



Major Projects Directorate

RCMP NPS-NIST Interface Control Document for Immigration External Contributors

NPS-NIST ICD 2.1.1

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RCMP National Police Services
National Institute of Standards and Technology
Interface Control Document
For Immigration External Contributors

DISCLAIMER

The purpose of the specifications contained in this document is to enable Immigration, Refugee and Citizenship Canada (IRCC) and Canada Border Services Agency (CBSA) to electronically connect via a standard interface to the Royal Canadian Mounted Police (RCMP) National Police Services (NPS). Agencies that fully implement this specification will be able to capture and transmit fingerprint and demographic data in a format compatible with the RCMP's Real Time Identification (RTID), Canadian Criminal Real Time Identification Services (CCRTIS). Authorized agencies will be able to submit immigration enrolments and verifications for search against and possible storage in the RCMP National Automated Fingerprint Identification System (AFIS) database as well as non biometric file management submissions.

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HOW TO READ THIS DOCUMENT

This National Police Service National Institute of Standards and Technology Interface Control Document (NPS-NIST ICD) is divided into sections as follows:

- **Section 1 – Introduction** provides a general overview and information regarding the NPS-NIST ICD 2.1.1;
- **Section 2 – RCMP NPS External Contributor Requirements** describes common requirements of the NPS-NIST (National Police Services' National Institute of Standard Technology) interface;
- **Section 3 – Types of Transactions** defines the types of transactions available in the NPS-NIST ICD 2.1.1;
- **Section 4 – NIST Data Definitions** defines the tags, the record types and the record layouts;
- **Section 5 – Logical Record Formats** defines the record types associated to each transaction;
- **Appendix A – Tables** contains reference tables used to populate various tags used in the NPS-NIST defined transactions;
- **Appendix B – Summary Type-2 Tag List for RCMP Immigration Transactions** presents the summary Type-2 tag list available to support all RCMP Immigration transactions;
- **Appendix C – Summary of RCMP-Defined Attributes** presents the data dictionary of RCMP-defined tags; and
- **Appendix D – List of Acronyms** provides a glossary of acronyms used in this document.

The transactions supported by NPS-NIST ICD Version 2.1.1 are intended to be used only in support of Immigration search and enrolment, search only or verifications, and the management of Immigration files in support of Immigration submissions.

New users of the NPS-NIST ICD should start by reading sections 1 and 2. The transactions that support processing Immigration submissions described in section 3 should then be reviewed. Refer subsequently to section 4 to obtain the record layout needed for the selected transactions followed by section 5 for Logical Record Format.

The RCMP NPS-NIST Certification Document provides certification test scenarios and data, including the steps to be performed, and the required flow of transactions to and from the RCMP NPS and the contributor. Vendors must be certified by the RCMP before a Contributor can begin submitting transactions for processing.

Throughout the document, references to the National Police Service National Institute of Standards and Technology Interface Control Document (NPS-NIST ICD) versions 2.1.0,

2.1.1 or 1.7.8 can be made in either the long form, (ex: NPS-NIST ICD 2.1.1), or the short form (ex: ICD 1.7.8).

1. INTRODUCTION

The following section provides some general information about NIST and the RCMP's implementation of the American National Standards Institute/National Institute of Standards and Technology – Information Technology Laboratory (ANSI/NIST-ITL) specification to support the Temporary Resident Biometric initiative.

1.1 BACKGROUND

The ANSI/NIST-ITL biometric data format exchange standard was established by the National Institute of Standards and Technology (NIST) and the fingerprint identification community to provide guidelines for the exchange of biometric information across jurisdictional lines and between dissimilar systems made by different manufacturers. This version of the RCMP's NPS-NIST ICD is based on the ANSI/NIST-ITL 1-2000 standard, titled "Data Format for the Interchange of Fingerprint, Facial, & Scar Mark & Tattoo (SMT) Information".

While the ANSI standard has established the guidelines for exchange of biometric data between agencies, the RCMP's NPS-NIST ICD defines requirements that agencies must adhere to when electronically communicating with the RCMP's Real Time Identification (RTID) System. The RCMP has used the ANSI standard as the basis for NIST transaction record design. However the RCMP's specific requirements, related to record content, are contained in the NPS-NIST ICD.

1.2 PREFACE TO VERSION 2.1.1 OF THE ICD

Due to a number of modifications to existing ICD 2.1.0 transactions and the addition of a new non-retain anonymous search transaction, the level of changes required a new ICD version. Several transactions in ICD 2.1.0 are forwards compatible to ICD 2.1.1; however the reverse is not true. A number of transactions in ICD 2.1.1 have changed their definition from that of ICD 2.1.0, so they are no longer interchangeable.

1.3 RETIREMENT OF ICD 2.1.0

Note: ICD version 2.1.0 was retired by the RCMP at the beginning of January 2016. Transactions formatted according to version 2.1.0 are no longer accepted by RTID. Many of the references made previously in this document linking back to version 2.1.0 have now been removed.

1.4 OBJECTIVES

This NPS-NIST ICD defines the data exchange specifications necessary to electronically communicate with the RCMP's RTID System. This standard will facilitate the development or purchase of automated systems that will allow IRCC and CBSA to electronically exchange fingerprint images and other information with the RCMP's RTID System.

This document describes the types and format of information that the RCMP expects to receive and send electronically.

As compared to NPS-NIST ICD version 1.7.7, this version of the ICD contains only Immigration specific transactions that will be used by IRCC and CBSA.

The NPS-NIST ICD 2.1.1 transactions defined in this document will continue to support the implementation of the Temporary Resident Biometric (TRB) project while modifying and adding transactions to support the Immigration Information Sharing (IIS) project, together referred to as "Immigration". RTID will continue to process 1.7.7 (or later versions) transactions for criminal, refugee, civil and latent crime scene fingerprints, while processing transactions for Immigration enrol, Verification and File Management submissions (Amend and Purge) under ICD 2.1.1. This ICD contains transactions to support Immigration enrolments and verifications, and the management of Immigration files. All required tag definitions and supporting information necessary to implement the types of transactions (TOT) are included in this document.

This document is not intended to provide a set of requirements or specifications related to a contributor's front-end application. Requirements related to electronic fingerprint capture devices and record management systems are entirely the responsibility of the contributor. This document is solely intended to define the standard by which a contributing agency's system can exchange data with the RCMP's RTID System.

A suggested list of front-end application features is provided in section 2.3 of this document as a guideline when evaluating Electronic Fingerprint Capture Devices or related systems solutions.

No details of networking or communications protocols are provided in this document. While contributing agencies are required to communicate with the RCMP's RTID System, this document provides no details of how that communication takes place.

NPS-NIST ICD 2.1.1 transactions are totally independent from that of ICD 1.7.7 and 1.7.8. The NPS-NIST ICD 2.1.1 **is not backward compatible** with NPS-NIST ICD 1.7.7 and/or 1.7.8 versions even though some transaction types share identical names (SRE, ACKT and ERRT). ICD 2.1.1 will only be implemented by IRCC and CBSA in support of Immigration projects and programs, and are not intended for general use by the NPS community.

Those agencies currently certified to NPS-NIST ICD version 1.7.7 or 1.7.8 have no need to make any changes as a result of the release of ICD version 2.1.1. Further, there is no upgrade path between 1.7.7 and 2.1.1 since they are completely independent interface control documents.

1.5 TEMPORARY RESIDENT BIOMETRICS PROJECT OPERATIONAL CONCEPTS

The Temporary Resident Biometrics Project's streamlines and enhances identity management within the Temporary Resident Program to make admissibility decisions based on accurate identity and immigration admissibility information; and permit Border Services Officers (BSO) to verify applicants' identity at Canada's Ports of Entry (POEs).

Streamlined and enhanced identity management includes the enrolment, management and verification of fingerprint and biographic information for select foreign nationals applying for Temporary Resident Visas and/or Temporary Resident Work/Study Permits. Discretionary verification at selected POEs will confirm the identity of visa-required foreign nationals.

Key elements of the Temporary Resident Biometrics (TRB) Project solution include:

- Capturing of biometrics by IRCC Visa Offices, Visa Application Centres (VAC) or Government Service Providers (GSP) abroad to establish a reliable biometric identity and submitting the transactions to IRCC. IRCC then submits NPS-NIST ICD 2.1.1 Immigration enrolment (IMM) transactions to the RCMP for processing;
- RCMP will search fingerprints for identification purposes against the RCMP's RTID System and return the Search Results (SRE) to assist IRCC with informed admissibility decisions. The RCMP will enrol the fingerprints in AFIS;
- CBSA confirms the identity of visa-required foreign nationals by submitting Verification (VER) transactions to the RCMP, on a discretionary basis, from select POEs. The client's fingerprints will be compared against the fingerprints captured at the time of enrolment and a match response (SRV – Verification Search Result) transaction sent to CBSA. However if the transaction contains validation errors, a verification error transaction (ERRV) will be sent to CBSA; and
- When required, IRCC will submit (IMA) Amend or (IMP) Purge transactions to the RCMP for processing to ensure that the RCMP's biographical information remains current, accurate and valid. An Immigration Amend Results (IMAR) or an Immigration Purge Results (IMPR) transaction is sent to IRCC when the RCMP has completed processing the (IMA) Amend or (IMP) Purge transaction.

The IMM, IMA, IMP, IMAR, IMPR, VER, SRV and ERRV transactions described above are collectively referred to as Immigration transactions. The IMM, IMA and IMP transaction use existing Tenprint NPS-NIST transactions for conveying Acknowledgments (ACKT), Errors (ERRT) and Search Responses (SRE) to IRCC, but these transactions have been redefined in ICD 2.1.1.

1.6 IMMIGRATION INFORMATION SHARING PROJECT OPERATIONAL CONCEPTS

The Immigration Information Sharing (IIS) Project's purpose is to build on the solution developed for the TRB project to enrol Resettlement Refugees and Inland Asylum Claimants in addition to Temporary Residents. The transactions developed for TRB in

NPS-NIST ICD 2.1.0 have been enhanced to expand the operational scope to meet IIS requirements and create ICD 2.1.1.

As part of the IIS project, non-retain anonymous searches for immigration identification purposes shall be received from the United States. To support these searches in an efficient manner, a new Anonymous Tenprint Search (ATS) transaction has been defined and added to ICD 2.1.1. It will use the same response (ACKT, SRE and ERRT) transactions as were defined previously.

1.7 BIOMETRIC EXPANSION PROJECT OPERATIONAL CONCEPTS

For the Immigration Biometric Expansion Project, non-retain searches for immigration identification purposes shall be received from additional FCC partners of Australia, New Zealand and the United Kingdom. The Anonymous Tenprint Search (ATS) transaction shall be leveraged to support search requests received from these FCC partners.

This revision of ICD 2.1.1 introduces the Unsolicited Criminal Notification (UCN) transaction type which shall be sent to both IRCC and CBSA when a CAR-Y or CAR-N submission type received from a police agency identifies to an Immigration subject or Legacy Refugee currently held on file by the RCMP.

Other functional requirements of the Biometric Expansion Project are described in the *Immigration Biometric Expansion Project - RCMP Business Requirements Document*, RDIMS #42878.

1.8 IMMIGRATION FUNCTIONS AND ICD VERSIONS

With the advent of the Immigration Information Sharing project, IRCC has instituted a non-differentiated, generalized approach to the enrolment of individuals in the immigration stream sent to the RCMP. All Immigration clients requiring entry visa or permit are consolidated into a general "Immigration" (IMM) enrolment transaction type.

CBSA shall continue to use the 1.7.8 REF transaction type to enrol Asylum claimants at a POE.

Additionally, IRCC and CBSA will commence electronic requests for fingerprint images of individuals already enrolled in the immigration stream, primarily for sharing with international partners for investigative reasons. Consequently, to support Immigration programs and CBSA enforcement duties, the following NPS-NIST ICD versions and transactions can be expected to be submitted by IRCC and CBSA:

Table 1-1: Versions of NPS-NIST ICDs Used for Immigration Information Sharing

NPS-NIST ICD Version	IRCC	CBSA
v 2.1.1	IMM, ATS, IMA, IMP	VER
v 1.7.8	IRQ	REF, CAR-Y, CAR-N, IRQ

Fingerprints and biographical information submitted with REF transactions under ICD 1.7.8 shall be stored in the RTID Immigration repository, along with those received via an IMM transaction under ICD 2.1.1.

1.9 NIST FILE

All Immigration transactions submitted to the RCMP's RTID System must adhere to the ANSI/NIST and NPS-NIST specification. As such, each NIST file will contain at a minimum a Type-1 and a Type-2 logical record. In addition, transactions with fingerprints will contain at least one Type-14 record.

Table 1-2 lists the Immigration logical record types included in the ANSI/NIST ITL 1-2000 standard. The record types currently supported by the RCMP that are pertinent for Immigration include Type-1, Type-2 and Type-14.

Table 1-2: Immigration Logical Record Types Supported by RCMP

Logical Record Type Identifier	Logical Record Contents	Type of Data	Implemented by the RCMP
1	Transaction Information	ASCII	Y
2	Descriptive Text (user-defined)	ASCII	Y
14	Tenprint Fingerprint Impressions (variable-resolution)	ASCII/Binary	Y

1.10 SEPARATORS

The ANSI/NIST-ITL 1-2000 standard specifies the use of separators to delimit information items within a tag, tags within a logical record, and logical records within a transaction (ANSI-NIST formatted file). The four information separators are unit/sub-tag separators (^Us) record/occurrence separators (^Rs) group/tag separators (^Gs) and file/record-type separators (^Fs). It is important to note that all of these separators are a **single ASCII character** (American Standard Code for Information Interchange) in length, which is shown in the table below.

Table 1-3: Information Separators Used in ANSI-NIST Formatted Files

Code	Type	Description	Hexadecimal Value	Decimal Value
U_s	Unit/Sub-tag Separator	Separates multiple information items within a tag or a sub-tag	1F	31
R_s	Record/Occurrence Separator	Separates multiple sub-tags	1E	30
G_s	Group/Tag Separator	Separates information tags	1D	29
F_s	File/Record-type Separator	Separates logical records	1C	28

For example, the Other Names/Alias (tag 2.824), contains sub-tags and allows up to 40 occurrences. Between each sub-tag there is a U_s separator. Between each occurrence there is an R_s separator and once there is no more information to enter for this tag there is either a G_s separator to separate this tag from another Type-2 record tag or a F_s separator if it is the last Type-2 record tag.

Note: Successive separator characters must be used with no intervening blank or other characters when a sub-tag is missing.

Table 1-4: Type 1 Transaction Record Example

Identifier	Tag Number	Tag Name	Example
LEN	1.001	Length	1.001:305 G_s
VER	1.002	Version	1.002:0300 G_s
CNT	1.003	Content ¹	1.003:1 U_s 4 R_s 2 U_s 00 R_s 14 U_s 01 R_s 14 U_s 02 R_s 14 U_s 03 G_s
TOT	1.004	Type of Transaction	1.004:IMM G_s
DAT	1.005	Date	1.005:20110121 G_s
PRY	1.006	Priority	1.006:1 G_s
DAI	1.007	Destination Agency Identifier	1.007:ON12345 G_s
OAI	1.008	Originating Agency Identifier	1.008:ON56789 G_s
TCN	1.009	Transaction Control Number	1.009:ON567890000000000125 G_s
TCR	1.010	Transaction Control	1.010:ON1234500000000000110 G_s

¹ The content field example depicts an IMM submission, which contains one (1) Type-1, one (1) Type-2 and three (3) Type-14 records.

Table 1-4: Type 1 Transaction Record Example

Identifier	Tag Number	Tag Name	Example
		Reference Number	
NSR	1.011	Native Scanning Resolution	1.011:19.69 ^G _s
NTR	1.012	Transmitting Resolution	1.012:19.69 ^G _s
GMT	1.014	Greenwich Mean Time	1.014:20110121153745Z ^F _s

1.11 REFERENCES

The following references are available to contributors:

- American National Standard Institute / National Institute of Standards and Technology, Data Format for the Interchange of Fingerprint, Facial, & Scar, Mark & Tattoo Information, July 27, 2000, ANSI/NIST-ITL 1-2000;
- Electronic Biometric Transmission Specification (EBTS), Criminal Justice Information Services, FBI, Version 9.3, December 9, 2011 IAFIS–DOC-01078-9.0;
- Electronic Biometric Transmission Specification (EBTS), Criminal Justice Information Services, FBI, Version 10.0, July 2, 2013, IAFIS–DOC-01078-10.0;
- FBI-WSQ Gray Scale Image Compression Specification, IAFIS-IC-0110 (V3.1), Federal Bureau of Investigation, October 4, 2010;
- Test Procedures for Verifying IAFIS Image Quality Requirements for Fingerprint Scanners and Printers, v1.4, MITRE Technical Report MTR05B0016R7, Department of Justice – Federal Bureau of Investigation, February 2013;
- Immigration Biometric Expansion Project - RCMP Business Requirements Document, RDIMS #42878;
- RTID SMTP-NIST Message Guidelines, RDIMS #21047.

2. RCMP NPS EXTERNAL CONTRIBUTOR REQUIREMENTS

The following sub-sections describe some of the requirements needed to submit electronic transactions to the RCMP's RTID System.

2.1 COMPLIANCE STANDARDS

This section describes the minimum requirements that must be met before a contributor may begin submitting Immigration transactions to the RCMP's RTID System.

2.1.1 RCMP NPS-NIST Certification

Any systems, which will connect to the RCMP RTID system must be certified by the RCMP before a Contributor is permitted to submit specific Immigration transactions as defined in the NPS-NIST ICD 2.1.1. The vendor will receive a Letter of Certification in order to confirm compliance to specific transaction types within a specific NPS-NIST ICD Version.

Only IRCC and CBSA will be authorized to submit electronic Immigration transactions.

All fingerprint image and logical records must comply with the ANSI/NIST-ITL 1-2000 specifications and Type-2 Logical Record formats must conform to the RCMP's implementation of the NPS-NIST ICD 2.1.1. The Federal Bureau of Investigation (FBI) compliance standards for image data as listed below will be used to confirm compliance to the ANSI/NIST standard.

2.1.2 FBI IAFIS Image Quality Specifications

These specifications, found in Appendix F of the FBI Electronic Biometric Transmission Specification (EBTS) document, apply to fingerprint scanner systems and printers.

Electronic images must be of sufficient quality to allow for:

- Conclusive fingerprint comparisons (identification or non-identification decision);
- Fingerprint classification;
- Automatic feature detection; and
- Overall AFIS search reliability.

The Electronic Fingerprint Capture Device (EFCD) must be listed on the FBI Certified Product List to initiate RCMP NPS-NIST Certification. These specifications are for the purpose of accrediting current Electronic Fingerprint Capture Devices (EFCD).

2.1.3 WSQ Gray-Scale Fingerprint Image Compression Specification ²

The contributor systems must compress using Wavelets Scalar Quantization (WSQ) for ICD 2.1.1 transactions. When contributors compress images using WSQ, the RCMP requires that the compression ratio of transmitted fingerprint images to be 15:1 or less on average, measured over multiple submissions. The RCMP monitors compression ratios for each contributor. Whenever the calculated average across many submissions is consistently higher than 15:1 by a large margin, the RCMP may request remedial action be taken by the identified contributor.

2.1.4 Data Format for the Interchange of Fingerprint Information

The data format must be compliant with the ANSI/NIST-ITL 1-2000 standard.

