by MCHS and AFIS. (No transactions are sent to the FBI in Phase 1.)
- Only one transaction at a time is submitted.
- Vendor and CIC will view the Reject Notices and Warning Notices that are sent to the scanning station. CIC will also review palm prints and logs.
 - CIC will indicate when the next test transaction can be submitted.
- Perform Test 4A if full palm images will be captured. Perform Test 4B if upper/lower pair palm images will be captured.
 - For Tests 4A and 4B, it is not necessary to actually capture partial prints.
- Use the Type 2 data specified in Appendix A unless otherwise specified in the individual test.
- Test transactions must be as defined in this document. Always create new transactions. A previously submitted transaction cannot be reused.

Phase 2 – Palm Print Certification: Submit Selected Live Transactions at Local Agency

- Vendor contacts CIC to schedule Phase 2 at each local agency.
- Prior to commencing Phase 2, vendor conducts training at local agency.
- Actual arrest transactions are submitted by the local agency with palm prints.
- A subject is selected for a transaction that includes capturing palm prints. Ideally, vendor observes the tests. CIC evaluates each transaction.
 - Local agency submits only one transaction with palm prints at a time and then contacts CIC.
 - CIC reviews transaction and contacts local agency and/or vendor if a problem is detected.
 - CIC reviews the FBI response, verifies whether the palm prints are enrolled in NPPS and contacts local agency and/or vendor if a problem is detected.
 - CIC indicates when the next live transaction with palm prints can be submitted.
- During Phase 2 testing, if necessary, live arrest transactions may be submitted that are not part of the test BUT do not include palm prints in the transactions.

PHASE 1 OF PALM PRINT CERTIFICATION: SUBMIT TEST TRANSACTIONS AT CIC

1.1 Test Preparations

1.1.1 CIC Obtains Information From and Gives Information to Vendor to Prepare for Phase 1 Certification

- CIC will obtain information from the vendor when the vendor requests certification of a livescan or cardscan with tenprint, and possibly palm print, scanner devices. (CIC: Refer to CIC Ref Guide 1.1.1.1)
- CIC will request sample transactions from a new vendor and for first palm print scanner-only certification (CIC: Refer to CIC Ref Guide 1.1.1.2) Certification testing will not be scheduled until the sample transactions are submitted to the CIC and no defects are detected
- CIC provides certification test information to vendor when certification is scheduled (CIC: Refer to CIC Ref Guide 1.1.1.3).
- CIC will give certification information to vendor prior to their arrival at CIC. (CIC: Refer to CIC Ref Guide 1.1.1.4)

1.1.2 CIC Preparations Prior to Vendor's Arrival at CIC

- CIC will assign test conductor and prepare for certification prior to vendor's arrival at CIC. (CIC: Refer to CIC Ref Guide 1.1.2)

1.1.3 CIC Sets MCHS Configurations Day Prior to Vendor's Arrival for Certification Tests

- CIC verifies that the configurations are properly set to begin Palm Print Phase 1 Certification tests. (CIC: Refer to CIC Ref Guide 1.1.3.1 and 1.1.3.2)

1.1.4 Vendor Sets Up at CIC on Day of Certification

1.1.4.1 Vendor and CIC Review Requirements for Conducting Phase 1 Certification Tests

Before vendor begins setting up for Phase 1 tests, CIC and vendor review the following:

1. Vendor must successfully complete a configuration verification step, a setup step, or an individual test before continuing with the next configuration verification or test.
2. In each test, the CIC test conductor will indicate whether the vendor or the test conductor will capture fingerprints and enter the text data.
3. The transactions require the standard TCN format as is defined for live transactions in ICD Appendix A.1.
4. Both arrest TOTs (ARR) and applicant TOTs (APP) are used in these tests.
5. In each test transaction, create an ARR transaction except Test 7 which requires an APP.
 - 1.07 Print Agency ORI
 - For livescans - Hardcoded - always MSZZEVAL1
 - For cardscans - User-entered as indicated the ICD and values are as indicated in Appendix A
 - 1.08 Arrest/Applicant/DOC Agency ORI
 - For ARRs - generated from field 2.702, as indicated in the ICD
 - For APPs and DOCs - user-entered as indicated in the ICD and values are as indicated in the individual tests
 - **The above ORIs are NOT the same at those used in the Tenprint Certification Test Procedures.**
 - Use the Type 2 test data in Appendix A unless otherwise indicated in an individual test. The following values are particularly critical:
 - Last name must always be "Z-TESTPRINTS"
 - First name must be changed in each transaction, as indicated in the instructions, for ease of identification
 - Date of birth must be "19000101" except for Test 1.11
 - Social Security Number must be "123456789" except for Test 1.11
 - Hair color must be "ZZDoNotUse" except for Test 1.11(The DOB, SSN, and Hair Color values are valid according to the ICD but are invalid in MCHS and are used in test transactions to guarantee that the transaction will be rejected.)
 - As specified in each test, in the OACN, include the vendor's name, as assigned by the test conductor, and the test number.
6. Except in Test 1.11, a combination of values in the test data and settings in MCHS configuration files are set up to ensure that test transactions are not stored in MCHS or the FBI's Next Generation Identification (FBI/NGI) database.
7. In Test 1.11, the transactions are accepted but, in addition to other controls, the type of transaction (APP) and the reason fingerprinted indicate to MCHS that it is not to be stored in MCHS and not to be sent to the FBI.
8. Include all fingerprint and palm print images in each test unless the test specifically indicates otherwise.
9. **Always reenter data and capture new fingerprints and palm prints to submit a new transaction for each test and for each subsequent transaction if more than one transaction is submitted in a test. Do not modify and resubmit an existing transaction.**
10. Do tests in sequence and when directed by the CIC test conductor.
11. CIC will review all submitted transactions. (CIC: Refer to CIC Ref Guide 1.5.1)

12. If multiple scanners are being certified, some tests will be repeated for each scanner.
13. In the test steps, CIC Test Conductor is abbreviated "TC".

1.1.4.2 Vendor Sets Up Scanning Station for Palm Print Certification Tests

(CIC: Refer to CIC Ref Guide 1.1.4 and 1.1.1.4)

Vendor: When configuring the scanning station for certification testing, use the following values:

1. Station Id for palm print certification testing - specified by CIC test conductor
2. Print Agency ORI (1.07) for palm print certification testing - MSZZEVAL (ICD Appendix A.1)
3. Station IP address - specified by CIC test conductor
4. POP3S mail login - as specified in ICD appendices D and E; uses station id specified above in item 1
5. SMTPS To email address for sending transactions to MCHS - as specified in ICD Appendix C
6. SMTPS From email address (and SMTPS login info if vendor software requires it) for sending transactions to MCHS - as specified in ICD Appendix C; uses station id specified above in item 1
7. SMTPS email structure - as specified in ICD Appendix C
8. Version Number (1.02) - as specified in ICD Appendix A.1
9. TCN standard format - as specified in ICD Appendix A.1; uses station id specified above in item 1
10. Printer - same printer that was defined in configuration that vendor provided to CIC

1.2 Reserved

1.3 Configuration Verification, Edit Tables, ATN Blocks for Certification Tests

1.3.1 Configuration Verification A - Verify POP3S Mail Connectivity & Printing at Scanning Station

CIC: Refer to CIC Ref Guide 1.3.1)

MCHS Tenprint ICD References: Appendix D

Steps:

1. Vendor: Check POP3S mail for test station being used for the certification and discard any existing mail.
1. TC: Send response "Configuration Verification A" to the test scanning station. (
2. Scanning station automatically retrieves message and prints response on scanning station printer.
3. TC: Compare the printed response with the response below. Note that station_id is as assigned by CIC (see 1.2.2 item 1).

```
From: "MCHS" <mchs@mscjis.mchs.state.ms.us>
To: "Local Test Livescan 1" <station_id@mscjis.state.ms.us>
Subject: Configuration Verification A
Content-Type: text/plain
Content-Transfer-Encoding: 7bit
```

Mississippi Criminal History System

*** TEST RESPONSE 0 ***

Receipt of this message verifies scanning station POP3S connectivity.

