



Department of Defense

**Electronic Biometric Transmission
Specification**

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1.0	19 August 2005	Release	Initial release of the EBTS Specification
1.1	23 August 2005	Updated Release	Section 1.5 updated to reflect BMO role in the change control of this document

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1.0 INTRODUCTION

This DoD Electronic Biometric Transmission Specification (EBTS) describes customizations of the Federal Bureau of Investigation (FBI) Electronic Fingerprint Transmission Specification (EFTS) transactions that are necessary to utilize the Department of Defense (DoD) Automated Biometric Identification System (ABIS).

1.1 Background

The DoD ABIS is an electronic database and associated set of software applications that support the storage, retrieval, and searching of multiple types of biometric data collected from persons of national security interest. Over time, the DoD ABIS will support the storage, retrieval, and searching of additional biometric modalities such as face images, iris images, and voice samples.

The software architecture of the DoD ABIS has been designed to be compliant with the FBI Criminal Justice Information Services (CJIS) EFTS Version (v) 7. The DoD ABIS implements the transaction types and codes described in the EFTS, thus ensuring operational compatibility with the FBI system. Because of the different nature of DoD encounters and detainment circumstances, the DoD ABIS has additional requirements for transaction types and codes beyond those defined in the EFTS. The DoD-unique transaction types and codes are defined in this, the EBTS.

1.2 Scope and Purpose

The primary audience for this specification consists of software engineers who develop and/or support systems that interface with the DoD ABIS. Readers are expected to have working knowledge of the EFTS and American National Standards Institute/National Institute of Standards and Technology ANSI/NIST-ITL 1-2000 as a prerequisite for understanding this specification.

This v1.0 of the EBTS addresses the mandatory transactional functionality required for the Initial Operating Capability (IOC) of the DoD ABIS. Future revisions may address the following additional functionality areas:

- New transactions for iris image submissions and responses
- New transactions for face image submissions and responses
- New transactions for voice sample submissions and responses
- Support for the submittal, storage, and searching of Common Biometric Exchange Formats Framework (CBEFF) header information along with images or other sample data representing various biometric modalities (e.g., face images, iris images, voice samples)
- Support for ANSI/International Committee for Information Technology Standards (INCITS) standards-based biometric data interchange formats
- Support for XML encoding and/or Web services

The DoD Biometrics Fusion Center (BFC) anticipates that many of these issues will be addressed in the ongoing revisions to the ANSI/NIST-ITL 1-2000 standard. DoD ABIS technical specifications, such as this one, shall be updated to be compatible with the revisions to ANSI/NIST-ITL 1-2000 when those revisions become available.

1.3 Current DoD ABIS Capability and EBTS Support

As of time of this publication, some transactions described in this specification are not yet fully supported by the DoD ABIS. For details of currently supported transactions, please contact the DoD BFC Help Desk for more information by e-mail at helpdesk@dodbfc.army.mil.

1.4 References

ANSI/NIST-ITL 1-2000, “Data Format for the Interchange of Fingerprint, Facial, & Scar Mark & Tattoo (SMT) Information” (ANSI/NIST-ITL 1-2000/NIST Special Publication 500 245). It is available for download at ftp://sequoyah.nist.gov/pub/nist_internal_reports/sp500-245-a16.pdf.

FBI CJIS EFTS v7 was published in January 1999 (CJIS RS 0010(V7)). This specification is available for download at http://www.fbi.gov/hq/cjisd/iafis/efts_70.pdf.

1.5 Change Control

The BMO maintains change control responsibilities for this document. Requested changes to this document should be submitted to the DoD Biometrics Web site (see contact information in Section 1.6).

1.6 Contact Information

DoD Biometrics Web site: <http://www.biometrics.dod.mil>.

For technical issues, contact the DoD BFC Help Desk at (304) 326-3023, Monday through Friday, 0800-1700 EST or by e-mail at helpdesk@dodbfc.army.mil.

2.0 DoD ABIS OPERATIONS

This section provides an overview of DoD ABIS operations and contains information for users who wish to begin using DoD ABIS services and who may have unique requirements.

2.1 Fingerprint Storage

The DoD ABIS accommodates 10-print rolled fingerprint data, flat fingerprint data ranging between one and 10 flat prints, and latent fingerprint images. The categories of supported fingerprint data are shown in Figure 1.

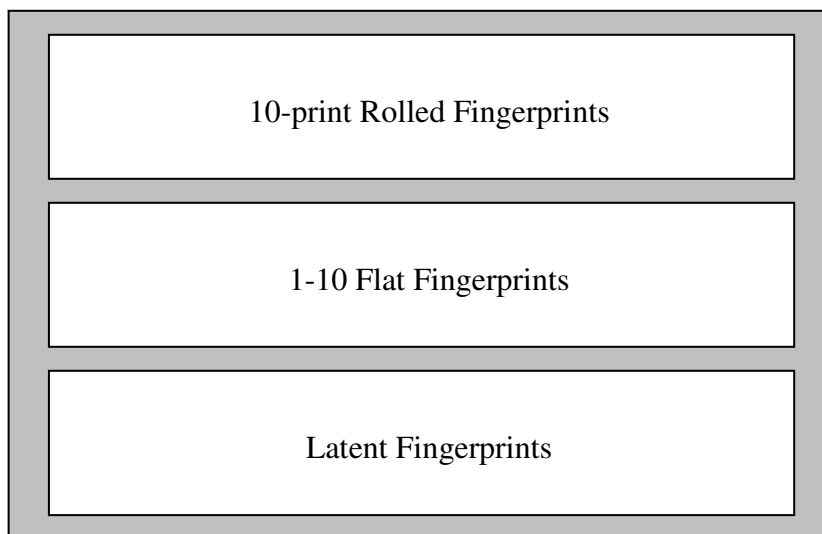


Figure 1: Categories of Fingerprint Data

2.2 Categories of Submissions

DoD ABIS submissions are divided into four categories: Red Force, Gray Force, Blue Force, and Latent. Each category represents a separate use case for the DoD ABIS.

- Red Force searches are used to identify detainees, enemy combatants, enemy prisoners of war (EPWs), or persons of interest (known or suspected terrorists).
- Gray Force searches are used when it is necessary for the military to run a biometric screening against an encountered subject. This may be at a check point or for third country nationals who want to work on a U.S. military base.
- Blue Force searches are used to identify U.S. military and contractors working for the DoD.
- Latent searches are for forensic purposes. Submissions are for those investigating crime scenes such as a fingerprint lifted from an improvised explosive device (IED).

The categories are shown in Figure 2.

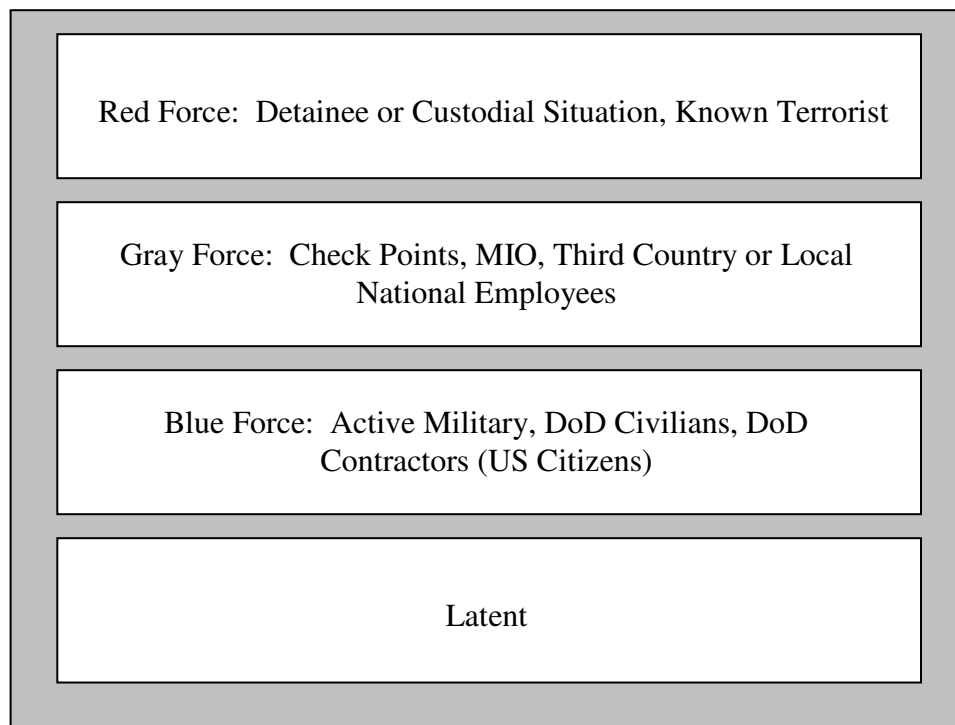


Figure 2: Categories of Submission

Each category of search is distinguishable based on the type of transaction, as shown in Figure 3. The DoD ABIS supports transaction types defined in the EFTS as well as DoD-specific transaction types. The details of transaction types supported by the DoD ABIS are outlined in Section 3, EBTS Transactions.

