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DRAFT

AMENDMENT

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Information technology — Biometric application programming interface —

Part 1: BioAPI specification

AMENDMENT 2: Framework-free BioAPI

Technologies de l'information — Interface de programmation d'applications biométriques —

Partie 1: Spécifications BioAPI

AMENDEMENT 2: Cadre Free BioAPI

Please see the administrative notes on page iii

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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Amendment 2 to ISO/IEC 19784-1:2006 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 37, *Biometrics*.

This Amendment adds support for biometric systems that use the BioAPI interface to BSPs without requiring the presence of a BioAPI Framework. Conformance is specified only for a BSP module. Applications access a conforming BSP module using system integration facilities provided by the operating system platform.

This Amendment also includes some minor editorial corrections to ISO/IEC 19784-1:2006.

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Information technology — Biometric application programming interface —

Part 1: BioAPI specification

AMENDMENT 2: Framework-free BioAPI

1) Add the following new paragraph after the third paragraph of the Introduction (starting "A key feature of the architecture"):

"However, this International Standard can also be applied where a system is to be built from conforming BSP components (without a BioAPI Framework module), using platform-specific system-integration mechanisms - see clause 6."

2) Add the following after the first paragraph of the Scope:

"For use in a system that does not include a BioAPI Framework (called a framework-free BioAPI system), only the SPI interface is applicable, with applications interfacing directly to that in a platform-specific manner.

NOTE: Many clauses and/or sub-clauses of this part of ISO/IEC 19784 are not applicable for implementation of a framework-free BioAPI system. These are identified at the head of the clause or sub-clause."

*3) Renumber the NOTE after paragraph 3 of the Scope (starting "This part of ISO/IEC 19784 supports …" as "*NOTE 1:*". Add the following new "*NOTE 2*":*

"NOTE 2: Where a BioAPI Framework is not used in a system, the ability to support multiple applications and multiple BSPs is platform-dependent and depends on the nature of the system-integration techniques employed."

4) Add the following at the end of the last sentence of paragraph 4 of the Scope (starting "This part of ISO/IEC 19784 is not required …":

", but see ISO/IEC 19784-3"

5) Add the following sentences at the end of the last paragraph of the Scope (starting "This part of ISO/IEC 19784 specifies a version …"):

"It also specifies a version number described as Major 2, Minor 1, or version 2.1 that provides an enhanced Graphical User Interface. Some clauses and sub-clauses apply only to one of these versions, some to both. This is identified at the head of the relevant clauses and sub-clauses."

6) Renumber the NOTE *after the last paragraph of the Scope (starting "This part of ISO/IEC 19784 specifies a version …") as "*NOTE 1*". Add the following new "*NOTE 2*":*

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"NOTE 2: The differences between the requirements of the 2.0 specification and the 2.1 specification for framework-free operation relate only to the biometric type values and encodings."

7) Add the following paragraph after the last paragraph of the Scope (starting "This part of ISO/IEC 19784 specifies a version …") and after the NOTE*s:*

"Conformance is specified in clause 2."

8) Renumber the NOTE *after the first paragraph of clause 4 (starting "For the purposes of this document …") as "*NOTE 1*". Add the following new "*NOTE 2*":*

"NOTE 2: Many of these terms and definitions are not relevant for the use of this part of ISO/IEC 19784 for framework-free BioAPI systems."

9) In 4.4 NOTE 2, change the cross-reference from 6.2.4 to 6.3.4; in 4.5 NOTE, change the cross-reference from 6.2.2 to 6.3.2.

10) Replace the heading of 6.1 with the following:

6.1 The full BioAPI API/SPI Architectural Model

11) In 6.1.2, replace "A BioAPI system consists of …" with the following:

"A full BioAPI system consists of …"

12) In 6.2.1, NOTE, change the cross-reference from 6.2 to 6.3.

13) In 6.1.8 d),change the cross-reference from 6.5 to 6.6.