The printed message verifies printer connectivity on the scanning station.

If Configuration Verification A is not successful, certification testing cannot commence. Vendor must correct these problems before going on to section 1.3.2.

1.3.2 Download Edit Tables required for Certification Tests

(CIC: Refer to CIC Ref Guide 1.3.1.2)

This is not a test. It sets up the proper edit tables on the scanning station for Palm Print Certification testing. Note that the edit tables are different than those used for Tenprint Certification tests.

Steps:

1. Vendor: Check POP3S mail for the assigned test station id and discard any existing mail.
2. TC: Using 'Download Station Edit Tables', send the Edit Table Message to the test station.
3. TC with vendor assistance: Verify that the latest Edit Tables have been installed by checking the date and time in the description in the Hair Color ZZDoNotUse drop down list on the scanning station.

If Download Edit Tables is not successful, certification testing cannot commence. Vendor must correct these problems before going on to section 1.3.

1.3.3 Download Livescan ATN Blocks required for Certification Tests

(CIC: Refer to CIC Ref Guide 1.3.1.3)

This is not a test. It sets up the proper ATN Blocks on the livescan for Palm Print Certification testing. Note that the ATN Blocks are different than those used for Tenprint Certification tests.

Steps:

1. **On MCHS, update the configuration for this test station to allow ARREST transactions.**
2. TC: Using 'Maintain or Download ATN Blocks', send the ATN Block Message to the test station.
3. Vendor: Verify ATN Blocks were installed.

If Download Livescan ATN Blocks is not successful, certification testing cannot commence. Vendor must correct these problems before going on to section 1.3.4.

1.3.4 Configuration Verification B - Verify SMTPS Mail Connectivity and Email Structure

(CIC: Refer to CIC Ref Guide 1.3.1.4)

Steps:

1. Vendor: Create and submit an arrest transaction:
 - Use standard TCN format
 - Last Name = 'Z-TESTPRINTS'
 - First Name = 'Palmer'
 - Date of Birth = '19000101'
 - Social Security Number = '123456789'
 - Hair Color = 'ZZDoNotUse'
 - Originating Agency Control Number (OACN) = '<vendor name> Verification B'
 - Enter any values in other required fields:
 - APP and ARR: Place of Birth, Race, Height, Weight, Eye Color, Palmprints Available, Photo Available
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - If the test is for a cardscan: Print Agency ORI, Date Printed
2. Allow 3-5 minutes for the transaction to be processed by Prescreening.
3. TC: Look at the Prescreening Transaction Report by specifying the test station id assigned to the stations for certification testing. If the transaction is found in the report:
 - If the transaction is found this verifies scanning station connectivity.
 - If error message 201, 203, 616, or 710 occurs: Make adjustments and go to step 1 to create and submit a new transaction. Do not continue to Test 4.5 unless these errors are corrected. The values in the fields referenced in these error messages are used to validate the transactions. If they are missing or incorrect, you will probably get other error messages that are not actually relevant to the type of agency and type of scanning station being certified. These three errors must be corrected before continuing.
 - Ignore all other error messages.
4. TC and vendor: If the transaction is not found in the Prescreening Transaction Report:
 - Vendor: Check the station id in the SMTPS email from line. It must be the assigned test station id.
 - If the transaction is in the Bad Transactions Log: Make adjustments and go to step 1 to create and submit a new transaction.
 - If the transaction generated output in the saprinter Log: Most likely the From email address is in error. Make adjustments and go to step 1 to create and submit a new transaction

If any of Configuration Verification A or B or the Edit Table and ATN Block downloads is not successful, certification testing cannot commence. Vendor must correct these problems before going to Test 1.4.

1.4 Test 1.4 - Transaction Response Test – Warning Notice

(CIC: Refer to CIC Ref Guide 1.4.4)

Objective: Test the receipt and printing of the Warning Notice used for Type 15 records.

Test Steps:

1. Vendor: Check POP3S mail for test station the assigned test station id and discards any existing mail.
2. TC: Send one test Transaction Response at a time from the MCHS Server to the scanning station.
 - W - Warning Notice for ARR
 - X - Warning Notice for APP
3. Scanning station automatically retrieves message and prints Warning Notice on scanning station printer.
4. TC: Compare the printed response with the response in the MCHS Tenprint and Palm Print Test Messages document. Verify that the content is complete.
5. TC: Verify that the email From, To, and Subject lines are printed.
6. TC: Verify that the response is printed and displayed using a fixed-width font.
7. Repeat steps 2 through 5 for the second response.

This test must be successfully completed before continuing to the next certification test.

1.5 Test 1.5 - Type 15 Record Tests - Record Format and Field Content

(CIC: Refer to CIC Ref Guide 1.4.5)

Objective: Test the format and content of text fields in the Type 15 record including:

- All of the fields that are applicable when all images are available for all palm positions for both hands.

Test Tools:

- For cardscans, tenprint card and palm print card (CIC Ref Guide 1.1.2 item 6)

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction:
 - Enter the Type 2 data as specified in Appendix A including First Name 'Harold'
 - Enter '<vendor name> Test 1-5' in Originating Agency Case Number (OACN)
 - Enter user-entered Type 15 data, if any
 - Capture all fingerprints and all palm print positions
2. Vendor: Submit the transaction.
3. Review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.** IGNORE the following error messages. They are either intentional, the subject of subsequent tests, or validations that are not to be implemented by the scanning station software.
 - "T" Errors indicating a test transaction" messages
 - Message 302 regarding compression ratio. This is addressed in another test.A Warning Notice will be sent only if issues with one or more Type 15 records are detected.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - a. Look at the error messages:
 - IGNORE the messages listed above.
 - IGNORE all "Correctable or allowed errors". They are either intentional or they are the subject of subsequent tests.
 - If error message 204 or 205 occurs, have the vendor correct these first, before addressing any other error messages and go to step 1 to create and submit a new transaction.
 - If error message 204 and 205 does not occur, look at other messages that are not in step 8. If any other errors occur, have the vendor correct these first, before going on to step b, and go to step 1 to create and submit a new transaction.
 - b. Once all of the errors not listed in step 3 have been eliminated, use the hyperlink to verify the following: (If the hyperlink says "NIST.FormatException", look for error 204 - see step a above.)
 - Type 1 field 1.03 Transaction Content: Beginning with the second occurrence of the Contents field, verify there are entries for the correct number of each record type - one Type 2, 14 Type 4s, either 4 or six Type 15 records.

- Presence of the Type 15 records: Verify that the transaction includes each of the expected Type 15.
 - For full palms, there must be two full palms and two writer's palms.
 - For upper/lower pairs, there must be two upper, two lower, and two writer's palms.
 - Verify that 1.07 Print Agency ORI and 1.08 Arrest Agency ORI are as specified by the CIC.
 - Verify that 2.067 Equipment Make and Model are as specified by the CIC.
4. Vendor with TC observing: Create and submit new transactions if requested by the CIC.
- Change the first name by adding 'Two', 'Three', etc after the name in step 1
 - Use the same OACN '<vendor name> Test 1-5'
 - Capture all fingerprints and all palm print positions

This test must be successfully completed before continuing to the next certification test.

