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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 41903.1-2022

**Information technology - Object oriented BioAPI - Part 1:
Architecture**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents"

drafted.

This document is Part 1 of GB/T 41903 "Object-Oriented Biometric Identification Application Programming Interface for Information Technology".

GB/T 41903 has released the following parts.

--- Part 1. Architecture.

This document is modified using ISO /IEC 30106-1.2016 "Information Technology Object-Oriented Biometrics Application Programming Interface No.

Part 1. Architecture".

The technical differences between this document and ISO /IEC 30106-1.2016 and the reasons are as follows.

a) ISO /IEC 19794-1 (see Chapter 1, Chapter 3, Chapter 6) is replaced with the normatively cited GB/T 30267.1-2013,

To adapt to the technical conditions of our country;

b) Add "Biometric Identification Function Provider" (see 3.1), "Biometric Identification Service Provider" (see 3.2), "Biometric Data Block"

(see 3.3), "Biometric Information Record" (see 3.4) and "Component Registry" (see 3.5);

c) Replaced ISO /IEC 2832-37 (see Chapter 3) with the normatively cited GB/T 5271.37-2021 to adapt to our country's technology

surgical conditions;

d) Changed the introduction of the abbreviations chapter, deleted the unused abbreviations of FMR, MOC, PID and SBH, and added Bio-

API, TLV and UML acronyms (see Chapter 4);

e) Replaced ISO /IEC 30106 (all parts) with the normative reference GB/T 41903 (all parts) (see Chapter 5, Chapter 6

Chapter, Chapter 8), to adapt to the technical conditions of our country;

f) GB 18030 for normative references is added to facilitate adaptation to my country's coded character standard (see Table 2 in 7.2 and Table 3 in 7.3.3);

g) Changed the coding requirements of "CBEFF_BIR_creator" in Table 2 and Table 3 to be consistent with the national standard system;

h) The normatively quoted GB/T 1988-1998 was added instead of ASCII encoding to adapt to the technical conditions of our country (see 7.3.3

table 3);

i) Changed the coding requirements of "CBEFF_BIR_validity_period" in Table 3 to be consistent with the national standard system;

j) Changed the name of the "BSP/BFP conformance subclass" function in Table A.1 so that Appendix A remains consistent with Chapter 9 of this document

Consistent.

The following editorial changes have been made to this document.

a) Changed the description of terms and definitions in Chapter 3, and revised ISO /IEC 19785 (all parts) to ISO /IEC

19785-1, ISO /IEC 19785-3 are consistent with the text of this document;

b) Added the content of Chapter 5, Chapter 10, Appendix A, according to the amendment ISO /IEC 30106-1.2016/Amd.1.2019

content supplement;

c) Changed the content outlined in 7.1, and adjusted the content according to the amendment ISO /IEC 30106-1.2016/Amd.1.2019;

d) The incorrect correspondence between this document and the interface in GB/T 30267.1-2013 in Table 1 has been changed, and the IBFP (function provider interface) has been changed.

port) is corrected to correspond to FPI (Function Provider Interface);

e) Changed the incorrect value of "CBEFF_version" in Table 2 and Table 3, and corrected "0x000030" to "0x30";

f) Added the table notes in Table 2 and Table 3 to make the format of the table more

standardized;

g) Changed the special provisions for the wrong field in Table 3, only the number of occurrences of the field "childBir" has special provisions, not

three fields;

h) Changed the wrong bit number of the "field Presence" field in Table 3, and corrected the bit number of the "field Presence" field to

continuous;

i) Add the introductory words before the list of biometric types in 8.2 to comply with the provisions of GB/T 1.1-2020;

j) Added the introductory language before the biometric subtype column of 8.3 to comply with the provisions of GB/T 1.1-2020.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

The BioAPI described in C language is suitable for applications written in C, and also suitable for applications written in C. However, like

Function-based languages like C do not map easily to object-oriented programming languages. In particular, in object-oriented applications

It is inconvenient to use the C language version of the API inside the program, and requires application development to introduce complex programming constructs. development oriented

The BioAPI version of Elephant is designed to increase the productivity of software practitioners, using BioAPI while retaining object-oriented programming model.

For Java, the standard object-oriented version of BioAPI that allows BSP execution to be loaded into Java-based application servers

Perform verification and/or identification operations. Among these application servers, the use of object-oriented BioAPI is better than using C when developing frameworks and BSPs.

The language version of BioAPI is more convenient.

Another area of application of the standard object-oriented version of BioAPI is in small computing devices based on object-oriented languages.

In devices (like the large application servers mentioned above) an object-oriented BioAPI framework and object-oriented BSP will

Their C equivalents are more suitable.

Object-oriented application programming interface requires a unified architecture, and the implementation languages include JAVA and C

IEC JTC1SC37 is the owner of the maintainer format. The maintainer format (ie Patronformat) is short for this format.

Part 2, Part 3 and Part 4 of GB/T 41903 "Object-Oriented Biometric Identification Application Programming Interface for Information Technology"

Points need to be used in conjunction with Part 1.

Information Technology Object-Oriented Biometric Recognition

Application Programming Interfaces Part 1.Architecture

1 Scope

This document establishes the architecture of a set of object-oriented BioAPI interfaces. Components identified in this document include frameworks, biometrics

Identification Service Provider (BSP), Biometric Function Provider (BFP), and Component Registry.

Note. Each of the above components has equivalent components established in GB/T 30267.1-2013, OOBioAPI is the object-oriented interpretation of this document.

Therefore, this document has conceptual equivalence with GB/T 30267.1-2013. Concepts appearing in this document (such as BioAPI_Unit and

Component registry) has the same meaning as GB/T 30267.1-2013. Although this document maintains the outline of GB/T 30267.1-2013

The concept is equivalent, but there are differences in the parameters passed between functions and the order of function calls. These differences exist to take advantage of object-oriented

Features of programming languages.

This document applies to the development and application of object-oriented biometric identification application programming interfaces.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations