



Temporary Resident Biometrics (TRB) Project



Temporary Resident
Biometrics Project

RCMP NPS-NIST INTERFACE CONTROL DOCUMENT FOR TRB EXTERNAL CONTRIBUTORS

NPS-NIST ICD 2.1.0

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Interface Control Document

for Temporary Resident Biometrics External Contributors

DISCLAIMER

The purpose of the specifications contained in this document is to enable Citizenship and Immigration Canada (CIC) and Canada Border Services Agency (CBSA) to electronically connect via a standard interface to the 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 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 AFIS database as well as non biometric file management submissions.

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HOW TO READ THIS DOCUMENT

This National Police Service NIST 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 2.1.0.
- **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 2.1.0.
- **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 TR Transactions** presents the summary Type-2 tag list available to support all RCMP Temporary Resident (TR) transactions.
- **Appendix C – Summary of RCMP-Defined Attributes** presents the data dictionary of RCMP-defined tags.
- **Appendix D – List of Acronyms** provides a glossary of acronyms used in this document.

The transactions supported by NPS-NIST ICD Version 2.1.0 are intended to be used only in support of Temporary Resident enrolments and verifications, and the management of Temporary Resident files in support of Temporary Resident submissions.

New users of the NPS-NIST ICD should start by reading sections 1 and 2. The transactions that support processing Temporary Resident 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. The Certification test suite has not yet been defined for Temporary Resident transactions defined in ICD Version 2.1.0.

The term "Future Use" will be found associated with a number of tags and records in this ICD. This label is used to indicate a function or feature that is being considered for future implementation, but no decision on its implementation has been reached. Anything labelled "Future Use" should be considered for information only. Vendors building rules to support "Future Use" tags do that at their own risk.

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 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 specific requirements, related to record content, are contained in the NPS-NIST ICD.

1.2 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 Citizenship and Immigration Canada (CIC) and Canada Border Services Agency (CBSA) to electronically exchange fingerprint images and other information with 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 Temporary Resident Biometrics (TRB) specific transactions that will be used by CIC and CBSA.

The NPS-NIST ICD 2.1.0 transactions defined in this document will support the implementation of the Temporary Resident Biometric (TRB) project. RTID will continue to process 1.7.7 (or later versions) transactions for criminal, refugee, civil and latent crime scene fingerprints, while processing TRB transactions for Temporary Resident enrol, Verification and File Management submissions (Amend and Purge). This ICD contains transactions to support Temporary Resident enrolments and verifications, and the management of Temporary Resident 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 RCMP's RTID System, this document provides no details of how that communication takes place.

NPS-NIST ICD 2.1.0 transactions are totally independent from that of ICD 1.7.7. The NPS-NIST ICD 2.1.0 **is not backward compatible** with other NPS-NIST ICD versions even though some transaction types share identical names (SRE, ACKT and ERRT). This new version of the ICD will only be implemented by CIC/CBSA in support of the TRB project.

Those agencies currently certified to NPS-NIST ICD version 1.7.5 or 1.7.7 have no need to make any changes as a result of the release of ICD version 2.1.0. Further, there is no upgrade path between 1.7.7 and 2.1.0 since they are completely independent interface control documents.

1.3 TEMPORARY RESIDENT BIOMETRICS PROJECT OPERATIONAL CONCEPTS

The Temporary Resident Biometrics Project's purpose is to implement a process that will streamline and enhance identity management within the Temporary Resident Program to make admissibility decisions based on accurate identity and immigration admissibility information; and permitting 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 those selected foreign nationals applying for Temporary Resident Visas and/or Temporary Resident Work/Study Permits. Enrolment affects visa-required Temporary Resident applicants from selected countries. Discretionary verification at selected POEs will confirm the identity of visa-required foreign nationals. In order to achieve this, the TRB Project will be expanding on existing systems at CIC, CBSA and RCMP. The TRB Project will also be providing the technical solution and supporting policy and legislation required for fingerprint capture at enrolment sites and fingerprint verification at POEs.

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

- Capturing of biometrics (fingerprints and a live photo) by selected CIC Visa Offices, Visa Application Centres (VACs) or Government Service Providers (GSP) abroad to establish a reliable biometric identity and submitting the transactions to CIC. CIC will submit NPS-NIST ICD 2.1.0 TR 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 CIC with informed admissibility decisions. The RCMP will enrol the fingerprints in AFIS.
- CBSA will confirm the identity of visa-required foreign nationals by submitting NPS-NIST ICD 2.1.0 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.
- When required, CIC will submit NPS-NIST ICD 2.1.0 (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 CIC 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 TR transactions. The IMM, IMA and IMP transaction use existing Ten-Print NPS-NIST transactions for conveying Acknowledgments (ACKT), Errors (ERRT) and search responses (SRE) to CIC, but these transactions have been redefined in ICD 2.1.0.

1.4 NIST FILE

All TR 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.

Table 1.4-1 lists the TR logical record types included in the ANSI/NIST ITL 1-2000 standard. The record types currently supported by the RCMP that are pertinent to the TRB Project include Type-1, Type-2 and Type-14.

Table 1.4-1: TRB Logical Record Types Supported by RCMP

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

1.5 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 (U_s) record/occurrence separators (R_s) group/tag separators (G_s) and file/record-type separators (F_s). It is important to note that all of these separators are a **single ASCII character** in length, which is shown in the table below.

Table 1.5-1: 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 1.5-2: 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

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

Table 1.5-2: Type 1 Transaction Record Example

Identifier	Tag Number	Tag Name	Example
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	1.009:0312345000125 ^G _s
TCR	1.010	Transaction Control Reference Number	1.010:0312345000110 ^G _s
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

1.6 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 9.0, November 30, 2009 IAFIS–DOC-01078-9.0;
- FBI-WSQ Gray Scale Image Compression Specification, IAFIS-IC-0110 (V3.1), Federal Bureau of Investigation, October 4, 2010; and
- Test Procedures for Verifying IAFIS Scanner Image Quality Requirements, CJIS-TD-0110, Federal Bureau of Investigation, March 1995.

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 Temporary Resident (TR) 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 TR transactions as defined in the NPS-NIST ICD 2.1.0. 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 CIC and CBSA will be authorized to submit electronic TR 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 2.1.0. The 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 Automated Fingerprint Identification System 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

The contributor systems must compress using WSQ, the average compression ratio of electronically transmitted fingerprint images and temporarily stored fingerprint images must be approximately 15:1. The RCMP will log average compression ratios and may reject submissions where the compression ratio adversely affects fingerprint image quality.

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 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. The alphanumeric RTID Agency Identifier is mapped to a 7-digit numeric RTID Agency Identifier which is embedded in the DCN and used to prefix a TCN.