1.6 Test 1.6 - Type 15 Record Tests - Data Entry and Scanning Station Validation

(CIC: Refer to CIC Ref Guide 1.4.6)

Usually this test is not applicable because it only applies to the optional fields and only if they are user-entered.

Objective: Test that "user-entered" and "pre-set default" fields in Type 15 records are validated by the livescan before the transaction is sent to MCHS.

In this test, the test conductor enters invalid data to ensure that the scanning station software validates all field values and only allows error-free transactions to be sent to MCHS. The test conductor also verifies that all valid values can be entered.

This test is not testing or assessing the operator interface. The scanning station's operator interface serves as a tool to test the validation of field values.

Test Tools:

- For cardscans, tenprint card and palm print card (CIC Ref Guide 1.1.2 item 6)
- MCHS Tenprint and Palm Print Certification Test Messages document

Test Steps:

1. TC: Confirm which Type 15 fields are included in this test.
2. TC: Verify that all valid values can be entered by entering a variety of valid values in each field.
3. TC: Verify that no invalid values can be entered by trying to enter a variety of invalid values.
4. TC: Verify that a transaction with invalid values cannot be submitted to MCHS. To do this:
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Truncation'
 - Enter '<vendor name> Test 1-6' in Originating Agency Case Number (OACN)
 - Enter invalid values
 - Capture all fingerprints and all palm prints
 - Try to submit the transaction. It should not be possible to submit a transaction with invalid values
5. If the transaction is submitted:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.** IGNORE the following error messages. They are either intentional, the subject of subsequent tests, or validations that are not to be implemented by the scanning station software.
 - Ignore " T - Errors indicating a test transaction" messages
 - Ignore message 302 regarding compression ratio. This is addressed in another test.A Warning Notice will only be sent if issues with one or more Type 15 records are detected.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and review the transaction content via the hyperlink.

This test must be successfully completed before continuing to the next certification test.

1.7 Test Set 1.7 - Type 15 Record Tests - 15.018 XX and UP Indicators – FULL Palms

(CIC: Refer to CIC Ref Guide 1.4.7)

Objective: Test the use of the Amputated or Bandaged field 15.018 for scanning stations that support FULL palm images.

The ANSI/NIST standard, as referenced by the FBI EBTS states: "XX shall be used only when a partial print exists due to amputation; therefore it contains some friction ridge detail. UP shall be used with the complete block where an image was to be transmitted, but there is no image due to amputation or total lack of friction ridge detail (such as with a bandage). An image with a scar should not be marked XX or UP." This means that:

- If the palm is partially amputated and a partial image can be captured: Capture the image and set 15.018 Amputated or Bandaged Code to 'XX' to indicate a partial amputation.
- If the entire palm cannot be captured: Supply only information in the Amputated or Bandaged field in the full and writer's palm record. Set the 15.018 Amputated or Bandaged to 'UP' to indicate that the palm image cannot be captured (is unprintable). XXXMOVE THIS TABLE TO 1.8; MAKE NEW TABLEXXX

	Amp/Band Code 15.018 in Type 15 record	Palm image in Type 15 record
Part of upper palm is amputated	XX	image
Entire upper palm amputated	UP	no image
Entire upper palm is unprintable (e.g., bandaged)	UP	no image

** Same rules apply to lower palm.

These tests require transactions with various combinations of palm print images and 15.018 Amputated or Bandaged Code values.

This test is not testing or assessing the operator interface. The scanning station's operator interface serves as a tool to test the validation of field values.

Test Tools:

- For cardscans, tenprint cards with each of the finger position and palm print position combinations described in the tests (CIC: Refer to CIC Ref Guide 1.1.2 item 6)

Test 1.7-1 - Designate palm image with partial amputation

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows.
 - Create an ARR transaction
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Adam'
 - Enter '<vendor name> Test 1-7-1' in Originating Agency Case Number (OACN)
 - Capture:
 - The fingerprints and palm images for full palm positions and writer's palm position for both palms
 - AND specify a partial amputation for the right full palm (position 21) (15.018 Amputated or Bandaged Code 'XX')
2. Vendor with TC observing: Submit the transaction.
3. Review the transaction:

- Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
IGNORE the following error messages. They are either intentional, the subject of subsequent tests, or validations that are not to be implemented by the scanning station software.
 - Ignore " T - Errors indicating a test transaction" messages
 - Ignore message 302 regarding compression ratio. This is addressed in another test.
 - Ignore messages 740 and 741.
 A Warning Notice will only be sent if issues with one or more Type 15 records are detected.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and review the transaction content via the hyperlink.
4. Vendor with TC observing: Create and submit new transactions if requested by the CIC.
- Change the first name by adding 'Two', 'Three', etc after the name in step 1.
 - Use the same OACN '<vendor name> Test 1-7-1'.
 - Capture fingerprints and all palm print positions as required in step 1.

Test 1.7.2 - Designate palm image unavailable due to full amputation or total lack of friction ridge detail

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Ben'
 - Enter '<vendor name> Test 1-7-2' in Originating Agency Case Number (OACN)
 - Capture:
 - The fingerprints and the palm images for the left full palm and left writer's palm
 - AND do not capture an image for the right full palm and right writer's palm
 - AND specify an unprintable palm position for the right writer's palm (position 22) (15.018 Amputated or Bandaged Code 'UP')
2. Vendor with TC observing: Submit the transaction.
3. Review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction.**
Ignore error messages identified in Test 1.7.1 step 3.
A Warning Notice will only be sent if issues with the Type 15 record are detected.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink.
3. Vendor with TC observing: Create and submit new transactions if requested by the CIC.
 - Change the first name by adding 'Two', 'Three', etc after the name in step 1.
 - Use the same OACN '<vendor name> Test 1-7-2'.
 - Capture fingerprints and all palm print positions as required in step 1.

Test Group 1.7-3 - Try Improper Values in 15.018 Amp/Band Code

There are THREE tests in this group.

Test 1.7-3-1 - Invalid Combination: No palm image and Amp/Band Code 'XX'

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Caleb'
 - Enter '<vendor name> Test 1-7-3-1' in Originating Agency Case Number (OACN)
 - Try to capture:
 - The fingerprints and the palm image for the right full palm and right writer's palm
 - AND do not capture an image for the left full palm and left writer's palm
 - AND specify an unprintable palm position for the left full palm position (position 23) (15.018 Amputated or Bandaged Code 'XX')
2. Vendor with TC observing: Try to submit the transaction. This combination of palm images and amputated or bandaged code should NOT be allowed by the scanning station.
3. If the transaction is submitted, review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction.**
Ignore error messages identified in Test 1.7.1 step 3.
A Warning Notice will only be sent if issues with one or more Type 15 records are detected. Look for error messages related to images and/or amputated or bandaged code, including error messages 558.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink.
4. Vendor with TC observing: Create additional transactions if requested by the CIC.
 - Change the first name by adding 'Two', 'Three', etc after the name in step 1.
 - Use the same OACN '<vendor name> Test 1-7-3-1'.
 - Capture fingerprints and all palm print positions as required in step 1.

Test 1.7.3.2 - Invalid Combination: Palm image and Amp/Band Code 'UP'

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction.
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Daniel'.
 - Enter '<vendor name> Test 1-7-3-2' in Originating Agency Case Number (OACN).
 - Try to capture:
 - The fingerprints and palm images for full palms and writer's palms for both palms
 - AND specify an unprintable palm position for the left full palm position (position 23) (15.018 Amputated or Bandaged Code 'UP')
2. Vendor with TC observing: Try to submit the transaction. This combination of palm images and amputated or bandaged code should NOT be allowed by the scanning station.
3. If the transaction is submitted, review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction.**

Ignore error messages identified in Test 1.7.1 step 3

A Warning Notice will only be sent if issues with one or more Type 15 records are detected. Look for error messages related to images and/or amputated or bandaged code, including error message 519.

- TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink. (The transaction will be valid if the scanning station uses only the latest information for a palm position by overriding previously entered information. E.g., a palm image is captured, and then the 15.018 Amputated or Bandaged Code is set to 'UP' so the palm image is removed.)
4. Vendor with TC observing: Create additional transactions if requested by the CIC.
 - Change the first name by adding 'Two', 'Three', etc after the name in step 1
 - Use the same OACN '<vendor name> Test 1-7-3-2'
 - Capture fingerprints and all palm print positions as required in step 1

Test 1.7.3.3 - Invalid Combination: No palm image and no Amp/Band Code

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Edward'
 - Enter '<vendor name> Test 1-7-3-3' in Originating Agency Case Number (OACN)
 - Try to capture:
 - The fingerprints and the palm images for the left full palm and left writer's palm
 - AND do not capture an image for the right full palm and right writer's palm
 - AND do not specify an unprintable palm position for the right palm positions (positions xx and xx) (Amputated or Bandaged Code = 'UP')
2. Vendor with TC observing: Try to submit the transaction. This combination of palm images and amputated or bandaged code should NOT be allowed by the scanning station.
3. If the transaction is submitted, review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction.**
Ignore error messages identified in Test 1.7.1 step 3.
A Warning Notice will only be sent if issues with one or more Type 15 records are detected. Look for error messages related to images and/or amputated or bandaged code, including error message 520.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink.
4. Vendor with TC observing: Create additional transactions if requested by the CIC.
 - Change the first name by adding 'Two', 'Three', etc after the name in step 1.
 - Use the same OACN '<vendor name> Test 1-7-3-3'.
 - Capture fingerprints and all palm print positions as required in step 1.

This test must be successfully completed before continuing to the next certification test.

1.8 Test Set 1.8 - Type 15 Record Tests – 15.018 XX and UP Indicators – UPPER/LOWER Pairs

(CIC: Refer to CIC Ref Guide 1.4.8)

Objective: Test the use of the Amputated or Bandaged field 15.018 for scanning stations that support UPPER/LOWER palm pair images.

The ANSI/NIST standard, as referenced by the FBI EBTS states: "XX shall be used only when a partial print exists due to amputation; therefore it contains some friction ridge detail. UP shall be used with the complete block where an image was to be transmitted, but there is no image due to amputation or total lack of friction ridge detail (such as with a bandage). An image with a scar should not be marked XX or UP." Therefore:

- If the upper portion of the palm is partially amputated and a partial image can be captured: Capture the image AND set the 15.018 Amputated or Bandaged Code to 'XX' to indicate a partial amputation.
- If the entire upper portion the palm cannot be captured: Supply only information in the Amputated or Bandaged field. Set the 15.018 Amputated or Bandaged to 'UP' to indicate that the palm image cannot be captured (is unprintable).
- If the entire palm cannot be captured: Supply only information in the Amputated or Bandaged field in each of the upper and lower palm records. Set the 15.018 Amputated or Bandaged to 'UP' to indicate that the palm image cannot be captured (is unprintable).

These tests require transactions with various combinations of palm print images and Amputated or Bandaged Code values.

This test is not testing or assessing the user interface. The scanning station's user interface serves as a tool to test the validation of field values.

Test Tools:

- For cardscans, tenprint cards with each of the finger position and palm print position combinations described in the tests (CIC: Refer to CIC Ref Guide 1.1.2 item 6)

Test 1.8-1 - Designate palm image with partial amputation

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction.
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Adam'
 - Enter '<vendor name> Test 1-8-1' in Originating Agency Case Number (OACN)
 - Capture:
 - The fingerprints and palm images for upper and lower palm positions and writer's palm position for both palms
 - AND specify a partial amputation for the right upper palm (position 26) (15.018 Amputated or Bandaged Code 'XX')
2. Vendor with TC observing: Submit the transaction.
3. Review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.** IGNORE the following error messages. They are either intentional, the subject of subsequent tests, or validations that are not to be implemented by the scanning station software.
 - Ignore " T - Errors indicating a test transaction" messages

- Ignore message [302](#) regarding compression ratio. This is addressed in another test.
A Warning Notice will only be sent if issues with one or more Type 15 records are detected.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink
4. Vendor with TC observing: Create and submit new transactions if requested by the CIC.
- Change the first name by adding 'Two', 'Three', etc after the name in step 1
 - Use the same OACN '<vendor name> Test 1-8-1'
 - Capture fingerprints and all palm print positions as required in step 1

Test 1.8-2 - Designate palm image unavailable due to full amputation or total lack of friction ridge detail

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction.
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Ben'
 - Enter '<vendor name> Test 1-8-2' in Originating Agency Case Number (OACN)
 - Capture:
 - The fingerprints and the palm images for the left upper and lower palms and left writer's palm and capture only the lower palm image for the right palm
 - AND specify unprintable palm positions for the right upper palm position (position 26) and right writer's palm (position 22) (15.018 Amputated or Bandaged Code to 'UP')
2. Vendor with TC observing: Submit the transaction.
3. Review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction.**
Ignore error messages identified in Test 1.8.1 step 3.
A Warning Notice will only be sent if issues with one or more Type 15 records are detected.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink.
4. Vendor with TC observing: Create and submit new transactions if requested by the CIC.
 - Change the first name by adding 'Two', 'Three', etc after the name in step 1.
 - Use the same OACN '<vendor name> Test 1-8-2'.
 - Capture fingerprints and all palm print positions as required in step 1.

Test Group 1.8-3 - Improper Values in 15.018 Amp/Band Code

There are THREE tests in this group.

Test 1.8-3-1 - Invalid Combination: No palm image and Amp/Band Code 'XX'

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction.
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Caleb'
 - Enter '<vendor name> Test 1-8-3-1' in Originating Agency Case Number (OACN)

- Try to capture:
 - The fingerprints and the palm images for the right upper and lower palms and right writer's palm and capture only the palm image for the left lower palm
 - AND specify unprintable palm positions for the left upper and lower palm positions (positions 28 and 27) (15.018 Amputated or Bandaged Code 'XX')
2. Vendor with TC observing: Try to submit the transaction. This combination of palm images and Amputated or Bandaged codes should NOT be allowed by the scanning station.
 3. If the transaction is submitted, review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction.**
Ignore error messages identified in Test 1.8.1 step 3.
A Warning Notice will only be sent if issues with one or more Type 15 records are detected. Look for error messages related to images and/or amputated or bandaged code, including error messages 558.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink.
 4. Vendor with TC observing: Create additional transactions if requested by the CIC.
 - Change the first name by adding 'Two', 'Three', etc after the name in step 1.
 - Use the same OACN '<vendor name> Test 1-8-3-1'.
 - Capture fingerprints and all palm print positions as required in step 1.

Test 1.8.3.2 - Invalid Combination: Palm image and Amp/Band Code 'UP'

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Daniel'
 - Enter '<vendor name> Test 1-8-3-2' in Originating Agency Case Number (OACN)
 - Try to capture:
 - The fingerprints and palm images for the upper and lower palms and writer's palms for both palms
 - AND specify unprintable palm positions for the left upper and lower palm positions (positions 28 and 27) (15.018 Amputated or Bandaged Code 'UP')
2. Vendor with TC observing: Try to submit the transaction. This combination of palm images and codes should NOT be allowed by the scanning station.
3. If the transaction is submitted, review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction.**
Ignore error messages identified in Test 1.8.1 step 3.
A Warning Notice will only be sent if issues with one or more Type 15 records are detected. Look for error messages related to images and/or amputated or bandaged code, including error message 519.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink. (The transaction will be valid if the scanning

station uses only the latest information for a palm position by overriding previously entered information. E.g., a palm image is captured, and then the 15.018 Amputated or Bandaged Code is set to 'UP' so the palm image is removed.)