2.2 GENERAL BUSINESS RULES

The following section describes some general concepts related to use of the NPS-NIST ICD.

2.2.1 Fields/Tags

All fields have a tag number assigned to them. The format for each field consists of the logical record number followed by a period ".", a field number followed by a colon ":", followed by the information appropriate to that field (for example, **2.807: M**).

The tags are assigned following the ANSI/NIST standard. These tag numberings are coordinated with the tag numberings used by the FBI in their Electronic Biometric Transmission Specification (EBTS). Every North American agency will have a unique assignment of tags. For example, the RCMP is assigned tags in the 2.8 range, FBI in the 2.0 range and in other U.S. States, a different range. Interpol countries are not included in this assignment of tag numbers.

2.2.2 RTID Agency Identifier

Every NIST submitting agency will be assigned a unique 7-character alphanumeric RTID Agency Identifier by the RCMP. This identifier identifies the agency from which the NIST transaction originated. The RTID Agency Identifier will be populated in the Originating Agency Identifier (tag 1.008) of incoming transactions and in the Destination Agency Identifier (tag 1.007) of responses from the RCMP's RTID System. Unlike previous ICD versions, in ICD 2.1.1 the alphanumeric RTID Agency Identifier is no longer mapped to an equivalent 7-digit numeric RTID Agency Identifier when used to prefix a Transaction Control Number (TCN). All uses of the RTID Agency Identifier in Type 1 records will now use the alphanumeric format.

² Refer to latest version of WSQ standard as indicated in Section 1.11, References. Contributors are encourage to use WSQ v3.1 or greater.

For Type 2 data, the alphanumeric RTID Agency Identifier must still be mapped to an equivalent 7-digit numeric RTID Agency Identifier when it is embedded in the Document Control Number (DCN) (refer to Document Control Number tag 2.800 in section 4.2).

The alphanumeric form of the RTID Agency Identifier will have the format shown below and will be used in Type 1 record tags:

AANNNNN

Where;

AA: 2-character alphabetic province code; and

NNNNN: 5-digit number.

Example: NS12345 is the alphanumeric form of the RTID Agency Identifier assigned to an agency in Nova Scotia.

See *Table A-4: Province Codes* in Appendix A for a list of province codes.

The numeric form of the RTID Agency Identifier will have the following format and will be embedded in the DCN (Type 2 record tag):

nnNNNNN

Where;

nn: 2-digit numeric province code; and

NNNNN: last 5 digits of the alphanumeric RTID Agency Identifier.

Example: **NS**12345 is the alphanumeric form of the RTID ID assigned to an agency in Nova Scotia. NS maps to 03, therefore the numeric form of the RTID ID of this agency is **03**12345.

See *Table A-4: Province Codes* in Appendix A for a list of province codes.

The Originating Agency Identifier (tag 1.008) and TCN prefix (part of tag 1.009) must always contain the *alphanumeric* version of the RTID agency identifier of the submitting agency or else the submission will be rejected (ERRT).

The DCN (tag 2.800) must contain the *numeric* version of the RTID Agency Identifier or else the submission will be rejected (ERRT).

Refer to Section 2.2.6 *Numeric vs. Alphanumeric RTID Agency Identifiers* for details.

2.2.3 Transaction Control Number

All transactions will contain a Transaction Control Number (TCN) that is automatically generated by the submitting system. This number will be populated in tag 1.009 of the Type-1 record. The 20-digit TCN must have the following format:

<7-digit alphanumeric RTID Agency Identifier> + <13-digit sequential number>.

Example:

TCN NS123450000000000001 = <NS12345> + <00000000000001>.

Version 2.1.1 of the ICD introduces a change to the TCN from previous NPS-NIST ICD versions. The TCN's length has been increased from 13 to 20 digits and the character type has been broadened from numeric to alphanumeric.

This change is to accommodate the increased volume of some larger contributors employing a single point of contact central server and whose accumulated volume of transactions exceeds the one million possible with the older 13 digit TCN. To support the pending introduction of Agency Identifiers with an alphanumeric 5 digit "number" following the province code, ex: ON12CD7, the character type of the TCN has also changed from Numeric to Alphanumeric.

The TCN is used to track the transaction through the RTID workflow. It may also be used within the Electronic Fingerprint Capture Device Case Management system to track the transaction and to reference the corresponding response from the RCMP's RTID System.

The response will contain a TCN as generated by the RCMP's RTID System. The TCN generated by the RCMP's RTID System will not follow the same formatting rules as the TCN generated by the submitting system. The original TCN of the corresponding incoming transaction (or TCN of most recent resubmission) will be referenced in the Transaction Control Reference Number (tag 1.010).

A transaction must never be resubmitted with the same TCN as a previous transaction, except when the 13-digit sequential number reaches 999999999999 and must rollover to 000000000000. Each **transaction must have a new TCN**. If an error has been received from the RCMP's RTID System the transaction may be resubmitted with the original DCN but requires new TCN.

Notes on Alphanumeric TCNs:

- The sequence number is intended to stay a number. The use of alphabetic characters in the 13 digit sequence number is not permitted and their reception will result in an error message (ERRT) being returned;
- The sequence number portion of the TCN should not be incremented by a value of more than one (1) between successive submissions from a Contributing Agency or individual device. The reservation of ranges of numbers or incrementing by more than 1 can lead to duplicate TCNs that will cause a submission to be rejected by RTID and so is not recommended;

2.2.4 Transaction Control Reference Number

All responses will contain a Transaction Control Reference Number (TCR) number that refers to the corresponding TCN of a submission received by the RCMP's RTID system.

Following is an example of a workflow of a single NPS-NIST ICD transaction. The format of the DCN, TCN and TCR are kept simple for illustration purposes only. In an actual transaction they would follow the format as defined in this document.

Example:

- Incoming file: IMM: TCN=1, DCN=1
- Outgoing file: ERRT: TCN=2, TCR=1, DCN=1
- Resubmitted file: IMM: TCN=3, DCN=1
- Outgoing file: ACKT: TCN=4, TCR=3, DCN=1
- Outgoing file: SRE: TCN=5, TCR=3, DCN=1

Note: The second incoming IMM request in the example above depicts a resubmission. The new TCN is used to identify the new instance of the IMM while the original DCN is used to indicate that it is a resubmission of a previous IMM, and the TCR is used to reference the RCMP response to the resubmitted IMM. A second, unrelated IMM would require a new DCN and TCN since it would be a new transaction.

2.2.5 Document Control Number

All ten-print submissions will contain a unique Document Control Number (DCN) created by the contributor. The DCN is the unique number that is used to carry out a dialogue pertaining to a specific ten-print submission. The DCN is also used as a reference number to identify individual fingerprint sets in AFIS.

Contributing Agencies will be supplied with the following three identifiers to assist in generating their unique DCN: a 7-digit numeric version of the RTID Agency Identifier, an external flag and a document flag. Refer to tag 2.800 in section 4.2 *Type-2 Data Definitions (Descriptive Text)* for the format and edit rules.

Each Enrolment submission will contain a unique combination of Document Control Number (DCN) and Transaction Control Number (TCN) created by the submitting agency. In response to a Canadian ERRT and ONLY in response to a Canadian ERRT, the user can resubmit the submission with same DCN to correct the errors. The resubmission must have the DCN created in the initial submission and a new TCN specifically created for the resubmission. Any resubmission made in the absence of an ERRT will be rejected. A RESUBMISSION WITH THE SAME DCN CAN ONLY BE SUBMITTED AFTER A CANADIAN ERRT IS RECEIVED BY THE AGENCY. A Canadian ERRT is differentiated

from an FBI ERRT by the RCMP-NPS Results (RRES) tag (2.875) which is set to “Y” for Canadian search requests and “N” for FBI and other foreign search requests.³

Note that the same DCN cannot be used to resubmit if the ERRT that was issued indicates a duplicate DCN error.

The contributing agency MUST NOT change the DCN in order to submit revision(s) to the Type-2 data with a set of fingerprints previously submitted.

Biographic information amendments must contain a DCN that already exists in RTID. This DCN refers to a specific Immigration Submission to be modified, as requested by the submitting agency.

Transaction level purges also require a DCN that must already exist in RTID, in order to remove a specific set of fingerprints, as well as the associated biographic data.

DCNs used for amendment and/or purge transactions are referred to as Document Control Reference numbers (DCR). A DCR always refers to a DCN on file.

Verification transactions do not require a DCN.

Below is an example of how DCN and TCN are used in a NIST dialogue. For simplicity, the DCN, TCN and TCR are represented as 2-digit integers. The format of the DCN, TCN and TCR are kept simple for illustration purposes only. In an actual transaction they would follow the format as defined in this document.

EXAMPLE:

Agency submitted transaction (initial submission):	IMM	TCN = 1, DCN = 1
RCMP's RTID System Response (errors found):	ERRT	TCN = 2, DCN = 1, TCR = 1
Agency re-submitted transaction (resubmission#1):	IMM	TCN = 3, DCN = 1
RCMP's RTID System Response (acknowledgement):	ACKT	TCN = 4, DCN = 1, TCR = 3
RCMP's RTID System Response (results):	SRE	TCN = 5, DCN = 1, TCR = 3

Important Note: The DCN remains unchanged throughout the whole dialogue.

Notes on DCNs:

- The potential impact on the DCN of employing alphanumeric RTID Agency Identifiers has not been fully assessed, so no changes to the DCN definition are included at this time; and
- The DCN as currently defined limits the number of transactions from a single RTID Agency Identifier to 10,000 per day. Though this restriction does not normally present any problems, some exceptionally high volume Contributors may exceed it. For these

³ Note that FBI searches are not currently included in ICD 2.1.1, however the resubmission process described here is standard functionality within the RTID system.

cases, a technique called Alternate Device Identifiers employing Primary and Secondary RTID Agency Identifiers can be implemented. This technique will be configured by the RCMP as required to accommodate special circumstances.

2.2.6 Numeric vs. Alphanumeric RTID Agency Identifiers

The RTID Agency Identifier is moving away from the format defined under earlier ICD versions as:

AANNNNN

Where;

A is a letter A-Z; and

N is a number 0-9.

Example: ON12345

The new format defined for future ICD versions is a fully alphanumeric RTID Agency Identifier generalized format of:

AAN@@@@

Where;

A is a letter A-Z;

N is a number 0-9; and

@ is alphanumeric 0-9 or A-Z.

Example: ON6AXBQ

Under ICD 2.1.1, the Type 1 record tags *can support* a fully alphabetic RTID Agency Identifier as shown in the example above. However, the RTID Agency Identifier is embedded in the DCN. The DCN ***cannot yet support any form of Alphabetic RTID Agency Identifier***, it can support only numeric identifiers.

Consequently, for ICD 2.1.1 ***fully alphabetic RTID Agency Identifiers cannot be used***, and only the first two characters “AA” can be employed without translation, and only for use in Type 1 record tags. The RTID Agency Identifier for users of ICD 2.1.1 will remain of the form AANNNNN, and will be mapped to a fully numeric form as previously described when embedding in the DCN.

Fully alphabetic RTID Agency Identifiers are expected to be employed in a future revision of ICD 2.1.1, when an alphanumeric DCN can be supported.

2.2.7 Format Validation

To ensure compliance with the NPS-NIST ICD, all data fields in a transaction must be validated by the EFCD or by the agency's central server prior to submitting the electronic transaction to the RCMP's RTID System. The use of pick-lists and drop-down lists is encouraged. Once received, the RCMP's RTID System will validate submissions to ensure that the data conforms to the NPS-NIST ICD. Fields are validated against all the business rules in the NPS-NIST ICD specification for field size, character type, number of occurrences and field inter-dependency rules. Refer to the section on NIST Data Definitions for the layout of the transactions and other rules. Only transactions that conform to this specification will be accepted. If a transaction does not meet NPS-NIST ICD specifications it will be rejected by the RCMP's RTID System and an error transaction (ERRT or ERRV). will be issued.

2.2.8 Condition

Under the **Condition** column in the logical record description tables, mandatory tags are designated by the letter **M** and optional tags by the letter **O**. Some tags become mandatory based on the value entered in another tag, thereby making it conditional, and are designated by the letter **C**. The contributor should not allow the transmission of an NPS-NIST ICD transaction if mandatory tags are not populated. If a transaction does not meet NPS-NIST ICD specifications, it will be rejected by the RCMP's RTID System (ERRT or ERRV).

When a tag is optional, it means that there are circumstances under which the tag cannot be populated. The tag *must be populated when the data is available*. That is, if a subject does not have a third given name, then the third given name will not be provided. If the subject does have a third given name then it must be included. The user of the EFCD or system populating biographical data must have the ability to enter all optional tags. All optional and mandatory tags in reply transactions must be presented to the recipient when they are populated.

Note: Optional tags that do not contain data should not be included in a transaction. Where a tag includes sub-tags, all sub-tags, populated or not, must be included.

2.2.9 Character Type (Allowable and Special Character Sets)

Allowable character types are indicated in the logical record definitions in the character type column. *Table 2-1: Allowable and Special Character Types* contains the codes used to describe the allowable character sets.

Table 2-1: Allowable and Special Character Types

Character Types	
Code	Description
A	Alpha; refers to all non-accented upper case letters (A-Z) defined by ASCII character set from decimal 65 to 90 inclusive.
B	Binary Data
D	Defines a known complete date value. Valid date format is CCYYMMDD, where: <div style="margin-left: 40px;">CC (Century) must be 19 to 20</div> <div style="margin-left: 40px;">YY (Year) must be 00 to 99</div> <div style="margin-left: 40px;">MM (Month) must be 01 to 12</div> <div style="margin-left: 40px;">DD (Day) must be 01 to the limit defined by the month and year</div> For example, 20110214 represents February 14, 2011.
N	Numeric; refers to 10 digits (0-9) defined by ASCII character set from decimal 48 to 57 inclusive.
S	RCMP Special Character Set; refers to allowable special characters <div style="margin-left: 40px;">comma [,]</div> <div style="margin-left: 40px;">apostrophe [']</div> <div style="margin-left: 40px;">period [.]</div> <div style="margin-left: 40px;">pound sign [#]</div> <div style="margin-left: 40px;">dollar sign [\$]</div> <div style="margin-left: 40px;">ampersand [&]</div> <div style="margin-left: 40px;">left parenthesis [(]</div> <div style="margin-left: 40px;">right parenthesis [)]</div> <div style="margin-left: 40px;">asterisk [*]</div> <div style="margin-left: 40px;">hyphen [-]</div> <div style="margin-left: 40px;">space []</div> Where they are permitted, unless otherwise stated in the notes, special characters cannot be used as the first or last character in a field.

The logical record format tables describing each TOT contain a character type column that will contain the above indicated character type code(s) to indicate the allowable characters for each tag and sub-tag in each transaction. Where a tag allows additional characters not included in the above indicated character set, the notes column will indicate the specific allowable characters.

Where a tag allows only certain characters within a character set, the set will not be indicated as a valid character type in the character type column. Instead, the specific allowable characters will be indicated in the notes column for that tag.

A mandatory tag where allowable Character type of "A" (re: A, ANS, AS) is defined must contain at least one non-blank character.

The formatting characters Carriage Return (ASCII character value of decimal 13) and Line Feed (ASCII character value of decimal 10) are allowed in certain tags as indicated in the logical record definitions.

2.2.10 Field Size per Occurrence

The maximum field size does not include any separators (i.e., unit, record, group, or file) but does include all alphanumeric, numeric or special characters. For example, if a tag allows up to 30 characters then 30 characters may be entered plus the separator. The logical record length (LEN) must include the count of every character of every field contained in the record including the information separators. Binary images (Type-14 fingerprint images) do not have a maximum field size and therefore, this constraint does not apply. Refer to the ANSI/NIST ITL 1-2000 for more information.

2.2.11 Occurrences

The occurrences column in the record layout indicates the number of occurrences allowed for the tag. Multiple occurrences are separated by the record separator (^Rs).

2.3 ELECTRONIC FINGERPRINT CAPTURE DEVICE (EFCD)

Electronic Fingerprint Capture Devices (EFCD) are automated systems that acquire the fingerprints of a subject directly from the subject's fingers or scanned from fingerprint cards. The device is capable of capturing palm prints, plain and rolled fingerprint impressions. EFCD's may also include the ability to capture the biographic profile of a subject (name, alias, sex, date of birth, etc.).

Agencies should be aware that this ICD standard is not intended to provide a software specification or a graphical user interface design of an external agency's EFCD. **Agencies should work closely with their vendor and the RCMP to ensure that the user interface dialogue and the functions and features of the EFCD adequately meet their needs and ensure that data is submitted to the RCMP's RTID System correctly.** A number of recommended features are described below.

2.3.1 Basic Administration

The device should support basic administration features. These include but are not limited to:

- User Identifier and password for login;
- Locked screensaver for workstations inactive after a predefined time;
- Backup / restore / archive processes;
- Operate in both official languages – English and French (where applicable);
- A training mode enabling users to practice and become familiar/comfortable with the use of the EFCD by taking electronic fingerprints and capturing demographic data without actually submitting transactions;
- A configuration capability for testing, which enable agencies/vendors to submit and receive test transactions to and from the RCMP's RTID System and/or the contributor's central server;
- Support for System Table updates received from RCMP's RTID System and/or the contributor's central server; and
- Virus Protection.

2.3.2 Basic Case Management

Case management should provide features including but not limited to the following:

- Fully capture and edit transactions of the types that the agency is permitted to submit;
- Monitor transaction status;
- Fully view transaction details and their replies;
- Generate a unique Document Control Number (DCN) and Transaction Control Number (TCN) combination per new request;
- Amend existing requests and resubmit with a new TCN and the same DCN when an error is returned;
- Use the same DCN for a submission dialogue (number of transactions) pertaining to one set of fingerprints;
- Retain, manage and delete the transactions/cases and their replies by TCN/DCN for a minimum specified period of time; and
- Display and print the submissions and their replies (e.g., IMM, VER, SRE, ERRT, etc).

2.3.3 Shared Devices

If an EFCD is shared by two or more agencies, the configuration of the device (e.g. the agency-specific identifiers: the alphanumeric RTID Agency Identifier used for the TCN prefix and OAI, and the numeric RTID Agency Identifier (embedded in the DCN), DCN external flag and DCN document flag) must be in context of the agency of the operator using the device. This can be set by the user profile at logon.

2.3.4 Bilingual Support

It is recommended that devices be capable of operating in either English or French. Users should be able to do all processing in either language; including a selection of drop-downs, pick-lists, tag names and on-line help. Accented characters are not supported within RTID and all data is stored in capitals.

2.3.5 Temporary Storage

Agencies should have, as a minimum, the ability to store all queued transactions for a configurable period of time in the event of the RCMP's RTID system downtime. The temporary storage would typically be located within the central server, for agencies supporting a single point of contact with the RCMP's RTID System. It also provides the user agency with a method of adding and editing transaction data if the biographic data changes after the capture of the fingerprints and before it is transmitted to the RCMP's RTID System.

2.4 EFCD-CENTRAL SERVER INTEGRATION

Agencies that interface their Electronic Fingerprint Capture Devices (EFCD) with a single point of contact central server must ensure that data forwarded to the RCMP's RTID System meets the requirements of the NPS-NIST ICD 2.1.1. This includes the validation of all data fields. If responses are to be received by a central server then it must have the capability to receive NPS-NIST response transactions and forward them to the proper EFCD.

