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**Information technology — Biometric  
data interchange formats —**

**Part 6:  
Iris image data**

**AMENDMENT 2: XML encoding and  
clarification of defects**

iTeh STANDARD PREVIEW  
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*Technologies de l'information — Formats d'échange de données  
biométriques —*

*ISO/IEC 19794-6:2011/Amd 2:2016  
Partie 6: Données d'image de l'iris*

<https://standards.iteh.ai/catalog/standards/sist/d487d512-adfd-4363-af5b-87d67d6b1e2b/iso-iec-19794-6-2011-amd-2-2016>

*AMENDEMENT 2: Codage XML et précisions concernant les défauts*

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ISO/IEC 19794-6:2011/Amd 2:2016  
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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

Amendment 2 to ISO/IEC 19794-6:2011 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 37, *Biometrics*.

ISO/IEC 19794-6:2011/Amd.2:2016  
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# Information technology — Biometric data interchange formats —

## Part 6: Iris image data

### AMENDMENT 2: XML encoding and clarification of defects

#### *Page v, Introduction*

Add the following paragraph to the end of the Introduction

Additionally, this document supports both binary and XML encodings, to support a spectrum of user requirement. With XML, this document will meet the requirements modern IT architectures. With binary encoding, this document will also be able to be used in bandwidth or storage constrained environments. Annex G specifies the schema that XML-encoded iris image records must conform to. Annex H provides an example of a valid XML-encoded iris image record.

#### *Page 1, Clause 2 Conformance*

Replace the existing text in Clause 2 Conformance with the following:

A binary data record conforms to this document if it satisfies all the format requirements with respect to its structure, data values, relationships among its fields, and with respect to relations between its fields and the underlying input that are specified throughout Clause 7.

An XML document conforms to this document if it satisfies the format requirements with respect to its structure, with respect to relations among its fields, and with respect to relations between its fields and the underlying input that are specified within Annex C.

A system that produces biometric data records is conformant to this document if all biometric data records that it outputs conform to this document (as defined above) as claimed in the Implementation Conformance Statement associated with that system. A system does not need to be capable of producing biometric data records that cover all possible aspects of this document, but only those that are claimed to be supported by the system in the Implementation Conformance Statement (ICS).

A system that uses biometric data records is conformant to this document if it can read, and use for the purpose intended by that system, all biometric data records that conform to this document (as defined above) as claimed in the Implementation Conformance Statement associated with that system. A system does not need to be capable of using biometric data records that cover all possible aspects of this document, but only those that are claimed to be supported by the system in an Implementation Conformance Statement (ICS).

Biometric data interchange format conformance tests conform to this document if they satisfy all of the normative requirements set forth in Annex A. Specifically, all Level-1, Level-2 and Level-3 tests shall use the assertions defined in Table A.2 and Table A.3 in conformity with the concept and rules set in ISO/IEC 19794-1:2011/Amd 1:2013.

Implementations of this document tested according to the specified methodology shall be able to claim conformance only to those biometric data record (BDB) requirements specified in this document that are tested by the test methods established by this methodology.

Implementations of this document do not necessarily need to conform to all possible aspects of this document, but only to those requirements that are claimed to be supported by the implementation in an implementation conformance statement (ICS), filled out in accordance with ISO/IEC 19794-1:2011/Amd 1:2013, Annex A and Table A.1.

Page 2, Clause 3 Normative references

Add the following reference to the normative references list:

- <http://www.w3.org/XML/Schema>

Page 13, Table 7

Add the following row to Table 7:

37 (0025 <sub>Hex</sub> )	XML-iris-image	{iso(1) registration-authority(1) cbeff(19785) biometric-organization(0) jtc1-sc37(257) bdbb(0) XML-iris-image(37)}
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Page XX, Annex A

Replace A.3 with the following:



**A.3 Table of test assertions for binary encoded records**

The specific test assertions required for conformance testing for binary records to this document are listed in Table A.2, which extends over multiple pages. The conformance test assertions are listed in the order in that the corresponding fields are required to appear, if present, in a conforming record. The normative requirements of this document, as summarized in Table A.1, are referenced in the tables.