14) Add the following new subclause before the current 6.2, and renumber the current 6.2, 6.3, 6.4 and 6.5 (and all sub-clauses) as 6.3, 6.4, 6.5, and 6.6:

6.2 The framework-free BioAPI Architectural Model

6.2.1 The framework-free architecture recognises the use of BioAPI-conforming BSPs that provide (a defined subset of) the SPI interface for integration into systems in which other components are not standardised.

6.2.2 The conformance requirements in this case are reduced to the minimum necessary for reliable BSP operation, and apply only to BSPs.

6.2.3 The architecture within a BSP (see 6.3) still applies, but many BSPs intended for use in framework-free systems are likely to be (but need not be) monolithic implementations from a single vendor.

15) Add the following after the new 6.4 heading:

"NOTE: The Component Registry function in a framework-free system is either not available or is provided by non-standardised interfaces to platform-dependent functions. This sub-clause is not relevant for such systems."

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16) In the new 6.4.6, change the cross-references from 6.3.4 and 6.3.5 to 6.4.4 and 6.4.5, respectively.

17) Add the following after the new 6.5 heading:

"NOTE: The installation and de-installation functions in a framework-free system are either not available or are provided by non-standardised interfaces to platform-dependent functions. This sub-clause is not relevant for such systems."

18) In the new 6.5.5, change the cross-reference from 6.4.6 to 6.5.6.

19) Add the following after the new 6.6 heading:

"NOTE: These functions in a framework-free system are either not available or are provided by non-standardised interfaces to platform-dependent functions. This sub-clause is not relevant for such systems."

20) Add the following NOTE after the new 6.7.1:

"NOTE: The schema might not be available in framework-free systems."

21) Add the following NOTE after the clause 7 heading:

"NOTE: Many of these types and macros are not relevant for the implementation of a BSP designed to work in a framework-free BioAPI system."

22) In 7.47, `#define BioAPI_PAYLOAD`, *replace "*accepts payload*" with "*accepts a payload*" and "*payroll*" with "*the payload*".*

23) Add the following NOTE after the clause 8 heading:

"NOTE: This clause is not applicable for framework-free systems, as BSPs provide — and applications interface directly with — the BioSPI interfaces specified in clause 9."

24) Add the following at the end of the first sentence of the first paragraph of 9.1:

", or with one or more applications in a framework-free BioAPI system"

25) In the second sentence of the first paragraph of 9.1, replace "In general, the SPI is a …" *with* "In general, for a full BioAPI system, the SPI is a …".

26) Add the following at the end of 9.1 a):

"NOTE: Reference to such text can be needed when building a BSP for use in a framework-free system."

27) Add the following after the 9.2.1 heading:

"NOTE: An application should not assume that this function is available when operating with a BSP designed for a framework-free system, as such a BSP is not required to support this function."

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28) Add the following after the 9.2.2 heading:

"NOTE: An application should not assume that this function is available when operating with a BSP designed for a framework-free system, as such a BSP is not required to support this function."

29) Add the following after the 9.2.3 heading:

"NOTE: An application should not assume that this function is available when operating with a BSP designed for a framework-free system, as such a BSP is not required to support this function."

30) Add the following after the 9.3.1 heading:

"NOTE: An application should not assume that this function is available when operating with a BSP designed for a framework-free system, as such a BSP is not required to support this function."

31) Add the following after the 9.3.3 heading:

"NOTE: An application should not assume that this function is available when operating with a BSP designed for a framework-free system, as such a BSP is not required to support this function."

32) Add the following after the 9.3.6 heading:

"NOTE: An application should not assume that this function is available when operating with a BSP designed for a framework-free system, as such a BSP is not required to support this function."

33) Add the following after the clause 10 heading:

"NOTE: This clause does not apply for a framework-free system."