The alphanumeric RTID Agency Identifier will have the following format:

AA>NNNNN

where

AA: 2-character alphabetic province code

NNNNN: 5-digit number

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

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

The numeric RTID Agency Identifier will have the following format:

nnNNNNN

where

nn: 2-digit numeric province code

NNNNN: last 5 digits of the alphanumeric RTID Agency Identifier

Example:

NS12345 is the alphabetic RTID ID assigned to an agency in Nova Scotia.

NS maps to 03, therefore the numeric RTID ID of this agency is **03**12345.

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

The Originating Agency Identifier (tag 1.008), TCN prefix (part of 1.009) and DCN (tag 2.800) must always contain the RTID agency identifiers of the submitting agency or else the submission will be rejected (ERRT).

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 13-digit TCN must have the following format:

<7-digit numeric RTID Agency Identifier> + <6-digit sequential number>.

For example:

TCN 0312345000001 = <0312345> + <000001>.

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 6-digit sequential number reaches 999999 and must rollover to 000001. 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 with a new TCN.

2.2.4 TRANSACTION CONTROL REFERENCE NUMBER

All responses will contain a Transaction Control Reference Number (TCR) that refers to the corresponding Transaction Control Number (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 above example 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 Temporary Resident Enrolment 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 enrolment submission. The DCN is also used as a reference number to identify individuals 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 RTID agency identifier, an external flag and a document flag. Refer to tag 2.800 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.

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 TR 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

Note: The DCN remains unchanged throughout the whole dialogue.

2.2.6 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 (ERRT or ERRV).

2.2.7 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. (e.g., 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.

2.2.8 CHARACTER TYPE (ALLOWABLE AND SPECIAL CHARACTER SETS)

Allowable character types are indicated in the logical record definitions in the character type column. **Table 2.2.8-2-1** contains the codes used to describe the allowable character sets.

Table 2.2.8-2-1: 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. CC (Century) must be 19 to 20 YY (Year) must be 00 to 99 MM (Month) must be 01 to 12 DD (Day) must be 01 to the limit defined by the month and year 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 Comma [,] Apostrophe ['] period [.] pound sign [#] dollar sign [\$] ampersand [&] left parenthesis [(] right parenthesis [)] asterisk [*] hyphen [-] space [] 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.

2.2.9 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 ID flats 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.

2.2.10 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 numeric agency RTID identifier (used for the TCN prefix and 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 RCMP RTID system downtime. The temporary storage would typically be located within the central server, for agencies supporting a single point of contact with RCMP RTID System. It 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 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 2.1.0. 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 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, inform the users of the low quality assessment. Fingerprint scanners must be identified in the FBI 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 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 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 TRB Transaction	Type of Transaction	Response	Error	Acknowledge
Immigration Enrolment Submission	IMM	SRE	ERRT	ACKT
Immigration File Amend	IMA	IMAR	ERRT	ACKT
Immigration File Purge	IMP	IMPR	ERRT	ACKT
Verification	VER	SRV	ERRV	n/a

3.1 TEN-PRINT TRANSACTIONS

This group of transactions includes the IMM and the VER.

3.1.1 IMMIGRATION SUBMISSION (IMM)

This transaction is used to submit fingerprints for search against the RCMP's RTID System on behalf of the Citizenship and Immigration Canada (CIC) or Canada Border Service Agency (CBSA).

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

- 0 – 1 Acknowledgement Ten-print (ACKT)
- 0 – 1² Search Results (SRE)
- 0 – 1³ Ten-print Transaction Error (ERRT)

The IMM transaction will include the following logical records:

- 1 Type-1 Header Record
- 1 Type-2 Record (Data Descriptors)
- 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).
- 0 – 1 Type-10 Record (Facial Image) (FUTURE USE)

² The maximum number of SREs returned to the contributor will change should the FBI and International Searches be supported.

³ The maximum number of ERRTs returned to the contributor will change should the FBI and International Searches be supported.

3.1.2 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).

3.2 NON-BIOMETRIC TRANSACTIONS

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

3.2.1 IMMIGRATION FILE AMEND (IMA)

This transaction is submitted by Citizenship and Immigration Canada (CIC) 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.

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

- 0 – 1 Acknowledgement Ten-print (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).

3.2.2 IMMIGRATION FILE PURGE (IMP)

This transaction is submitted by Citizenship and Immigration Canada (CIC) 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.

Note: A File Level purge and a Submission Level purge cannot be combined within the same IMP transaction.

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

- 0 – 1 Acknowledgement Ten-print (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).

3.3 RESULTS AND RESPONSES

3.3.1 TEN-PRINT SEARCH RESULTS (SRE)

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

The SRE Transaction will include the following logical records:

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

3.3.2 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).

3.3.3 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).

3.3.4 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).

3.4 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 transactions (IMM), 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.

3.4.1 ACKNOWLEDGEMENT (ACKT)

The ACKT transaction will include the following logical records:

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

3.5 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 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.

3.5.1 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) and Immigration Purge (IMP) 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).

3.5.2 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).

4. NIST DATA DEFINITIONS

The following section contains detailed descriptions of the individual tags used in the various logical records supported with the RCMP NPS-NIST ICD 2.1.0. 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 (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 date that a transaction was initiated. 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.

1.007: DAI Destination Agency Identifier

This mandatory tag contains the 7-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 alphabetic province codes.

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

1.008: OAI **Originating Agency Identifier**

This mandatory tag contains the 7-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 alphabetic 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-digit RTID Agency Identifier><6-digit sequence number>

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

nnNNNNN

where:

nn: 2-digit numeric province code, and

NNNNN: last 5 digits of the RTID Agency Identifier

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

Example:

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

NS maps to 03, therefore the numeric RTID ID of this agency is **03**12345.

The 7-digit RTID Agency Identifier must prefix all TCN's submitted by the agency.

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.

For example,

IMM: TCN = 1, DCN=1

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

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.

4.2 TYPE-2 DATA DEFINITIONS (DESCRIPTIVE TEXT)

The Type-2 logical record contains demographic and descriptive information required by RCMP's RTID System to process the electronic transaction to complete the fingerprint search and update the RCMP 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**.

Note: The term "Future Use" will be found associated with a number of tags and records in this section. This label is used to indicate a function or feature that is being considered for future implementation, but no decision on its implementation in this ICD has been reached. Anything labeled "Future Use" should be considered for information only.

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 ten-print submission throughout its lifetime. Each DCN must be unique and in the following format:

CYYJJNNNNNNNNnnnnESK

where:

C current century ("0"=19xx, "1"=20xx)

YY last two digits of current year (i.e. "03" if 2003)

JJJ Julian Date or days since January 1st (i.e. "032" if Feb 01)

NNNNNNN 7-digit RTID numeric Agency Identifier 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
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)

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.