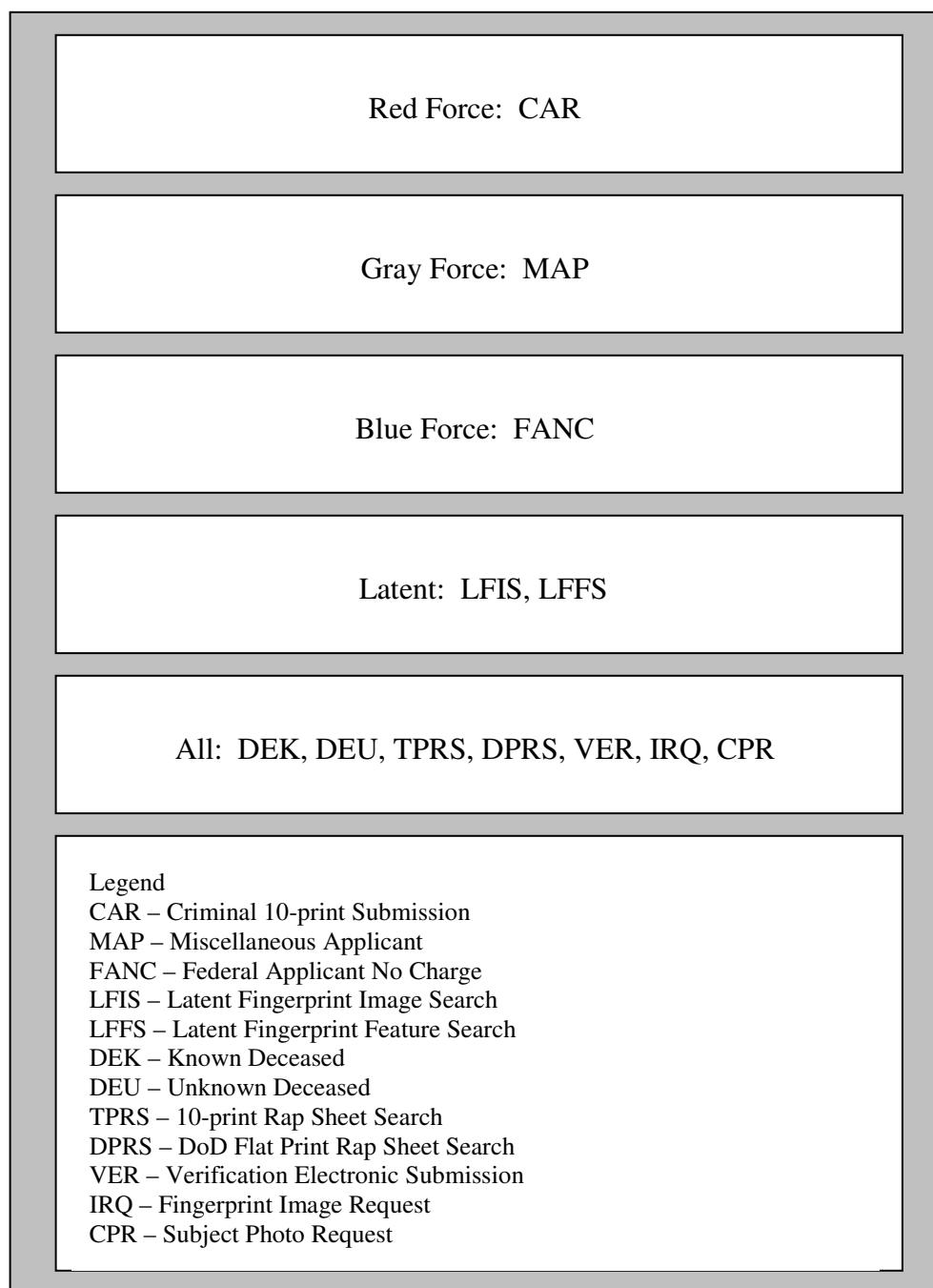


Figure 3: Types of Submissions

2.3 User Provisioning Process

The BFC is responsible for maintaining the data integrity of the DoD ABIS. Therefore, the BFC has approval authority for all systems interfacing with the DoD ABIS and coordinates the requests of all new users who desire access to DoD ABIS. The term “user” applies to any DoD entity that wishes to make use of the storage, retrieval, and searching capabilities of the DoD ABIS.

The overall goal of the DoD ABIS user provisioning process is to ensure that DoD ABIS data are accurate and timely and that DoD ABIS services are available when required. DoD entities may contact the DoD BFC Help Desk (see Section 1.6) concerning the provisioning process.

The new user provisioning process will be documented in the BFC Standard Operating Procedure (SOP) titled “ABIS User Provisioning Process.” The user provisioning process is complete when the DoD entity is granted a formal “permission to operate” with the DoD ABIS. The SOP will identify the significant steps a new user must take before being granted a “permission to operate.” A non-exhaustive list of these steps includes:

- Completion of a DoD ABIS User Agreement
- Designing a system using equipment that complies with DoD ABIS interface, data format, information security, and image quality requirements
- Coordinating with the BFC in the assignment of user- and equipment-specific parameters such as originating agency identifier (ORI), e-mail addresses, and transaction privileges
- Submitting the proposed system that will interface with the DoD ABIS to the BFC for a certification of compliance and supporting the certification process as required
- Generating and transmitting test transactions to the DoD ABIS

The goal of the BFC certification process is to assess how well a system conforms to relevant standards and operating requirements. Please contact the BFC Help Desk (see Section 1.6) for further assistance with the certification process.

2.4 EBTS Domain Name

The BFC is the domain registrar for the EBTS implementation domain. ANSI/NIST-ITL 1-2000 defines an implementation domain as “a group of agencies or organizations that have agreed to use specific pre-assigned groups of numbered tag fields for exchanging information unique to their installations.”

The EBTS Type-1 domain name field (field 1.013) consists of two information items (subfields). The first, DOM_IMP, uniquely identifies the EBTS implementation with the character string “EBTS.” The second item, DOM_VER, identifies the EBTS version, which is currently 1.0.

For example, standard EBTS transactions should have the following domain field values:

DOMAIN IMPLEMENTATION	DOMAIN VERIFICATION
EBTS	1.0

This coding specifies that the information within the files contains data that are fully compliant with the specifications of EBTS v1.0.

A DoD entity may determine that its unique needs require more information than is defined by the EBTS. In such instances, the DoD entity may request a new domain to customize EBTS fields, types, and/or transactions.

To obtain a new domain name, the entity must request a new domain from the BFC domain registrar. Please contact the BFC Help Desk (see Section 1.6) for more information. Once approved, the domain registrar shall assign the entity a unique character string for use in the DOM_IMP field and a version number for the DOM_VER field. The BFC shall maintain the complete documentation for all requests and the unique fields assigned for each domain.

For example, a domain implementation may resemble the following:

DOMAIN IMPLEMENTATION	DOMAIN VERIFICATION
EBTS_NAVY	1.0

This new domain may have domain-specific fields such as the following:

Field #: 2.0001123	T2_PORT_OF_CALL
Field #: 2.0001124	T2_TYPE_OF_VESSEL

Note that ANSI/NIST-ITL 1-2000 uses implementation domains to define common sets of Type-2 tags. This document allows an implementation domain to define a common usage of fields, types, and transactions.

The DoD BFC recognizes that some applications will collect and utilize information outside of this EBTS specification. The use of a registered domain name will allow these data to be utilized in multiple applications. Instead, this additional information can be included as “user-defined fields” in existing transactions. Additional user-defined Type-2 data fields containing only American Standard Code for Information Interchange (ASCII) data are ignored and not processed by the DoD ABIS.

3.0 EBTS TRANSACTIONS

EBTS transactions are a superset of the transactions of the EFTS. The EBTS preserves the structure of the EFTS records so that EBTS submissions can be forwarded to the FBI, but it adds additional transactions and fields to collect DoD-specific data that may be recorded in the DoD ABIS.

The full set of EBTS transactions is shown in Table 1.

Table 1: EBTS Types of Transactions (TOT) (Submissions and Responses) by Category

EBTS TOT	EBTS Transaction Name	DoD Implementation Notes
Electronic 10-print Submissions		
CAR	Criminal 10-print Submission (Answer Required)	Submission used for detainee or EPW.
FANC	Federal Applicant No Charge	Submission used as part of a background check for enlisting U.S. military, DoD civilians, and DoD contractors.
MAP	Miscellaneous Applicant	Submission used as part of a background check for local nationals and third country nationals who require access to U.S. military installations or other restricted areas.
DEK	Known Deceased	Submission used for deceased subject whose identity is known.
DEU	Unknown Deceased	Submission used for deceased subject whose identity is not known.
SRE	Submission Results - Electronic	Response containing an Ident/Non-Ident decision; will contain an electronic rap sheet if requested.
ERRT	10-print Transaction Error	Error response.
Remote 10-print Searches		
TPRS	10-print Rap Sheet Search	Performs a search only, non-retain, and can return an unconfirmed-identification (“yellow”) identification.
DPRS	DoD Flat Print Rap Sheet Search	This is only used in special circumstances.
SRT	Search Result – 10-print	Response including a candidate list comprising names and DoD number of each candidate.
ERRT	10-print Transaction Error	Error response.
Remote Latent Print Searches		
LFIS	Latent Fingerprint Image Search	Used for latent image submission and searches.
LFFS	Latent Fingerprint Feature Search	Used for latent feature submission and searches.
LRE	Latent Result	Latent Response containing an Ident/Non-Ident decision.

EBTS TOT	EBTS Transaction Name	DoD Implementation Notes
ERRL	Latent Transaction Error	Error response.
Remote Requests for Fingerprint Images		
IRQ	Fingerprint Image Request	Request for identification information (flat prints, mug shots, demographic/biographic information).
IRR	Fingerprint Image Request Response	Response containing requested identification information (flat prints, mug shots, demographic/biographic information).
ISR	Image Response Summary	Response indicating that the prints were not on file with DoD ABIS.
ERRI	Image Transaction Error	Error response.
Electronic Criminal Subject Photo Searches		
CPR	Subject Photo Request	Request for mug shot photos on file with DoD ABIS.
PRR	Photo Response	Response containing requested identification mug shot photos.
Verification		
VER	Verification Electronic Submission	Used for 1:1 verification based on an identifier.
VRSP	Verification Response - Electronic	A verification response that contains Ident/Non-Ident information.
EVER	Verification Error Response	Error response.