2.4.1 System Table Updates

The **System Table Version Number** (tag **2.8911**) is included in the Type-2 record of NPS-NIST transactions. This number indicates the version of NPS tables being used. All tables must be identified by a version number. If any reference tables are updated, the System Table Version Number will be incremented. These tables may be updated at any time, and in some cases may require frequent updating. Vendors should design their systems to support RCMP's RTID System table updates easily and quickly.

The mechanism by which the RCMP's RTID System will distribute new version of system tables is to be determined. **Note that updates to the system tables do not require new versions of this NPS-NIST ICD.**

2.5 SCANNERS

The fingerprint scanner (which must be certified to EBTS Appendix F) must be capable of producing images that exhibit good geometric fidelity, sharpness, grey-level uniformity, and gray-scale dynamic range, with low noise characteristics. The images must be true representations of the input fingerprints, without creating any significant artefacts, anomalies, false detail, or cosmetic image restoration effects. Scanners should have the ability to assess image quality and where image quality does not meet pre-set image quality thresholds, and inform the users of the low quality assessment. They should also be able to verify correct hand placement. Fingerprint scanners ***must be identified in the FBI's Certified Product List.***

2.6 NETWORK CONSIDERATIONS

Unless otherwise advised, the agency requesting NPS-NIST certification is responsible for the provision of communication hardware and software necessary to connect to the RCMP's RTID System. For local applications, the vendor and/or the local agency must provide the necessary hubs, routers and cables for the physical connection.

The RCMP Departmental Security Branch (DSB) approves the connection between NPS and the contributor. This includes all security issues such as encryption, network protocols, ports, firewalls, etc. A Threat Risk Assessment (TRA) must be completed and approved before a contributor will be authorized to connect to the RCMP. The RCMP Network Services Section (NSS) is responsible for the physical network connection once DSB approves the TRA.

2.7 NIST TEST ENVIRONMENT

Contributors will have the ability to submit test cases to a separate RCMP NPS-NIST test server. The RCMP's NPS-NIST test server will perform validation of submissions. Arrangements must be made in advance with RCMP to allow proper configurations.

2.8 RTID AGENCY PROFILE

The RCMP will create an Agency Profile in the production environment and maintain it for each contributing agency. The Agency Profile contains information such as the type of agency, RTID Agency Identifier (ORI), common and formal name of the agency, contact name, contact phone number, preferred language, physical and mailing addresses, authorized transaction types; as well as other detailed properties associated to the agencies authorized submission types.

Once the Agency Profile is established, it is used to validate each NPS-NIST submission from the agency. Authority to submit enrolments and/or verifications are examples of agency profile validations that are performed upon receipt of a submission. A complete agency profile will be established during certification and provided to the certified agency.

3. TYPES OF TRANSACTIONS

The table below lists the NPS-NIST transactions defined in this ICD to support the various types of Immigration transactions. The transactions in this table are defined in more detail later in this section.

Table 3-1: Types of Transactions (TOTs)

NPS-NIST Immigration Transaction	Type of Transaction	Response	Error	Acknowledge
Immigration Enrolment Submission	IMM	SRE	ERRT	ACKT
Anonymous Tenprint Search	ATS	SRE	ERRT	ACKT
Verification	VER	SRV	ERRV	n/a
Immigration File Amend	IMA	IMAR	ERRT	ACKT
Immigration File Purge	IMP	IMPR	ERRT	ACKT
NPS-NIST Notification Transaction – sent by RTID; no response transaction required				
Unsolicited Criminal Notification	UCN	n/a	n/a	n/a

3.1 SUBMISSIONS AND FILES: SOME RTID CONCEPTS

A Submission is a request for service sent to the RTID system for processing. A File refers to the biometrics (fingerprints only for ICD 2.1.1) and biographical information (name, date of birth, etc.) for an individual held on the RTID system. A File may contain multiple Submissions received and processed by RTID over time. Within the context of ICD 2.1.1, Submissions are further divided into those containing biometrics (IMM, ATS, VER), and those for managing files (IMA and IMP).

Biometric submissions are retained by RTID when creating or updating files (IMM). Other biometric submissions serve to search for an identity only (ATS), or validate a presented biometric against a pre-existing File (VER).

When a retainable IMM Submission is received, it will either create a File (the first submission for an individual), or add to an existing file (second or subsequent Submission for an individual). The response to the Submission will contain the RTID File number that is either created (first enrolment) or is already assigned (second and subsequent enrolments). Once a File is created, specific Submissions within the File can be referenced by the Document Control Number (DCN) as supplied on the original Submission. Consequently, transactions used to maintain Files (IMA and IMP) can modify individual Submissions (via the DCN) or certain File level attributes (e.g. the overall File retention can be modified by an IMA transaction that does not reference a DCN).

3.2 TENPRINT TRANSACTIONS

This group of transactions includes the IMM, ATS and the VER.

3.2.1 Immigration Submission (IMM)

This transaction is used to submit fingerprints for search against the RCMP's RTID System on behalf of IRCC.

The possible response transactions to the IMM transaction will include the following transaction types:

- 0 – 1 Acknowledgement Tenprint (ACKT);
- 0 – 1 Search Results (SRE); and
- 0 – 1 Tenprint Transaction Error (ERRT).

The IMM transaction will include the following logical records:

- 1 Type-1 Header Record;
- 1 Type-2 Record (Data Descriptors); and
- 1 – 3 Type-14 Records (Two plain impressions of the 4 fingers obtained simultaneously from each hand and one plain impression of both thumbs. Finger Position Codes (FGP) 13, 14 and 15).

3.2.2 Anonymous Tenprint Search (ATS)

This transaction is used to submit fingerprints from a foreign nation's immigration system for search against the RCMP's RTID System, on behalf of IRCC. These fingerprints will originate from one of the member countries of the Five Country Conference (FCC) for search only and are not retained.

The possible response transactions to the ATS transaction will include the following transaction types:

- 0 – 1 Acknowledgement Tenprint (ACKT);
- 0 – 1 Search Results (SRE); and
- 0 – 1 Tenprint Transaction Error (ERRT).

The ATS transaction will include the following logical records:

- 1 Type-1 Header Record;
- 1 Type-2 Record (Data Descriptors);

- 1 – 14 Type-14 Records;
- The Type-14 Records will be provided in one of three (3) ***mutually exclusive*** formats:

Identification Slaps (also known as ID Flats):

1. Two plain impressions of the 4 fingers obtained simultaneously from each hand and one plain impression of both thumbs, Finger Position Codes (FGP) 13, 14 and 15. Also known as a 4-4-2 slap. Individual fingerprint segment positions containing pixel coordinates are required on each record.

Rolled and Plain Images:

2. 14-Print consisting of ten rolled impressions of each digit obtained individually, plus plain impressions of the 4 fingers obtained simultaneously from each hand and one plain impression of each thumb taken individually, Finger Position Codes 01 – 10, plus 11, 12, 13 and 14. Fingerprint segment positions are not required for the 14-Print variant.
3. 13-Print consisting of ten rolled impressions of each digit obtained individually, plus plain impressions of the 4 fingers obtained simultaneously from each hand and one plain impression of both thumbs taken together, Finger Position Codes 01 – 10, plus 13, 14 and 15. Fingerprint segment positions are not required for the 13-Print variant.

3.2.3 Verification Submission (VER)

This transaction is used to submit fingerprints to be matched against the RCMP's RTID System on behalf of the Canadian Border Services Agency (CBSA).

Note: A Verification transaction will not return an acknowledgement transaction from the RCMP's RTID System.

The possible response transactions to the VER transaction will include one of the following transaction types:

- 0 – 1 Search Results (SRV); or
- 0 – 1 Verification Transaction Error (ERRV).

The VER transaction will include the following logical records:

- 1 Type-1 Header Record;
- 1 Type-2 Record (Data Descriptors); and
- 1 – 3 Type-14 Records (Two plain impressions of the 4 fingers obtained simultaneously from each hand and one plain impression of both thumbs. Finger Position codes 13, 14 and 15).

3.3 NON-BIOMETRIC TRANSACTIONS

This group of transactions includes the IMA and the IMP transactions.

3.3.1 Immigration File Amend (IMA)

This transaction is submitted by IRCC to add or modify Type-2 data on an individual Immigration file held on the RTID database. Currently, the external agency can perform two types of amendments: a file retention date change, or a biographic data change to an enrolment transaction. For biographic data changes, the external agencies must provide **all** the biographic information, not only the information that has changed. For example, if an applicant's date of birth was changed, the contributor must provide all the primary name, sex, new date of birth, other names, etc. as part of the amendment (IMA), not the new date of birth only. This also applies to Alias/Other Names. Should only one of several Alias Names change, all Aliases, including the one that has changed must be provided.

The possible response transactions to the IMA transaction will include the following transaction types:

- 0 – 1 Acknowledgement Tenprint (ACKT);
- 0 – 1 Immigration Amend Results (IMAR); and
- 0 – 1 Transaction Error (ERRT).

The IMA transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

Notes:

- A File Level amendment (retention end date) and a Submission Level amendment (biographic data change) cannot be combined within the same IMA transaction;
- All Immigration files created using an IMM transaction can be amended at both a File Level (file retention) and Submission Level (biographic data associated with a specific submission); and
- For Legacy Refugee Files, neither file retention nor biographical data can be amended with an IMA transaction. A request for a manual amendment process is required.

3.3.2 Immigration File Purge (IMP)

This transaction is submitted by IRCC to purge entire subject files or an individual enrolment submission within a subject file held on the RTID database. Once a file or transaction is purged, it cannot be recovered.

The possible response transactions to the IMP transaction will include the following transaction types:

- 0 – 1 Acknowledgement Tenprint (ACKT);
- 0 – 1 Temporary Resident Purge Response (IMPR); and
- 0 – 1 Transaction Error (ERRT).

The IMP transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

Notes:

- A File Level purge and a Submission Level purge cannot be combined within the same IMP transaction;
- All Immigration files created using an IMM transaction can be purged at both a File Level (all submissions in file) and Submission Level (individual submission);
- Since ICD 2.1.1 is now operating in production, new Immigration files created after the date of 2.1.1 inception, using an ICD 1.7.7/1.7.8 REF transaction, can be purged at both a File Level and Submission Level; and
- Legacy Refugee files created using an NPS-NIST ICD v1.7.5/1.7.7/1.7.8 REF transaction *prior to ICD 2.1.1 implementation* can only be purged at a File Level. Purge at a Submission Level is not available due to different Submission and File storage structures.

3.4 RESULTS AND RESPONSES

3.4.1 Tenprint Search Results (SRE)

This reply transaction contains the results of the tenprint search from the RCMP's RTID System. An SRE may contain identifications to several file types. If there are any errors associated with a tenprint IMM submission, then an ERRT is returned instead of an SRE.

The SRE Transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

3.4.2 Verification Search Results (SRV)

This reply transaction contains the results of the 1:1 fingerprint verification from the RCMP in response to a verification (VER) transaction. If there are any errors associated with the verification submission then an ERRV will be returned.

The SRV Transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

3.4.3 Immigration Amend Response (IMAR)

This reply transaction contains the response to the Immigration Amend (IMA) transaction from the RCMP. If there are any errors associated with an Immigration Amend transaction then an ERRT is returned.

The IMAR transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

3.4.4 Immigration File Purge Response (IMPR)

This reply transaction contains the response to the Immigration Purge (IMP) transaction from the RCMP. If there are any errors associated with an Immigration Purge transaction then an ERRT is returned.

The IMPR transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

3.5 ACKNOWLEDGEMENTS

Acknowledgment transactions are sent back to external Agencies to confirm that the submitted transaction has passed the initial NIST validation and is being processed. For enrolment (IMM) and search only (ATS) transactions, acknowledgement transactions are sent back after the submitted transactions have passed both the initial NIST validation and the fingerprint quality check.

An error related to fingerprint quality can still be returned even if an acknowledgement transaction was previously sent to the external agency.

Verification transactions will not be acknowledged with an acknowledgement transaction.

3.5.1 Acknowledgement (ACKT)

The ACKT transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

3.6 ERROR TRANSACTIONS

When the RCMP's RTID System receives a transaction, the content of the transaction is automatically validated to ensure that it conforms to the NPS-NIST ICD standards with regard to mandatory tags, conditional tag rules, tag format/content rules, image type and image quality rules, etc. A validation to ensure that the contributing agency is authorized to submit the type of transaction is also performed. If there are any errors with the submitted transaction, an error transaction is returned.

3.6.1 Transaction Error (ERRT)

This transaction is returned by the RCMP's RTID System in response to a transaction that contains errors. The error could be missing or inadequate quality fingerprints, missing mandatory tags, missing conditional tags, invalid tag contents, unauthorized transaction etc. A message tag will contain details about the error(s) detected. An ERRT related to fingerprint quality can be returned after an ACKT has been issued. Error (ERRT) transactions can be sent back for Immigration Enrolment (IMM), Immigration Amendment (IMA), Immigration Purge (IMP), and Anonymous Tenprint Search (ATS) transactions. The ERRT will include all errors detected; therefore more than one error reason may be included in the transaction.

The ERRT transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

3.6.2 Verification Transaction Error (ERRV)

This transaction is returned by the RCMP's RTID System in response to a Verification (VER) transaction that contains errors. The error could be missing mandatory tags, invalid tag content, missing or inadequate quality fingerprints, unauthorized transaction, etc. A message tag will contain details about the error detected. The ERRV will be automatically issued upon detection of the first error.

The ERRV Transaction will include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors)..

3.7 NOTIFICATION TRANSACTIONS

3.7.1 Unsolicited Criminal Notification (UCN)

This unsolicited transaction type is sent to IRCC and CBSA, containing the results of a tenprint search performed by the RCMP's RTID System for a criminal enrolment or criminal inquiry submission received from a police agency. The UCN shall contain identification information for one or more file types, at least one of which shall belong to an Immigration or Legacy Refugee subject. The UCN Transaction shall include the following logical records:

- 1 Type-1 Header Record; and
- 1 Type-2 Record (Data Descriptors).

4. NIST DATA DEFINITIONS

The following section contains detailed descriptions of the individual tags used in the various logical records supported with the RCMP's NPS-NIST ICD 2.1.1. They are sorted numerically. Refer to the logical record definitions in *Section 5 – Logical Record Formats*, to see which tags are required for each transaction type.

4.1 TYPE-1 DATA DEFINITIONS (HEADER RECORD)

The following describes the data contained in the tags of the Type-1 header record. Each tag is defined in ANSI/NIST ITL 1-2000. A Type-1 logical record is mandatory and must be included with every transaction. The Type-1 record provides ASCII information describing the type of transaction involved, a list of each logical record included in the file, the originator or source of the physical record as well as other useful and required information items. The last tag in the Type-1 record MUST contain a File/Record type separator (F_s).

1.001: LEN LOGICAL RECORD LENGTH

This mandatory ASCII tag contains the total count of the number of bytes in this Type-1 logical record. The total count is made up of every character of every tag contained in the record and includes the count of all character separators. The number of characters added to the record by the LEN tag itself must be included in calculating the value of LEN.

1.002: VER ANSI/NIST VERSION NUMBER

This mandatory four-byte ASCII tag is to be used to specify the current version number of the ANSI/NIST specification implemented by the software or system creating the file. The format of this tag consists of four numeric characters. The first two characters specify the major version number. The last two characters are used to specify the minor revision number. The value that should be entered in this tag is "0300" which represents ANSI/NIST ITL 1-2000.

1.003: CNT FILE CONTENT

This mandatory tag lists each of the records in the file by record type and the order in which the records appear in the logical file. It consists of two or more sub-tags, each of which in turn contains two information items describing a single logical record found in the current file. The sub-tags are entered in the same order in which the records are recorded and transmitted.

The first sub-tag relates to this Type-1 transaction. The first information item within this is the single character indicating this is a Type-1 record consisting of header information. The second sub-tag will be the sum of the Type-2 to Type-15 logical records in this file, as applicable.

Each of the remaining sub-tags is associated with one record within the file, and the sequence of sub-tags corresponds to the sequence of records. Each sub-tag contains two items of information. The first is to identify the type of the record. The second is the record's Image Designation Character (IDC), that is generally in the range 0-16 (ex: 1 Type-1, 1 Type-2, and 3 Type-14), but could be much higher if additional records are included. The unit/sub-tag separator (^U_S) shall be used to separate the two information items.

1.004: TOT TYPE OF TRANSACTION

This mandatory tag contains an identifier, which designates the type of transaction (TOT) and subsequent processing that the logical file should be given. See *Table 3-1: Types of Transactions (TOTs)* for a list of valid transaction types.

1.005: DAT DATE

This mandatory tag contains an eight-digit date that appears in the format CCYYMMDD.

The Date tag contains the local date on which the transaction is created and forwarded by the EFCD. If a transaction is being resubmitted this date shall be the date of resubmission, not the date of the original transaction. For example, if a transaction was submitted on January 20, 2011 then this tag would contain the value 20110120. If an error was returned and this transaction was resubmitted on January 31, 2011 then the contents of this tag would be 20110131.

1.006: PRY PRIORITY

This mandatory tag contains a single information character to designate the priority of the transaction. Priorities are 1 to 9 where 1 is the highest and 9 is the lowest.

Under ICD 2.1.1, most transaction priority values are assigned by RTID to ensure that pre-determined service times are met. In most circumstances, RTID observes a target Service Level Objective (SLO) according to the Type of Transaction received. The exception to this general rule is defined as follows:

IMM Immigration Enrolments

For IMM transactions received with 1.006 Priority set to a value of 4, RTID shall process the enrolment according to an Expedited SLO, defined for Biometric Expansion as 2 (two) hours. This is the standard priority setting expected by RTID for an expedited IMM enrolment. However, should RTID receive an IMM transaction priority value of 1 to 3, the transaction shall also be processed according to the Expedited SLO, the same as for priority value 4.

For IMM transactions received with 1.006 Priority set to a value of 8, RTID shall process the enrolment according to the previously established Regular SLO of 3 (three) business days. This is the standard priority setting expected by RTID for a regular IMM enrolment. Should RTID receive an IMM transaction priority value outside the range of 1 to 4, the transaction shall be processed according to the Regular SLO target, the same as for priority value 8.

In order for RTID to determine the appropriate SLO target for IMM transactions, the Type of Transaction (IMM) and priority setting (4 or 8) must be replicated by the sender in the SMTP

email wrapper used to deliver the transaction to RTID. Please refer to the specifications in the *RTID SMTP-NIST Message Guidelines*, RDIMS #21047, for details of the email encoding requirements.

Additionally, please refer to the *Immigration Biometric Expansion Project - RCMP Business Requirements Document*, RDIMS #42878, for service times applicable to other transaction types.

1.007: DAI DESTINATION AGENCY IDENTIFIER

This mandatory tag contains the 7-character alphanumeric RTID Agency Identifier of the agency designated to receive the NIST transaction. Each agency will be assigned a unique RTID Agency identifier of the following format:

AANNNNN

Where;

AA: 2-character alphabetic province code; and

NNNNN: 5-digit number.

Example: NS12345 is the RTID ID of an agency in Nova Scotia.

See *Table A-4: Province Codes* in Appendix A for a list of province codes.

Any submissions containing an invalid Destination Agency Identifier will be rejected by the RCMP's NPS-NIST server.