4. Vendor with TC observing: Create additional transactions if requested by the CIC.
 - Change the first name by adding 'Two', 'Three', etc after the name in step 1.
 - Use the same OACN '<vendor name> Test 1-8-3-2'.
 - Capture fingerprints and all palm print positions as required in step 1.

Test 1.8-3-3 - Invalid Combination: No palm image and no Amp/Band Code

Test Steps:

1. Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction.
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Edward'.
 - Enter '<vendor name> Test 1-8-3-3' in Originating Agency Case Number (OACN).
 - Try to capture:
 - The fingerprints and the palm images for the left upper and lower palms and the left writer's palm
 - AND do not capture an image for the right upper and lower palm positions
 - AND do not specify unprintable palm positions for the right upper and lower palm positions (positions 28 and 27) (Amputated or Bandaged Code 'UP')
2. Vendor with TC observing: Try to submit the transaction. This combination of palm images and Amputated or Bandaged codes should NOT be allowed by the scanning station.
3. If the transaction is submitted, review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction.**
Ignore error messages identified in Test 1.8.1 step 3.
A Warning Notice will only be sent if issues with one or more Type 15 records are detected. Look for error messages related to images and/or amputated or bandaged code, including error message 520.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink.
4. Vendor with TC observing: Create additional transactions if requested by the CIC.
 - Change the first name by adding 'Two', 'Three', etc after the name in step 1.
 - Use the same OACN '<vendor name> Test 1-8-3-3'.
 - Capture fingerprints and all palm print positions as required in step 1.

This test must be successfully completed before continuing to the next certification test.

1.9 Test 1.9 - Palm Print Capture Test #1

(CIC: Refer to CIC Ref Guide 1.4.9)

Test 1.9.1 - Palm Print Capture Test #1 - Livescan

Objective: Verify ability to accurately and efficiently capture quality palm prints. Verify that: palm print scanner is easy for operator to use, the quality of the fingerprint images appear to be sufficient for MCHS AFIS and for FBI/NGI (a visual check).

This test does NOT submit transactions to MCHS.

Test Tools:

- Multiple individuals from the CIC AFIS group whose fingerprints and palm prints will be captured (but not submitted to MCHS)

Test Steps:

Do the following numerous times with different individuals in the role of subject whose palm prints are captured.

1. TC:
 - Create an ARR transaction
 - Enter Type 2 data specified in Appendix A
 - Capture fingerprints and palm prints
2. TC: Assess:
 - Usability of the scanner device
 - Quality of the captured prints (a visual check)
3. Do not submit the transaction.

This test must be successfully completed before continuing to the next certification test.

Test 1.9.2 - Palm Print Capture Test #1 - Cardscan

Objective: Verify ability to accurately and efficiently capture quality palm prints. Verify that: the quality of the fingerprint images are of the same quality as the prints on the card (a visual check).

This test does NOT submit transactions to MCHS.

Test Tools:

- Tenprint cards and palm print cards with fingerprints and palm prints of multiple individuals from the AFIS group

Test Steps:

Do the following numerous times with palm print cards of different individuals.

1. TC:

- Create an ARR transaction
- Enter Type 2 data specified in Appendix A
- Scan fingerprint and palm print cards

1. TC: Assess:

- Verify that the entire print in the box on the card, and nothing else, is captured
- Quality of the captured prints (a visual check)

2. Do not submit the transaction.

This test must be successfully completed before continuing to the next certification test.

1.10 Test 1.10 - Palm Print Capture Test #2

(CIC: Refer to CIC Ref Guide 1.4.10)

Objective: Test the format and content of text fields in the Type 15 record including:

- No errors are detected in the Type 15 palm print image records.
- The compression ratio of the images is within a reasonable range of the FBI's target 15:1 ratio.

Test Tools:

For cardscans, tenprint cards with each of the finger position combinations described in the tests (CIC: Refer to CIC Ref Guide 1.1.2 item 6)

Test Steps:

1. Palm Position Combinations

Create new transactions as specified in a through c below. These cases should not be allowed but full transactions need to be created and submitted if allowed.

a. Two of the same palm position (livescan only)

- Vendor with TC observing: Create a new test transaction as follows:
 - Create an ARR transaction
 - Enter the Type 2 data as specified in Appendix A, but use first name 'Michael'
 - Enter '<vendor name> Test 1-10' in Originating Agency Case Number (OACN)
 - For upper/lower palm pairs, capture the fingerprints and two images for the left writer's palm.

For full palms, capture the fingerprints and two images for the left full palm

- Try to submit this transaction. This combination of palm images should not be allowed by the scanning station
- If the transaction is submitted, review the transaction:
 - Vendor: Review the Reject Notice and Warning Notice. Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of an error. **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
IGNORE the following error messages. They are either intentional, the subject of subsequent tests, or validations that are not to be implemented by the scanning station software.
Ignore "T - Errors indicating a test transaction" messages
Ignore message 302 regarding compression ratio. This will be addressed in step 2.
A Warning Notice will only be sent if issues with one or more Type 15 records are detected.
 - TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report and the transaction content via the hyperlink.
 - Look for error message 674.
 - Use the hyperlink to view the invalid combination.
- Vendor with TC observing: Repeat these steps as needed.

b. No upper/lower or full palm position but writer's position

- Repeat step 2a.
 - For upper/lower palms pairs, specify right upper and lower palm positions as "UP" but include right writer's palm position.
For full palms, specify right palm position as "UP" but include right writer's palm position.
 - Look for error message 518.

- c. Palm position missing
 - Repeat step 2a.
 - For upper/lower palm pairs, don't include palm image for right upper palm position and do not include palm position for right lower palm position.
 - Look for error message 676.
- 2. Compression Ratio of Images
 - a. TC: In the Prescreening Transaction Report, look for all occurrences of message 302 for Type 15 records.

This message is used to diagnose image quality problems. If any of the compression ratios is significantly larger or smaller than 15:1, the compression software on the scanning station needs to be adjusted. Message 302 is generated only if the compression ratio is less than 10:1 or greater than 20:1, allowing for considerable variance from 15:1.
 - b. Vendor: If this message is in the Prescreening Transaction Report, the vendor needs to make adjustment so the compression ratio is within the allowed range.

This test must be successfully completed before continuing to the next certification test.

1.11 Test 1.11 - Palm Print Image Quality – Full Review of Palm Print Images

(CIC: Refer to CIC Ref Guide 1.4.11)

This test will submit multiple APP transactions through the MCHS workflow and AFIS. Any errors in previous tests must be corrected before doing this test. For each transaction, reenter the Type 2 data and recapture the palm prints. These transactions will NOT be stored in AFIS. They will NOT go to the FBI.

Objective: Verify the quality of multiple sets of palm print images.

This test requires APP transactions to be submitted.