Additional transaction types will be added in subsequent versions of this specification to support additional biometric modalities, as noted in Section 1.4, Change Control.

3.1 Comparison with EFTS Transactions

Many of the EFTS transactions are used directly by EBTS, some are not used at all, and some are modified to carry additional DoD-specific fields. EBTS also defines new submission and response transaction types.

The EBTS transactions described in detail in this specification are compared to the EFTS transactions in Table 2 below:

Table 2: Comparison of EBTS and EFTS TOTs

EBTS TOT	Description	Related EFTS TOT	EBTS Differences from EFTS
Electronic 10-print Submissions			
CAR	Criminal 10-print Submission	CAR	Options for two iris images, 1,000-ppi fingerprints, and

EBTS TOT	Description	Related EFTS TOT	EBTS Differences from EFTS
	(Answer Required)		an additional mug shot
FANC	Federal Applicant No Charge	FANC	Options for two iris images, 1,000-ppi fingerprints, and five mug shots
MAP	Miscellaneous Applicant	MAP	Options for two iris images, 1,000-ppi fingerprints, and five mug shots
DEK	Known Deceased	DEK	Options for two iris images, 1,000-ppi fingerprints, and one additional mug shot
DEU	Unknown Deceased	DEU	Options for two iris images, 1,000-ppi fingerprints, and one additional mug shot
Remote 10-print Searches			
TPRS	10-print Rap Sheet Search	TPIS	10-print Fingerprint Image Searches - None
DPRS	DoD Flat Print Rap Sheet Search	TPIS	Additional Type-2 logical record fields are required. Options for two iris images, 1,000-ppi fingerprints, five mug shots, four additional 500-ppi flat prints, and up to 10 fingerprint minutiae. This is used only in special circumstances.
Remote Latent Print Searches			
LFIS	Latent Fingerprint Image Search	LFIS	None
LFFS	Latent Fingerprint Feature Search	LFFS	None
Remote Requests for Fingerprint Images			
IRQ	Fingerprint Image Request	IRQ	None
Electronic Criminal Subject Photo Searches			
CPR	Subject Photo Request	CPR	None
Verification Electronic Submissions			
VER	Verification Electronic Submission	None	New Transaction

3.2 Mug Shot Support

The CAR, DEK, DEU, MAP, FANC, and DPRS transactions support mug shot submission. Up to five Type-10 records are permitted in these submissions. Facial images should be taken in accordance with the Federal Information Processing Standard (FIPS) 201 Personal Identity Verification (PIV) format (i.e. INCITS 385-2004).

3.3 Interim Iris Support

Interim support for the submission of iris image data is achieved by permitting iris images to be stored in Type-16 records. This interim support will be required until ANSI/NIST-ITL 1-2000 and/or the EFTS provide support for iris images.

The CAR, DEK, DEU, MAP, FANC, and DPRS transactions support iris image submission. Up to six Type-16 records are permitted in these submissions.

3.4 Transaction Record Requirements

Each EBTS transaction has requirements for including a certain number of records of each type.

Table 3 defines record requirements for the transaction types in EBTS. Notations for the table are as follows:

- A single asterisk (*) indicates that less than 14 images are acceptable for this transaction only in the case of amputation, deformity, or bandage. If less than 14 images are present due to the reasons listed above, this shall be indicated in the Type-2 record as defined in the EFTS. Type-4 data will only contain fingerprint images at 500 ppi with 15:1 Wavelet Scalar Quantization (WSQ) compression as defined in the EFTS.
- Double asterisks (**) indicate that this field shall contain iris images. Currently, DoD Biometrics will accept iris images in any image format in Type-16 records for CAR, DEK, DEU, MAP, FANC, and DPRS transactions. DoD Biometrics anticipates changes to the underlying ANSI/NIST-ITL 1-2000 standard that will guide the next iteration of this specification to a standardized definition and record location for iris data transmission. Iris images are optional.
- Triple asterisks (***) indicate that this field shall contain 1,000-ppi fingerprint images if available. Currently, DoD Biometrics will accept 1,000-ppi fingerprint images for CAR, DEK, DEU, MAP, FANC, and DPRS transactions. 1,000-ppi fingerprint images are optional.

Table 3: Transaction Record Requirements

TOT	Type1	Type2	Type4	Type7	Type9	Type10	Type14	Type16
CAR	1	1	0 to 14*	-	-	0 to 5	0-14***	0-6**
DEK	1	1	0 to 14*	-	-	0 to 5	0-14***	0-6**
DEU	1	1	0 to 14*	-	-	0 to 5	0-14***	0-6**
MAP	1	1	0 to 14*	-	-	0 to 5	0-14***	0-6**
FANC	1	1	0 to 14*	-	-	0 to 5	0-14***	0-6**
VER	1	1	1 to 14	-	-	-	-	-
LFFS	1	1 to 2	0 to 10	0 to 10	1 to 10	-	-	-
LFIS	1	1 to 2	0 to 10	0 to 10	-	-	-	-

TPRS	1	1	2 to 10	-	0 to 10	-	-	-
DPRS	1	1	0 to 14	-	0 to 14	0 to 5	0-14***	0-6**
SRE	1	1	-	-	-	-	-	-
VRSP	1	1	-	-	-	0 to 1	-	-
EVER	1	1	-	-	-	-	-	-
SRT	1	1	0 to 14	-	-	-		-
ERRT	1	1	-	-	-	-	-	-
LRE	1	1	-	-	-	-	-	-
ERRL	1	1	1 to n	-	-	-	-	-
IRQ	1	1	-	-	-	-	-	-
CPR	1	1	-	-	-	-	-	-
PRR	1	1	-	-	-	1 to 5	-	-
IRR	1	1	1 to 4	-	-	0 to 1	-	-
ISR	1	1						
ERRI	1	1	-	-	-	-	-	-
Legend:								
CAR – Criminal 10-print submission				DEK – Known Deceased				
CPR – Subject Photo Request				DEU – Unknown Deceased				
DPRS – DoD flat print rap Sheet Search				LFIS – Latent Fingerprint Image Search				
ERRI – Image Transaction Error				LRE – Latent Result				
ERRL – Latent Transaction Error				MAP – Miscellaneous Applicant				
ERRT – 10-print Transaction Error				PRR – Photo Response				
EVER – Verification Error Response				SRE – Submission Results – Electronic				
FANC – Federal Applicant No Charge				SRT – Search Result – 10-print				
IRQ – Fingerprint Image Request				TOT – Types of Transactions				
IRR – Fingerprint Image Request Response				TPRS – 10-print Rap Sheet Search				
ISR – Image Response Summary				VER – Verification Electronic Submission				
LFFS – Latent Fingerprint Feature Search				VRSP – Verification Response – Electronic				

3.5 Transaction Control Numbers

A transaction identification number is assigned to a submission and carried through on the response for tracing purposes. A Transaction Control Number (TCN) is a unique identifier generated by the equipment that submits the transaction. A Transaction Control Reference (TCR) number is part of the DoD ABIS/IAFIS reply and includes the TCN so the originating submission request can be identified. When a transaction is sent to the DoD ABIS, the TCR in the response(s) will contain the TCN used in the submission. A TCN is mandatory for a submission, and a TCR is mandatory for a response. These values are contained in the Type-1 record in an EFTS or EBTS transaction. Information on TCN and

TCR is contained in Section 1.6, Identifying Previous Transactions of the EFTS document. Figure 4 illustrates the TCN and TCR in the transaction flow.