Code Table 2.807 – Sex

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

2.808: HAI Hair Colour (future use)

This tag is used to indicate the subject's colour of hair. The entry is a two digit code from the following code table.

Code Table 2.808 – Hair Colour

Code	English Description	French Description
00	UNKNOWN	INCONNU
01	BALD	CHAUVE
02	BLACK	NOIR
03	BLONDE	BLOND
04	BROWN	BRUN
05	GREY	GRIS
06	RED	ROUX
07	WHITE	BLANC

2.809: EYE Eye Colour (future use)

This tag is used to indicate the subject's eye colour. If the subject's eyes are different colours, two eye colours may be specified. In such cases, the colour of the left eye shall be entered first. The following code table contains allowable Eye Colour codes.

Code Table 2.809 – Eye Colour

Code	English Description	French Description
A	BROWN	BRUN
D	GREY	GRIS
G	GREEN	VERT
H	HAZEL	NOISETTE
K	BLACK	NOIR

Code Table 2.809 – Eye Colour

Code	English Description	French Description
M	MAROON	MARRON
W	BLUE	BLEU
U	UNKNOWN	INCONNU

2.810: HGT Height (future use)

This tag is used to indicate the subject's height in centimeters. The allowable height range is 91 to 251 cm. No decimal points shall be used. Enter 0 if the height is unknown.

2.811: WGT Weight (future use)

This tag is used to indicate the subject's weight in kilograms. The allowable weight range is 23 to 227 kg. No decimal points shall be used. Enter 0 if the weight is unknown.

2.814: RACE Race Descent Code (future use)

This tag is used to indicate the observable race of the subject. A race code from the following code table shall be used. If this field is mandatory and Race Descent Code is indicated as 'NON-WHITE (N)' a textual ***Race Description*** (tag **2.8936**) is required.

Code Table 2.814 – Race

Code	English Description	French Description
W	WHITE	BLANC
N	NON-WHITE	NON-BLANC
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.

2.824: OTN Other Names/Aliases (future use)

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.

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.

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 to describe the results of the submission.

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.

2.874: SFBI FBI Search Request Indicator (future use)

This tag is used to request an FBI fingerprint search. “Y” is the only acceptable value for this tag. If an FBI search is not requested the tag should not be included in the NIST packet.

Note: The RCMP has the right not to proceed with an FBI fingerprint search request. If the contributor is not authorized to request FBI fingerprint searches or the reason for the search is not acceptable then the FBI search request will be rejected.

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. In the context of TRB, 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 future capability.

Future use: If this tag is set to “N” in an ERRT that has been returned by the RCMP, it signifies that a foreign search request has been rejected. In such case, if an ERRT containing a “Y” in this field has not been received, the submission is undergoing search processing and an SRE could be returned.

Code Table 2.875 – RCMP-NPS Results

Code	English Description	French Description
Y	YES	OUI
N	NO	NON

2.887: CIC CBSA/CIC Office Number

This number represents a regional CBSA/CIC office and is assigned by Citizenship and Immigration Canada.

2.888: FOSS Field Operational Support System Number (future use)

This unique identifier number is assigned by CBSA/CIC and represents a subject of interest to CBSA/CIC.

2.891: ISR International Search Request (future use)

This tag is used to request a fingerprint search of other countries. “Y” is the only acceptable value for this tag. If an international search is not being requested this tag should not be included in the submission. If an international search is being requested one or more countries to search must be indicated in tag 2.892.

Note: The RCMP has the right not to proceed with an International fingerprint search request. If the contributor is not authorized to request an International fingerprint search or the reason for the search is not acceptable or the country to search does not perform such searches then the International search request will be rejected.

2.892: IRP International Countries to Search (future use)

In cases where an international search request is being made, this tag is used to indicate the country or countries to search. See **Table A-6: Country Codes** in *Appendix A* for a list of country codes.

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 and 13, 14 and 15.

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 BRÛLÛRE PERMANENTE AU DOIGT
99	OTHER	AUTRE

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

2.894: FER Foreign Search Reason (future use)

This tag will indicate the reason why a foreign search has been requested.

2.8005: RET Retention Code

This tag indicates whether the RCMP's RTID System should retain the submitted fingerprint images and other demographic information. The RCMP RTID System has the final retention decision regardless of the retention code setting. 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 TRB IMM transaction, "Y" is the only acceptable value. This may change should TRB require the support for an "identification only" transaction in the future.

Code Table 2.8005 – Retention

Type Of Transaction	Retention Code
IMM	Y

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. It is the contributor's responsibility to verify the age of the subject. Temporary Resident 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 date that the subject was fingerprinted. 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 after Time-Zone adjustments.

2.8044: ESD Effective Search Date

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

2.8056: PLB Place of Birth (future use)

This tag is used to indicate the subject's place of birth. Two sub-tags are available to store the country and province or state. If the country is Canada a province is mandatory; if the country is United States of America a state is mandatory.

A third sub-tag is available to enter a country description. This sub-tag must be populated only if the country code selected is 'Other (998)'.

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

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. This tag is mandatory on all ID Flat Submissions.

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.

2.8084: MFR Missing Fingerprint Reason

This tag is used to indicate reasons for missing fingers and/or missing images. If there are fewer than fourteen fingerprint images in a ten print submission or fewer than three fingerprint images in an ID Flats submission or missing fingers on the subject then this tag must be populated. 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 TRB, the valid finger position codes values are 01 to 10 and 13 to 15. The missing fingerprint reason codes are listed in Table 2.8084.

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 13 to 15	English Description	French Description
MI	MISSING IMAGE	IMAGE MANQUANTE

If any of the 3 required ID Flats images (13, 14 or 15) are missing then the agency must enter "Missing Image" (MI) as a Missing Fingerprint Reason for each missing images (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 three 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 all three ID Flats images can be obtained, then a Missing Fingerprint Reason should be specified for Finger Position '01' (not '11') and all 3 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:

```
2.8084:02USXXUS20101023RS03USXXUS20101023GS
```

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:

```
2.8084:02USXXUS20101023RS03USXXUS20101023RS04USUPUS20120322RS05USUPUS20120322RS13USMIUSGS
```

Note: Amputation (XX), bandaged (UP) and physical limitations (PL) reason codes must be used only against missing fingers (01 to 10). Missing image (MI) reason code must be used only against missing images (13, 14, 15).

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).

2.8106: ICI Investigator Contact Information (future use)

This tag identifies the Investigator contact information when an International or FBI Search has been requested. The contact information contains several sub-tags; Investigator Name, Investigating Agency Name, Investigating Section Name, Contact Telephone Number, Contact Fax Number, Contact Mailing Address and Contact E-mail Address.

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 210.

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.

2.8913: CRS Criminal Record (future use)

Although present in the SRE transaction type, this field is not populated in the context of TRB. It may be populated in the future with International Search Results.