Do not use the test data in Appendix A. The Type 2 data for this test is as follows:

Type 2 Field	Value
1.08 Applicant Agency ORI	<ORI from Agency edit table for "Palm Print Eval at CIC Agency">
2.009 Originating Agency Case # (OACN)	<vendor name> Test 1-11
2.018 Name	--
Last Name	Z-TESTPRINTS
First Name	FIRST (in first transaction; change in each subsequent transaction)
Middle Name	
2.020 Place of Birth	YY
2.022 Date of Birth *	19750101
2.024 Sex/Gender	Male
2.025 Race	White
2.027 Height	507
2.029 Weight	130
2.031 Eye Color	Hazel
2.032 Hair Color *	Pink
2.037 Reason Fingerprinted	Instate Inquiry Only
Do not specify a Social Security Number	

Test Tools:

- Multiple individuals from the CIC AFIS group who will play the role of subject
- For livescans, the individuals with the fingerprints (CIC: Refer to CIC Ref Guide 1.1.2 item 5)
- For cardscans, tenprint cards (CIC: Refer to CIC Ref Guide 1.1.2 item 6 and 7)
- **AFIS examiner for QC review of fingerprint quality**

Test Steps:

1. **TC: On MCHS, update the configuration for this test station to allow Applicant transactions for this test.**
2. TC: Create a new test transaction as follows:
 - Create an APP transaction for reason fingerprinted Instate Inquiry Only
 - Enter the Type 2 data as indicated in the table above
 - If the test is for a cardscan, enter any valid value in the following required fields: Print Agency ORI, Date Printed
 - Capture all fingerprints and all palm print positions.

If all other fields are valid but one of the above fields does not have the indicated value, Prescreening will not forward the transaction to the MCHS workflow and no response will be sent to the test station.

3. TC: Submit the transaction.
4. Allow 3-5 minutes for the transaction to be processed by Prescreening.

5. Vendor: Review the Reject Notice and Warning Notice. There should not be any errors detected by Prescreening and therefore there should not be a Reject Notice. **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
A Warning Notice will be sent only if issues with one or more Type 15 records are detected.
6. TC: While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - There should not be any errors detected by Prescreening.
 - Check the Overall Transaction Status.
 - If it says 'Accepted' go on to the step 7.
 - If it says "Test Transaction" and there are no error messages, this means that there is an error in the values specified in step 2.
 - Vendor: If errors are found, make adjustments and go to step 2 to create and submit a new transaction.
7. TC: Use the Workflow Report to determine the transaction's status and tell the AFIS Examiner that the transaction has been submitted.
8. AFIS Examiner: Review the palm prints:
 - The submitted finger prints should match multiple sets of prints for this subject (which the CIC has already stored in AFIS).
 - The prints will be presented to the AFIS examiner for QC review. The examiner reviews the palm prints as well as comparing them with the fingerprints.
 - The examiner indicates a match on one set of prints (no consolidation) and releases it to MCHS for further processing.
 - Report assessment of the palm prints to the test conductor.
9. TC: Compare each image with palm capture diagrams from the FBI, in Appendix B, to ensure that that the proper portion of the hand is fully captured, that the images have a north-south orientation, and that the operator is able to properly align them.
10. Vendor and TC: If problems are detected in either step 8 or step 9, determine the cause. The problem will be either the scanning station software, the scanner, or possibly a training issue.
11. Vendor with TC observing: Create and submit new transactions with new palm prints. the CIC will provide different individuals in the role of the subject whose fingerprints are captured. To distinguish between test transactions (vs. resubmission of a transaction), do the following:
 - Change the name to 'Second', 'Third', etc
 - Use the same Type 2 data
 - Use the same OACN '<vendor name> Test 1-11'

This test must be successfully completed before continuing to the next certification test.

1.12 Test 1.12 - Print Palm Print Card

(CIC: Refer to CIC Ref Guide 1.4.12)

Objective: Print palm print images and demographic data on 8 ½ x 11 paper in the FBI Standard Palm Print Card FD-884 format.

Test Tools:

- Blank arrest cards (CIC: Refer to CIC Ref Guide 3.2 item 11)
- Blank applicant cards (CIC: Refer to CIC Ref Guide 3.2 item 11)
- Blank palm print cards (CIC: Refer to CIC Ref Guide 3.2 item 11)

Test Steps:

1. Palm print card on 8 1/2 x 11 paper
 - a. Vendor with TC observing: Select a stored ARR transaction from a previous test. Enter the data, capture the prints, and print a palm print card (both sides) on 8 1/2 x 11 paper.
 - b. TC: Verify the format of the printed image of a card: "print the palm print images and demographic data on 8 ½ x 11 paper using an imbedded template such that the image and data formats appear on the paper to look like the front of the FBI Palm Print Card FD-884. For an upper/lower pair: print each palm position on a separate card, use the front of the card for each, include the writer's palm on each card, and include the demographic data on each card."
 - c. TC: Verify the contents of the printed palm print card.
 - d. TC: Look at the Prescreening Transaction Report to verify that the transaction was not submitted.
2. Palm print card on preprinted card stock
 - a. Vendor with TC observing: Select a stored ARR transaction. Enter the data, capture the prints, and print a palm print card (both sides) on 8 1/2 x 11 paper.
 - b. TC: Verify that all data is correctly positioned on the FBI Applicant Card.
 - c. TC: Verify the contents of the printed palm print card.
 - d. TC: Look at the Prescreening Transaction Report to verify that the transaction was not submitted.

This test must be successfully completed before palm print certification testing is complete.

1.13 Reset Configurations when Phase 1 Tests at CIC are Concluded

The following can be done after the vendor departs:

- CIC notifies MSHC Support that the tests are concluded.
- MCHS Support resets configurations. (CIC: Refer to CIC Ref Guide 1.4.13)

1.14 When the Vendor's Palm Print Capability Has Been Certified

A certification decision will be made a few days after the Phase 1 Certification tests are completed.

If the certification is given to the vendor, the CIC reviews the requirements for Phases 2 through 3 of the Palm Print Scanner Certification process with the vendor:

- Phase 2 requirements for vendor's first installation of their palm print capability. This includes the portion of the evaluation where FBI responses to the palm prints are evaluated.
- Phase 3 requirements for the vendor's subsequent palm print installations at additional sites.

PHASE 2 OF PALM PRINT CERTIFICATION: SUBMIT SELECTED LIVE TRANSACTIONS AT LOCAL AGENCY

This phase:

- Evaluates the completeness of Type 15 records and assesses the quality of palm prints when entered by local agency personnel.
- Provides the FBI's assessment of the palm prints.

The operator training described in Phase 3 must be completed before commencing Phase 2. The quality of palm prints will be assessed during this test so operators should be proficient in capturing palm prints and specifying partial amputations and unprintable palm positions ('XX' and 'UP' indicators).

MCHS ICD requirements for a Type 15 record are designed to be consistent with FBI requirements. However, the FBI may have additional validations and they also have a process to assess whether the palm print images are suitable for enrollment in the National Palm Print System. No transactions were sent to the FBI in Phase 1. The feedback from the FBI is provided in this phase.

2.1 Phase 2 Certification - Livescan at Local Agency

In order for a local agency or the CIC to submit palm prints at a location the vendor must complete the following:

- Before conducting Phase 2 Palm Print Certification Training: Conduct training to capture palm prints including specifying partial amputations and unprintable palm positions
- Law Enforcement agencies: Conduct the following tests for arrest transactions
- MDOC: Conduct the following tests for DOC transactions
- Sheriff's Offices only: Conduct these tests for APP for Sex Offender Registration transactions

The vendor may elect to arrange conduct of the Phase 2 tests during the same period of time when they install the palm print capability and conduct palm print training.

To Schedule Phase 2 Certification Testing

1. Vendor contacts the CIC to coordinate Phase 2 testing. Vendor provides the following information:
 - Livescan id
 - Arrest agency ORI
 - Suggested dates/times to conduct these tests
2. CIC: Sends the current version of the Livescan Instruction Manual and the Tenprint Transaction Reject Notice and Warning Notice Error Messages document to the local agency.
3. CIC: Establishes date/time of test and notifies all participants.