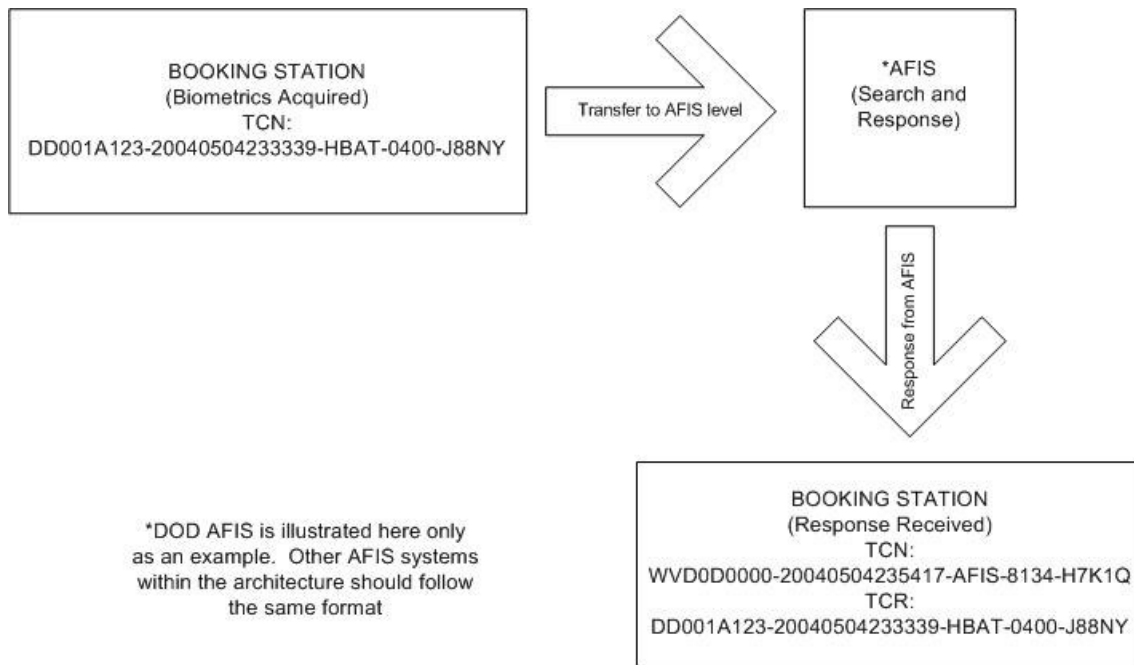


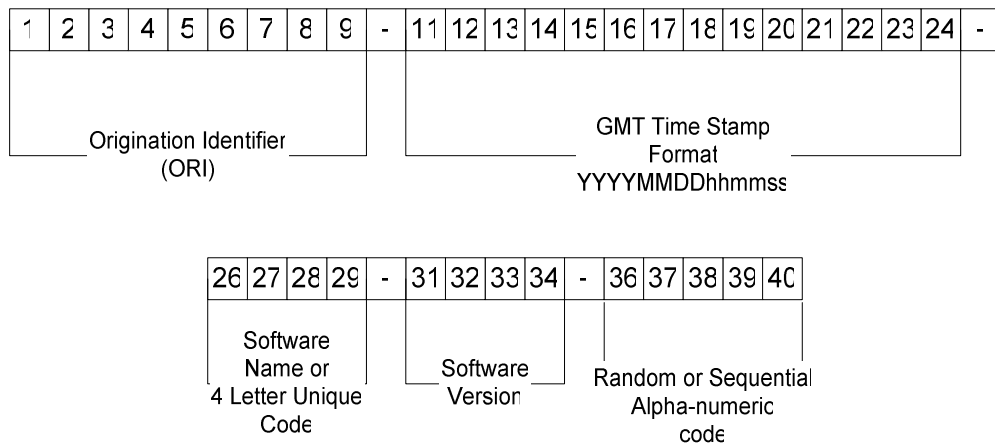
Figure 4: Transaction Submission and Response Sequence

The EFTS requires that a TCN must be a 10- to 40-byte string that consists of letters, numbers, and special characters. The EBTS requires a 40-byte identifier that contains:

- the ORI
- a Greenwich Mean (a.k.a. Zulu or UTC) date/time stamp
- a code for the software used at the point of collection/transmission
- an indicator of the software version used at the point of collection/transmission
- a random or sequential alphanumeric string

A hyphen separates each of these fields.

Figure 5 illustrates the makeup of the TCN.

**Figure 5: TCN Field Layout**

The BFC will assign a software code to a product as part of the DoD ABIS certification process outlined in Section 2.3, User Provisioning Process of this document. Software developers must contact the BFC Help Desk (see Section 1.6) to obtain a four-letter software code. This code must be used consistently in the software product.

Software users must not generate a TCN; rather the software must do this automatically based on a predetermined configuration. **A TCN must be unique.** A TCN must not be reused. Matching a TCN to a TCR is the method used to match EBTS responses to EBTS submissions.

3.6 Origination Identifiers

The mandatory origination field shall contain the ORI identifying the agency or organization submitting the transaction. For EBTS purposes, this field shall be a nine-byte alphanumeric field. The BFC assigns an ORI code to DoD entities that submit directly to DoD ABIS. Those DoD entities must contact the BFC Help Desk (see Section 1.6) to obtain an ORI.

3.7 Interpretation of Tags and Error Handling

The DoD ABIS will observe the processing rules for tag interpretation and error handling as described in Section 2.4, Tagged Fields, and Section 1.5, Error Handling of the EFTS document. Additional guidance may be added to this EBTS document as necessary to support the operation of the DoD ABIS.

3.8 Image Quality Requirements

The DoD ABIS will observe the image quality requirements defined in Appendix F of the EFTS. From an image quality perspective only, any system certified for use with IAFIS meets DoD ABIS image quality requirements.

Flat fingerprints will be accepted by the DoD ABIS only in specific types of transactions. The following table outlines which transactions require rolled fingerprints and which transactions accept flat fingerprints. The transactions are outlined in Figure 4.

Table 4: Image Quality Requirements

TOT	Fingerprint Requirements
CAR	10 prints rolled (14 images)
MAP	10 prints rolled or flat (14 images)
DEK	10 prints rolled (14 images)
DEU	10 prints rolled (14 images)
FANC	10 prints rolled (14 images)
TPRS	1-10 prints flat
DPRS	1-10 prints flat
LFIS	Any
LFFS	Any
VER	1-10 prints flat
Legend:	
TOT – Type of Transaction	
CAR – Criminal 10-print Submission	
MAP – Miscellaneous Applicant	
FANC – Federal Applicant No Charge	
TPRS – 10-print Rap Sheet Search	
DEK – Known Deceased	
DEU – Unknown Deceased	
DPRS – DoD Flat Print Rap Sheet Search	
LFIS – Latent Fingerprint Image Search	
LFFS – Latent Fingerprint Feature Search	
VER – Verification Electronic Submission	

4.0 EBTS TRANSACTION DETAIL

The DoD ABIS will process the transactions listed in Table 5. Those transactions are described in detail in this section.

Table 5: Transaction List

TOT	Transaction
CAR	Criminal 10-print Submission (Answer Required)
MAP	Miscellaneous Applicant
FANC	Federal Applicant No Charge
DEK	Known Deceased
DEU	Unknown Deceased
TPRS	10-print Rap Sheet Search
DPRS	DoD Flat Print Rap Sheet Search
LFIS	Latent Fingerprint Image Search
LFFS	Latent Fingerprint Features Search
VER	Electronic Verification Submission
IRQ	Fingerprint Image Request
CPR	Subject Photo Request

4.1 CAR – Criminal 10-print Submission (Answer Required)

The Criminal 10-print Submission Answer Required (CAR) transaction type shall be used for detainees or EPWs. DoD Biometrics policy requires 10-print rolled fingerprints for subjects in a detained situation. The demographic data required in the EFTS CAR transaction are also required for submission to the DoD ABIS.

This DoD implementation of the CAR transaction contains additional optional DoD-specific data fields. The DoD CAR transaction type is a superset of the EFTS CAR transaction type.

The two valid responses to a CAR submission are Submission Results – Electronic (SRE) or 10-print Transaction Error (ERRT). An SRE will be returned with the search results (Identification/Non-identification) if no errors exist in the submission. An ERRT transaction will be returned with details of the specific error should a syntax error and/or image quality problem exist.

Detailed field requirements of this transaction type can be requested from the BFC Help Desk (see Section 1.6). CAR transactions types are listed in Table 6.

Table 6: CAR Transaction

TOT	Submission Transaction
CAR	Criminal 10-print Submission (Answer Required)

TOT	Response Transactions
SRE	Submission Results – Electronic
ERRT	10-print Transaction Error

4.2 MAP – Miscellaneous Applicant

The MAP transaction type shall be used as part of a background check for local nationals and third country nationals who desire access to U.S. military installations or other restricted areas.

DoD Biometrics policy requires 10-print rolled or flat fingerprints (14 images including slaps) for these subjects. Rolled prints are always preferred and should be collected whenever possible. Demographic data required in the EFTS MAP transaction are also required for submission to the DoD ABIS.

This DoD implementation of the MAP transaction contains additional optional DoD-specific data fields and biometric information such as mug shots. The DoD EBTS MAP transaction type is a superset of the EFTS MAP transaction type.

Valid responses to this submission are Submission Results – Electronic (SRE) or 10-print Transaction Error (ERRT). An SRE will be returned with the search results (Identification/Non-identification) provided that no errors exist in the submission. If a syntax error is present or there is a problem with image quality, an ERRT transaction will be returned with details of the specific error.

Detailed field requirements of this transaction type can be requested from the BFC Help Desk (see Section 1.6). MAP transaction types are listed in Table 7.

Table 7: MAP Transaction

TOT	Submission Transaction
MAP	Miscellaneous Applicant
TOT	Response Transactions
SRE	Submission Results – Electronic
ERRT	10-print Transaction Error

4.3 FANC – Federal Applicant No Charge

The FANC transaction type may be used as part of a background check for enlisting U.S. military, DoD civilians, and DoD contractors.

DoD Biometrics policy requires 10-print rolled or flat fingerprints (14 images including slaps) for these subjects. Rolled prints are always preferred and should be collected whenever possible. Demographic data required in the EFTS FANC transaction are also required for submission to the DoD ABIS. This DoD implementation of the FANC transaction contains additional optional DoD-specific data fields and biometric information such as mug shots. The DoD EBTS FANC transaction type is a superset of the EFTS FANC transaction type.

Valid responses to this submission are Submission Results – Electronic (SRE) or 10-print Transaction Error (ERRT). An SRE will be returned with the search results (Identification/Non-identification) provided that no errors exist in the submission. If a syntax error is present or there is a problem with image quality, an ERRT transaction will be returned with details of the specific error.

Detailed field requirements of this transaction type can be requested from the BFC Help Desk (see Section 1.6). FANC transaction types are listed in Table 8.

Table 8: FANC Transaction

TOT	Submission Transaction
FANC	Federal Applicant No Charge
TOT	Response Transactions
SRE	Submission Results – Electronic
ERRT	10-print Transaction Error

4.4 DEK – Known Deceased & DEU – Unknown Deceased

The DEK transaction type is used for a deceased subject whose identity is known. The DEU transaction type is used for a deceased subject whose identity is not known.

DoD Biometrics policy requires 10-print rolled fingerprints for these types of submissions. The DEK and DEU transaction types are defined in the EFTS. Demographic data required in the EFTS DEK and DEU transactions are also required for submission to the DoD ABIS. This DoD implementation of the DEK and DEU transaction types contains additional optional DoD-specific data fields and biometric information such as mug shots.

Valid responses to this submission are Submission Results – Electronic (SRE) or 10-print Transaction Error (ERRT). An SRE will be returned with the search results (Identification/Non/identification) provided that no errors exist in the submission. If a syntax error is present or there is a problem with image quality, an ERRT transaction will be returned with details of the specific error.