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 Card Scan and creation of the NIST packet.

2.8936: RTX Race Description (future use)

This tag is used to specify the race of the subject. Enter 'UNKNOWN' if the race description is not known.

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 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. The sub-fields can contain the values as received by the RCMP within Contributor Individual Reference Number, Contributor Case/File Number, CBSA/CIC Office Number, FOSS Number, Primary Name, Sex and Date of Birth. The Contributor Supplied Reference Information is intended to be included in all SRE responses for reference purpose.

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,
- 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 enrollment 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 CAR-Y submissions against the Criminal repository, REF submissions against the Refugee repository, and IMM submissions against the Temporary Resident 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, Refugee or Temporary Resident. See 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. In the context of TRB, only code 01, 02 and 04 are used as part of the search result.

Code Table 2.8953A – File Type Searched

Code	English Description	French Description
01	CRIMINAL	CRIMINELS
02	REFUGEE	RÉFUGIÉS
03	EMPLOYEE	EMPLOYÉS
04	TEMPORARY RESIDENT	RÉSIDENTS TEMPORAIRES

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

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

- **File Number** – the file number that the RCMP uses to uniquely identify the file pertaining to the subject of the identification; for example, the 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;
- **CIC/CBSA Office Number** – If an Identification has been made to a Refugee file or a TR file, and the RCMP has a CIC/CBSA Office Number on the Refugee file or the TR file, it will be returned in this sub-tag; and
- **Field Operational Support System Number** – If an Identification has been made to a Refugee file or to a TR file, and the RCMP has a FOSS Number on the Refugee file or TR file, it will be returned in this sub-tag.

2.8955: VSR Verification Search Result

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

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.
- A value of “X” means that the system was unable to locate the Immigration File number as supplied in the VER transaction.

2.8960: IFIL Immigration File Type (future use)

This tag is used to describe the file type of the Immigration transaction submitted by the contributor (CIC).

Code Table 2.8960 – Immigration File Type

Code	English Description	French Description
01	TEMPORARY RESIDENT APPLICATION	INSCRIPTION DU RÉSIDENT TEMPORAIRE

2.8961: PCI Passport Country of Issuance (future use)

This tag is used to describe the nationality of the subject which is based on the country issuing the subject's travel document at the time of enrolment. It is composed of two sub-tags: a country of issuance country code and a country name.

2.8963: REM Removal (future use)

This tag contains the removal location, country to which the subject was removed and the date of the removal.

2.8964: IID Immigration File Number

This tag contains the Immigration file number that the RCMP assigns to uniquely identify the TR file pertaining to the subject. The Immigration file number is created as the result of a new TR enrolment. Amend, Purge and Verification submissions require the IID to identify the proper TR subject.

2.8965: GCMS Global Case Management UCI (future use)

This tag value is assigned by CIC's GCMS and is used as their client identifier.

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.

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

2.8968: POI Person of Interest (future use)

This tag is used to describe a person of interest.

2.8971: RDA Immigration Retention End Date

This tag contains the date that the TR File expires. It is returned within the enrolment response (SRE) and can be modified through an amendment (IMA) transaction. When modified, this tag's value must be between the amendment's transaction date (tag 1.005) and 100 years following it. The Temporary Resident File will be automatically purged from the RCMP's RTID System once its retention date expires. The date is in the CCYYMMDD format.

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 AFIS File Number

This tag is a generic representation of a file number, depending on the associated file type. For example, for criminal, the file number represents the FPS, for Temporary Resident, it represents the Immigration File Number (IID), etc. It is used to initiate a verification match (1:1).

The AFIS file number is composed of two sub-tags: the AFIS File Type, which contains one of the values in code table 2.8973, and the File Number.

Code Table 2.8973 – AFIS File Type

Code	English Description	French Description
01	CRIMINAL	CRIMINEL
02	REFUGEE	RÉFUGIÉ
03	EMPLOYEE/CIVIL	EMPLOYÉ/CIVIL
04	TEMPORARY RESIDENT	RÉSIDENT TEMPORAIRE

4.3 TYPE-10 DATA DEFINITION (PHOTO IMAGE RECORD) (FUTURE USE)

Type-10 records are collected by CIC and CBSA as part of the Temporary Resident Biometrics Project, but are retained by CIC and CBSA only. In the context of TRB, the Type-10 records are not transmitted to the RCMP.

4.4 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 used, the image size and other parameters or comments required to process the image are recorded as tagged-fields within the record.

The image records will normally contain the left and right plain impressions as well as the two thumbs. There may be up to 3 Type-14 records in a transaction; one plain impression of both thumbs taken simultaneously and two plain impressions of the four simultaneously obtained remaining fingers of each hand. This definition is taken directly from the ANSI/NIST 2000 document as well as Appendix N of the FBI Electronic Biometric Transmission Specifications v9.1. For finger codes, see **Table A-1: Finger/Palm Codes**. For allowable box sizes, see **Table A-2: Allowable Box Sizes for Finger/Palm Images** in Appendix A.

There are four additional tags defined by RCMP, as follows:

14.013: FGP Finger Number

This tag shall contain the finger number code that matches the ten-print image. See **Table A-1: Finger/Palm Codes** in Appendix A for a list of finger codes. Valid values are 13, 14 and 15.

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 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.
- If 14.013 is 15, 14.021 shall contain all or a subset of 01 and 06 in any order.

14.022: IQM Image Quality Metric

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

14.200: IMTC Image Type Contained

This tag identifies the type of image contained in the record. The value shall be set to 2 (Identification flats). Any other value will return an error.

5. LOGICAL RECORD FORMATS

The following section presents all the transaction types that are supported by the TRB Project. All the fields with yellow background which have a “future use” note are included to support future capability. Their use by external agencies is not recommended. If received in transactions, they will be ignored by the RCMP.

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		
	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.	