1.008: OAI ORIGINATING AGENCY IDENTIFIER

This mandatory tag contains the 7-character alphanumeric RTID Agency Identifier of the agency originating the information. This identifier is issued and controlled by the RCMP. It has the following format:

AANNNNN

Where;

AA: 2-character alphabetic province code; and

NNNNN: 5-digit number.

See *Table A-4: Province Codes* in Appendix A for a list of province codes.

Any submissions containing an invalid Originating Agency Identifier will be rejected by the RCMP NPS-NIST server.

1.009: TCN TRANSACTION CONTROL NUMBER

This mandatory tag contains a transaction control number created by the originating agency for each transaction submitted. The format is as follows:

<7-character RTID Agency Identifier><13-digit sequence number>

The <7-character RTID Agency Identifier > has the following format:

AANNNNN

Where;

AA: 2-character alphabetic province code; and

NNNNN: last 5 digits of the RTID Agency Identifier. Note that fully alphabetic Agency Identifier (ex: NS5BGT6) are not supported under ICD 2.1.1 because the Agency Identifier is embedded in the DCN which does not support alphanumeric formats.

Example: NS12345 is the alphabetic RTID ID of an agency in Nova Scotia.

See *Table A-4: Province Codes* in Appendix A for a list of province codes.

The 7-character RTID Agency Identifier must prefix all TCN's submitted by the agency. The use of alphanumeric RTID Agency Identifiers (province codes only at this time) is made possible by the TCN's change to alphanumeric character type.

1.010: TCR TRANSACTION CONTROL REFERENCE NUMBER

This optional tag will be used to refer to the TCN of a previous transaction. If there is no previous transaction to refer to, then this tag should not be included in the file.

Example:

IMM: TCN = 1, DCN=1;

ACKT: TCN = 2, TCR = 1, DCN = 1; and

SRE: TCN = 3, TCR = 1, DCN = 1.

1.011: NSR NATIVE SCANNING RESOLUTION

This mandatory tag specifies the native scanning resolution of the AFIS or other fingerprint or palm print image capture device supported by the originator of the transmission. This tag permits the recipient of this transaction to send response data at a transmitting resolution tailored to the Native Scanning Resolution (if it is able to do so) or to the minimum scanning resolution. This tag contains five bytes specifying the native scanning resolution in pixels per millimetre. The resolution is expressed as two numeric characters followed by a decimal point and two more numeric characters (e.g. 19.69). This tag is required because the

interchange of fingerprint information between systems of the same manufacturer may, in some instances, be more efficiently done at a transmitting resolution equal to the native scanning resolution of the system rather than at the minimum scanning resolution specified in this standard. If no images are present in the NIST packet the value should be 00.00.

1.012: NTR NOMINAL TRANSMITTING RESOLUTION

This mandatory tag specifies the nominal transmitting resolution for the fingerprint image or images being exchanged. It has little to no relevance for non-fingerprint applications. This tag contains five bytes specifying the transmitting resolution in pixels per millimetre. The resolution is expressed as two numeric characters followed by a decimal point and two more numeric characters (e.g. 19.69). The transmitting resolution is within the range specified by the transmitting resolution requirement. If no images are present in the NIST packet the value should be 00.00.

1.014: GMT GREENWICH MEAN TIME

This is an optional tag which eliminates the local time inconsistencies encountered when a transaction and its response are transmitted between two places separated by several time zones. If used, it contains the universal date and 24-hour clock time that a transaction was initiated, independent of time zones. It is represented by a 15-character string that is the combination of the date with the GMT and concludes with a "Z" (for example: *ccyyymmddhhMMssZ*), so the complete date shall not exceed the current date and time based on GMT.

For ICD 2.1.1 transactions, this tag will be populated in the Type 1 records that accompany response and notification transactions (SRE, IMAR, IMPR, ACKT, ERRT and UCN) issued by RTID. It is not populated for SRV and ERRV transactions.

If it is provided on incoming transactions, it will be validated to assure a correct date and time that does not exceed the current GMT date and time when received.

4.2 TYPE-2 DATA DEFINITIONS (DESCRIPTIVE TEXT)

The Type-2 logical record contains demographic and descriptive information required by the RCMP's RTID System to process the electronic transaction to complete the fingerprint search and update the RCMP's central repository. The Type-2 logical record layouts in *Section 5 – Logical Record Formats* define the mandatory and optional tags that must be included in each transaction. Conditional edit rules – tags that become mandatory depending on the value entered in another tag – are also included in *Section 5 – Logical Record Formats*.

2.001: LEN LOGICAL RECORD LENGTH

This mandatory ASCII tag contains the total count of the number of bytes in this Type-2 logical record. The total count is made up of every character of every tag contained in the record and includes the count of all information separators. The number of characters

added to the record by the Logical Record Length field itself must be included in calculating the value of Logical Record Length.

2.002: IDC IMAGE DESIGNATION CHARACTER

This mandatory tag is used to identify the user-defined text information contained in this record. The Image Designation Character contained in this tag is the Image Designation Character of the Type-2 logical record as found in the file content tag of the Type-1 record.

2.800: DCN DOCUMENT CONTROL NUMBER

The Document Control Number is used to uniquely identify and track a particular tenprint submission throughout its lifetime. Each DCN must be unique and in the following format:

CYYJJN>NNNNNnnnnESK

Where;

C	Current century ("0"=19xx, "1"=20xx);
YY	Last two digits of current year (e.g. "03" if 2003);
JJJ	Julian Date or days since January 1 st (e.g. "032" if Feb 01);
NN>NNNN	7-digit RTID Agency Identifier (numeric form – refer to Section 2.2.2) issued and controlled by the RCMP;
nnnn	A 4-digit sequential number (ensures uniqueness);
E	External Format Flag – see below;
S	Document Flag – see below; and
K	Check digit (see calculation below).

External Format Flag

The external format flag indicates where the DCN was created. Always use value 1 for this tag.

Document Flag

The document flag indicates the type of request. Always use value 0 for this tag.

Check Digit Calculation

The check digit will be a modulo 10 check digit based on alternate 1, 3 weightings of the data characters. The weighting is arranged so that the least significant digit is on the far right of the data stream and receives a 3 weight.

For example, the check character will be calculated as follows:

Data Characters: 4 3 8 2 7

Weights: 3 1 3 1 3

Weighted Sum = (3x4) + (1x3) + (3x8) + (1x2) + (3x7) = 62

The check digit for the data characters is the digit which when added to the weighted sum produces a sum ending in 0. Hence, in this case the check digit is 8 and the final result is **“4 3 8 2 7 8”**. This exact process should be followed to calculate the 20th digit of the DCN.

2.806: NAME PRIMARY NAME

This tag is populated with the subject's primary name (Surname, Given Name 1, Given Name 2, Given Name 3 and Given Name 4). Additional names should be entered in tag 2.824 – Other Names/Alias.

- All sub-tags in the primary name tag must not begin or end with a space or any other allowable special character.
- All given names other than the first must be preceded by a given name (e.g. if given name 2 is provided, given name 1 must also be provided).
- Given Names must be populated in order from 1 to 4, with no intervening blank name or empty name allowed.

2.807: SEX SEX

This tag is used to report the subject's gender. The entry is a single character selected from the following code table.

Table 4-1: Code Table 2.807 – Sex

Code	English Description	French Description
M	MALE	MASCULIN
F	FEMALE	FEMININ
U	UNKNOWN	INCONNU

2.819: LGF LANGUAGE FLAG

This tag denotes the language of the transaction; “E” for English and “F” for French. The language must be consistent throughout the submission with the value of this field. It is not permissible to mix French and English in the same submission. Responses returned by RTID shall contain messages and descriptions as applicable in the official language indicated by this tag value.

2.824: OTN OTHER NAMES/ALIASES

This tag is made up of other names that are associated to the subject. These names could be a maiden name, former name (in the event that a name was changed), nicknames, street names, etc. Nicknames should be entered in the Surname. This tag is made up of Surname, Given Name 1, Given Name 2, Given Name 3, and Given Name 4. Given Names must be populated in order from 1 to 4, with no intervening blank or empty name allowed.

Each additional instance of an alias should be entered as a separate occurrence within the tag. All sub-tags of this tag must not begin or end with a space or any other allowable special character.

This tag is **not** available in the IMM transaction, but is employed to enable the amendment of immigration files that are created with transactions other than IMM (e.g. REF transactions under ICD 1.7.8).

2.827: NMG NARRATIVE MESSAGE

This tag can be used to clarify information about the submission. This clarification may help with the processing of the transaction, as it may eliminate the need for a phone call to the agency for further information. Normal processing of submissions will not take the contents of this tag into consideration. The contents of this tag may be considered only if the submission is subject to manual intervention.

The RCMP uses this tag in the SRE of ICD versions other than 2.1.1 to describe the results of the submission; however it is **not** populated for ICD 2.1.1 SRE transaction.

2.851: DCR DCN REFERENCE NUMBER

This tag is used to refer to the DCN of the submission to be amended (IMA) or purged (IMP). The validation rules for a DCR are simpler than for a DCN: when used, the DCR refers to a DCN that must exist in RTID or else a validation error is generated.

2.855: SUBTP SUBMISSION TYPE

This tag contains an acronym for the type of submission reported to the RCMP which results in the creation of the UCN Notification transaction. In context of an Unsolicited Notification which advises of a criminal enrolment or criminal inquiry involving an Immigration/Refugee subject, the Submission Type distinguishes the type of transaction received by the RCMP.

Table 4-2: Code Table 2.855 – Submission Type

Code	English Description	French Description
CAR-N	Criminal Inquiry	Enquête criminel
CAR-Y	Criminal Enrolment	Enregistrement criminelle

2.856: CAI CONTRIBUTING AGENCY INFORMATION

This tag describes the police agency responsible for the criminal submission that results in the creation of the UCN Notification transaction. The tag consists of three sub-tags which contain the Agency Identifier (ORI), the English Name and the French Name of the Agency contributing the CAR-N or CAR-Y criminal submission.

2.875: RRES RCMP-NPS RESULTS

This tag is included in the responses to the contributor. If it is set to “Y” then the response is from the RCMP’s RTID System. If it is set to “N” then the response is a result of a foreign search. For the Immigration Enrolment (IMM) transaction, RTID will always return “Y” for this tag in an SRE, and will not return a value for this tag in the ERRT transaction type; foreign searches are not available in ICD 2.1.1.

Table 4-3: Code Table 2.875 – RCMP-NPS Results

Code	English Description	French Description
Y	Yes	Oui
N	No	Non

Only Code “Y” is defined for use in ICD 2.1.1.

2.887: CIC CBSA/IRCC OFFICE NUMBER

This number represents a regional CBSA/IRCC office and is assigned by Immigration, Refugee and Citizenship Canada. This is a legacy data item that is not populated by IRCC for ICD 2.1.1 submissions. However, legacy immigration files may contain this reference and it will be returned in the SRE if it is on file.

2.888: FOSS IMMIGRATION CLIENT IDENTIFIER

This unique identifier number is assigned by CBSA/IRCC and represents a subject of interest to CBSA/IRCC. It was previously known as the Field Operational Support System, and the tag identifier will remain the same to maintain compatibility with other ICD versions.

Currently CBSA and IRCC are transitioning from the Field Operational Support System (FOSS) to the Global Case Management System (GCMS). The identifier numbers are of an identical format and there will be identifier numbers created by both systems that are unique across both systems. This tag was previously labelled as “*FOSS Field Operational Support System*” in other NPS-NIST ICD versions. Only the label has changed, the tag definition and use are otherwise unchanged.

2.893: FQO FINGERPRINT QUALITY OVERRIDE

This tag is used by a contributor to identify quality override reasons for the fingerprint images that are of poor quality. The contributor must attempt to improve the quality of the fingerprints but if attempts are unsuccessful this tag is used to indicate to the RCMP the reason that the fingerprints are of poor quality. See *Table A-1: Finger/Palm Codes* in Appendix A for a list of finger codes. Unless otherwise specified in the Type-2 logical record definition notes, valid finger code values are 01 to 10, 13, 14 and 15.

Table 4-4: Code Table 2.893 – Fingerprint Quality Override

Code	English Description	French Description
01	RIDGE DETAIL INDISTINCT DUE TO SUBJECT'S EMPLOYMENT	PARTICULARITES DES CRETES INDISTINCTES EN RAISON DE LA PROFESSION DE LA PERSONNE
02	RIDGE DETAIL INDISTINCT DUE TO AGE	PARTICULARITES DES CRETES INDISTINCTES EN RAISON DE L'AGE DE LA PERSONNE
03	RIDGE DETAIL INDISTINCT DUE TO SKIN CONDITIONS (ECZEMA, ICHTHYOSIS, WARTS, PSORIASIS, FROSTBITE, RIDGE ABERRATION)	PARTICULARITÉS DES CRÊTES INDISTINCTES EN RAISON DE L'ÉTAT DE LA PEAU (ECZÉMA, ICHTYOSE, VERRUE, PSORIASIS, ENGELURE, ANOMALIE DES CRÊTES)
04	FINGER TEMPORARILY INJURED	BLESSURE TEMPORAIRE AU DOIGT
05	FINGER IS DEFORMED / PARALYZED	DIFFORMITÉ AU DOIGT/ PARALYSIE
06	FINGER IS PARTIALLY AMPUTATED	DOIGT PARTIELLEMENT AMPUTÉ
07	FINGER IS PERMANENTLY SCARRED OR BURNED	CICATRICE OU BRULURE PERMANENTE AU DOIGT
99	OTHER	AUTRE

The EFCD operator must manually enter a fingerprint quality override description, if using code 99.

2.8005: RET RETENTION CODE

This tag indicates whether the RCMP's RTID System should retain the submitted fingerprint images and other demographic information. For transactions with a retention code = Y, the RCMP RTID System has the final retention decision regardless of the retention code setting. Transactions with a retention code = N are never retained. Each transaction has its own rules for determining the value of the retention code. "Y" or "N" are the only acceptable values for this tag.

For the Immigration Enrolment (IMM) transaction, "Y" is the only acceptable value. For the Anonymous Tenprint Search (ATS) transaction, this is set to "N".

Table 4-5: Code Table 2.8005 – Retention

Type of Transaction	Retention Code
IMM	Y
ATS	N

2.8022: DOB DATE OF BIRTH

This tag contains the subject's date of birth. It is entered as an eight-digit number in the standard date format – CCYYMMDD. Partial dates are not acceptable. It is the contributor's responsibility to verify the age of the subject. Immigration subjects must be between 12 and 130 years old at the time they are fingerprinted (tag 2.8038).

2.8038: DPR DATE FINGERPRINTED

This tag contains the local date that the subject was fingerprinted on the EFCD. The format is the standard date format CCYYMMDD. Partial dates are not acceptable. The Date Fingerprinted cannot exceed the Date (tag 1.005) of submission.

2.8044: ESD EFFECTIVE SEARCH DATE

This tag indicates the date that a fingerprint based RCMP's RTID search was completed.

2.8060: EMSG ERROR MESSAGE

This tag contains an error message or messages to indicate why a specific transaction was rejected by the RCMP. This tag contains the following sub-tags: Error Code and Error Message.

Examples of error messages:

- IMG68 Invalid image size. – TYPE=4 IDC=8 FGP=12 Actual-HLL=535 Expected-HLL=500.0;
- IMG70 Quality Rejection Code. Manual Quality Rejection;
- IMG71 Poor Quality Reason Code. Impressions smudged; and
- IMG71 Poor Quality Reason Code. Ridge detail indistinct.

2.8067: IMA IMAGE CAPTURE EQUIPMENT

This free-text field is used to log the make, model and serial number of the equipment used to acquire images. It is a grouped field composed of three subfields: the Make (MAK), Model (MODL) and Serial Number (SERNO) of the acquisition device.

2.8071: ACN ACTION TO BE TAKEN

This tag is used to return information either advising the contributor to take a specified action, or informing the contributor of an action being undertaken by the RCMP on the contributor's behalf. Note that this tag is **not** currently populated for ICD 2.1.1 transactions.

2.8084: MFR MISSING FINGERPRINT REASON

This tag is used to indicate reasons for missing fingers and/or missing images. This tag is required if any of the following conditions exist:

- There are fewer than fourteen Type-14 images in a submission containing a 14-print set of rolled and plain fingerprints;
- There are fewer than thirteen Type-14 images in a submission containing a 13-print set of rolled and plain fingerprints;
- There are fewer than three Type-14 images in a submission containing a set of Identification Flats (ID Flats) arranged in a 4-4-2 configuration;
- Fewer than two thumbs shown within in an ID Flats submission having tag 14.013 FGP set to 15;
- Fewer than four fingers shown within an ID Flats submission having tag 14.013 FGP set to 13 or 14.

Refer to section 4.3 - *TYPE-14 DATA DEFINITION (VARIABLE-RESOLUTION TENPRINT RECORD)* for more information about the fingerprint image variations supported by this particular ICD version.

Unless a fingerprint is completely missing, the fingerprint should be taken regardless of the quality of the print. A partially scarred finger should be printed. A Missing Fingerprint Date may also be entered for each finger flagged as missing; to indicate the date that it was amputated, bandaged or subject to physical limitations. Finger Position codes can be found in Appendix A, Table A.1 and for Immigration tenprint enrolments, the valid finger position codes values are 01 to 10 and 13 to 15.

For Anonymous Tenprint Search submissions **only**, finger position codes 01 through 15 are valid, but must be in accordance with the option chosen in the Type 14 record (ex: a missing digit using FGP 15 would be invalid for a submission that contains rolled images).

The missing fingerprint reason codes are listed in *Table 4-6*.

Table 4-6: Code Table 2.8084 – Missing Fingerprint Reason

Valid Codes for Finger Position 01 to 10	English Description	French Description
XX	AMPUTATION	AMPUTATION
UP	BANDAGED	PANSEMENT
PL	PHYSICAL LIMITATIONS	LIMITES PHYSIQUES
Valid Code for Finger Position 11 to 15	English Description	French Description
MI	MISSING IMAGE	IMAGE MANQUANTE

As per the above table, Amputation (XX), Bandaged (UP) and Physical Limitations (PL) reason codes shall be available for missing finger positions 01 to 10. The Missing Image (MI) reason code shall be used for missing finger positions 11, 12, 13, 14 and 15.

For ID Flats, if any of the 3 required images 13, 14 or 15 are missing then the agency must enter “Missing Image” (MI) as a Missing Fingerprint Reason for each missing image (13, 14 or 15).

If the subject has amputated or bandaged fingers that cannot be captured within one of the 3 ID Flat images, then use codes “01” to “10” to indicate which fingers are amputated or bandaged. For example, if a subject has finger Number “02” amputated, but all 3 ID Flats images can be obtained, then a Missing Fingerprint Reason must be specified for Finger Position “02” and all 3 ID Flats images should be provided in the submission. If a subject has finger Number “01” amputated and three ID Flats images can be obtained (13 to 15), then a Missing Fingerprint Reason should be specified for Finger Position “01” and all 3 available ID Flats images should be provided in the submission.

If the subject has a physical limitation such that an ID flat cannot be obtained and the subject has all ten fingers (no amputations or bandaged), then the agency must enter “Physical Limitations” for each finger and “Missing Image” for each missing image.