Detailed field requirements of these transaction types can be requested from the BFC Help Desk (see Section 1.6). DEK and DEU transaction types are listed in Table 9.

Table 9: DEK And DEU Transactions

TOT	Submission Transaction
DEK	Known Deceased
DEU	Unknown Deceased
TOT	Response Transactions
SRE	Submission Results – Electronic
ERRT	10-print Transaction Error

4.5 TPRS – 10-print Rap Sheet Search

The TPRS transaction type may be used as part of a quick background check by the U.S military. Uses include highly mobile applications, check points, and situations with a very limited time on target.

Demographic information is permitted but not required in this transaction type. This transaction is for flat fingerprints only. One to 10 flat prints are required. This transaction is always search only (non-retain). TPRS is the only transaction type that can return an undetermined identification (“yellow”) to the originator. TPRS requires no demographic or biographic information to be collected from the subject. The TPRS transaction type has the same field requirements as TPIS defined in the EFTS.

Remote 10-print responses are the expected result from a remote 10-print search. An SRT will be returned with the search results provided that no errors exist in the submission. If a syntax error is present or there is a problem with image quality, an ERRT transaction will be returned with details of the specific error.

Detailed field requirements of this transaction type can be requested from the BFC Help Desk (see Section 1.6). TPRS transaction types are listed in Table 10.

Table 10: TPRS Transaction

TOT	Submission Transaction
TPRS	Flat-Print Rap Sheet Search
TOT	Response Transactions
SRT	Search Result – 10-print
ERRT	10-print Transaction Error

4.6 DPRS – DoD Flat Print Rap Sheet Search

The DPRS transaction type shall only be used in certain circumstances. These circumstances include legacy data submission and situations where acquiring full rolled fingerprints is not feasible. Highly mobile or limited time on target situations may warrant the use of this transaction type.

DPRS data submission requires special coordination with DoD Biometrics. Submissions of this type may require special processing. In all situations, DoD Biometrics policy is to collect as much data as possible. DoD entities can contact the BFC for specific guidance on the use of this transaction type.

The DPRS transaction will accept flat or rolled fingerprints. One to 14 fingerprint images are required. Mug shot images may be included in this transaction as a Type-10 record. Iris images may be included in this transaction as a Type-16 record. Type-2 optional and mandatory data types are similar to those of the MAP transaction. The DPRS transaction type is a superset of the TPRS transaction type.

Remote 10-print responses are the expected result from a remote 10-print search. An SRT will be returned with the search results provided that no errors exist in the submission. If a syntax error is present or there is a problem with image quality, an ERRT transaction will be returned with details of the specific error.

Detailed field requirements of this transaction type can be requested from the BFC Help Desk (see Section 1.6). DPRS transaction types are listed in Table 11.

Table 11: DPRS Transaction

TOT	Submission Transaction
DPRS	DoD Flat Print Rap Sheet Search
TOT	Response Transactions
SRT	Search Result – 10-print
ERRT	10-print Transaction Error

4.7 LFIS – Latent Fingerprint Image Search & LFFS – Latent Fingerprint Feature Search

LFIS and LFFS transaction types shall be used for latent submissions and searches. Information regarding the latent print is required. DoD Biometrics requires the following supporting information to be included with all latent submissions:

- Circumstances for latent collection
- Item from which print was lifted
- Any unique item descriptor (i.e. serial number, make, model, etc)
- Contact info

The previous four information items will be required to be present in the “Notes” field of latent transactions submitted to the DoD ABIS.

All feature searches (LFFS) are required to contain fingerprint images as well as feature data. Additionally, DoD Biometrics requires the name of the latent technician (i.e., the lifter or processor) and the name of the submitter (i.e., the AFIS operator).

Remote Latent Fingerprint Responses are the expected result from a remote latent print search. An LRE will be returned with the search files provided that no errors exist in the submission. A candidate list is not returned. The response will contain an identification or non-identification. If a syntax error is present or there is a problem with image quality, an ERRL transaction will be returned with details of the specific error.

Detailed field requirements of these transaction types can be requested from the BFC Help Desk (see Section 1.6). LFIS and LFFS transaction types are listed in Table 12.

Table 12: LFIS and LFFS Transaction

TOT	Submission Transaction
LFIS	Latent Fingerprint Image Search
LFFS	Latent Fingerprint Feature Search
TOT	Response Transactions
LRE	Latent Result Electronic
ERRL	Latent Transaction Error

4.8 VER – Verification Electronic Submission

The VER transaction type may be used to verify an identity. This submission will not perform a search, but rather perform only a lookup of the biometric. The submission must include a unique identifier that must be on file with the verification system in order to perform the lookup. Valid identifiers may be a Social Security Number, Electronic Data Interchange Personal Identifier (EDIPI), Internment Serial Number (ISN), Biometrics Automated Toolset (BAT) Global Unique Identifier, Defense Biometric Identification System (DBIDS) ID, or DoD Number, depending upon the system.

Uses include check points and physical and logical access applications. The DoD ABIS is not intended to support day-to-day verification; this capability is designed to support other local access control applications. For example, this transaction may be used upon initial enrollment of a local access control system to verify a given identity against DoD records.

Demographic information is permitted but not required in this transaction type. This transaction is for flat prints only. One to 10 flat prints are required.

Electronic verification results are the expected response from an electronic verification submission. A VRSP will be returned with the search results provided that no errors exist in the submission. If a syntax error is present or there is a problem with image quality, an EVER transaction will be returned with details of the specific error.

Detailed field requirements of this transaction type can be requested from the BFC Help Desk (see Section 1.6). VER transaction types are listed in Table 13.

Table 13: VER Transaction

TOT	Submission Transaction
VER	Verification Electronic Submission
TOT	Response Transactions
VRSP	Verification Response – Electronic
EVER	Verification Error Response

4.9 IRQ – Fingerprint Image Request

The IRQ transaction enables the retrieval of fingerprint images from the DoD ABIS. These images can be used to load a local biometrics identity verification system (i.e., a base access control system). The requester identifies the DoD Number(s) of the subject(s) whose prints are being requested.

Fingerprint image files for up to 1,000 subjects may be requested per transaction. Each DoD Number in a request will be addressed in a separate Image Request Response (IRR) or Image Error Response (ERRI). Errors associated with individual DoD Numbers, such as an image set not being on file, will be reported in the Fingerprint Image Response Summary (ISR).

Detailed field requirements of this transaction type can be requested from the BFC Help Desk (see Section 1.6). IRQ transaction types are listed in Table 14.

Table 14: IRQ Transaction

TOT	Submission Transaction
IRQ	Fingerprint Image Request
TOT	Response Transactions
IRR	Fingerprint Image Request Response
ISR	Image Response Summary
ERRI	Image Transaction Error

4.10 CPR – Subject Photo Request

The CPR transaction enables the retrieval of a photo set from the DoD ABIS. Each set of photos is comprised of one to five photos of a subject from different views. Each photo set is identified by the DoD Number and date of encounter (represented by the EFTS DOA field). If a date of encounter is not specified in the request, the photo set with the latest date of encounter will be sent. A Photo Response (PRR) will be sent back to the requester.

Detailed field requirements of this transaction type can be requested from the BFC Help Desk (see Section 1.6). CPR transaction types are listed in Table 15.

Table 15: CPR Transaction

TOT	Submission Transaction
CPR	Subject Photo Request
TOT	Response Transactions
PRR	Photo Response

5.0 EBTS-UNIQUE FIELDS

To support DoD-specific requirements, additional data fields beyond those contained in the EFTS have been added to the EBTS. These new and modified data fields are outlined in the following sections. All other data are defined in the EFTS.

For each new EBTS field, the following sections list the field number, short name, and a descriptive name in the section title. For example, a section titled ***Field 1.013 Domain Name*** is interpreted as follows:

- Field Number: 1.013
- Descriptive Name: Domain Name

Each section also provides:

- A description of the field
- A table detailing the construction of the field, including
 - Subfield
 - Item
 - Acceptable input to the field. Abbreviations used are as follows:
 - A—alphabetic
 - B1—Binary
 - N—numeric
 - S—special characters
 - Length of field
- Identification of which special characters are valid (if any)
- A list of transactions indicating whether the field is mandatory ([M]) or optional ([O]).

5.1 Type-1 Records

EBTS identifies one additional field for Type-1 records. This field is defined in ANSI/NIST-ITL 1-2000, but is not used in the EFTS.

5.1.1 Field 1.013 Domain Name

This mandatory field identifies the domain name for the user-defined Type-2 logical record implementation. The domain name may appear only once within a transaction. The domain must be registered with the BFC and shall consist of two information items. The first information item will uniquely identify the agency, entity, or implementation used for formatting the tagged fields in the Type-2 record. A second information item will contain the unique version of the particular implementation. The default value for the field shall be the EBTS implementation and shall appear as 1.013:EBTS{US}1.0{GS}. The BFC is the domain registrar for domain names used in EBTS transactions.

Subfields	1 to 1
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Item	all
Character Type	ANS
Characters	2 to 20

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], DEU[M], FANC[M], MAP[M], VRSP[O], EVER[O], ERRT[O], SRE[O], TPRS[M], DPRS[M], SRT[O], ERRT[O], LFIS[O], LFFS[O], SRL[O], ERRL[O], IRQ[M]

5.1.1.1 Subfield 1.013_1 Domain Name Implementation

Subfield	all
Item	1
Character Type	ANS
Characters	1 to 15

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], DEU[M], FANC[M], MAP[M], VRSP[O], EVER[O], ERRT[O], SRE[O], TPRS[M], DPRS[M], SRT[O], ERRT[O], LFIS[O], LFFS[O], SRL[O], ERRL[O], IRQ[M]

5.1.1.2 Subfield 1.013_2 Domain Name Implementation Version

Subfield	all
Item	2
Character Type	ANS
Characters	1 to 5

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], DEU[M], FANC[M], MAP[M], VRSP[O], EVER[O], ERRT[O], SRE[O], TPRS[M], DPRS[M], SRT[O], ERRT[O], LFIS[O], LFFS[O], SRL[O], ERRL[O], IRQ[M]

5.2 Type-2 Records

EBTS defines new Type-2 fields to meet DoD requirements.