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		
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.	
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. In the response transactions this information will be the RCMP agency identifier.	
TCN	M	1.009	Transaction Control Number	N	13	13	1	1		
TCR	O	1.010	Transaction Control Reference Number	N	13	13	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
GMT	O	1.014	Greenwich Mean Time	AN	15	15	0	1		

Under the Condition Column: O=Optional; M=Mandatory; C=Conditional

Under the Character Type Column: A=Alpha; N=Numeric; B=Binary; S=Special Characters; D=Date

5.2 TYPE-2 LOGICAL RECORD: IMMIGRATION ENROLLMENT 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	If there are additional names they should be entered in the Other Names/Aliases (tag 2.824).	
	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
	O		Given Name 4	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
SEX	M	2.807	Sex	A	1	1	1	1		
HAI	C	2.808	Hair Colour	N	2	2	0	1	(FUTURE USE) Mandatory when SFBI 2.874 [FBI Search Request Indicator] is equal to 'Yes (Y)' or ISR 2.891 [International Search Request Indicator] is equal to 'Yes (Y)' Code Table: Hair Colour	

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		
EYE	C	2.809	Eye Colour	A	1	1	0	2	(FUTURE USE) Mandatory when SFBI 2.874 [FBI Search Request Indicator] is equal to 'Yes (Y)' or ISR 2.891 [International Search Request Indicator] is equal to 'Yes (Y)' Code Table: Eye Colour	
HGT	C	2.810	Height	N	1	3	0	1	(FUTURE USE) Mandatory when SFBI 2.874 [FBI Search Request Indicator] is equal to 'Yes (Y)' or ISR 2.891 [International Search Request Indicator] is equal to 'Yes (Y)' Enter 0 if height is unknown.	
WGT	C	2.811	Weight	N	1	3	0	1	(FUTURE USE) Mandatory when SFBI 2.874 [FBI Search Request Indicator] is equal to 'Yes (Y)' or ISR 2.891 [International Search Request Indicator] is equal to 'Yes (Y)' Enter 0 if weight is unknown.	
RACE	C	2.814	Race Descent	A	1	1	0	1	(FUTURE USE) Mandatory when ISR 2.891 [International Search Request Indicator] is equal to 'Yes (Y)' Code Table: Race	
LGF	M	2.819	Language Flag	A	1	1	1	1	Code Table: Language Flag	
OTN	O	2.824	Other Names/Aliases				0	40	(FUTURE USE)	
	M		Surname	AS	1	50	1	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 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
	O		Given Name 4	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
SFBI	O	2.874	FBI Search Request	A	1	1	0	1	(FUTURE USE)	
CIC	O	2.887	CBSA/CIC Office Number	ANS	1	16	0	1		
FOSS	O	2.888	Field Operational Support System Number	ANS	1	16	0	1	(FUTURE USE)	
ISR	O	2.891	International Search Request	A	1	1	0	1	(FUTURE USE)	
IRP	C	2.892	International Countries to Search				0	30	(FUTURE USE) Mandatory when ISR 2.891 [International Search Request Indicator] is equal to 'Yes (Y)'	
	M		Country Code	N	3	3	1	1	Code Table: Country	
	O		File Number	ANS	1	32	0	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.	

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		
FER	C	2.894	Foreign Search Reason	ANS	1	500	0	1	(FUTURE USE) Mandatory when SFBI 2.874 [FBI Search Request Indicator] is equal to 'Yes (Y)' or ISR 2.891 [International Search Request Indicator] is equal to 'Yes (Y)'	Any RCMP special character, plus Carriage Return [CR] and Line Feed [LF]
RET	M	2.8005	Retention Code	A	1	1	1	1	Value will 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		
PLB	C	2.8056	Place of Birth	A	1	1	0	1	(FUTURE USE) Mandatory when SFBI 2.874 [FBI Search Request Indicator] is equal to 'Yes (Y)' or ISR 2.891 [International Search Request Indicator] is equal to 'Yes (Y)'	
	M		Country Code	N	3	3	1	1	Code Table: Country	
	C		Country	AS	1	35	0	1	Mandatory when 2.8056 (Country Code) is equal to "Other" otherwise must not be provided.	
	C		Province State/Code	N	2	2	0	1	Code Table: Province/U.S. States. Mandatory if 2.8056 (Country Code) is equal to "Canada (124) or United States of America (840) otherwise must not be provided.	
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		
ICI	C	2.8106	Investigator Contact Information				0	1	(FUTURE USE) Mandatory when ISR 2.891 [International Search Request] is equal to "Y".	
	M		Investigator Name	ANS	1	50	1	1		
	M		Investigating Agency Name	ANS	1	50	1	1		
	O		Investigating Section Name	ANS	1	50	0	1		
	M		Contact Telephone Number	N	1	20	1	1		
	O		Contact Fax Number	N	1	20	0	1		
	M		Contact Mailing Address	ANS	1	200	1	1		
	O		Contact E-mail Address	ANS	1	50	0	1		Any RCMP special character plus @, +, -, /, . (period)
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		

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		
RTX	C	2.8936	Race Description	ANS	1	25	0	1	(FUTURE USE) This tag becomes mandatory if the Race Descent tag (tag 2.814) has a value of 'N'.	
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		
IFIL	M	2.8960	Immigration File Type	N	2	2	1	1	(FUTURE USE) Code Table: Immigration File Type	
PCI	M	2.8961	Passport Country of Issuance				1	1	(FUTURE USE) This will correspond to the Country issuing the subject's passport or other travel document that is used at the time of enrolment.	
	M		Country of Issuance Code	N	3	3	1	1	Code Table: Country	
	C		Country of Issuance	AS	1	35	0	1	Mandatory when 2.8961 (Country of Issuance code) is equal to "998" otherwise must not be specified.	
REM		2.8963	Removal						(FUTURE USE)	
GCMS	O	2.8965	Global Case Mgmt System UCI	AN	8	20	0	1	(FUTURE USE)	

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

Table 5-3: 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		
LGF	M	2.819	Language Flag	A	1	1	1	1	(FUTURE USE)	
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	AFIS File Number				1	1		
	M		File Type	N	2	2	1	1	Code table: File Type Code	
	M		File Number	N	1	12	1	1		

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

Table 5-4: 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	Mandatory when AMR 2.8967 [Amendment Reason] is equal to "01" (Biographic Data) Must not exist when AMR 2.8967 [Amendment Reason] is not equal to "01" (Biographic Data)	
	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
	O		Given Name 4	AS	1	20	0	1		Space, Hyphen, Apostrophe, Period
SEX	C	2.807	Sex	A	1	1	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 not equal to "01" (Biographic Data)	

Table 5-4: 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		
LGF	M	2.819	Language Flag	A	1	1	1	1	Code Table: Language Flag	
OTN	O	2.824	Other Names/Aliases				0	40	(FUTURE USE) Must not exist when AMR 2.8967 [Amendment Reason] is not equal to "01" (Biographic Data)	
	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
	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 not equal to "01" (Biographic Data)	
CIC	O	2.887	CBSA/CIC Office Number	ANS	1	16	0	1		
FOSS	O	2.888	Field Operational Support System Number	ANS	1	16	0	1	(FUTURE USE)	

Table 5-4: 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		
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 not equal to "01" (Biographic Data)	
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		
REM		2.8963	Removal						(FUTURE USE)	
IID	M	2.8964	Immigration File Number	N	12	12	1	1		
GCMS	O	2.8965	Global Case Mgmt System No UCI	AN	8	20	0	1	(FUTURE USE)	
AMR	M	2.8967	Amendment Reason	N	2	2	1	1	Code Table: Amendment Reason	
POI		2.8968	Person of Interest Indicator						(FUTURE USE)	
RDA	C	2.8971	Immigration Retention End Date	D	8	8	0	1	Mandatory when AMR 2.8967 [Amendment Reason] is equal to "02" (Immigration Retention End Date). Must not exist when AMR 2.8967 [Amendment Reason] is not equal to "02" (Immigration Retention End Date).	