34) Add the followingafter the clause 11 heading:

"NOTE: This clause provides specification of error handling, and is applicable for a full BioAPI system and for use of a BSP designed for a framework-free operation, but in the latter case only the BSP-related and Unit-related errors will occur."

35) Add the following after the A.3 heading:

"NOTE: This sub-clause is not applicable in a framework-free system."

36) Add the following new paragraph after the first paragraph of A.4:

"BSPs that claim conformance only for framework-free operation need not support the functions identified in earlier text as not being required for framework-free operation."

37) Replace paragraph 2 of A.4 (added by Amd.1) from "BioAPI 2.0 conformant BSPs (of any conformance subclass) are …" *with the following:*

"BioAPI 2.0 conformant BSPs (of any conformance subclass, including framework-free operation) are ..."

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38) Replace paragraph 3 of A.4 (added by Amd.1) from "BioAPI 2.1 conformant BSPs (of any conformance subclass) are…" *with the following:*

"BioAPI 2.1 conformant BSPs (of any conformance subclass, including framework-free operation) are ..."

39) In paragraph 4 of A.4, replace "specification requirements. Additional parameters …" *with the following:*

"specification requirements, including functions not required for framework-free operation, but actually implemented. Additional parameters ..."

40) In paragraph 5 of A.4, replace "The BSP installation process shall … " *with the following:*

"The BSP installation process (not applicable for a BSP designed for framework-free operation) shall ..."

41) Replace paragraph 9 of A.4, starting "All BSPs shall support basic Component Management ...", *with the following:*

"All BSPs claiming to support a full BioAPI system shall support basic Component Management (clause 9.3.1), Handle (clause 9.3.2), Event (9.3.3.1) and Utility (clause 9.3.7) operations (BSPs claiming only to support use in a framework-free system need not support any of these operations). Callback (clause 9.3.3.2), Database (clause 9.3.5), and BioAPI Unit (clause 9.3.6) operations are optional."

42) In Table A.1, column 1, cell starting **"Component Management Functions"***, add* "**(BSPs claiming only conformance for use in a framework-free system)"**

43) In Table A.1, column 1, cell starting **"Handle Functions"***, add* "**(A BSP claiming only conformance for use in a framework-free system need not implement handle functions, provided it never returns a handle (recommended). If it returns a handle, then these functions shall be supported.)"**

44) In Table A.1, column 1, cell starting **"Callback and Event Functions"***, add* "**(None are required for a BSP claiming only conformance for use in a framework-free system)"**

45) In Table A.1, column 1, cell starting **"BioAPI Unit Functions"***, add* "**(None are required for a BSP claiming only conformance for use in a framework-free system)"**

46) In Table A.1, column 1, cell starting "**Utility Functions"***, add* "**(None are required for a BSP claiming only conformance for use in a framework-free system)"**

47) Add the following after the second bullet of A.4.6:

"NOTE: This is not applicable for BSPs designed for framework-free systems."

48) Add the following after A.4.6.2.3:

"NOTE: This is not applicable for BSPs designed for framework-free systems."

49) Add the following after A.4.6.2.4:

"NOTE: This is not applicable for BSPs designed for framework-free systems."

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50) Change "NOTE:" *in A.4.6.2.5 to* "NOTE 2:" *and add the following new NOTE 1 above:*

"NOTE 1: This is not applicable for BSPs designed for framework-free systems."

51) Add the following before the heading D.1:

"NOTE: This is not applicable for BSPs designed for framework-free systems."

