

CBEFF Working Group

ANSI/NIST Fingerprint Standard Update Workshop II

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Proposal

- Add Type-18 CBEFF Record
 - Can carry M1 standard biometric data of any type
- Provide Annex with example
- New fields for Type-10, -13, -14, -15, and -16
 - Make those records conform to CBEFF

CBEFF

- Common Biometric Exchange Formats Framework
- INCITS 398-2005
- Biometric Information Record (BIR)
 - Header
 - Biometric Data Block (BDB)
 - optional Signature Block (not used in Type-18)
- Exact format and ordering not specified
- Type-18 will define

Type-18

Cond Code	Field Number	Field Name	Char Type	Field Size
M	18.001	LOGICAL RECORD LENGTH	N	4-10
M	18.002	IMAGE DESIGNATION CHARACTER	N	2-5
M	18.100	CBEFF HEADER VERSION	N	5
M	18.101	BIOMETRIC TYPE	N	9
M	18.102	BIOMETRIC DATA QUALITY	AN	2-4
M	18.103	BDB FORMAT OWNER	AN	5
M	18.104	BDB FORMAT TYPE	AN	5
M	18.999	BIOMETRIC DATA	B	-

↑
C
B
E
F
F
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H
E
A
D
E
R

e.g., M1 Data Interchange Format

e.g., Image

Field Definitions

Field 18.100: CBEFF Header Version (HDV)

- Version of CBEFF specification
- INCITS 398-2005 represented by the string '0101'

Field 18.101: Biometric Type (BTY)

- Type of biometric technology (CBEFF Table 4)
 - fingerprint, iris, etc.

Field 18.102: Biometric Data Quality (BDQ)

- Quality of the data in the BDB (0 through 100)

Field 18.103: BDB Format Owner (BFO)

- Vendor, standards body, working group, or industry consortium that has defined the format of the Biometric Data (in the BDB).

Field 18.104: BDB Format Type (BFT)

- Value assigned by the format owner to represent the specific BDB Format

Example

- Biometric Data Block is an INCITS 381-2004 standard finger image data record

Field	Transaction Record	Byte Count
LEN	18.001:234519 ^{G_S}	14
IDC	18.002:33 ^{G_S}	10
HDV	18.100:0101 ^{G_S}	12
BTY	18.101:00000008 ^{G_S}	16
BDQ	18:102:80 ^{G_S}	10
BFO	18.103:001B ^{G_S}	12
BFT	18.104:0401 ^{G_S}	12
BDB	18.999:<binary data> ^{F_S} See Table 2	234,425 + 8
Total		234,519

e.g., Applied to Type-16

Cond Code	Field Number	Field Name
M	16.001	LOGICAL RECORD LENGTH
M	16.002	IMAGE DESIGNATION CHARACTER
M	16.006	HORIZONTAL LINE LENGTH
 (other Type-16 fields)
M	16.012	BITS PER PIXEL
O	16.100	CBEFF HEADER VERSION
O	16.101	BIOMETRIC TYPE
O	16.102	BIOMETRIC DATA QUALITY
O	16.103	BDB FORMAT OWNER
O	16.104	BDB FORMAT TYPE
M	16.999	IMAGE DATA

The diagram illustrates the layout of Type-16 fields. A vertical yellow bar on the right side of the table indicates the position of the fields. A red double-headed arrow indicates the vertical extent of the CBEFF header fields (rows 16.100 to 16.104). A yellow arrow points from the 'IMAGE DATA' field to the 'CBEFF HEADER' label.

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