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

Table 5-5: 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 transaction level purge. The DCR must already exist in RTID/TRB 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		
IID	M	2.8964	Immigration File Number	N	12	12	1	1	The IID must already exist in the RTID/TRB system.	

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

Table 5-6: 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		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		Any RCMP special character plus Carriage Return & Linefeed
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
CRS	O	2.8913	Criminal Record				0	1	(FUTURE USE)	
	O		Country	N	3	3	0	1		
	O		Criminal Record Contents	ANS	1	200000	0	1		Any RCMP special character plus Carriage Return & Linefeed
CREF	O	2.8952	Contributor Supplied Reference Information				0	1		

Table 5-6: 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		Primary 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	D	8	8	0	1		
	O		Sex	A	1	1	0	1		
	O		CIC/CBSA Office Number	ANS	1	16	0	1		
	O		Field Operational Support System Number	ANS	1	16	0	1		
	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	2	2	1	1	Code Table: Identification Type, examples include Criminal or Refugee or Immigration.	
	M		Search Result Code	A	1	1	1	1	Code Table: Search Result	

Table 5-6: 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	1	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		CIC/CBSA Office Number	ANS	1	16	0	1		
	O		Field Operational Support Number	ANS	1	16	0	1		
IFIL	O	2.8960	Immigration File Type	N	2	2	0	1	(FUTURE USE) Immigration File Type is returned in response to an IMM TOT	

Table 5-6: 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		
POI		2.8968	Person of Interest						(FUTURE USE)	
RDA	O	2.8971	Immigration Retention End Date	D	8	8	0	1	Immigration Retention End Date is returned in response to an IMM TOT	

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

Table 5-7: 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	AFIS File Number				1	1		
	M		File Type	N	2	2	1	1	Code table: File Type	
	M		File Number	N	1	12	1	1		

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

Table 5-8: 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		
GCMS	O	2.8965	Global Case Mgmt System No UCI	AN	8	20	0	1	(FUTURE USE) Value will be returned if present in the originating IMA transaction.	
EAD	M	2.8966	Effective Amendment Date	D	8	8	1	1		
AMR	M	2.8967	Amendment Reason	N	2	2	1	1		
POI		2.8968	Person of Interest						(FUTURE USE)	
RDA	O	2.8971	Immigration Retention End Date	D	8	8	0	1	Value will be returned if present in the originating IMA transaction.	

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

Table 5-9: 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		
IID	M	2.8964	Immigration File Number	N	12	12	1	1	Value is returned from the originating IMP transaction.	
EPD	M	2.8972	Effective Purge Date	D	8	8	1	1		

5.10 TYPE-2 LOGICAL RECORD: TEN-PRINT SUBMISSION ERROR (ERRT)

Table 5-10: 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		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		
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		

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

Table 5-11: 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		
NVN	M	2.8910	External ICD Version Number	N	3	3	1	1		
AFN	M	2.8973	AFIS File Number				1	1		
	M		File Type	N	2	2	1	1	Code table: File Type	
	M		File Number	N	1	12	1	1		

5.12 TYPE-2 LOGICAL RECORD: ACKNOWLEDGMENT TEN-PRINT (ACKT)

Table 5-12: 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		

5.13 TYPE-14 LOGICAL RECORD: PLAIN IMPRESSION

Table 5-13: 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 and should be set to 0 or 2.	
SRC	M	14.004	Source Agency Identifier	AN	7	7	1	1		
TCD	M	14.005	Capture Date	D	8	8	1	1		
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 centimeter" 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.	
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 or WSQ20.	
BPX	M	14.012	Bits Per Pixel	N	1	3	1	1	The value shall contain the number of bytes used to represent a pixel. An entry of 8 is required for normal grayscale values of 0 - 255.	
FGP	M	14.013	Finger Number Code	N	2	2	1	6	Acceptable values are 13, 14 and 15.	

Table 5-13: 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		
SEG	M	14.021	Segment Position				1	4		
	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		
IQM	M	14.022	Image Quality Metric				1	4		
	M		Finger Number	N	2	2	1	1	Valid values are 01 to 10, 13, 14 and 15.	
	M		Quality Score	N	1	2	1	1		
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 (Identification flats).	
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	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	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	HYPOTHENAR DROIT
23	LEFT FULL PALM	PAUME GAUCHE COMPLETE
24	LEFT WRITERS PALM	HYPOTHENAR GAUCHE
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 in the context of TRB.		

Table A-2: Allowable Box Sizes for Finger/Palm Images

Finger/Palm print	Impression Type	Finger / Palm Codes	Width pixels (inches)	Length/Height pixels (inches)
ROLLED FINGER IMPRESSIONS (TYPE-4 RECORD)	1 OR 3	01 - 10	800 (1.6)	750 (1.5)
PLAIN FINGER IMPRESSIONS (TYPE-14 RECORD)	0 OR 2	02-05, 07-10	500 (1.0)	1000 (2.0)
PLAIN THUMB IMPRESSION (TYPE-4 & 14 RECORD)	0 OR 2	11 - 12	500 (1.0)	1000 (2.0)
2 PLAIN THUMB IMPRESSIONS (TYPE-14 RECORD)	0 OR 2	15	1600 (3.2)	1500 (3.0)
4 FINGER PLAIN IMPRESSIONS (TYPE-4 RECORD)	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)
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)

Notes:

- Attributes for allowable box sizes for finger/palm codes showing in red and greyed out must not be used in the context of TRB.
- Livescan maximum box sizes must be the width and height stated in the table above.
- Cardscan box sizes shall default to the width and height stated in the table 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 ENCREE		Y
12	LATENT PALM IMPRESSION	EMPREINTE PALMAIRE LATENTE		Y
13	LATENT PALM TRACING	TRACAGE – EMPREINTE PALMAIRE LATENTE		Y
14	LATENT PALM PHOTO	PHOTO - EMPREINTE PALMAIRE LATENTE		Y
15	LATENT PALM LIFT	DÉCALQUE – EMPREINTE PALMAIRE LATENTE		Y
<p>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.</p> <p>Note: Impression Type codes in red and greyed out are not included in TRB.</p>				