Example 1: Finger 02 (right index) and finger 03 (right middle) are missing due to amputation on October 23, 2010. Therefore, tag 2.8084 would contain 2 entries:

2.8084:02^U_SXX^U_S20101023^R_S03^U_SXX^U_S20101023^G_S

Example 2: Finger 02 (right index) and finger 03 (right middle) are missing due to amputation on October 23, 2010, and finger 04 (right ring) and finger 05 (right little) are missing due to being bandaged on March 22, 2012. Therefore, tag 2.8084 would contain 5 entries:

2.8084:02^U_SXX^U_S20101023^R_S03^U_SXX^U_S20101023^R_S04^U_SUP^U_S20120322^R_S05^U_SUP^U_S20120322^R_S13^U_SMI^U_S^G_S

Agency systems could automatically derive some missing reason codes. For example any missing reasons (XX, UP and/or PL) entered for all fingers 02, 03, 04 and 05 implies that ID Flat 13 is also missing (MI) (see example 2); any missing reasons (XX, UP and/or PL) entered for all fingers 07, 08, 09 and 10 implies that ID Flat 14 is missing (MI); and any missing reasons (XX, UP and/or PL) entered for both fingers 01 and 06 implies that ID Flat 15 is missing (MI).

2.8908: CNON CONTRIBUTOR CASE FILE NUMBER

This is the contributor assigned case or file number. This number may be returned to the contributor for reference purposes.

2.8910: NVN EXTERNAL ICD VERSION NUMBER

This is the version number of the NPS-NIST ICD used to create the transaction. Value must always be set to 211.

2.8911: STV SYSTEM TABLE VERSION NUMBER

This tag is used to indicate the version number of the system tables used when creating the transaction. Upon certification, system tables and the System Table Version Number will be supplied to contributors. Value must be set to 001.

2.8931: NFT NAME OF PERSON RESPONSIBLE FOR TRANSACTION

This tag contains the name of the person submitting the transaction. If the submission is created using a Cardscan facility, this tag contains the name of the person responsible for the scanning of the fingerprints at the Cardscan and creation of the NIST packet.

2.8938: NOTF NAME OF OFFICIAL TAKING FINGERPRINTS

This tag contains the name of the person taking the fingerprints. If the submission is created at a Cardscan facility, this tag contains the name that appears on the RCMP's fingerprint form in the box "Signature of Official taking fingerprints".

2.8939: FPCL FINGERPRINTS CAPTURE LOCATION

This tag contains the location where fingerprints were taken.

2.8952: CREF CONTRIBUTOR SUPPLIED REFERENCE INFORMATION

This tag is used to return contributor supplied reference numbers and subject information received with a submission. The sub-fields can contain the values as received by the RCMP within Contributor Individual Reference Number, Contributor Case/File Number, CBSA/IRCC Office Number, Immigration Client Identifier, Primary Name, Sex and Date of Birth. The Contributor Supplied Reference Information is intended to be included in all SRE responses for reference purpose.

All Surname and Given Name sub-tags shall not begin or end with a space or other special character.

Given names shall be populated in order from 1 to 4, with no intervening blank or empty given name present.

2.8953: IDI SEARCH RESULT INFORMATION

This optional tag contains information about the identification(s) that have been made as a result of a fingerprint search request.

Positive identification will return, as a minimum, the following sub-tags for each repository searched:

- File Type Searched Code;
- Search Result Code (set to “I”);
- File Number;
- Surname;
- Given Name 1 to Given Name 4, populated in order from 1 to 4, with no intervening blank or empty given name present;
- Sex; and
- Date of Birth.

Negative identification will return, as a minimum, the following sub-tags for each repository searched:

- File Type Searched Code; and
- Search Result Code (set to “N”).

Note: A negative identification of an enrolment submission against its own repository will populate the **File Number** sub-tag with a new number generated by RCMP for the enrolled individual. This scenario occurs for negative identification of IMM enrolments against the Immigration repository.

Each occurrence of Identification Information is comprised of the following sub-tags:

- **File Type Searched Code** – a code value representing the type of identification made; examples include Criminal, Legacy Refugee or Immigration. See *Table 4-7: Code Table 2.8953A – File Type Searched codes*. If a new file is being created, this code will indicate the type of file that was created.

Table 4-7: Code Table 2.8953A – File Type Searched

Code	English Description	French Description
01	CRIMINAL	CRIMINELS
02	LEGACY REFUGEE	RÉFUGIÉS <i>PATRIMONIALES ?</i>
03	EMPLOYEE/CIVIL	EMPLOYÉS/CIVILE
04	IMMIGRATION	IMMIGRATION

File Type Searched Codes 01, 02 and 04 are defined for use in ICD 2.1.1. In the context of Immigration Transactions, code 03 is not used as part of the search result.

Search Result Code – a code value representing the result of the search. This code will indicate whether the search was positive or negative. See *Table 4-8: Code Table 2.8953B – Search Result* codes.

Table 4-8: Code Table 2.8953B – Search Result

Code	English Description	French Description	Note
I	POSITIVE	POSITIF	An identification was made
N	NEGATIVE	NEGATIF	No identification was made
U	UNSUITABLE	REJET	Fingerprints were unsuitable

- Search Result “I” and “N” are defined for use in ICD 2.1.1. In the context of Immigration Transactions, Search Result “U” is not returned;
- **File Number** – the file number that the RCMP uses to uniquely identify the file pertaining to the subject of the identification; for example, the Fingerprint Section Number (FPS) number, the Refugee number or the Immigration File number. If the file is newly created this sub-field contains the number assigned by the RCMP;
- **Surname** – the surname on file of the subject of the identification;
- **Given Name 1 to Given Name 4** – Given names, 1 to 4 that were submitted with the surname returned in the previous sub-tag;
- **Sex** – a code representing the subject’s gender as indicated on the corresponding RCMP file;
- **Date of Birth** – the subject’s date of birth as reported to, and stored by, the RCMP;
- **CBSA/IRCC Office Number** – If an Identification has been made to a Legacy Refugee file and the RCMP has a CBSA/IRCC Office Number in the File; it will be returned in this sub-tag; and

- **Immigration Client Identifier (previously *Field Operational Support System number*)** – If an Identification has been made to a Refugee file or Immigration file, and the RCMP has an Immigration Client Identifier number on the Refugee file or Immigration file, it will be returned in this sub-tag.

Note: The Immigration Client Identifier (ICI) number cannot be submitted with an IMM transaction, but may be available in Legacy Refugee files or new Immigration files created using the REF transaction type. Consequently, under ICD 2.1.1 the ICI can be returned in an SRE when certification to a Legacy Refugee file (or new Immigration file created by a REF transaction) occurs. The ICI can also be modified with the IMA transaction, but **only for** a new Immigration file created using an ICD 1.7.8 REF.

2.8955: VSR VERIFICATION SEARCH RESULT

This tag is used in the verification search results (TOT SRV) to indicate the verification search results findings.

Table 4-9: Code Table 2.8955 – Verification Search Result Findings

Code	English Description	French Description
I	MATCH	CORRESPONDANCE
N	NON MATCH	NON CORRESPONDANCE
U	UNABLE TO AUTO CERTIFY	AUTO-CERTIFICATION IMPOSSIBLE
X	FILE NO. NOT FOUND	NO. FICHIER. INTROUVABLE

Notes:

- A value of “**I**” means there was a verification identification made;
- A value of “**N**” means there was no verification identification made;
- A value of “**U**” means that the system was unable to auto-certify the fingerprints submitted; and
- A value of “**X**” means that the system was unable to locate the Immigration File number as supplied in the VER transaction.

2.8964: IID IMMIGRATION FILE NUMBER

This tag contains the file number that the RCMP assigns to uniquely identify the Immigration file pertaining to the subject. The Immigration file number is created as the result of a new Immigration enrolment, either from an IMM transaction, or a REF transaction under ICD 1.7.7/1.7.8. Amend, Purge and Verification submissions require the IID to identify the proper Immigration subject.

Immigration enrolments are assigned a 50000 series File number. Legacy Refugee files currently have a 33000 series number. The 33000 series of File numbers is being deprecated and is no longer used for new enrolments triggered by REF transactions.

2.8966: EAD EFFECTIVE AMENDMENT DATE

This tag indicates the date (in CCYYMMDD format) the processing of the amendment was successfully completed by the RCMP's RTID System.

2.8967: AMR AMENDMENT REASON

This tag is used to describe the type of amendment.

Table 4-10: Code Table 2.8967 – Amendment Reason

Code	English Description	French Description
01	BIOGRAPHICAL DATA	DONNÉES BIOGRAPHIQUES
02	IMMIGRATION RETENTION END DATE	DATE D'EXPIRATION DU FICHIER D'IMMIGRATION

2.8971: RDA IMMIGRATION RETENTION END DATE

The RDA contains the date that the Immigration file expires. The immigration file will be automatically purged from the RCMP's RTID System once its retention date expires. The date is in the CCYYMMDD format.

In an IMM transaction, RDA represents the *requested* retention date. When present in an SRE the RDA tag contains the *assigned* retention date. For most situations, the assigned retention date will be identical to the requested retention date, unless the incoming IMM certifies to an existing Immigration file whose retention end date is greater than the *requested* date in the IMM submission. In this case, the greater date is kept and this *assigned retention date* value is returned in the RDA tag in the SRE.

The date that the immigration file expires can be modified through an amendment (IMA) transaction.

When included in an IMM or IMA transaction, this tag's value must be between the transaction date (tag 1.005) and 100 years following it.

Notes:

- In the special case of an IMM submission certifying to a Legacy Refugee file, no validation or adjustment of *requested* vs. *assigned* retention dates is performed. The Immigration file created by the IMM submission will have the retention date contained in the IMM's RDA tag, and the Legacy Refugee file's retention date will be unchanged by the creation of the Immigration file.

- The retention end date of a Legacy Refugee File is determined by the RTID system based on IRCC/CBSA policy and cannot be changed with an IMA transaction.

2.8972: EPD EFFECTIVE PURGE DATE

This tag returns to the external agency the date that the purge request was processed in response to a submitted purge (IMP) transaction. The date is in the CCYYMMDD format.

2.8973: AFN SUBJECT FILE IDENTIFIER

This tag is a generic representation of a file number, depending on the associated file type. For Immigration, it represents the Immigration File Number (IID), for Legacy Refugee files; it represents the Reference file number.

The Subject File Identifier is composed of two sub-tags: the File Type Code, which contains one of the values in code *Table 4-11* and the File Number.

Table 4-11: Code Table 2.8973 – File Type Code

Code	English Description	French Description
01	CRIMINAL	CRIMINEL
02	LEGACY REFUGEE	RÉFUGIÉS PATRIMONIALES ?
03	EMPLOYEE/CIVIL	EMPLOYÉ/CIVIL
04	IMMIGRATION	IMMIGRATION

The VER transaction can only specify File Type code 04 at this time. The IMP can specify File Type Code 02 or 04.

2.8981: RCC COUNTRY REQUESTING SEARCH

This tag contains a numeric code which indicates from which country the search transaction originates based on ISO-3166-1 numeric codes. The code table below is to be employed for this tag.

Table 4-12: Code Table 2.8981 – Country Requesting Search

Code	English Description	French Description
840	UNITED STATES	ÉTATS-UNIS
554	NEW ZEALAND	NOUVELLE-ZÉLANDE
036	AUSTRALIA	AUSTRALIE
826	UNITED KINGDOM	ROYAUME-UNI

4.3 TYPE-14 DATA DEFINITION (VARIABLE-RESOLUTION TENPRINT RECORD)

The Type-14 tagged-field logical record is used to exchange variable-resolution tenprint fingerprint image data together with fixed and user-defined textual information fields pertinent to the digitized image. Textual information regarding the scanning resolution, the image size and other parameters or comments required to process the image are recorded as tagged-fields within the record.

A tenprint set may be represented as:

- Identification Flats (ID Flats), consisting of plain finger images only, normally captured as three Type-14 records, or,
- A combination of Rolled and Plain images (rolls and plains), normally captured as thirteen or fourteen Type-14 records.

Finger segment coordinates are required when a tenprint set is encoded as ID Flats; segment coordinates are not required for a set of rolls and plains.

The IMM submission type shall contain a set of Identification Flats consisting of up to 3 Type-14 records in the transaction:

- one plain impression of four fingers obtained simultaneously from the right hand;
- one plain impression of four fingers obtained simultaneously from the left hand;
- one plain impression of left and right thumbs taken together.

The ATS submission type may contain a set of ID Flats, or alternately, may contain a set of rolled and plain fingerprint images. A set of rolled and plain images shall be configured in one of two styles, referred to as a 13-print or 14-print set.

A 13-print set of images normally contains:

- ten rolled finger impressions taken individually;
- one plain impression of four fingers obtained simultaneously from the right hand;
- one plain impression of four fingers obtained simultaneously from the left hand;
- one plain impression of left and right thumbs taken together.

A 14-print set of images normally contains:

- ten rolled finger impressions taken individually;
- one plain impression of four fingers obtained simultaneously from the right hand;
- one plain impression of four fingers obtained simultaneously from the left hand;
- one plain impression of the right thumb taken individually;
- one plain impression of the left thumb taken individually.

The supported tenprint definitions are based on the *ANSI/NIST 2000* document as well as Appendix N of the *FBI Electronic Biometric Transmission Specifications v9.3*. For finger codes, see *Table A-1: Finger/Palm Codes*. For allowable box sizes, see *Table A-2a: Allowable Box Sizes for Finger/Palm Images* in Appendix A.

Refer to the ANSI/NIST-ITL 1-2000 Data Format for the Interchange of Fingerprint, Facial, & Scar, Mark & Tattoo Information standard for a description of Type 14 record tags. Only tags defined in addition to, or differently from the standard are described here.

14.011: CGA COMPRESSION ALGORITHM

For ICD 2.1.1, Type 14 records must use WSQ compression only. Currently ANSI-NIST recommends Version 3.1 or higher of the algorithm be used. Version 2.0 or Version 3.0 is acceptable when an EFCD whose platen area is less than 2 inches in height is employed. For ICD 2.1.1, the only acceptable values for this tag are WSQ and WSQ20. Note that RTID currently only accepts images captured at 500 ppi (or down-sampled from a higher resolution) for tenprint searches or search and enrolment.

There are four additional tags defined by the RCMP for use in Type 14 records, as follows:

14.013: FGP FINGER NUMBER

This tag shall contain the finger number code that matches the tenprint image. See *Table A-1: Finger/Palm Codes* in Appendix A for a list of finger codes.

For Identification Flats, valid values are 13, 14 and 15.

For 14-Print rolls and plains, the ATS transaction shall specify finger position codes 01 – 10 for the rolled images and codes 11 – 14 for the plain images.

For 13-Print rolls and plains, the ATS transaction shall specify finger position codes 01 – 10 for the rolled images and codes 13 – 15 for the plain images.

14.021: SEG FINGER SEGMENT POSITION(S)

This tag shall contain offsets to the locations of image segments containing the individual fingers within the image. The offsets are relative to the origin, (0, 0), which is in the upper left corner of the image. The horizontal offsets (X) are the pixel counts to the right, and the vertical offsets (Y) are the pixel counts down. A finger segment is defined by the finger number, the X coordinates (left, right) and the Y coordinates (top, bottom), of its bounding box.

Image segmentation must not be provided for missing finger(s) identified in the Type-2 record (as per tag 2.8084, "Missing Fingerprint Reason").

Finger Segment positions must include valid combinations of fingers as per the Finger Number Code indicated (tag 14.013). The following combinations are valid:

- If 14.013 is 11, 14.021 shall contain 01 only;
- If 14.013 is 12, 14.021 shall contain 06 only;
- If 14.013 is 13, 14.021 shall contain all or a subset of 02, 03, 04 and 05 in any order;

- If 14.013 is 14, 14.021 shall contain all or a subset of 10, 09, 08 and 07 in any order; and
- If 14.013 is 15, 14.021 shall contain all or a subset of 01 and 06 in any order.

14.022: NQM NIST QUALITY METRIC

This tag shall contain the NIST Fingerprint Image Quality (NFIQ) scores for all fingers except those fingers that are identified as missing as per the Type-2 tag 2.8084, "Missing Fingerprint Reason".

The first sub-field specifies the finger number, FGP 01-10. The second sub-field specifies the NIST image quality score associated with the finger. The score ranges from "1" for the best quality image, to "5" for the worst quality image. A "254" indicates that no score was computed while "255" indicates a failed attempt to calculate the image quality metric.

It is expected that the vast majority of the transactions submitted will have a score between 1 and 5, and that codes 254 and 255 will only apply in exceptional circumstances.

14.200: IMTC IMAGE TYPE CONTAINED

This tag identifies the type of image contained in the record. For IMM and VER submissions, this field shall always be set to 2 (Identification Flats). For ATS submissions, this field may be set to 1 (Rolled and Plain 14-Print), 2 (Identification Flats, captured as 4-4-2), or 4 (Rolled and Plain 13-Print). Any other value will return an error.

Table 4-13: Code Table 14.200 – Image Type Contained

Value	Image Type	Available for Transactions
1	Rolled and Plain: 14-Print	ATS
2	Identification flats, 4-4-2	ATS, IMM, VER
3	Biometric consent	n/a
4	Rolled and Plain: 13-Print	ATS

5. LOGICAL RECORD FORMATS

The following section presents all the transaction types that are supported by ICD 2.1.1 for Immigration transaction.

For all Logical Record formats:

- Under the Condition Column: O=Optional; M=Mandatory; C=Conditional; and
- Under the Character Type Column: A=Alpha; N=Numeric; B=Binary; S=Special Characters; D=Date.

5.1 TYPE-1 LOGICAL RECORD: HEADER INFORMATION

Table 5-1: RCMP NPS Type-1 Logical Record: Header Information

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	1.001	Logical Record Length	N	2	3	1	1		
VER	M	1.002	ANSI/NIST Version Number	N	4	4	1	1		
CNT	M	1.003	File Content	N			2	50	1st occurrence (mandatory): - Information item#1: a single character indicating this is a Type-1 record consisting of header information - Information Item#2: the sum of the Type-2 to Type-16 logical records in this file. Subsequent occurrence(s): - Information item#1: type of record - Information item#2: the record's IDC	
	M		Information Item 1	N	1	2	1	1		

Table 5-1: RCMP NPS Type-1 Logical Record: Header Information

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	M		Information Item 2	N	1	5	1	1		
TOT	M	1.004	Type of Transaction	A	3	5	1	1		
DAT	M	1.005	Date	D	8	8	1	1		
PRY	M	1.006	Priority	N	1	1	1	1	Valid values are 1 to 9. 1 is the highest and 9 the lowest.	
DAI	M	1.007	Destination Agency Identifier	AN	7	7	1	1	In submissions to the RCMP's RTID System, this tag is populated with the RTID Identifier of the agency designated to receive the NIST transaction. In the response transactions this information will be the Originating Agency Identifier. For a notification transaction, this tag shall contain the identifier of the intended recipient organization.	
OAI	M	1.008	Originating Agency Identifier	AN	7	7	1	1	In submissions to the RCMP's RTID System, this tag is populated with the Originating Agency Identifier. For response and notification transactions, this tag shall contain the identifier assigned to the RTID system.	
TCN	M	1.009	Transaction Control Number	AN	20	20	1	1		
TCR	O	1.010	Transaction Control Reference Number	AN	20	20	0	1		
NSR	M	1.011	Native Scanning Resolution	NS	5	5	1	1	For transactions that do not contain fingerprint images then this tag is not applicable and should be set to "00.00".	Period
NTR	M	1.012	Nominal Transmitting Resolution	NS	5	5	1	1	For transactions that do not contain fingerprint images then this tag is not applicable and should be set to "00.00".	Period

Table 5-1: RCMP NPS Type-1 Logical Record: Header Information

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
GMT	O	1.014	Greenwich Mean Time	AN	15	15	0	1	This is populated for all transactions outbound from RTID, except SRV and ERRV.	