Phase 2 Certification Tests

(CIC: Refer to CIC Ref Guide 2.1, 2.2 and 1.5.1)

1. CIC: Before the local agency submits the first live transaction with palm prints, the CIC verifies that the configuration files are properly set for evaluation tests Phase 2.
2. When all parties are ready to commence this phase, local agency livescan operator captures fingerprints and palm prints and enters biographic and arrest data.
3. After submitting a live ARR transaction, vendor and/or local agency contacts the CIC test conductor and provides identification information (name and TCN).
4. Vendor and/or local agency look for a Reject Notice. There should not be a reject notice.
5. Vendor and/or local agency look for a Warning Notice. A Warning Notice will only be sent if issues with one or more Type 15 records are detected. There should not be a Warning Notice. (If no errors are detected, MCHS will send a MS rap sheet.)
6. CIC: Reviews the Prescreening Transaction Report.
7. CIC: Reviews the FBI result in the Workflow Report. Contacts the vendor and/or the local agency when problems are detected by the FBI.
8. CIC: Contacts the vendor and/or the local agency when problems are detected. If the transaction was rejected or there are warning messages for Type 15 records, determine the type of problem.
 - If it is an operator error, consider what training might be required.
 - If it is a data entry error that should have been caught by vendor software, the vendor will need to correct their software or configuration.
9. CIC: Indicates when another live transaction with palm prints can be submitted.
10. Repeat steps 3 through 10 until the CIC indicates that the session is concluded.

NOTE: The local agency can continue to submit live ARR transactions, but without palm prints, while the CIC completes steps 9 through 10.

The vendor and CIC repeat Phase 2 certification at each agency where a palm print scanner will be installed.

2.2 Phase 2 Certification - Cardscan at CIC

In order for a local agency or the CIC to submit palm prints at a location the vendor must complete the following:

- Before conducting Phase 2 Palm Print Certification Training: Conduct training to capture palm prints including specifying partial amputations and unprintable palm positions

The vendor may elect to arrange conduct of the Phase 2 tests during the same period of time when they install the palm print capability and conduct palm print training.

To Schedule Phase 2 Certification Testing

1. Vendor contacts the CIC to coordinate Phase 2 testing. Vendor provides the following information:
 - Suggested dates/times to conduct these tests
2. CIC: Ensures that cardscan operators have the current version of the CIC's Cardscan Instruction Manual and the Tenprint Transaction Reject Notice and Warning Notice Error Messages document.
3. CIC: Establishes date/time of test and notifies all participants.

Phase 2 Certification Tests

(CIC: Refer to CIC Ref Guide 2.1, 2.2 and 1.5.1)

1. CIC: Before the local agency submits the first live transaction with palm prints, the CIC verifies that the configuration files are properly set for evaluation tests Phase 2.
2. When all parties are ready to commence this phase, cardscan operator scans fingerprints and palm prints and enters biographic and arrest data.
3. After submitting a live ARR transaction, vendor and/or CIC operator contacts the CIC test conductor and provides identification information (name and TCN).
4. Vendor and CIC operator: Look for a Reject Notice. There should not be a reject notice.
5. Vendor and CIC operator: Look for a Warning Notice. A Warning Notice will only be sent if issues with one or more Type 15 records are detected. There should not be a Warning Notice. (If no errors are detected, MCHS will send a MS rap sheet.).
6. CIC: Reviews the Prescreening Transaction Report.
7. CIC: Reviews the FBI result in the Workflow Report. Contacts the vendor when problems are detected by the FBI.
8. CIC: Contacts the vendor when problems are detected. If the transaction was rejected or there are warning messages for Type 15 records, determine the type of problem.
 - If it is an operator error, consider what training might be required.
 - If it is a data entry error that should have been caught by vendor software, the vendor will need to correct their software or configuration.
9. CIC: Indicates when another live transaction with palm prints can be submitted.
10. Repeat steps 3 through 10 until the CIC indicates that the session is concluded.

NOTE: The local agency can continue to submit live ARR transactions, but without palm prints, while the CIC completes steps 9 through 10.

The vendor and the CIC repeat Phase 2 certification at each agency where a palm print scanner will be installed.

APPENDIX A TYPE 2 DATA FOR PHASE 1 CERTIFICATION TEST TRANSACTIONS

Use the following values unless a test explicitly indicates a different value.

Type 1 or 2 Field	Value
1.07 Print Agency ORI	Cardscan: MSZZEVAL1 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value assigned to test livescan by CIC.
2.009 Originating Agency Case # (OACN)	****Enter value specified in each individual test****
2.016 Social Security #	123456789
2.018 Name	--
Last Name	Z-TESTPRINTS <always use this last name>
First Name	HAROLD <change as indicated in each transaction >
Middle Name	POTTER
Name Suffix	--
2.020 Place of Birth	YY
2.022 Date of Birth *	19000101
2.024 Sex/Gender	Male
2.025 Race	White
2.027 Height	507
2.029 Weight	130
2.031 Eye Color	Hazel
2.032 Hair Color *	ZZDoNotUse
2.035 Palm Prints Available	No
2.036 Photo Available	No
2.038 Date Printed	Cardscan: 20170715 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.045 Date of Arrest	20170715
2.084 Amputated or Bandaged	As indicated in individual tests in Test Sets 4A and 4B
2.701 Arrest Tracking Number	Cardscan lceval1,cceval1: next ATN in list below this table Enter THIS ATN, do NOT enter the ATN on test tenprint card Livescan lseval1: Assigned by livescan from downloaded ATN Block. Livescan: Assigned by livescan from downloaded ATN Block.
2.702 Arrest Agency ORI	<from Enforce Agency edit table>
2.704 Arrest Type	Adult
2.705 Arrest Charge Set	--
Citation	49-7-83
# Counts	2
Date of Offense	20170710
Action	Arrest Charge

The DOB, SSN, and Hair Color values are valid according to the ICD but are invalid in MCHS and are used in test transactions to guarantee that the transaction will be rejected. Ignore error messages [701](#) regarding hair color "ZZDoNotUse", [503](#) regarding DOB "19000101", and [511](#) for SSN "123456789".

ATNs for lceval1 and cceval1:

For lceval1 and cceval1, use the following ten character ATNs:

5000000005	5000000013	5000000021	500000003X
5000000048	5000000056	5000000064	5000000072
5000000080	5000000099	5000000102	5000000110
5000000129	5000000137	5000000145	5000000153
5000000161	500000017X	5000000188	5000000196
500000020X			