5.2.1 Field 2.300 BAT Global Unique Identifier (BATGUID)

This optional field shall contain the BATGUID as assigned by the BAT.

Subfields	1 to 10
Item	1
Character Type	ANS
Characters	36 to 38

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], FANC[O], MAP[O], DPRS[O], VER[O], VRSP[O], SRE[O], SRT[O], SRL[O]

5.2.2 Field 2.301 Location

This optional field shall contain the location of biometric collection.

Subfield	1
Item	1
Character Type	ANS
Characters	1 to 255

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], FANC[O], MAP[O], SRE[O], DPRS[O], SRT[O], SRL[O]

5.2.3 Field 2.302 Internment Serial Number (ISN)

This field shall contain the ISN as defined by the AR190-8. This field is mandatory for CAR (i.e., EPW, detainee) transactions.

Subfield	1
Item	1
Character Type	ANS
Characters	13 to 14

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DPRS[O], VER[O], VRSP[O], SRE[O], SRT[O], SRL[O]

5.2.4 Field 2.303 DoD Number

This optional field contains the subject's DoD Number. A valid DoD Number shall be no more than nine alphanumeric characters. No special characters allowed.

Subfields	1 to 5
Item	1
Character Type	AN
Characters	1 to 9

Special Character: N/A

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VRSP[O], EVER[O],
ERRT[O], SRE[O], DPRS[O], SRT[O], ERRT[O], SRL[O]

5.2.5 Field 2.304 Passport Information

This optional field contains the subject's passport information. All five subfields must be completed if this field is used.

Subfields	1 to 5
Item	all
Character Type	ANS
Characters	20 to 172

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], SRE[O], TPRS[O], DPRS[O]

5.2.5.1 Subfield 2.304_1 Passport Date Issued

This field contains the date the subject's passport was issued. The format for this field is YYYYMMDD.

Subfield	all
Item	1
Character Type	N
Characters	8

Other Tags:

date	YYYYMMDD
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Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], SRE[O], TPRS[O], DPRS[O]

5.2.5.2 Subfield 2.304_2 Passport Date Expires

This field contains the date the subject's passport expires. The format for this field is YYYYMMDD.

Subfield	all
Item	2
Character Type	N
Characters	8

Other Tags:

date	YYYYMMDD
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Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], SRE[O], TPRS[O], DPRS[O]

5.2.5.3 Subfield 2.304_3 Passport Number

This field contains the subject's passport number.

Subfield	all
Item	3
Character Type	ANS
Characters	1 to 80

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], SRE[O], TPRS[O], DPRS[O]

5.2.5.4 Subfield 2.304_4 Country of Passport Issuance

This field contains the name of the country from which the subject's passport was issued. Entry must be a valid country code as noted in the EFTS.

Subfield	all
Item	4

Character Type	A
Characters	2

Possible Codes (Mandatory):

The country code will consist of a valid two-letter National Crime Information Center (NCIC) country code.

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], SRE[O], TPRS[O], DPRS[O]

5.2.5.5 Subfield 2.304_5 Location of Passport Issuance

This field contains the name of the location of passport issuance.

Subfield	all
Item	5
Character Type	ANS
Characters	1 to 80

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], SRE[O], TPRS[O], DPRS[O]

5.2.6 Field 2.306 Coordinates in Decimal Format

This optional field contains longitude and latitude in decimal format. Both longitude and latitude are mandatory if this field is present.

Subfield	1
Item	1
Character Type	NS
Characters	2 to 19

Special Characters: period, plus, hyphen

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VER[O], TPRS[O], DPRS[O]

5.2.6.1 Subfield 2.306_1 Longitude

This field contains the longitude at which the submission was collected. The data are in the range of +180 to -180, e.g., +132.30643 or -89.61458.

Subfield	all
Item	1
Character Type	NS
Characters	1 to 10

Special Characters: period, plus, hyphen

Used in Transactions: CAR[M], DEK[M], FANC[M], MAP[M], VER[M], TPRS[M], DPRS[M]

5.2.6.2 Subfield 2.306_2 Latitude

This field contains the latitude at which the submission was collected. The data are in degrees in the range of +90 to -90, e.g., +31.30243 or -88.62458.

Subfield	all
Item	2
Character Type	NS
Characters	1 to 9

Special Characters: period, plus, hyphen

Used in Transactions: CAR[M], DEK[M], FANC[M], MAP[M], VER[M], TPRS[M], DPRS[M]

5.2.7 Field 2.307 Coordinates in degrees, minutes, seconds (DMS) format

This optional field contains longitude and latitude in degrees, minutes, seconds, and hundredths of seconds. Both longitude and latitude are mandatory if this field is present.

Subfield	1
Item	1
Character Type	NS
Characters	2 to 27

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VER[O], TPRS[O], DPRS[O]

5.2.7.1 Subfield 2.307_1 Longitude

This field contains the longitude in DMS format at which the submission was collected. The data are in the range of +180 to -180, e.g., +132 25'25.25" or -5 8'.

Subfield	all
Item	1
Character Type	NS
Characters	1 to 14

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], FANC[M], MAP[M], VER[M], TPRS[M], DPRS[M]

5.2.7.2 Subfield 2.307_2 Latitude

This field contains the latitude in DMS format at which the submission was collected. The data are in degrees in the range +90 to -90, e.g., +32 25'25.25" or -5 8'.

Subfield	all
Item	2
Character Type	NS
Characters	1 to 13

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], FANC[M], MAP[M], VER[M], TPRS[M], DPRS[M]

5.2.8 Field 2.308 Electronic Data Interchange Personal Identifier (EDIPI)

This optional field shall contain the EDIPI unique identifier for a person in the DMDC Person Data Repository.

Subfield	1
Item	1
Character Type	N
Characters	10 to 20

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VRSP[O], EVER[O], ERRT[O], SRE[O], DPRS[O], SRT[O], ERRT[O], SRL[O], IRQ[O], IRR[O]

5.2.9 Field 2.309 Defense Biometric Identification System (DBIDS) ID

This optional field shall contain the DBIDS ID unique identifier for a DBIDS user.

Subfield	1
Item	1
Character Type	ANS
Characters	10 to 50

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VRSP[O], EVER[O], ERRT[O], SRE[O], DPRS[O], SRT[O], ERRT[O], SRL[O], IRQ[O], IRR[O]

5.2.10 Field 2.310 Personnel Type

This mandatory field shall contain the classification for the person or personnel.

Subfield	1
Item	1
Character Type	AS
Characters	3-50

Possible Codes (Mandatory):

Code	Description
ADGR	Active Duty or Guard or Reserve on Active Duty Assignment
RESERVE	Reserve
NATIONAL_GUARD	National Guard
DOD_CIVIL_SERVICE_OR_NAF	DoD Civil Service or NAF
DOD_CONTRACTOR	DoD Contractor
FEDERAL_ASSOCIATE	Federal Associate (e.g., State Dept)

Code	Description
CIVILIAN_ASSOCIATE	Civilian Associate (e.g. Red Cross or USO)
VOLUNTEER_AGENCY	Member of Service Volunteer Agency
FOREIGN_MILITARY	Foreign Military
HOST_NATION_MILITARY_OCONUS	Host Nation Military (OCONUS)
HOST_NATION_HIRE_OCONUS	Host Nation Hire (OCONUS) (e.g. Local National)
DOD_BENEFICIARY	DoD Beneficiary (Retiree, Disabled American Veteran, Transitional Comp)
AD_OR_GUARD_OR_RESERVER_ON_ADFM	Ad or Guard/Reserver on Active Duty Family Member
RESERVE_FAMILY_MEMBER	Reserve Family Member
NATIONAL_GUARD_FAMILY_MEMBER	National Guard Family Member
DOD_OR_USCS_OR_NAF_FAMILY_MEMBER	DoD or Uniform Service Civil Service or NAF Family Member
DOD_OR_USC_FAMILY_MEMBER	DoD or Uniform Service Contractor Family Member
CONVEYANCE_OPERATOR	Conveyance Operator
PERSONAL_SERVICES_OR_DOMESTIC	Personal Services or Domestic
FACILITIES_SERVICE_PERSON	Person (Delivery, Pickup, Repair)
NON_GOVERNMENT_CIVILIAN	Non-Government Civilian
DISTINGUISHED_CIVILIAN	Distinguished Civilian
OTHER	Other
IDENTI_KID	Identi-Kid
EPW	Enemy Prisoner Of War or Enemy Combatant
FOREIGN_NATION_HIRE_OCONUS	Third Country National
FOREIGN_NATION_HIRE_CONTRACTOR_OCONUS	Contractor for Third Country National
OEN	Operational or Combat Encounter (Identity Spot Check)

Code	Description
PEN	Patrol or Checkpoint Encounter (Identity Spot Check)
MIO	Maritime Interdiction Operation Encounter (Identity Spot Check)
UNK	Unknown

Used in Transactions: CAR[M], DEK[M], DEU[M], FANC[M], MAP[M], TPRS[M], DPRS[M]

5.2.11 Field 2.311 Name-One

This optional field shall accommodate long names and would generally include the last name or family name (surname).