5.2 TYPE-2 LOGICAL RECORD: IMMIGRATION ENROLMENT SUBMISSION (IMM)

Table 5-2: IMM Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
DCN	M	2.800	Document Control Number	N	20	20	1	1		
NAME	M	2.806	Primary Name				1	1	Refer to the applicable encoding rules for tag 2.806 NAME within section 4 – <i>NIST DATA DEFINITIONS</i> .	
	M		Surname	AS	1	50	1	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 1	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 2	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period

Table 5-2: IMM Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	O		Given Name 3	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 4	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
SEX	M	2.807	Sex	A	1	1	1	1	Code Table: Sex	
LGF	M	2.819	Language Flag	A	1	1	1	1		
FQO	O	2.893	Fingerprint Quality Override				0	15		
	M		Finger Number	N	2	2	1	1	Code Table: A1 (Finger/Palm) (01-10 and 13-15).	
	M		Reason Code	N	2	2	1	1	Code Table: Fingerprint Quality Override.	
	C		Description	ANS	1	50	0	1	A description must be entered if the reason code "99" is selected.	
RET	M	2.8005	Retention Code	A	1	1	1	1	Value must be set to "Y".	
DOB	M	2.8022	Date of Birth	D	8	8	1	1	Subject's age cannot be less than 12 years based on the DOB and Date Fingerprinted. It is the contributor's responsibility to verify the age of the individual and provide a valid date of birth (CCYYMMDD).	
DPR	M	2.8038	Date Fingerprinted	D	8	8	1	1	Date fingerprinted is the local time where the fingerprints were enrolled.	
IMA	M	2.8067	Image Capture Equipment				1	1		
	M		Originating Fingerprint Reading System Make	ANS	1	25	1	1		
	M		Originating Fingerprint Reading System Model	ANS	1	25	1	1		

Table 5-2: IMM Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	M		Originating Fingerprint Reading System Serial Number	ANS	1	50	1	1		
MFR	C	2.8084	Missing Fingerprint Reason				0	13	Mandatory if less than 3 type-14 images or less than 10 segmented fingers.	
	M		Finger Position Code	N	2	2	1	1		
	M		Missing Fingerprint Reason Code	A	2	2	1	1		
	O		Missing Fingerprint Date	D	8	8	0	1		
CNON	O	2.8908	Contributor Case File Number	ANS	1	32	0	1		
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
STV	M	2.8911	System Table Version Number	N	3	3	1	1		
NFT	M	2.8931	Name of Person Responsible for Transaction	ANS	1	50	1	1		
NOTF	M	2.8938	Name of Official taking fingerprints	ANS	1	50	1	1	Name or unique identifier of an official operating the electronic fingerprint capture device (EFCD).	
FPCL	M	2.8939	Fingerprints Capture Location	ANS	1	20	1	1		
RDA	M	2.8971	Immigration Retention End Date	D	8	8	1	1	Requested retention end date. Must be between 0 and 100 years from transaction date (based on tag 1.005).	

5.3 TYPE-2 LOGICAL RECORD: ANONYMOUS TENPRINT SEARCH SUBMISSION (ATS)

Table 5-3: ATS Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
DCN	M	2.800	Document Control Number	N	20	20	1	1		
LGF	M	2.819	Language Flag	A	1	1	1			
RET	M	2.8005	Retention Code	A	1	1	1	1	Value will be set to "N".	
MFR	C	2.8084	Missing Fingerprint Reason				0	14	Mandatory if less than 10 fingers in images provided or if images missing. Refer to Type-14 record definition.	
	M		Finger Position Code	N	2	2	1	1		
	M		Missing Fingerprint Reason Code	A	2	2	1	1		
	O		Missing Fingerprint Date	D	8	8	0	1		
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
STV	M	2.8911	System Table Version Number	N	3	3	1	1		
RCC	M	2.8981	Country Requesting Search	N	3	3	1	1	Code Table: Country Requesting Search	

5.4 TYPE-2 LOGICAL RECORD: VERIFICATION SUBMISSION (VER)

Table 5-4: VER Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
IMA	M	2.8067	Image Capture Equipment				1	1		
	M		Originating Fingerprint Reading System Make	ANS	1	25	1	1		
	M		Originating Fingerprint Reading System Model	ANS	1	25	1	1		
	M		Originating Fingerprint Reading System Serial Number	ANS	1	50	1	1		
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
NOTF	M	2.8938	Name of Official Taking Fingerprints	ANS	1	50	1	1	Name or unique identifier of an official operating the electronic fingerprint capture device (EFCD).	
FPCL	M	2.8939	Fingerprints Capture Location	ANS	1	20	1	1		
AFN	M	2.8973	Subject File Identifier				1	1		
	M		File Type	N	2	2	1	1	Code table: File Type Code	
	M		File Number	N	1	12	1	1		

5.5 TYPE-2 LOGICAL RECORD: IMMIGRATION FILE AMEND (IMA)

Table 5-5: IMA Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
NAME	C	2.806	Primary Name				0	1	<p>Mandatory when:</p> <p>AMR 2.8967 [Amendment Reason] is equal to "01" (Biographic Data).</p> <p>Must not exist when:</p> <p>AMR 2.8967 [Amendment Reason] is equal to "02" (Immigration Retention End Date).</p> <p>Refer to the applicable encoding rules for tag 2.806 NAME within section 4 – <i>NIST DATA DEFINITIONS</i>.</p>	
	M		Surname	AS	1	50	1	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 1	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 2	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 3	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period

Table 5-5: IMA Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	O		Given Name 4	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
SEX	C	2.807	Sex	A	1	1	0	1	Code Table: Sex Mandatory when: AMR 2.8967 [Amendment Reason] is equal to "01" (Biographic Data). Must not exist when: AMR 2.8967 [Amendment Reason] is equal to "02" (Immigration Retention End Date).	
LGF	M	2.819	Language Flag	A	1	1	1	1		
OTN	O	2.824	Other Names/Aliases				0	40	Must not exist when: AMR 2.8967 [Amendment Reason] is equal to "02" (Immigration Retention End Date). Refer to the applicable encoding rules for tag 2.824 OTN within section 4 – <i>NIST DATA DEFINITIONS</i> .	
	M		Surname	AS	1	50	1	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 1	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 2	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period

Table 5-5: IMA Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	O		Given Name 3	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 4	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
DCR	C	2.851	DCN Reference Number	N	20	20	0	1	Mandatory when; AMR 2.8967 [Amendment Reason] is equal to "01" (Biographic Data). Must not exist when; AMR 2.8967 [Amendment Reason] is equal to "02" (Immigration Retention End Date).	
FOSS	O	2.888	Immigration Client Identifier	ANS	1	16	0	1	New for ICD 2.1.1. Previously Field Operational Support System. Must not exist when: AMR 2.8967 [Amendment Reason] is equal to "02" (Immigration Retention End Date).	
DOB	C	2.8022	Date of Birth	D	8	8	0	1	Mandatory when: AMR 2.8967 [Amendment Reason] is equal to "01" (Biographic Data). Must not exist when: AMR 2.8967 [Amendment Reason] is equal to "02" (Immigration Retention End Date). Age restrictions on enrolment are carried through for Amendments.	
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
STV	M	2.8911	System Table Version Number	N	3	3	1	1		

Table 5-5: IMA Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
NFT	M	2.8931	Name of Person Responsible for Transaction	ANS	1	50	1	1		
IID	M	2.8964	Immigration File Number	N	12	12	1	1	The IID must already exist in the RTID system.	
AMR	M	2.8967	Amendment Reason	N	2	2	1	1	Code Table: Amendment Reason	
RDA	C	2.8971	Immigration Retention End Date	D	8	8	0	1	<p>Mandatory when:</p> <p>AMR 2.8967 [Amendment Reason] is equal to "02" (Immigration Retention End Date).</p> <p>Must not exist when:</p> <p>AMR 2.8967 [Amendment Reason] is equal to "01" (Biographic Data).</p> <p>Must be between 0 and 100 years from transaction date (based on tag 1.005).</p>	

5.6 TYPE-2 LOGICAL RECORD: IMMIGRATION FILE PURGE (IMP)

Table 5-6: IMP Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
LGF	M	2.819	Language Flag	A	1	1	1	1		
DCR	O	2.851	DCN Reference Number	N	20	20	0	1	This field must be provided for submission level purge. The DCR must already exist in RTID system as a DCN when used. The field must not be provided for file level purge.	
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
STV	M	2.8911	System Table Version Number	N	3	3	1	1		
NFT	M	2.8931	Name of Person Responsible for Transaction	ANS	1	50	1	1		
AFN	M	2.8973	Subject File Identifier				1	1		
	M		File Type	N	2	2	1	1	Code table: File Type Code	
	M		File Number	N	1	12	1	1	The File Number must already exist in the RTID system.	

5.7 TYPE-2 LOGICAL RECORD: SEARCH RESULTS (SRE)

Table 5-7: SRE Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
DCN	M	2.800	Document Control Number	N	20	20	1	1		
NMG	O	2.827	Narrative Message	ANS	1	1000	0	1	Not populated for ICD 2.1.1 transactions.	Any RCMP special character plus Carriage Return & Linefeed
RRES	M	2.875	RCMP-NPS Results	A	1	1	1	1	Valid value is "Y".	
ESD	O	2.8044	Effective Search Date	D	8	8	0	1		
ACN	O	2.8071	Action to be Taken	ANS	1	500	0	1	Not populated for ICD 2.1.1 transactions.	Any RCMP special character plus Carriage Return & Linefeed
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
CREF	O	2.8952	Contributor Supplied Reference Information				0	1	This will be populated if provided by the incoming submission that generated the SRE.	
	O		Primary Surname	AS	1	50	0	1		Space, Period, Hyphen, Apostrophe
	O		Given Name 1	AS	1	20	0	1		Space, Period, Hyphen, Apostrophe

Table 5-7: SRE Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	O		Given Name 2	AS	1	20	0	1		Space, Period, Hyphen, Apostrophe
	O		Given Name 3	AS	1	20	0	1		Space, Period, Hyphen, Apostrophe
	O		Given Name 4	AS	1	20	0	1		Space, Period, Hyphen, Apostrophe
	O		Date of Birth	D	8	8	0	1		
	O		Sex	A	1	1	0	1		
	O		CBSA/IRCC Office Number	ANS	1	16	0	1	Not populated in incoming ICD 2.1.1 transactions.	
	O		Immigration Client Identifier	ANS	1	16	0	1	Previously known as Field Operational Support System (FOSS).	
	O		Individual Reference Number	ANS	1	32	0	1		
	O		Contributor Case File Number	ANS	1	32	0	1		
IDI	O	2.8953	Search Result Information				0	10		
	M		File Type Searched Code	N	3	3	1	1	Code Table (2.8953A): Identification Type, examples include Criminal or Legacy Refugee or Immigration.	
	M		Search Result Code	A	1	1	1	1	Code Table (2.8953B): Search Result	

Table 5-7: SRE Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	O		File Number	AN	1	12	0	1	This element contains the file number that the RCMP uses to identify the file pertaining to a subject of the identification; for example, FPS number or Refugee number or Immigration number. The FPS number will always be returned in short format.	
	O		Surname	AS	1	50	0	1		Space, Period, Hyphen, Apostrophe
	O		Given Name 1	AS	1	20	0	1		Space, Period, Hyphen, Apostrophe
	O		Given Name 2	AS	1	20	0	1		Space, Period, Hyphen, Apostrophe
	O		Given Name 3	AS	1	20	0	1		Space, Period, Hyphen, Apostrophe
	O		Given Name 4	AS	1	20	0	1		Space, Period, Hyphen, Apostrophe
	O		Date of Birth	N	8	8	0	1	May not be a complete date of birth.	
	O		Sex	A	1	1	0	1		
	O		CBSA/IRCC Office Number	ANS	1	16	0	1	Provided if on file.	
	O		Immigration Client Identifier	ANS	1	16	0	1	Previously known as Field Operational Support System (FOSS).	

Table 5-7: SRE Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
RDA	O	2.8971	Immigration Retention End Date	D	8	8	0	1	Immigration Retention End Date assigned is returned in response to an IMM TOT.	

5.8 TYPE-2 LOGICAL RECORD: VERIFICATION SEARCH RESULTS (SRV)

Table 5-8: SRV Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
VSR	M	2.8955	Verification Search Result	A	1	1	1	1	Code table: Verification Search Result Findings	
AFN	M	2.8973	Subject File Identifier				1	1		
	M		File Type	N	2	2	1	1	Code table: File Type Code	
	M		File Number	N	1	12	1	1		

5.9 TYPE-2 LOGICAL RECORD: IMMIGRATION AMEND RESULTS (IMAR)

Table 5-9: IMAR Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
DCR	O	2.851	DCN Reference Number	N	20	20	0	1	Value will be returned if present in the originating IMA transaction.	
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
IID	M	2.8964	Immigration File Number	N	12	12	1	1		
EAD	M	2.8966	Effective Amendment Date	D	8	8	1	1		
AMR	M	2.8967	Amendment Reason	N	2	2	1	1	Code Table: Amendment Reason	
RDA	O	2.8971	Immigration Retention End Date	D	8	8	0	1	Value will be returned if present in the originating IMA transaction.	

5.10 TYPE-2 LOGICAL RECORD: IMMIGRATION PURGE RESULTS (IMPR)

Table 5-10: IMPR Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
DCR	O	2.851	DCN Reference Number	N	20	20	0	1	Value is returned if present in the originating IMP transaction.	
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
EPD	M	2.8972	Effective Purge Date	D	8	8	1	1		
AFN	M	2.8973	Subject File Identifier				1	1		
	M		File Type	N	2	2	1	1	Code table: File Type Code	
	M		File Number	N	1	12	1	1		

5.11 TYPE-2 LOGICAL RECORD: TENPRINT SUBMISSION ERROR (ERRT)

Table 5-11: ERRT Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
DCN	O	2.800	Document Control Number	N	20	20	0	1	DCN (Tag 2.800) will be returned only if present in the original transaction.	
NMG	O	2.827	Narrative Message	ANS	1	1000	0	1	Special character may appear as the first or last character in the field.	Any RCMP special character plus Carriage Return & Linefeed
RRES	O	2.875	RCMP-NPS Results	A	1	1	0	1		
EMSG	M	2.8060	Error				1	50		
	M		Error Code	N	1	5	1	1		
	M		Error Message	ANS	1	300	1	1	Special character may appear as the first or last character in the field.	
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		

5.12 TYPE-2 LOGICAL RECORD: VERIFICATION SUBMISSION ERROR (ERRV)

Table 5-12: ERRV Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
EMSG	M	2.8060	Error				1	50		
	M		Error Code	N	1	5	1	1		
	M		Error Message	ANS	1	300	1	1	Special character may appear as the first or last character in the field.	
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
AFN	M	2.8973	Subject File Identifier				1	1		
	M		File Type	N	2	2	1	1	Code table: File Type Code	
	M		File Number	N	1	12	1	1		

5.13 TYPE-2 LOGICAL RECORD: ACKNOWLEDGMENT TENPRINT (ACKT)

Table 5-13: ACKT Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
DCN	O	2.800	Document Control Number	N	20	20	0	1	DCN (Tag 2.800) will be returned only if present in the original transaction.	
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		

5.14 TYPE-2 LOGICAL RECORD: UNSOLICITED CRIMINAL NOTIFICATION (UCN)

Table 5-14: UCN Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	2.001	Logical Record Length	N	2	7	1	1		
IDC	M	2.002	Image Designation Character	N	1	5	1	1		
DCR	M	2.851	DCN Reference Number	N	20	20	1	1	Contains the Document Control Number specified by the contributor of a criminal submission that identifies to an Immigration or Legacy Refugee subject	
SUBTP	M	2.855	Submission Type	ANS	3	7	1	1	The criminal submission type reported to the RCMP; one of "CAR-Y" (enrolment) or "CAR-N" (inquiry)	Hyphen
CAI	M	2.856	Contributing Agency Information				1	1	Information describing the agency reporting or inquiring about criminal activity for a fingerprinted subject	
	M		Contributing Agency Identifier	AN	7	7	1	1	The agency identifier of the contributor	
	M		Contributing Agency Name EN	ANS	1	50	1	1	The common name of the agency, expressed in English	
	M		Contributing Agency Name FR	ANS	1	50	1	1	The common name of the agency, expressed in French	
DPR	M	2.8038	Date Fingerprinted	D	8	8	1	1	The date fingerprints are taken, as reported on the criminal submission	
ESD	M	2.8044	Effective search Date	D	8	8	1	1	The date on which the fingerprint-based search is completed by the RCMP	
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1	Shall be set to 211	

Table 5-14: UCN Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
CREF	M	2.8952	Contributor Supplied Reference Information				1	1	Information provided by the contributor of the criminal enrolment or inquiry submission which describes the fingerprinted subject. Name components shall be encoded as per the applicable rules defined for tag 2.8952 CREF within section 4 – <i>NIST DATA DEFINITIONS</i> .	
	M		Surname	AS	1	50	1	1	The surname of the subject, as known by the contributor	Space, Hyphen, Apostrophe, Period
	O		Given Name 1	AS	1	20	0	1	A given name of the subject, as known by the contributor; up to 4 given names populated	Space, Hyphen, Apostrophe, Period
	O		Given Name 2	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 3	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 4	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	M		Date of Birth	N	8	8	1	1	May be zero-filled when DOB is unknown by the contributor of a CAR-N criminal inquiry	
	M		Sex	A	1	1	1	1	Permissible values are: M Male F Female U Unknown	

Table 5-14: UCN Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	O		CBSA/IRCC Office Number	ANS	1	16	0	1	A CBSA or IRCC Office Number if it is known by the contributor and supplied on the criminal submission	
	O		Immigration Client Identifier	ANS	1	16	0	1	An Immigration Client ID or FOSS Number if it is known by the contributor and supplied on the criminal submission	
	O		Individual Reference Number	ANS	1	32	0	1	An identifier belonging to the contributor of the criminal submission which is assigned to the fingerprinted subject	
	O		Contributor Case File Number	ANS	1	32	0	1	A case or file number belonging to the contributor of the criminal submission	
IDI	M	2.8953	Search Result Information				2	10	A variable list of search results by RTID file type. For UCN, one occurrence shall be present for File Type 01 (Criminal) and one or two other occurrences shall be present for File Type 04 (Immigration) or 02 (Legacy Refugee) or both.	
	M		File Type Searched Code	N	1	2	1	1	Shall be set to one of: 01 Criminal 02 Legacy Refugee 04 Immigration	
	M		Search Result Code	A	1	1	1	1	Shall be set to one of: I A fingerprint identification is made by RTID N No fingerprint identification is made by RTID All remaining sub-tags within tag 2.8953 Search Result Information shall only be provided when Search Result Code is equal to "I" (Ident).	