52) Replace Figure 3 and its title with the following figure and title:

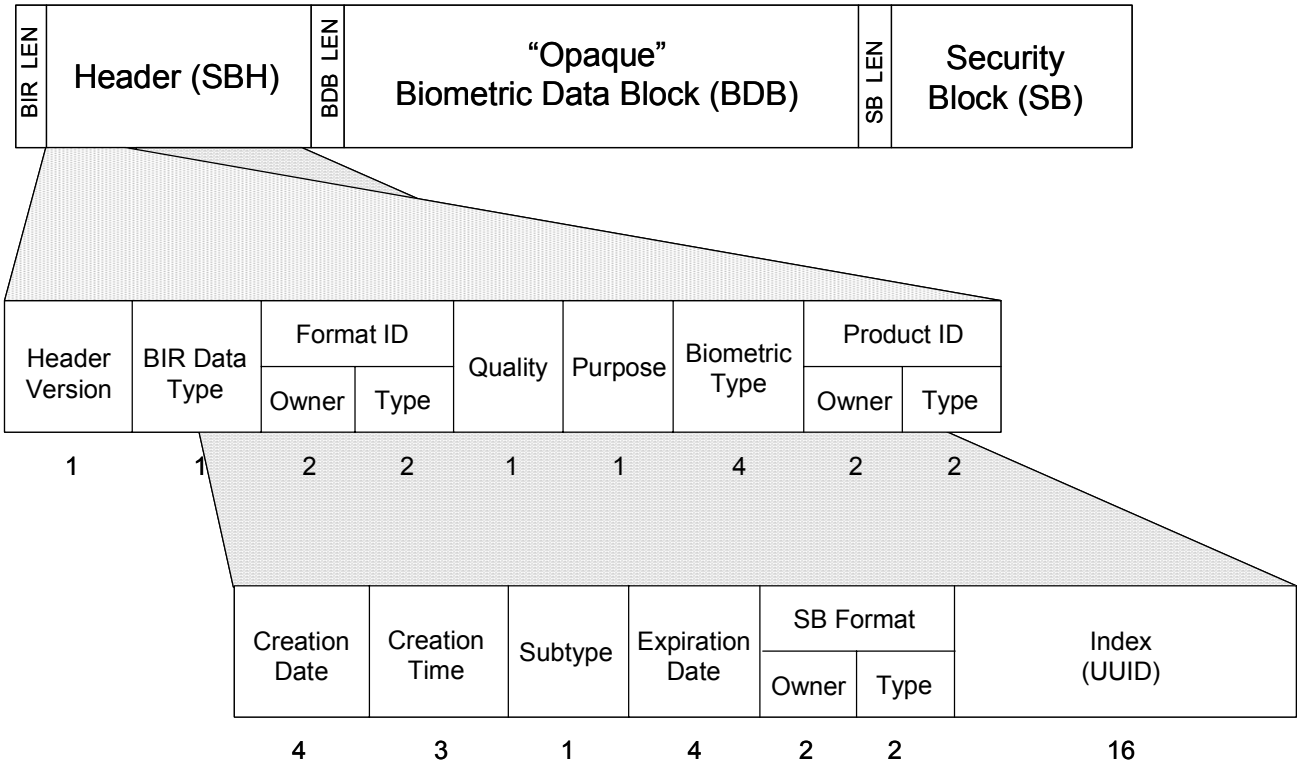

Figure 3 — Biometric information record (serialized BIR for storage and transmission)

53) Replace "BioAPI_Load" and "BioAPI_Unload" *with* "BioAPI_BSPLoad" *and* "BioAPI_BSPUnload", *respectively, throughout the document. This affects 8.1.9 and 8.11.2.*

54) Add the following text at the end of 8.7.1.1:

"This function may be called from any thread.

This function shall not be called in the callback function."

55) In footnote e of the table in B.10, replace "BIR_DATA_TYPE" *with* "BioAPI_BIR_DATA_TYPE"*.*

56) In the last paragraph of 8.1.9.1 and in the penultimate paragraph of 8.1.11.1, replace "***BioAPI_Load***" *with* "***BioAPI_BSPLoad***"*.*

57) In the last paragraph of 8.1.9.1 and in the penultimate paragraph of 8.1.11.1, replace "**BioAPI_Unload**" with "**BioAPI_BSPUnload**".

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