Subfield	1
Item	1
Character Type	AS
Characters	1 to 50

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VRSP[O], EVER[O], ERRT[O], SRE[O], DPRS[O], SRT[O], ERRT[O], SRL[O], IRQ[O], IRR[O]

5.2.12 Field 2.312 Name-Two

This optional field shall accommodate long names and would generally include the first name or given name.

Subfield	1
Item	1
Character Type	AS
Characters	1 to 50

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VRSP[O], EVER[O], ERRT[O], SRE[O], DPRS[O], SRT[O], ERRT[O], SRL[O], IRQ[O], IRR[O]

5.2.13 Field 2.313 Name-Three

This optional field shall accommodate long names and would generally include the middle name.

Subfield	1
Item	1
Character Type	AS
Characters	1 to 50

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VRSP[O], EVER[O], ERRT[O], SRE[O], DPRS[O], SRT[O], ERRT[O], SRL[O], IRQ[O], IRR[O]

5.2.14 Field 2.314 Name-Four

This optional field shall accommodate long names and would generally include the tribe name.

Subfield	1
Item	1
Character Type	AS
Characters	1 to 50

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VRSP[O], EVER[O], ERRT[O], SRE[O], DPRS[O], SRT[O], ERRT[O], SRL[O], IRQ[O], IRR[O]

5.2.15 Field 2.315 Verification Identifier

This mandatory field is present only in VER transactions, shall contain the verification identifier on file with the DoD, and may contain the DoD number, SSN, EDIPI, ISN, BATGUID, or DBIDS number.

Subfield	1
Item	1
Character Type	ANS
Characters	4 to 57

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: VER[M]**5.2.15.1 Subfield 2.315_1 Verification Identifier Type**

This mandatory field identifies the type of verification identifier.

Subfield	all
Item	1
Character Type	A
Characters	3 to 7

Possible Codes (Mandatory):

Code	Description
SSN	Social Security Number
EDIPI	EDIPI
ISN	Internment Serial Number
DOD	DoD Number
BATGUID	BAT Global Unique Identifier
DBIDS	DBIDS Identifier

Used in Transactions: VER[M]**5.2.15.2 Subfield 2.315_2 Verification Identifier Value**

This mandatory field shall contain the verification identifier on file with the DoD, and may contain the DoD number, SSN, EDIPI, ISN, BATGUID, or DBIDS number.

Subfield	all
Item	2
Character Type	ANS
Characters	1 to 50

Special Characters: Any 7-bit non-Ctrl characters**Used in Transactions:** VER[M]

5.2.16 Field 2.316 Request Mug Shot

This optional field shall indicate a request to return the most recent mug shot (frontal pose) on file with DoD for the given subject. Otherwise this field may be omitted.

Subfield	1
Item	1
Character Type	A
Characters	1

Possible Codes (Mandatory):

Code	Description
Y	Yes
N	No

Used in Transactions: IRQ[O]

5.2.17 Field 2.317 Request IAFIS Search

This optional field shall indicate a request to search IAFIS in addition to the DoD ABIS.

Subfield	1
Item	1
Character Type	A
Characters	1

Possible Codes (Mandatory):

Code	Description
Y	Yes
N	No

Used in Transactions: CAR[O], DEK[O], DEU[O], FANC[O], MAP[O], TPRS[O], DPRS[O]

5.2.18 Field 2.318 XML-based Rap Sheet

This field shall contain an electronic rap sheet in XML format. The electronic rap sheet shall consist of lines with a maximum of 174 characters per line. The response formatting shall conform to a future DoD standard.

Subfield	1
Item	1
Character Type	ANS
Characters	4 to 400,000

Special Characters: Any 7-bit characters, including printer control

Used in Transactions: SRE[O]

5.2.19 Field 2.319 Name of Latent Technician

This field contains the name of the latent technician (i.e., lifter or latent processor). The surname should be entered first, separated by a comma and followed by the given name(s), which is separated by a space. This field should contain an alpha string of no more than 100 characters. Commas, hyphens, and blanks are allowed as special characters.

Subfield	1
Item	1
Character Type	AS
Characters	3 to 100

Special Characters: comma, hyphen, blank

Used in Transactions: LFIS[M], LFFS[M]

5.2.20 Field 2.320 Name of Latent Submitter

This field contains the name of the latent submitter. The surname should be entered first, separated by a comma and followed by the given name(s), which is separated by a space. This field should contain an alpha string of no more than 100 characters. Commas, hyphens, and blanks are allowed as special characters.

Subfield	1
Item	1
Character Type	AS

Characters	3 to 100
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Special Characters: comma, hyphen, blank

Used in Transactions: LFIS[M], LFFS[M]

5.2.21 Field 2.321 Coordinates in Military Grid Reference System (MGRS) format

This optional field contains the MGRS grid coordinate and corresponding datum. Both the MGRS and datum subfields are mandatory if this field is present.

Subfield	1
Item	1
Character Type	NS
Characters	11 to 21

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VER[O], TPRS[O], DPRS[O]

5.2.21.1 Subfield 2.321_1 Coordinate

This field is the MGRS coordinate at which the submission was collected. The data are in the form of Grid Zone Designation followed by a two-character easting/northing grid identifier, which is followed by a 4-, 6-, 8-, 10-, or 12-digit coordinate, e.g., 42BNG1155, 42BNG112556, 42BNG11235567, 42BNG1123455678, 42BNG112343556789).

Subfield	all
Item	1
Character Type	NS
Characters	7 to 17

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], FANC[M], MAP[M], VER[M], TPRS[M], DPRS[M]

5.2.21.2 Subfield 2.321_2 Datum

This field is the EBTS Geocoordinate Datum Code corresponding to the datum of the MGRS coordinate in subfield 2.321.1. The data are in the range 1 to 9,999.

Subfield	all
Item	2
Character Type	NS
Characters	4

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], FANC[M], MAP[M], VER[M], TPRS[M], DPRS[M]

5.2.22 Field 2.322 Coordinates in UTM format

This optional field contains the Universal Trans Mercator (UTM) grid coordinate and corresponding datum. Both the UTM and datum subfields are mandatory if this field is present.

Subfield	1
Item	1
Character Type	NS
Characters	12 to 24

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[O], DEK[O], FANC[O], MAP[O], VER[O], TPRS[O], DPRS[O]

5.2.22.1 Subfield 2.322_1 Coordinate

This field is the UTM coordinate at which the submission was collected. The data are in the form of Zone Number, space, Zone Letter, space, Easting, space, Northing, e.g., 10 U 499425 5521953.

Subfield	all
Item	1
Character Type	NS
Characters	8 to 20

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], FANC[M], MAP[M], VER[M], TPRS[M], DPRS[M]

5.2.22.2 Subfield 2.322_2 Datum

This field is the EBTS Geocoordinate Datum Code corresponding to the datum of the UTM coordinate in subfield 2.321.1. The data are in the range 1 to 9,999.

Subfield	all
Item	2
Character Type	NS
Characters	4

Special Characters: Any 7-bit non-Ctrl characters

Used in Transactions: CAR[M], DEK[M], FANC[M], MAP[M], VER[M], TPRS[M], DPRS[M]

5.3 Type-14 Records

The DoD ABIS will accept 1,000-ppi fingerprint images in Type-14 records for CAR, MAP, FANC, DEK, DEU, and DPRS submissions.

Type-14 records are defined in the EFTS.

5.4 Type-16 Records

The DoD ABIS will accept iris images in Type-16 records for CAR, MAP, FANC, DEK, DEU, and DPRS submissions.

Type-16 records are defined in the following sections.

5.4.1 Field 16.001 Logical Record Length

This mandatory field shall contain the length of the logical record specifying the total number of bytes, including every byte of all nine fields contained in the record. This field is defined in ANSI/NIST-ITL 1-2000.

5.4.2 Field 16.002 Image Designation Character (IDC)

This mandatory field shall be used to identify the image data contained in this record. The IDC in this field shall be a binary representation of the IDC found in the file content field of the Type-1 record. This field is defined in ANSI/NIST-ITL 1-2000.

5.4.3 Field 16.003 Feature Identifier

This mandatory field shall contain an identifier indicating which eye is represented by the image in the record. An entry of “0” in this field indicates that the image in this record is undefined. An entry of “1” in this field indicates that the image in this record is of a right eye. An entry of “2” in this field indicates that the image in this record is of a left eye.

Subfield	1
Item	1
Character Type	N
Characters	1

Possible Codes (Mandatory):

Code	Description
0	Left or Right eye not defined
1	Right Eye
2	Left Eye

5.4.4 Field 16.004 Make/Model/Serial Number

This optional field contains the make, model, and serial number for the iris capture device.

Subfields	1
Item	1
Character Type	ANS
Characters	3 to 150

Special Characters: Any 7-bit non-Ctrl characters

5.4.4.1 Subfield 16.004_1 Make

This mandatory field contains the make for the iris capture device.

Subfield	all
Item	1
Character Type	ANS
Characters	1 to 50

Special Characters: Any 7-bit non-Ctrl characters

5.4.4.2 Subfield 16.004_2 Model

This mandatory field contains the model for the iris capture device.

Subfield	all
Item	2
Character Type	ANS
Characters	1 to 50

Special Characters: Any 7-bit non-Ctrl characters

5.4.4.3 Subfield 16.004_1 Serial

This mandatory field contains the serial number for the iris capture device.

Subfield	all
Item	3
Character Type	ANS
Characters	1 to 50

Special Characters: Any 7-bit non-Ctrl characters

5.4.5 Field 16.005 Image Format

This mandatory ASCII field shall contain the image format code. It shall be used to specify the type of image format used.