Table 5-14: UCN Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	O		File Number	AN	1	12	0	1	When Search Result Code is equal to "I" (Ident) File Number shall contain the identifier assigned to this subject for the specified File Type Searched Code. Note that a criminal File Number shall be encoded as exactly 7 characters long; example: 001234G	
	O		Surname	AS	1	50	0	1	The surname of the subject on file at the RCMP having the specified File Number	Space, Hyphen, Apostrophe, Period
	O		Given Name 1	AS	1	20	0	1	A given name of the subject on file at the RCMP having the specified File Number; up to 4 given names populated	Space, Hyphen, Apostrophe, Period
	O		Given Name 2	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 3	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Given Name 4	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
	O		Date of Birth	N	8	8	0	1	May be a partial or complete date of birth	
	O		Sex	A	1	1	0	1	Permissible values are: M Male F Female U Unknown	

Table 5-14: UCN Transaction: Type-2 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
	O		CBSA/IRCC Office Number	ANS	1	16	0	1	Optionally returned when RTID has a CBSA or IRCC Office Number on file for a Legacy Refugee subject	
	O		Immigration Client Identifier	ANS	1	16	0	1	Optionally returned when RTID has an Immigration Client ID or FOSS Number on file for an Immigration or Legacy Refugee subject	

5.15 TYPE-14 LOGICAL RECORD: TENPRINT IMAGE RECORD

Table 5-15: Type-14 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
LEN	M	14.001	Logical Record Length	N	4	8	1	1		
IDC	M	14.002	Image Designation Character	N	1	5	1	1		
IMP	M	14.003	Impression Type	N	1	2	1	1	Value is the appropriate impression code from table A3 (Impression Type Codes) and should be set to 0 or 2 for IMM and VER. For ATS transactions containing ID Flats, this must be 0 or 2. For ATS transactions contained Rolled and Plain images, this must be 1 or 3.	
SRC	M	14.004	Source Agency Identifier	AN	7	7	1	1		
TCD	M	14.005	Capture Date	D	8	8	1	1	The local date on which the fingerprint image is captured by the EFCD.	
HLL	M	14.006	Horizontal Line Length	N	3	5	1	1		
VLL	M	14.007	Vertical Line Length	N	3	5	1	1		
SLC	M	14.008	Scale Units	N	1	1	1	1	Used to specify the units used to describe the image sampling frequency (pixel density). "Pixels per inch" is represented as a 1 and "pixels per centimetre" is represented by a 2. Valid values are 1 or 2.	
HPS	M	14.009	Horizontal Pixel Scale	N	1	5	1	1	Contributors must round to the nearest whole number.	

Table 5-15: Type-14 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
VPS	M	14.010	Vertical Pixel Scale	N	1	5	1	1	Contributors must round to the nearest whole number.	
CGA	M	14.011	Compression Algorithm	AN	3	7	1	1	This tag shall be used to specify the type of compression algorithm used. Valid values are WSQ only.	
BPX	M	14.012	Bits Per Pixel	N	1	3	1	1	The value shall contain the number of bits used to represent a pixel. An entry of 8 is required for normal greyscale values of 0 – 255.	
FGP	M	14.013	Finger Number Code	N	2	2	1	1	Acceptable values are 01 – 15.	
SEG	C	14.021	Segment Position				1	4	Mandatory for all fingerprint submissions except ATS transactions that contain Rolled and Plain images (see 14.200).	
	M		Finger Number	N	2	2	1	1	Valid values are 01 to 10.	
	M		Left	N	1	4	1	1		
	M		Right	N	1	4	1	1		
	M		Top	N	1	4	1	1		
	M		Bottom	N	1	4	1	1		
NQM	C	14.022	NIST Quality Metric				0	4	Mandatory when tag 1.004 Type of Transaction is equal to "IMM" or "VER"; Optional when tag 1.004 Type of Transaction is equal to "ATS".	
	M		Finger Position Code	N	2	2	1	1	Valid values are 01 to 10.	
	M		Image Quality Score	N	1	3	1	1	Valid values are 1 – 5, 254 and 255.	

Table 5-15: Type-14 Logical Record

Identifier	Condition	Tag Number	Tag Name	Character Type	Field Size Per Occurrence		Occurrences		Notes	Special Characters Allowed
					Min	Max	Min	Max		
IMTC	M	14.200	Image Type Contained	N	1	1	1	1	Used to specify the type of image contained in the record. For IMM and VER transactions, this field shall always be set to 2 (4-4-2 Identification flats). Valid values for ATS transactions are 1 (rolled 14-Print), 2, or 4 (Rolled 13-Print). Refer to Code Table 14.200, Image Type Contained.	
DAT	M	14.999	Image Data	B	2	--	1	1		

APPENDIX A – TABLES

Table A-1: Finger/Palm Codes

Code	English Description	French Description
00	UNKNOWN FINGER	DOIGT INCONNU
01	RIGHT THUMB	POUCE DROIT
02	RIGHT INDEX	INDEX DROIT
03	RIGHT MIDDLE	MAJEUR DROIT
04	RIGHT RING	ANNULAIRE DROIT
05	RIGHT LITTLE	AURICULAIRE DROIT
06	LEFT THUMB	POUCE GAUCHE
07	LEFT INDEX	INDEX GAUCHE
08	LEFT MIDDLE	MAJEUR GAUCHE
09	LEFT RING	ANNULAIRE GAUCHE
10	LEFT LITTLE	AURICULAIRE GAUCHE
11	PLAIN RIGHT THUMB	POUCE DROIT NON-ROULE
12	PLAIN LEFT THUMB	POUCE GAUCHE NON-ROULE
13	PLAIN RIGHT FOUR FINGERS	IMPRESSION SIMULTANEE DES QUATRE DOIGTS DROIT
14	PLAIN LEFT FOUR FINGERS	IMPRESSION SIMULTANEE DES QUATRE DOIGTS GAUCHE
15	PLAIN LEFT AND RIGHT THUMBS	POUCES GAUCHE ET DROIT NON ROULES
20	UNKNOWN PALM	PAUME INCONNUE
21	RIGHT FULL PALM	PAUME DROITE COMPLETE
22	RIGHT WRITERS PALM	PAUME DROIT – HYPOTHENAR
23	LEFT FULL PALM	PAUME GAUCHE COMPLETE
24	LEFT WRITERS PALM	PAUME GAUCHE – HYPOTHENAR
25	RIGHT LOWER PALM	PAUME DROITE – PARTIE INFÉRIEURE
26	RIGHT UPPER PALM	PAUME DROITE – PARTIE SUPÉRIEURE
27	LEFT LOWER PALM	PAUME GAUCHE – PARTIE INFÉRIEURE
28	LEFT UPPER PALM	PAUME GAUCHE – PARTIE SUPÉRIEURE
29	RIGHT PALM – OTHER	PAUME DROITE – AUTRE PARTIE
30	LEFT PALM – OTHER	PAUME GAUCHE – AUTRE PARTIE
Note: Finger palm codes in red and greyed out must not be used for ICD 2.1.1 transactions.		

Table A-2a: Allowable Box Sizes for Finger/Palm Images for IMM and VER

Finger/Palm print	Impression Type	Finger / Palm Codes	Width pixels (inches)	Length/Height pixels (inches)
ROLLED FINGER IMPRESSIONS	1 OR 3	01 – 10	800 (1.6)	750 (1.5)
PLAIN FINGER IMPRESSIONS	0 OR 2	02–05, 07–10	500 (1.0)	1000 (2.0)
PLAIN THUMB IMPRESSION	0 OR 2	11 – 12	500 (1.0)	1000 (2.0)
4 FINGER PLAIN IMPRESSIONS	0 OR 2	13 – 14	1600 (3.2)	1000 (2.0)
4 FINGER PLAIN IMPRESSIONS (TYPE-14 RECORD)	0 OR 2	13 – 14	1600 (3.2)	1500 (3.0)
2 PLAIN THUMB IMPRESSIONS (TYPE-14 RECORD)	0 OR 2	15	1600 (3.2)	1500 (3.0)
FULL PALM IMPRESSION (TYPE-15 RECORD)	10 OR 11	21, 23	2750 (5.5)	4000 (8.0)
WRITER'S PALM IMPRESSION (TYPE-15 RECORD)	10 OR 11	22, 24	900 (1.8)	2500 (5.0)
UPPER AND LOWER PALM (TYPE-15 RECORD)	10 OR 11	25, 26, 27, 28	2750 (5.5)	2750 (5.5)

Table A-2b: Allowable Box Sizes for Finger Images for ATS (International Transactions)

Finger/Palm print	Impression Type	Finger Codes	Width pixels (inches)	Length/Height pixels (inches)
ROLLED FINGER IMPRESSIONS	1 OR 3	01 – 10	800 (1.6)	1000 (2.0)
PLAIN THUMB IMPRESSION	0 OR 2	11 – 12	650 (1.3)	1050 (2.1)
2 PLAIN THUMB IMPRESSIONS	0 OR 2	15	1600 (3.2)	1500 (3.0)
4 FINGER PLAIN IMPRESSIONS	0 OR 2	13 – 14	1600 (3.2)	1500 (3.0)

Notes:

- The allowable box sizes for International Transactions (ATS) are different from Domestic sizes shown in Table A-2a and so are addressed separately in Table A-2b.
- Attributes for allowable box sizes for finger/palm codes showing in red and greyed out must not be used for ICD 2.1.1 transactions.
- For Tenprint submissions, all finger/palm impressions to be scanned at 500ppi
- Livescan box sizes must conform to the width and height specifications stated in the tables above.

- Cardscan box sizes shall default to the width and height stated in the tables above but should allow the user to adjust downward the box sizes to allow for the removal of adjacent fingerprints and/or lines.

Table A-3: Impression Type Codes

Code	English Description	French Description	Finger	Palm
0	LIVESCAN PLAIN	TRACE PLAQUÉE À SEC	Y	
1	LIVESCAN ROLLED	TRACE ROULÉE À SEC	Y	
2	NON-LIVESCAN PLAIN	TRACE PLAQUÉE ENCRÉE	Y	
3	NON-LIVESCAN ROLLED	TRACE ROULÉE ENCRÉE	Y	
4	LATENT IMPRESSION	EMPREINTE LATENTE	Y	
5	LATENT TRACING	TRAÇAGE – EMPREINTE LATENTE	Y	
6	LATENT PHOTO	PHOTO – EMPREINTE LATENTE	Y	
7	LATENT LIFT	DÉCALQUE – EMPREINTE LATENTE	Y	
10	LIVESCAN PALM	PAUME A SEC		Y
11	NON-LIVESCAN PALM	PAUME ENCRÉE		Y
12	LATENT PALM IMPRESSION	EMPREINTE PALMAIRE LATENTE		Y
13	LATENT PALM TRACING	TRAÇAGE – EMPREINTE PALMAIRE LATENTE		Y
14	LATENT PALM PHOTO	PHOTO – EMPREINTE PALMAIRE LATENTE		Y
15	LATENT PALM LIFT	DÉCALQUE – EMPREINTE PALMAIRE LATENTE		Y
Note: LIVESCAN PLAIN (0) LIVESCAN ROLLED (1) or LIVESCAN PALM (10) impression types must be used for Livescan submissions, and NON-LIVESCAN PLAIN (2) or NON-LIVESCAN ROLLED (3) or NON-LIVESCAN PALM (11) impression types must be used for Cardscan submissions.				
Note: Impression Type codes in red and greyed out are not supported for ICD 2.1.1 transactions.				

All province codes may be used unless otherwise specified in the tag definition.

Table A-4: Province Codes / Codes de Province

Numeric Code / Code Numérique	English Description / Description anglaise	French Description / Description française	ORI Alpha Code / IND code alpha	Canada Post Alpha Code / Postes Canada code alpha
01	NEWFOUNDLAND AND LABRADOR	TERRE-NEUVE-ET-LABRADOR	NF	NL
02	PRINCE EDWARD ISLAND	ÎLE-DU-PRINCE-ÉDOUARD	PE	PE
03	NOVA SCOTIA	NOUVELLE-ÉCOSSE	NS	NS
04	NEW BRUNSWICK	NOUVEAU-BRUNSWICK	NK	NB
05	QUEBEC	QUÉBEC	PQ	QC

Table A-4: Province Codes / Codes de Province

Numeric Code / Code Numérique	English Description / Description anglaise	French Description / Description française	ORI Alpha Code / IND code alpha	Canada Post Alpha Code / Postes Canada code alpha
06	ONTARIO	ONTARIO	ON	ON
07	MANITOBA	MANITOBA	MB	MB
08	SASKATCHEWAN	SASKATCHEWAN	SN	SK
09	ALBERTA	ALBERTA	AB	AB
10	BRITISH COLUMBIA	COLOMBIE-BRITANNIQUE	BC	BC
11	NORTH WEST TERRITORIES	TERRITOIRES DU NORD-OUEST	NT	NT
12	YUKON	YUKON	YT	YT
13	NUNAVUT	NUNAVUT	NU	NU

Notes:

1. The listed ORI Alpha Codes are those used in the formulation and validation of RTID Agency Identifiers populated in Record Type-1 tags 1.007 DAI – Destination Agency Identifier and 1.008 OAI – Originating Agency Identifier. See section 2.2.2 RTID Agency Identifier for more information on the identifier format.
2. Whenever an address within Canada is printed on an output form or other product, RTID relies on the Canada Post coding convention for mailing purposes. Encoding differences can be observed in the above table specifically for Newfoundland and Labrador, New Brunswick, Quebec and Saskatchewan. The RTID system performs the necessary conversions in order to print the Canada Post mailing code for each province/territory.

COUNTRY CODES

RTID Standard Country Codes, based on ISO-3166-1 Numeric Codes. It is possible that there may be a difference in the spelling of the country name between *Country Codes* and the official ISO Code. Agencies should use the ISO code number only if there are any concerns.

Table A-5: Country Codes

Code	English Description	French Description
004	AFGHANISTAN	AFGHANISTAN
008	ALBANIA	ALBANIE
010	ANTARCTICA	ANTARCTIQUE
012	ALGERIA	ALGERIE

Table A-5: Country Codes

Code	English Description	French Description
016	AMERICAN SAMOA	SAMOAS AMERICAINES
020	ANDORRA	ANDORRE
024	ANGOLA	ANGOLA
028	ANTIGUA AND BARBUDA	ANTIGUA-ET-BARBUDA
031	AZERBAIJAN	AZERBAIDJAN
032	ARGENTINA	ARGENTINE
036	AUSTRALIA	AUSTRALIE
040	AUSTRIA	AUTRICHE
044	BAHAMAS	BAHAMAS
048	BAHRAIN	BAHREIN
050	BANGLADESH	BANGLADESH
051	ARMENIA	ARMENIE
052	BARBADOS	BARBADE
056	BELGIUM	BELGIQUE
060	BERMUDA	BERMUDES
064	BHUTAN	BHOUTAN
068	BOLIVIA	BOLIVIE
070	BOSNIA-HERZEGOVINA	BOSNIE-HERZEGOVINE
072	BOTSWANA	BOTSWANA
074	BOUVET ISLAND	BOUVET, ILE
076	BRAZIL	BRESIL
084	BELIZE	BELIZE
086	BRITISH INDIAN OCEAN TERRITORY	OCEAN INDIEN, TERRITOIRE BRITANNIQUE
090	SOLOMON ISLANDS	ILES SALOMON
092	BRITISH VIRGIN ISLANDS	ILES VIERGES BRITANNIQUES
096	BRUNEI DARUSSALAM	BRUNEI DARUSSALAM
100	BULGARIA	BULGARIE
104	MYANMAR	MYANMAR
108	BURUNDI	BURUNDI
112	BELARUS	BELARUS
116	CAMBODIA	CAMBODGE
120	CAMEROON	CAMEROUN
124	CANADA	CANADA
132	CAPE VERDE	CAP-VERT
136	CAYMAN ISLANDS	ILES CAIMANS

Table A-5: Country Codes

Code	English Description	French Description
140	CENTRAL AFRICAN REPUBLIC	REPUBLIQUE CENTRAFRICAINE
144	SRI LANKA	SRI LANKA
148	CHAD	TCHAD
152	CHILE	CHILI
156	CHINA	CHINE
158	TAIWAN	TAIWAN
162	CHRISTMAS ISLAND	ILE CHRISTMAS
166	COCOS (KEELING) ISLANDS	ILES COCOS (KEELING)
170	COLOMBIA	COLOMBIE
174	COMOROS	COMORES
175	MAYOTTE	MAYOTTE
178	CONGO	CONGO
180	DEMOCRATIC REPUBLIC OF THE CONGO	REPUBLIQUE DEMOCRATIQUE DU CONGO
184	COOK ISLANDS	ILES COOK
188	COSTA RICA	COSTA RICA
191	CROATIA	CROATIE
192	CUBA	CUBA
196	CYPRUS	CHYPRE
203	CZECH REPUBLIC	REPUBLIQUE TCHEQUE
204	BENIN	BENIN
208	DENMARK	DANEMARK
212	DOMINICA	DOMINIQUE
214	DOMINICAN REPUBLIC	REPUBLIQUE DOMINICAINE
218	ECUADOR	EQUATEUR
222	EL SALVADOR	EL SALVADOR
226	EQUATORIAL GUINEA	GUINEE EQUATORIALE
231	ETHIOPIA	ETHIOPIE
232	ERITREA	ERYTHREE
233	ESTONIA	ESTONIE
234	FAEROE ISLANDS	ILES FEROE
238	FALKLAND ISLANDS (MALVINAS)	ILES FALKLAND (MALVINAS)
242	FIJI	FIDJI
246	FINLAND	FINLANDE
248	ALAND ISLANDS	ILES D'ALAND
250	FRANCE	FRANCE

Table A-5: Country Codes

Code	English Description	French Description
254	FRENCH GUIANA	GUYANE FRANCAISE
258	FRENCH POLYNESIA	POLYNESIE FRANCAISE
260	FRENCH SOUTHERN TERRITORY	TERRES AUSTRALES FRANCAISES
262	DJIBOUTI	DJIBOUTI
266	GABON	GABON
268	GEORGIA	GEORGIE
270	GAMBIA	GAMBIE
275	OCCUPIED PALESTINIAN TERRITORY	TERRITOIRE PALESTINIEN OCCUPE
276	GERMANY	ALLEMAGNE
288	GHANA	GHANA
292	GIBRALTAR	GIBRALTAR
296	KIRIBATI	KIRIBATI
300	GREECE	GRECE
304	GREENLAND	GROENLAND
308	GRENADA	GRENADE
312	GUADELOUPE	GUADELOUPE
316	GUAM	GUAM
320	GUATEMALA	GUATEMALA
324	GUINEA	GUINEE
328	GUYANA	GUYANA
332	HAITI	HAITI
334	HEARD AND MCDONALD ISLANDS	ÎLES HEARD ET MCDONALD
336	HOLY SEE	SAINT-SIEGE
340	HONDURAS	HONDURAS
344	HONG KONG	HONG KONG
348	HUNGARY	HONGRIE
352	ICELAND	ISLANDE
356	INDIA	INDE
360	INDONESIA	INDONESIE
364	IRAN	IRAN
368	IRAQ	IRAQ
372	IRELAND	IRLANDE
376	ISRAEL	ISRAEL
380	ITALY	ITALIE
384	IVORY COAST	COTE D'IVOIRE