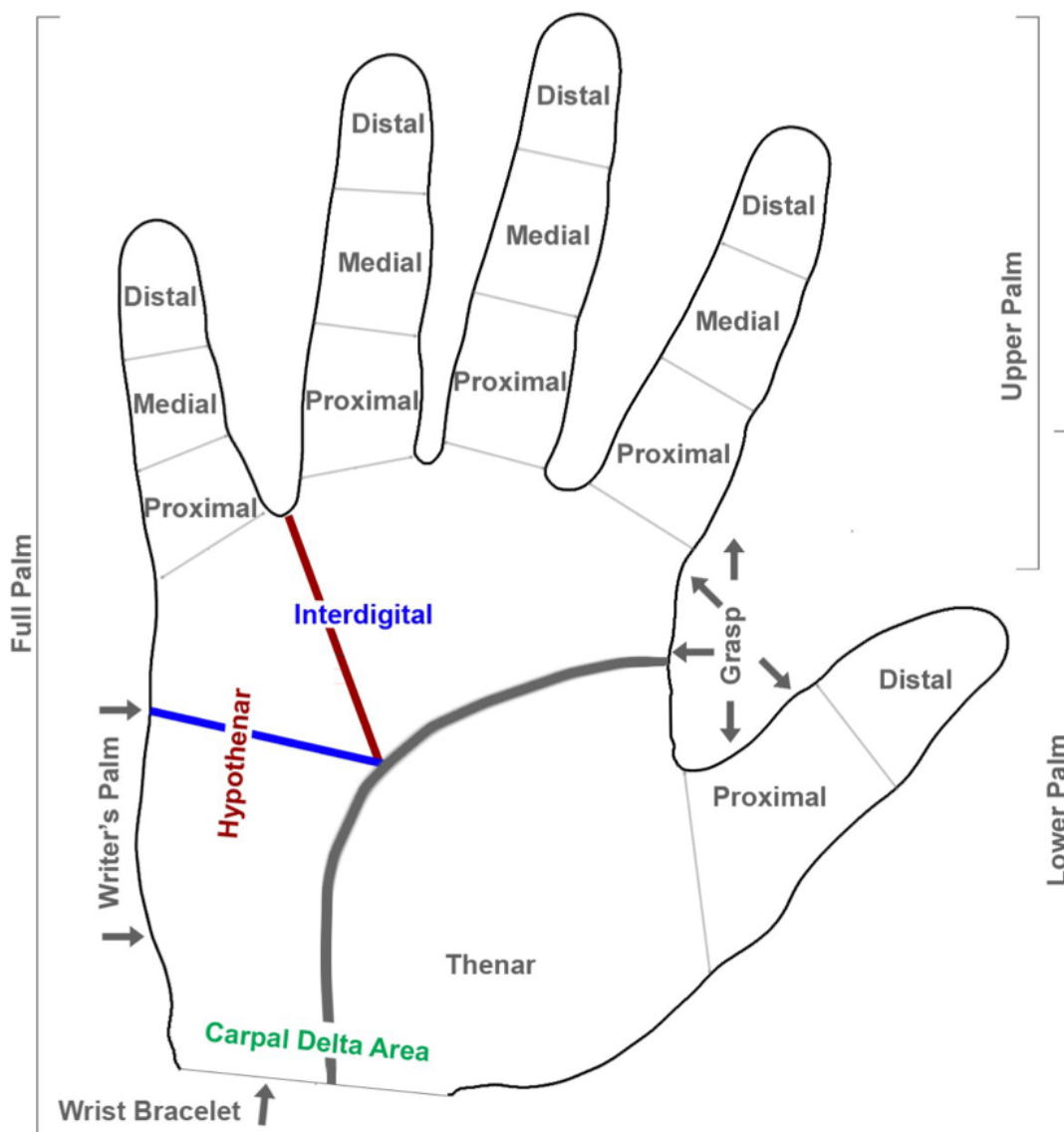
APPENDIX B PALM CAPTURE DIAGRAMS FROM THE FBI

The content of this appendix is extracted from the FBI's "A Practical Guide for Palm Print Capture".

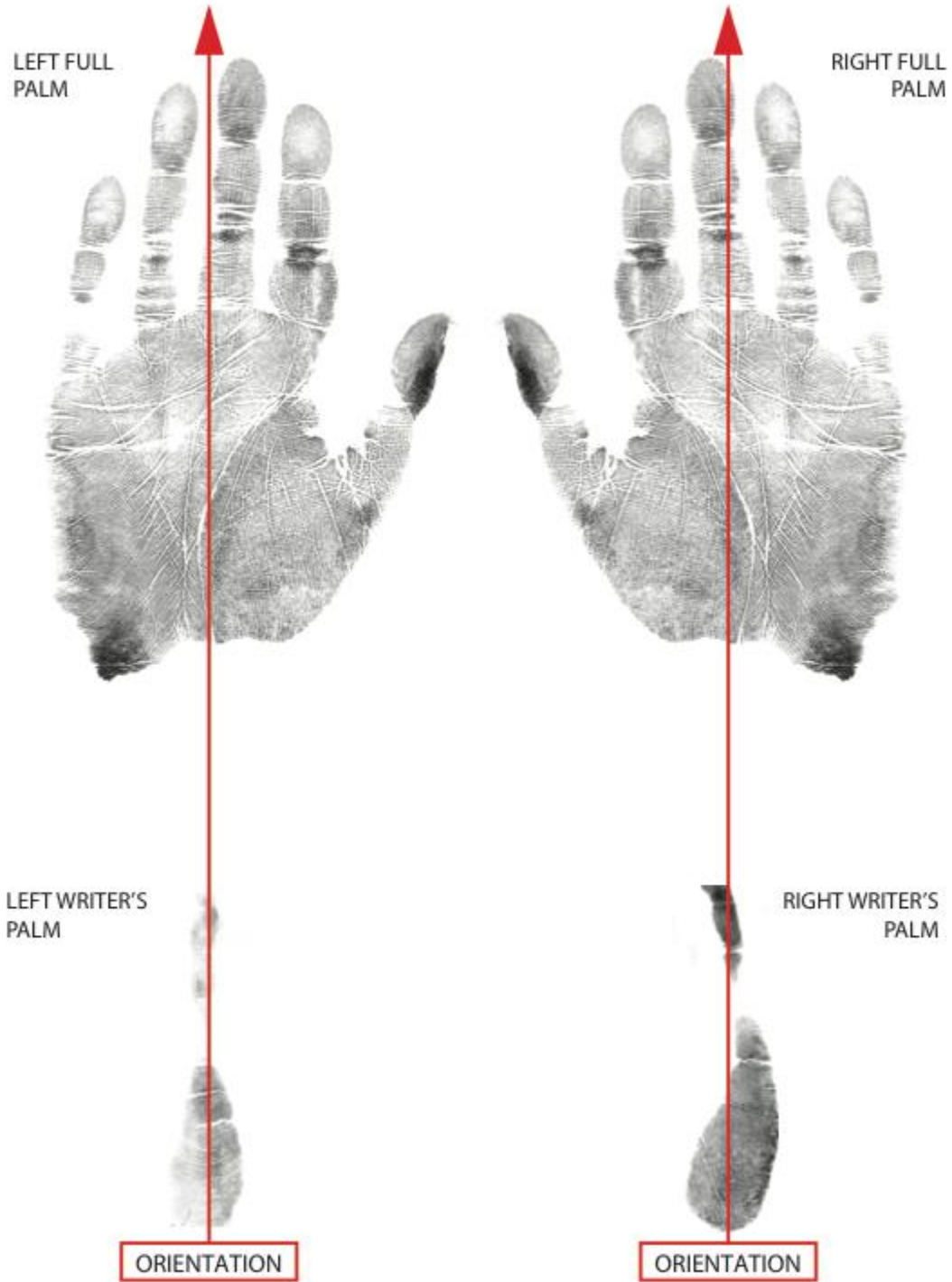
Parts of the Palm

The entire area of the full palm (See Figure 1) is defined as that area extending from the top of the *wrist bracelet* to the tips of the fingers and can be represented as one or two scanned images. If two images are used to represent the full palm, the lower image shall extend from the top of the *wrist bracelet* to the top of the *interdigital* area (*proximal* finger joint) and shall include the *thenar* and *hypothenar* areas of the palm. The upper image shall extend from the bottom of the *interdigital* area to the upper tips of the fingers. This provides an adequate amount of overlap between the two images to facilitate subject verification. By matching the ridge structure and details contained in the common *interdigital* area, an examiner can confidently state that both images came from the same palm. The inclusion of the finger images, particularly the distal segments, allows the palm print to be verified against a tenprint record for confirmation of identity.

Figure 1 - Finger and Palm Segment Positions



Full Palm Capture - 4 Image Capture



Upper/Lower Palm Capture - 6 Image Capture