Subfield	1
Item	1
Character Type	N

Characters	1 to 2
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Possible Codes (Mandatory):

Code	Description
0	Undefined
2	Gray Scale (mono) raw image format
4	RGB (color) raw image format
6	RGB gray scale (mono) JPEG image format
8	RGB (color) JPEG image format

5.4.6 Field 16.006 Horizontal line length

This mandatory ASCII field shall contain the number of pixels present on a single horizontal line of the transmitted image. This field is defined in ANSI/NIST ITL 1 2000.

5.4.7 Field 16.007 Vertical line length

This mandatory ASCII field shall contain the number of horizontal lines present in the transmitted image. This field is defined in ANSI/NIST-ITL 1-2000.

5.4.8 Field 16.008 Scale units

This mandatory ASCII field shall specify the units used to describe the image sampling frequency (pixel density). A “1” in this field indicates pixels per inch; a “2” indicates pixels per centimeter. A “0” in this field indicates that no scale is given. For this case, the quotient of HPS/VPS gives the pixel aspect ratio. This field is defined in ANSI/NIST-ITL 1-2000.

5.4.9 Field 16.009 Horizontal pixel scale

This mandatory ASCII field shall specify the integer pixel density used in the horizontal direction providing that the scale unit fields contain a “1” or a “2”. Otherwise, it indicates the horizontal component of the pixel aspect ratio. This field is defined in ANSI/NIST-ITL 1-2000.

5.4.10 Field 16.010 Vertical pixel scale

This mandatory ASCII field shall specify the integer pixel density used in the vertical direction providing the SLC contains a “1” or a “2.” Otherwise, it indicates the vertical component of the pixel aspect ratio. This field is defined in ANSI/NIST-ITL 1-2000.

5.4.11 Field 16.011 Compression algorithm

This mandatory ASCII field shall specify the algorithm used to compress the image. An entry of “NONE” in this field indicates that the data contained in this record are uncompressed. The domain

registrar, DoD Biometrics, maintains a registry of acceptable compression techniques and corresponding codes. This field is defined in ANSI/NIST-ITL 1-2000.

Possible Codes (Mandatory):

Code	Description
NONE	Uncompressed
JPEGB	JPEG

5.4.12 Field 16.012 Bits per pixel

This mandatory ASCII field shall contain the number of bits used to represent a pixel. This field is defined in ANSI/NIST-ITL 1-2000.

5.4.13 Field 16.013 Iris Image Quality

This optional field shall indicate the image quality value. This field is defined in ANSI-INCITS 379-2004 – Iris Image Interchange Format.

Subfield	1
Item	1
Character Type	N
Characters	2 to 3

5.4.14 Field 16.014 Rotation Angle of Eye

This optional field shall indicate the rotation angle of the eye. For rectilinear images: rotation angle = round $(65536 * \text{angle} / 360)$ modulo 65536. The angle is measured in degrees from horizontal. The value “FFFF” indicates rotation angle of eye is undefined. For polar images, entry shall be “FFFF.”

Subfield	1
Item	1
Character Type	AN
Characters	1 to 4

5.4.15 Field 16.015 Rotation Uncertainty

This optional field shall indicate the rotation uncertainty. The rotation uncertainty is equal to round $(65536 * \text{uncertainty} / 180)$. The uncertainty is measured in degrees and is the absolute value of maximum error. The value “FFFF” indicates uncertainty is undefined.

Subfield	1
Item	1
Character Type	AN
Characters	1 to 4

5.4.16 Field 16.016 Image Properties

This optional field shall contain the image property code, and shall contain six information items. The information items shall indicate the specific:

1. horizontal orientation
2. vertical orientation
3. scan type
4. iris occlusions
5. occlusion filling
6. boundary extraction

These subfields are defined in ANSI-INCITS 379-2004 – Iris Image Interchange Format.

Subfield	1
Item	1
Character Type	N
Characters	6

5.4.16.1 Subfield 16.006_1 Horizontal Orientation

This mandatory field contains the horizontal orientation.

Subfield	all
Item	1
Character Type	N
Characters	1

Possible Codes (Mandatory):

Code	Description
0	Undefined
1	Base
2	Flipped

5.4.16.2 Subfield 16.006_2 Vertical Orientation

This mandatory field contains the vertical orientation.

Subfield	all
Item	2
Character Type	N
Characters	1

Possible Codes (Mandatory):

Code	Description
0	Undefined
1	Base
2	Flipped

5.4.16.3 Subfield 16.006_3 Scan Type

This mandatory field contains the scan type.

Subfield	all
Item	3
Character Type	N
Characters	1

Possible Codes (Mandatory):

Code	Description
0	Undefined
1	Progressive
2	Interlace Frame
3	Interlace Field

5.4.16.4 Subfield 16.006_4 Iris Occlusions

This mandatory field contains the iris occlusions.

Subfield	all
Item	4
Character Type	N
Characters	1

Possible Codes (Mandatory):

Code	Description
0	Undefined
1	Processed

5.4.16.5 Subfield 16.006_5 Occlusion Filling

This mandatory field contains the occlusion filling.

Subfield	all
Item	5
Character Type	N
Characters	1

Possible Codes (Mandatory):

Code	Description
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0	Zerofill
1	Unitfill

5.4.16.6 Subfield 16.006_6 Boundary Extraction

This mandatory field contains the boundary extraction.

Subfield	all
Item	6
Character Type	N
Characters	1

Possible Codes (Mandatory):

Code	Description
0	Undefined
1	Processed

5.4.17 Field 16.017 Device Unique Identifier

This optional field shall contain a 16-character string uniquely identifying the device or source of the data. This data can be one of: (1) Device Serial Number, identified by the first character “D,” (2) Host PC Mac address, identified by the first character “M,” (3) Host PC processor ID, identified by the first character “P,” and (4) No Serial Number, identified by all zero’s.

Subfield	1
Item	1
Character Type	ANS
Characters	16

Special Characters: Any 7-bit non-Ctrl characters

5.4.18 Field 16.018 Global Unique Identifier (GUID)

This optional field shall contain a 16-character string to indicate a GUID.

Subfield	1
Item	1
Character Type	AN
Characters	16

5.4.19 Field 16.019 Image Transformation

This optional field shall specify the transformation type used in the record. A “0” in this field indicates transformation type undefined; a “1” indicates standard transformation type.

Subfield	1
Item	1
Character Type	N
Characters	1

Possible Codes (Mandatory):

Code	Description
0	Undefined
1	Standard

5.4.20 Field 16.999 Iris Image

This field shall contain the grayscale or color data from an iris, is always assigned field number 999, and must be the last physical field in the feature record.

Subfield	1
Item	1
Character Type	B1
Characters	1 to no limit

APPENDIX A: ACRONYM LIST

ACRONYM	DEFINITION
ABIS	Automated Biometric Identification System
ADGR	Active Duty or Guard or Reserve on Active Duty Assignment
AFIS	Automated Fingerprint Identification System
ANSI/NIST	American National Standards Institute/National Institute of Standards and Technology
ASCII	American Standard Code for Information Interchange
BAT	Biometrics Automated Toolset
BATGUID	BAT Global Unique Identifier
BFC	DoD Biometrics Fusion Center
BMO	DoD Biometrics Management Office
CAR	Criminal 10-print Submission
CBEFF	Common Biometric Exchange File Format
CJIS	Criminal Justice Information Systems
CPR	Subject Photo Request
DBIDS	Defense Biometric Identification System
DEK	Known Deceased
DEU	Unknown Deceased
DMDC	Defense Manpower Data Center
DMS	Degrees, Minutes, Seconds
DoD	Department of Defense
DOM_IMP	Domain Implementation
DOM_VER	Domain Verification
DPRS	DoD Flat Print Rap Sheet Search
EBTS	DoD Electronic Biometric Transmission Specification
EDIPI	Electronic Data Interchange Personal Identifier
EFTS	Electronic Fingerprint Transmission Specification
EPW	Enemy Prisoner of War
ERRI	Image Transaction Error
ERRL	Latent Transaction Error
ERRT	10-print Transaction Error
EVER	Verification Error Response
FANC	Federal Applicant No Charge

ACRONYM	DEFINITION
FBI	Federal Bureau of Investigations
FIPS	Federal Information Processing Standard
GMT	Greenwich Mean Time
GUID	Global Unique Identifier
HPS	Horizontal Pixel Scale
IDC	Image Designation Character
IED	Improvised Explosive Device
IOC	Initial Operating Capability
IRQ	Fingerprint Image Request
IRR	Fingerprint Image Request Response
ISN	Internment Serial Number
ISR	Image Response Summary
LFFS	Latent Fingerprint Feature Search
LFIS	Latent Fingerprint Image Search
LRE	Latent Result
MAP	Miscellaneous Applicant
MGRS	Military Grid Reference System
MIO	Maritime Interdiction Operation Encounter (Identity Spot Check)
NCIC	National Crime Information Center
NIST	National Institute of Standards and Technology
ORI	Originating Agency Identifier
OEN	Operational or Combat Encounter (Identity Spot Check)
PEN	Patrol or Checkpoint Encounter (Identity Spot Check)
PIV	Personal Identity Verification
PRR	Photo Response
SOP	Standard Operating Procedure
SRE	Submission Results – Electronic
SRL	Search Result – Latent
SRT	Search Result – 10-print
TCN	Transaction Control Number or Third Country National
TOT	Types of Transactions
TPIS	10-print Fingerprint Image Searches
TPRS	10-print Rap Sheet Search

ACRONYM	DEFINITION
UNK	Unknown
USO	United Service Organization
UTC	Universal Time Code
v	version
VER	Verification Electronic Submission
VPS	Vertical Pixel Scale
VRSP	Verification Response – Electronic
WSQ	Wavelet Scalar Quantization
XML	Extensible Markup Language