Table A-5: Country Codes

Code	English Description	French Description
388	JAMAICA	JAMAIQUE
392	JAPAN	JAPON
398	KAZAKHSTAN	KAZAKHSTAN
400	JORDAN	JORDANIE
404	KENYA	KENYA
408	DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	RÉPUBLIQUE POPULAIRE DÉMOCRATIQUE DE CORÉE
410	REPUBLIC OF KOREA	REPUBLIQUE DE COREE
414	KUWAIT	KOWEIT
417	KYRGYZSTAN	KIRGHIZISTAN
418	LAO PEOPLE'S DEMOCRATIC REPUBLIC	REPUBLIQUE DEMOCRATIQUE POPULAIRE LAO
422	LEBANON	LIBAN
426	LESOTHO	LESOTHO
428	LATVIA	LETTONIE
430	LIBERIA	LIBERIA
434	LIBYAN ARAB JAMAHIRIYA	JAMAHIRIYA ARABE LIBYENNE
438	LIECHTENSTEIN	LIECHTENSTEIN
440	LITHUANIA	LITUANIE
442	LUXEMBOURG	LUXEMBOURG
446	MACAU	MACAU
450	MADAGASCAR	MADAGASCAR
454	MALAWI	MALAWI
458	MALAYSIA	MALAISIE
462	MALDIVES	MALDIVES
466	MALI	MALI
470	MALTA	MALTE
474	MARTINIQUE	MARTINIQUE
478	MAURITANIA	MAURITANIE
480	MAURITIUS	MAURICE
484	MEXICO	MEXIQUE
492	MONACO	MONACO
496	MONGOLIA	MONGOLIE
498	REPUBLIC OF MOLDOVA	REPUBLIQUE DE MOLDOVA
499	MONTENEGRO	MONTENEGRO
500	MONTSERRAT	MONTSERRAT AMERIQUES

Table A-5: Country Codes

Code	English Description	French Description
504	MOROCCO	MAROC
508	MOZAMBIQUE	MOZAMBIQUE
512	OMAN	OMAN
516	NAMIBIA	NAMIBIE
520	NAURU	NAURU
524	NEPAL	NEPAL
528	NETHERLANDS	PAYS-BAS
530	NETHERLANDS ANTILLES	ANTILLES NEERLANDAISES
533	ARUBA	ARUBA
540	NEW CALEDONIA	NOUVELLE-CALEDONIE
548	VANUATU	VANUATU
554	NEW ZEALAND	NOUVELLE-ZELANDE
558	NICARAGUA	NICARAGUA
562	NIGER	NIGER
566	NIGERIA	NIGERIA
570	NIUE	NIOUE
574	NORFOLK ISLAND	ILE NORFOLK
578	NORWAY	NORVEGE
580	NORTHERN MARIANA ISLANDS	ILES MARIANNES SEPTENTRIONALES
583	MICRONESIA	MICRONESIE
584	MARSHALL ISLANDS	ILES MARSHALL
585	PALAU	PALAOS
586	PAKISTAN	PAKISTAN
591	PANAMA	PANAMA
598	PAPUA NEW GUINEA	PAPOUASIE-NOUVELLE-GUINEE
600	PARAGUAY	PARAGUAY
604	PERU	PEROU
608	PHILIPPINES	PHILIPPINES
612	PITCAIRN	PITCAIRN
616	POLAND	POLOGNE
620	PORTUGAL	PORTUGAL
624	GUINEA-BISSAU	GUINEE-BISSAU
626	TIMOR-LESTE	TIMOR-LESTE
630	PUERTO RICO	PORTO RICO
634	QATAR	QATAR
638	REUNION	REUNION

Table A-5: Country Codes

Code	English Description	French Description
642	ROMANIA	ROUMANIE
643	RUSSIAN FEDERATION	FEDERATION DE RUSSIE
646	RWANDA	RWANDA
654	SAINT HELENA	SAINTE-HELENE
659	SAINT KITTS AND NEVIS	SAINT-KITTS-ET-NEVIS
660	ANGUILLA	ANGUILLA
662	SAINT LUCIA	SAINTE-LUCIE
666	SAINT PIERRE AND MIQUELON	SAINT-PIERRE-ET-MIQUELON
670	SAINT VINCENT AND THE GRENADINES	SAINT-VINCENT-ET-LES GRENADINES
674	SAN MARINO	SAINT-MARIN
678	SAO TOME AND PRINCIPE	SAO TOME-ET-PRINCIPE
682	SAUDI ARABIA	ARABIE SAOUDITE
686	SENEGAL	SENEGAL
688	SERBIA	SERBIE
690	SEYCHELLES	SEYCHELLES
694	SIERRA LEONE	SIERRA LEONE
702	SINGAPORE	SINGAPOUR
703	SLOVAKIA	SLOVAQUIE
704	VIET NAM	VIET NAM
705	SLOVENIA	SLOVENIE
706	SOMALIA	SOMALIE
710	SOUTH AFRICA	AFRIQUE DU SUD
716	ZIMBABWE	ZIMBABWE
724	SPAIN	ESPAGNE
728	SOUTH SUDAN	SOUDAN DU SUD
729	SUDAN	SOUDAN
732	WESTERN SAHARA	SAHARA OCCIDENTAL
740	SURINAME	SURINAME
744	SVALBARD AND JAN MAYEN ISLANDS	ILES SVALBARD ET JAN MAYEN
748	SWAZILAND	SWAZILAND
752	SWEDEN	SUEDE
756	SWITZERLAND	SUISSE
760	SYRIAN ARAB REPUBLIC	REPUBLIQUE ARABE SYRIENNE
762	TAJIKISTAN	TADJIKISTAN

Table A-5: Country Codes

Code	English Description	French Description
764	THAILAND	THAILANDE
768	TOGO	TOGO
772	TOKELAU	TOKELAOU
776	TONGA	TONGA
780	TRINIDAD AND TOBAGO	TRINITE-ET-TOBAGO
784	UNITED ARAB EMIRATES	EMIRATS ARABES UNIS
788	TUNISIA	TUNISIE
792	TURKEY	TURQUIE
795	TURKMENISTAN	TURKMENISTAN
796	TURKS AND CAICOS ISLANDS	ILES TURQUES ET CAIQUES
798	TUVALU	TUVALU
800	UGANDA	OUGANDA
804	UKRAINE	UKRAINE
807	MACEDONIA	MACEDOINE
818	EGYPT	EGYPTE
826	UNITED KINGDOM	ROYAUME-UNI
830	CHANNEL ISLANDS	ILES ANGLO-NORMANDES
831	GUERNSEY	GUERNESEY
832	JERSEY	JERSEY
833	ISLE OF MAN	ILE DE MAN
834	UNITED REPUBLIC OF TANZANIA	REPUBLIQUE-UNIE DE TANZANIE
840	UNITED STATES OF AMERICA	ETATS-UNIS D'AMERIQUE
850	UNITED STATES VIRGIN ISLANDS	ILES VIERGES AMERICAINES
854	BURKINA FASO	BURKINA FASO
858	URUGUAY	URUGUAY
860	UZBEKISTAN	OUZBEKISTAN
862	VENEZUELA	VENEZUELA
876	WALLIS AND FUTUNA ISLANDS	ILES WALLIS ET FUTUNA
882	SAMOA	SAMOA
887	YEMEN	YEMEN
891	SERBIA AND MONTENEGRO	SERBIE-ET-MONTENEGRO
894	ZAMBIA	ZAMBIE
998*	OTHER	AUTRE
999	UNKNOWN	INCONNU
Note: Country codes in red and greyed out are not supported for ICD 2.1.1 transactions.		

APPENDIX B – SUMMARY TYPE-2 TAG LIST FOR RCMP IMMIGRATION TRANSACTIONS

Table B-1: Summary Type-2 Tag List for Immigration Transactions Sent to RCMP

Tag Number	Tag ID	Type of Transaction				
		ATS	IMM	IMA	IMP	VER
2.001	LEN	M	M	M	M	M
2.002	IDC	M	M	M	M	M
2.800	DCN	M	M			
2.806	NAME		M	C		
2.807	SEX		M	C		
2.819	LGF	M	M	M	M	
2.824	OTN			O		
2.827	NMG					
2.851	DCR			C	O	
2.875	RRES					
2.887	CIC					
2.888	FOSS			O		
2.893	FQO		O			
2.8005	RET	M	M			
2.8022	DOB		M	C		
2.8038	DPR		M			
2.8044	ESD					
2.8060	EMSG					
2.8067	IMA		M			M
2.8071	ACN					
2.8084	MFR	C	C			
2.8908	CNON		O			
2.8910	NVN	M	M	M	M	M
2.8911	STV	M	M	M	M	
2.8931	NFT		M	M	M	
2.8938	NOTF		M			M
2.8939	FPCL		M			M
2.8952	CREF					
2.8953	IDI					
2.8955	VSR					
2.8964	IID			M		
2.8966	EAD					

Tag Number	Tag ID	Type of Transaction				
		ATS	IMM	IMA	IMP	VER
2.8967	AMR			M		
2.8971	RDA		M	C		
2.8972	EPD					
2.8973	AFN				M	M
2.8981	RCC	M				

Table B-2: Summary Type-2 Tag List for Immigration Transactions Returned by RCMP

Tag Number	Tag ID	Type of Transaction							
		ACKT	ERRT	SRE	IMAR	IMPR	ERRV	SRV	UCN
2.001	LEN	M	M	M	M	M	M	M	M
2.002	IDC	M	M	M	M	M	M	M	M
2.800	DCN	O	O	M					
2.806	NAME								
2.807	SEX								
2.819	LGF								
2.824	OTN								
2.827	NMG		O	O					
2.851	DCR				O	O			M
2.855	SUBTP								M
2.856	CAI								M
2.875	RRES		O	M					
2.887	CIC								
2.888	FOSS								
2.893	FQO								
2.8005	RET								
2.8022	DOB								
2.8038	DPR								M
2.8044	ESD			O					M
2.8060	EMSG		M				M		
2.8067	IMA								
2.8071	ACN			O					
2.8084	MFR								
2.8908	CNON								
2.8910	NVN	M	M	M	M	M	M	M	M
2.8911	STV								
2.8931	NFT								
2.8938	NOTF								
2.8939	FPCL								
2.8952	CREF			O					M
2.8953	IDI			O					M
2.8955	VSR							M	
2.8964	IID				M				
2.8966	EAD				M				
2.8967	AMR				M				

Tag Number	Tag ID	Type of Transaction							
		ACKT	ERRT	SRE	IMAR	IMPR	ERRV	SRV	UCN
2.8971	RDA			O	O				
2.8972	EPD					M			
2.8973	AFN					M	M	M	
2.8981	RCC								

APPENDIX C – SUMMARY OF RCMP-DEFINED ATTRIBUTES

Table C-1: Immigration Transactions Attributes

Tag Number	Tag ID	Tag Name	Pick List	Character Type	Min Field Size	Max Field Size
1.001	LEN	Logical Record Length		N	2	3
1.002	VER	ANSI/NIST Version Number		N	4	4
1.003	CNT	File Content				
		Information Item 1		N	1	2
		Information Item 2		N	1	5
1.004	TOT	Type of Transaction		A	3	5
1.005	DAT	Date		D	8	8
1.006	PRY	Priority		N	1	1
1.007	DAI	Destination Agency Identifier		AN	7	7
1.008	OAI	Originating Agency Identifier		AN	7	7
1.009	TCN	Transaction Control Number		AN	20	20
1.010	TCR	Transaction Control Reference Number		AN	20	20
1.011	NSR	Native Scanning Resolution		NS	5	5
1.012	NTR	Nominal Transmitting Resolution		NS	5	5
1.014	GMT	Greenwich Mean Time		AN	15	15
2.001	LEN	Logical Record Length		N	2	7
2.002	IDC	Image Designation Character		N	1	5
2.800	DCN	Document Control Number		N	20	20
2.806	NAME	Primary Name				
		Surname		AS	1	50
		Given Name 1		AS	1	20
		Given Name 2		AS	1	20
		Given Name 3		AS	1	20
		Given Name 4		AS	1	20
2.807	SEX	Sex	Y	A	1	1
2.819	LGF	Language Flag		A	1	1
2.824	OTN	Other Names/Alias				
		Surname		AS	1	50
		Given Name 1		AS	1	20
		Given Name 2		AS	1	20
		Given Name 3		AS	1	20
		Given Name 4		AS	1	20
2.827	NMG	Narrative Message		ANS	1	1000

Table C-1: Immigration Transactions Attributes

Tag Number	Tag ID	Tag Name	Pick List	Character Type	Min Field Size	Max Field Size
2.851	DCR	DCN Reference Number		N	20	20
2.855	SUBTP	Submission Type		ANS	3	7
2.856	CAI	Contributing Agency Information				
		Contributing Agency Identifier		AN	7	7
		Contributing Agency Name EN		ANS	1	50
		Contributing Agency Name FR		ANS	1	50
2.875	RRES	RCMP-NPS Results	Y	A	1	1
2.887	CIC	CBSA/IRCC Office Number		ANS	1	16
2.888	FOSS	Immigration Client Identifier		ANS	1	16
2.893	FQO	Fingerprint Quality Override				
		Finger Number	Y	N	2	2
		Reason Code	Y	N	2	2
		Description		ANS	1	50
2.8005	RET	Retention Code		A	1	1
2.8022	DOB	Date of Birth		D	8	8
2.8038	DPR	Date Fingerprinted		D	8	8
2.8044	ESD	Effective Search Date		D	8	8
2.8060	EMSG	Error				
		Error Code		N	1	5
		Error Message		ANS	1	300
2.8067	IMA	Image Capture Equipment				
		Originating Fingerprint Reading System Make		ANS	1	25
		Originating Fingerprint Reading System Model		ANS	1	25
		Originating Fingerprint Reading System Serial Number		ANS	1	50
2.8071	ACN	Action to be Taken		ANS	1	500
2.8084	MFR	Missing Fingerprint Reason				
		Finger Position Code	Y	N	2	2
		Missing Fingerprint Reason Code	Y	A	2	2
		Missing Fingerprint Date		D	8	8
2.8908	CNON	Contributor Case File Number		ANS	1	32
2.8910	NVN	External ICD Version Number		N	3	3
2.8911	STV	System Table Version Number		N	3	3
2.8931	NFT	Name of Person responsible for		ANS	1	50

Table C-1: Immigration Transactions Attributes

Tag Number	Tag ID	Tag Name	Pick List	Character Type	Min Field Size	Max Field Size
		Transaction				
2.8938	NOTF	Name of Official Taking Fingerprints		ANS	1	50
2.8939	FPCL	Fingerprints Capture Location		ANS	1	20
2.8952	CREF	Contributor Supplied Reference Information				
		Primary Surname		AS	1	50
		Given Name 1		AS	1	20
		Given Name 2		AS	1	20
		Given Name 3		AS	1	20
		Given Name 4		AS	1	20
		Date of Birth		D	8	8
		CBSA/IRCC Office Number		ANS	1	16
		Immigration Client Identifier		ANS	1	16
		Individual Reference Number		ANS	1	32
		Contributor Case File Number		ANS	1	32
2.8953	IDI	Search Result Information				
		File Type Searched Code	Y	N	2	2
		Search Result Code	Y	A	1	1
		File Number		N	1	12
		Surname		AS	1	50
		Given Name 1		AS	1	20
		Given Name 2		AS	1	20
		Given Name 3		AS	1	20
		Given Name 4		AS	1	20
		Date of Birth		N	8	8
		Sex	Y	A	1	1
		CBSA/IRCC Office Number		ANS	1	16
		Immigration Client Identifier		ANS	1	16
2.8955	VSR	Verification Search Result	Y	A	1	1
2.8964	IID	Immigration File Number		N	12	12
2.8966	EAD	Effective Amendment Date		D	8	8
2.8967	AMR	Amendment Reason	Y	N	2	2
2.8971	RDA	Immigration Retention End Date		N	8	8
2.8972	EPD	Effective Purge Date		D	8	8
2.8973	AFN	Subject File Identifier				

Table C-1: Immigration Transactions Attributes

Tag Number	Tag ID	Tag Name	Pick List	Character Type	Min Field Size	Max Field Size
		File Type	Y	N	2	2
		File Number		N	1	12
2.8981	RCC	Requesting Country		N	3	3
14.021	SEG	Segmented Position		ANS		
		Finger Number	Y	N	2	2
		Left		N	1	4
		Right		N	1	4
		Top		N	1	4
		Bottom		N	1	4
14.022	NQM	NIST Quality Metric				
		Finger Position Code	Y	N	2	2
		Image Quality Score		N	1	3
14.200	IMTC	Image Type Contained	Y	N	1	1

APPENDIX D – LIST OF ACRONYMS

Table D-1: List of Acronyms and Abbreviations

Term	Definition
ACKT	Acknowledgement Tenprint
AFIS	Automated Fingerprint Identification System
ANSI	American National Standards Institute
ASCII	American Standard Code for Information Interchange
ATS	Anonymous Tenprint Search transaction
BSO	Border Services Officer(s)
CAR-N	CAR-Non-Retain (or -Retain No) (i.e., information and fingerprint images associated with this submission will not be retained).
CAR-Y	CAR-Retain (or -Retain Yes) (i.e., information and fingerprint images associated with this submission will be retained).
CBSA	Canadian Border Services Agency
CCRTIS	Canadian Criminal Real Time Identification Services
CIC	Citizenship and Immigration Canada, the former name of IRCC
DCN	Document Control Number
DSB	Departmental Security Branch
EBTS	Electronic Biometric Transmission Specification
EFCD	Electronic Fingerprint Capture Device
ERRT	Error Tenprint Submission
ERRV	Error Verification Submission
FBI	Federal Bureau of Investigation
FCC	Five Country Conference
FGP	Finger Position Code
FOSS	Field Operational Support System
FPS	Fingerprint Section Number

Table D-1: List of Acronyms and Abbreviations

Term	Definition
GCMS	Global Case Management System
GMT	Greenwich Mean Time
GSP	Government Service Provider
HLL	Horizontal Line Length
IAFIS	FBI Integrated Automated Fingerprint Identification System
ICD	Interface Control Document
ICI	Immigration Client Identifier (previously Field Operational Support System number)
ID	Identification / Identifier
IDC	Image Designation Character
IIS	Immigration Information Sharing
IMA	Immigration File Amend Submission
IMAR	Immigration File Amend Response
IMM	Immigration Submission
IMP	Impression Type or Immigration File Purge Submission
IMPR	Immigration File Purge Response
IRCC	Immigration, Refugee and Citizenship Canada
IRQ	Image Retrieve Request
LEN	Logical Record Length
NFIQ	NIST Fingerprint Image Quality
NIST	National Institute of Standards and Technology
NIST-ITL	National Institute of Standards and Technology Information Technology Laboratory
NPS	National Police Services
NSS	Network Services Section
ORI	RTID Agency Identifier
POE	Port(s) of Entry

Table D-1: List of Acronyms and Abbreviations

Term	Definition
RCMP	Royal Canadian Mounted Police
RTID	Real Time Identification
SMT	Scar, Mark and Tattoo
SRE	Tenprint Search Results (response to an IMM)
SRV	Verification Search Results (response to a VER)
TOT	Type of Transaction
TRA	Threat and Risk Assessment
TRB	Temporary Resident Biometric(s)
UCN	Unsolicited Criminal Notification, a type of transaction set by the RCMP to authorized partners
VAC	Visa Application Centre
VER	Verification Submission
WBS	Work Breakdown Structure
WSQ	Wavelet Scalar Quantization (a compression algorithm that uses wavelet technology)

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