Table A-4: Province Codes

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

Table A-4: Province Codes

Alphabetic Province Code	English Description	French Description	Numeric Province Codes
NF	NEWFOUNDLAND	TERRE-NEUVE	01
PE	PRINCE EDWARD ISLAND	ILE-DU-PRINCE-EDOUARD	02
NS	NOVA SCOTIA	NOUVELLE-ECOSSE	03
NB	NEW BRUNSWICK	NOUVEAU-BRUNSWICK	04
QC	QUEBEC	QUEBEC	05
ON	ONTARIO	ONTARIO	06
MB	MANITOBA	MANITOBA	07
SK	SASKATCHEWAN	SASKATCHEWAN	08
AB	ALBERTA	ALBERTA	09
BC	BRITISH COLUMBIA	COLOMBIE-BRITANNIQUE	10
NT	NORTH WEST TERRITORIES	TERRITOIRES DU NORD-OUEST	11
YT	YUKON	YUKON	12
NU	NUNAVUT	NUNAVUT	13

Table A-5: U.S. State Codes (future use)

Code	English Description	French Description
20	ALABAMA	ALABAMA
21	ALASKA	ALASKA
22	ARIZONA	ARIZONA
23	ARKANSAS	ARKANSAS
24	CALIFORNIA	CALIFORNIE
25	COLORADO	COLORADO
26	CONNECTICUT	CONNECTICUT
27	DELAWARE	DELAWARE
28	D.C.	D.C.
29	FLORIDA	FLORIDE
30	GEORGIA	GEORGIE
31	HAWAII	HAWAII
32	IDAHO	IDAHO
33	ILLINOIS	ILLINOIS
34	INDIANA	INDIANA
35	IOWA	IOWA
36	KANSAS	KANSAS
37	KENTUCKY	KENTUCKY
38	LOUISIANA	LOUISIANE
39	MAINE	MAINE
40	MARYLAND	MARYLAND
41	MASSACHUSETTS	MASSACHUSETTS
42	MICHIGAN	MICHIGAN
43	MINNESOTA	MINNESOTA
44	MISSISSIPPI	MISSISSIPPI
45	MISSOURI	MISSOURI
46	MONTANA	MONTANA
47	NEBRASKA	NEBRASKA
48	NEVADA	NEVADA
49	NEW HAMPSHIRE	NEW HAMPSHIRE
50	NEW JERSEY	NEW JERSEY
51	NEW MEXICO	NOUVEAU-MEXIQUE
52	NEW YORK	NEW YORK
53	NORTH CAROLINA	CAROLINE DU NORD
54	NORTH DAKOTA	DAKOTA DU NORD

Table A-5: U.S. State Codes (future use)

Code	English Description	French Description
55	OHIO	OHIO
56	OKLAHOMA	OKLAHOMA
57	OREGON	OREGON
59	PENNSYLVANIA	PENNSYLVANIE
61	RHODE ISLAND	RHODE ISLAND
62	SOUTH CAROLINA	CAROLINE DU SUD
63	SOUTH DAKOTA	DAKOTA DU SUD
64	TENNESSEE	TENNESSEE
65	TEXAS	TEXAS
66	UTAH	UTAH
67	VERMONT	VERMONT
68	VIRGINIA	VIRGINIE
69	WASHINGTON	WASHINGTON
70	WEST VIRGINIA	VIRGINIE-OCCIDENTALE
71	WISCONSIN	WISCONSIN
72	WYOMING	WYOMING
74*	WESTERN IDENT NETWORK (IDAHO, MONTANA, NEVADA, OREGON, UTAH, ALASKA)	RESEAU D'IDENTIFICATION DE L'OUEST (IDAHO, MONTANA, NEVADA, OREGON, UTAH, ALASKA)
* Not available for use in Address, Place of Birth or Place of Death tag.		
Note: This table is currently not available for use in TRB.		

Table A-6: Country Codes (future use)

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

Table A-6: Country Codes

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

Table A-6: Country Codes

Code	English Description	French Description
120	CAMEROON	CAMEROUN
124	CANADA	CANADA
132	CAPE VERDE	CAP-VERT
136	CAYMAN ISLANDS	ILES CAIMANS
140	CENTRAL AFRICAN REPUBLIC	REPUBLIQUE CENTRAFRICAINE
144	SRI LANKA	SRI LANKA
148	CHAD	TCHAD
152	CHILE	CHILI
156	CHINA	CHINE
158	TAIWAN PROVINCE OF CHINA	PROVINCE CHINOISE DE 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

Table A-6: Country Codes

Code	English Description	French Description
248	ALAND ISLANDS	ILES D'ALAND
250	FRANCE	FRANCE
254	FRENCH GUIANA	GUYANE FRANCAISE
258	FRENCH POLYNESIA	POLYNESIE FRANCAISE
260	FRENCH SOUTERN 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 ISLAND AND MCDONALD ISLANDS	HEARD, ILE ET MCDONALD, ILES
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-6: 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 REP. OF KOREA	REP. POPULAIRE DEMOCRATIQUE DE COREE
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	LETONIE
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
504	MOROCCO	MAROC
508	MOZAMBIQUE	MOZAMBIQUE
512	OMAN	OMAN

Table A-6: Country Codes

Code	English Description	French Description
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
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

Table A-6: Country Codes

Code	English Description	French Description
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
732	WESTERN SAHARA	SAHARA OCCIDENTAL
729	SUDAN	SOUDAN
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
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

Table A-6: Country Codes

Code	English Description	French Description
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
997**	Interpol General Secretariat (Lyon)	
998*	OTHER	AUTRE
999	UNKNOWN	INCONNU
<p>* For use if a country is not on the list. In this case the Country Name must be captured in the 'Country' sub-field.</p> <p>** Not to be used in an 'Address', 'Place of Birth' or 'Place of Death' tags, or in TRB (future use).</p>		

Appendix B – Summary Type-2 Tag List for RCMP TR Transactions

Table B-1: Summary Type-2 Tag List for RCMP TR Transactions

Tag Number	Tag ID	TO RCMP				FROM RCMP						
		IMM	IMA	IMP	VER	ACKT	ERRT	SRE	IMAR	IMPR	ERRV	SRV
2.001	LEN	M	M	M	M	M	M	M	M	M	M	M
2.002	IDC	M	M	M	M	M	M	M	M	M	M	M
2.800	DCN	M				O	O	M				
2.806	NAME	M	C									
2.807	SEX	M	C									
2.808	HAI	C										
2.809	EYE	C										
2.810	HGT	C										
2.811	WGT	C										
2.814	RACE	C										
2.819	LGF	M	M	M	M							
2.824	OTN	O	O									
2.827	NMG						O	O				
2.851	DCR		C	O					O	O		
2.874	SFBI	O										
2.875	RRES						O	M				
2.887	CIC	O	O									
2.888	FOSS	O	O									
2.891	ISR	O										
2.892	IRP	C										
2.893	FQO	O										
2.894	FER	C										
2.8005	RET	M										
2.8022	DOB	M	C									
2.8038	DPR	M										
2.8044	ESD							O				
2.8056	PLB	C										
2.8060	EMSG						M				M	
2.8067	IMA	M			M							
2.8071	ACN							O				
2.8084	MFR	C										
2.8106	ICI	C										
2.8908	CNON	O										
2.8910	NVN	M	M	M	M	M	M	M	M	M	M	M

Table B-1: Summary Type-2 Tag List for RCMP TR Transactions

		TO RCMP				FROM RCMP						
Tag Number	Tag ID	IMM	IMA	IMP	VER	ACKT	ERRT	SRE	IMAR	IMPR	ERRV	SRV
2.8911	STV	M	M	M								
2.8913	CRS							O				
2.8931	NFT	M	M	M								
2.8936	RTX	C										
2.8938	NOTF	M			M							
2.8939	FPCL	M			M							
2.8952	CREF							O				
2.8953	IDI							O				
2.8955	VSR											M
2.8960	IFIL	M						O				
2.8963	REM											
2.8964	IID		M	M					M	M		
2.8965	GCMS	O	O						O			
2.8966	EAD								M			
2.8967	AMR		M						M			
2.8968	POI											
2.8971	RDA		C					O	O			
2.8972	EPD									M		
2.8973	AFN				M						M	M

Appendix C – Summary of RCMP-Defined Attributes

Table C-1: Temporary Resident 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		N	13	13
1.010	TCR	Transaction Control Reference Number		N	13	13
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
2.808	HAI	Hair Colour	Y	N	2	2
2.809	EYE	Eye Colour	Y	A	1	1
2.810	HGT	Height		N	1	3
2.811	WGT	Weight		N	1	3
2.814	RACE	Race Descent	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

Table C-1: Temporary Resident Transactions Attributes

Tag Number	Tag ID	Tag Name	Pick List	Character Type	Min Field Size	Max Field Size
		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
2.851	DCR	DCN Reference Number		N	20	20
2.874	SFBI	FBI Search Request		A	1	1
2.875	RRES	RCMP-NPS Results	Y	A	1	1
2.887	CIC	CBSA/CIC Office Number		ANS	1	16
2.888	FOSS	Field Operational Support System Number		ANS	1	16
2.891	ISR	International Search Request		A	1	1
2.892	IRP	International Countries to Search				
		Country Code	Y	N	3	3
		File Number		ANS	1	32
2.893	FQO	Fingerprint Quality Override				
		Finger Number	Y	N	2	2
		Reason Code	Y	N	2	2
		Description		ANS	1	50
2.894	FER	Foreign Search Reason		ANS	1	500
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
2.8056	PLB	Place of Birth				
		Country Code	Y	N	3	3
		Country		AS	1	35
		Province/State Code	Y	N	2	2
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

Table C-1: Temporary Resident Transactions Attributes

Tag Number	Tag ID	Tag Name	Pick List	Character Type	Min Field Size	Max Field Size
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
2.8106	ICI	Investigator Contact Information				
		Investigator Name		ANS	1	50
		Investigating Agency Name		ANS	1	50
		Investigating Section Name		ANS	1	50
		Contact Telephone Number		N	1	20
		Contact Fax Number		N	1	20
		Contact Mailing Address		ANS	1	200
		Contact E-mail Address		ANS	1	50
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
2.8913	CRS	Criminal Record				
		Country Code	Y	N	3	3
		Criminal Record Contents		ANS	1	200000
2.8931	NFT	Name of Person responsible for Transaction		ANS	1	50
2.8936	RTX	Race Description		ANS	1	25
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/CIC Office Number		ANS	1	16
		Field Operational Support System Number		ANS	1	16
		Global Case Mgmt System UCI		AN	8	20
		Individual Reference Number		ANS	1	32
		Contributor Case File Number		ANS	1	32
2.8953	IDI	Search Result Information				

Table C-1: Temporary Resident Transactions Attributes

Tag Number	Tag ID	Tag Name	Pick List	Character Type	Min Field Size	Max Field Size
		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/CIC Office Number		ANS	1	16
		Field Operational Support System Number		ANS	1	16
		Global Case Mgmt System UCI		AN	8	20
2.8955	VSR	Verification Search Result	Y	A	1	1
2.8960	IFIL	Immigration File Type	Y	N	2	2
2.8963	REM	Removal				
2.8964	IID	Immigration File Number		N	12	12
2.8965	GCMS	Global Case Mgmt System UCI		AN	8	20
2.8966	EAD	Effective Amendment Date		D	8	8
2.8967	AMR	Amendment Reason	Y	N	2	2
2.8968	POI	Person of Interest				
2.8971	RDA	Immigration Retention End Date		N	8	8
2.8972	EPD	Effective Purge Date		D	8	8
2.8973	AFN	AFIS File Number				
		File Type	Y	N	2	2
		File Number		N	1	12
14.021	SEG	Segmented Position				
		Finger Number	Y	N	2	2
		Left		N	1	4
		Right		N	1	4
		Top		N	1	4
		Bottom		N	1	4
14.022	IQM	Image Quality Metric				
		Finger Number	Y	N	2	2
		Quality Score		N	1	2
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
AFIS	Automated Fingerprint Identification System
ACKT	Acknowledgement Ten-print
ANSI	American National Standards Institute
ASCII	American Standard Code for Information Interchange
BSO	Border Services Officer(s)
CBSA	Canadian Border Services Agency
CIC	Citizenship and Immigration Canada
CCRTIS	Canadian Criminal Real Time Identification Services
CJIS	Criminal Justice Information Services
DCN	Document Control Number
DSB	Departmental Security Branch
EBTS	Electronic Biometric Transmission Specification
EFCD	Electronic Fingerprint Capture Device
ERRT	Error Ten-print Submission
ERRV	Error Verification Submission
FBI	Federal Bureau of Investigation
FOSS	Field Operational Support System
FPS	Fingerprint Section Number
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

Table D-1: List of Acronyms and Abbreviations

Term	Definition
ID	Identification / Identifier
IDC	Image Designation Character
IMA	Immigration File Amend Submission
IMM	Immigration Submission
IMAR	Immigration File Amend Response
IMP	Impression Type Immigration File Purge Submission
IMPR	Immigration File Purge Response
LEN	Logical Record Length
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
POE	Port(s) of Entry
RCMP	Royal Canadian Mounted Police
SMT	Scar, Mark and Tattoo
RTID	Real Time Identification
SRE	Ten-print Search Results (response to an IMM)
SRV	Verification Search Results (response to a VER)
TOT	Type of Transaction
TR	Temporary Resident
TRA	Threat and Risk Assessment
TRB	Temporary Resident Biometric(s)
UCI	Unique Client Identifier (CIC's Global Case Management System)

Table D-1: List of Acronyms and Abbreviations

Term	Definition
VAC	Visa Application Centre
VER	Verification Submission
WSQ	Wavelets Scalar Quantization (a compression algorithm that uses wavelet technology)