Page XX, Annex A

Rename Table A.2 to:

**Table A.2 — Level 1 and Level 2 Conformance Test assertions for all binary encoded records**

Rename Table A.3 to:

**Table A.3 — Level 1 and Level 2 Conformance Test assertions for Type 1 binary encoded records**

Rename Table A.4 to:

**Table A.4 — Level 1 and Level 2 Conformance Test assertions for Type 2 binary encoded records**

Rename Table A.5 to:

**Table A.5 — Level 1 and Level 2 Conformance Test assertions for Type 3 binary encoded records**

Rename Table A.6 to:

**Table A.6 — Level 1 and Level 2 Conformance Test assertions for Type 7 binary encoded records**

Add new section A.4:

**A.4 Tables of test assertions for XML-encoded records**

The specific test assertions required for conformance testing for XML-encoded records to this document are listed in [Tables A.7, A.8, A.9, A.10](#) and [A.11](#), which may extend over multiple pages. The conformance test assertions are listed in the order in that the corresponding fields are required to appear, if present, in a conforming record. The normative requirements of this document, as summarized in Table A.1, are referenced in the tables.

**Table A.7 — Conformance test assertions for all XM-encoded records**

Test Num	Rqt ID	Level	Element Name	Operator	Opd	Test Note	Status	IUT Spt	Spt Range	Test Result
X1	R3-R4	1	IrisImage.Version.Major	EQ	2		M			
X2	R3-R4	1	IrisImage.Version.Minor	EQ	0		M			
X3	R-174	2	IrisImage.Representation-List.Representation.ImageCompressionAlgorithm-Name	EQ	Compression Algorithm of decoded base64 IrisImage.Representation-List.Representation.IrisImageData	1	M			
X4	R-186	2	IrisImage.RepresentationList.Representation.Width	EQ	Width Value found within decoded base64 IrisImage.Representation-List.Representation.IrisImageData	1	M			
X5	R-190	2	IrisImage.Representation-List.Representation.Height	EQ	Height Value found within decoded base64 IrisImage.Representation-List.Representation.IrisImageData	1	M			
X6	R-194	2	IrisImage.Representation-List.Representation.BitDepth	EQ	BitDepth Value found within decoded base64 IrisImage.Representation-List.Representation.IrisImageData	1	M			
X7	R-207	2	IrisImage.Representation-List.Representation.SmallestIrisCentreX	LT	IrisImage.Representation-List.Representation.Width	1	M			

Table A.7 (continued)

Test Num	Rqt ID	Level	Element Name	Operator	Opd	Test Note	Status	IUT Spt	Spt Range	Test Result
X8	R-210	2	IrisImage. Representation- List. Representation. LargestIrisCentreX	LT	IrisImage. Representation- List. Representation. Width	1	M			
X9	R-213	2	IrisImage. Representation- List. Representation. SmallestIrisCentreY	LT	IrisImage. Representation- List. Representation. Height	1	M			
X10	R-216	2	IrisImage. Representation- List. Representation. SmallestIrisCentreY	LT	IrisImage. Representation- List. Representation. Height	1	M			
X11	R-219	2	IrisImage. Representation- List. Representation. SmallestIrisDiameter	LTE	Min(IrisImage. Representation- List. Representation. Width, IrisImage. Representation- List. Representation. Height)	1	M			
X12	R-222	2	IrisImage. Representation- List. Representation. LargestIrisDiameter	LTE	Min(IrisImage. Representation- List. Representation. Width, IrisImage. Representation- List. Representation. Height)	1	M			

Table A.8 — Conformance test assertions for type 1 XML-encoded records

Test Num	Rqt ID	Level	Element Name	Operator	Opd	Test Note	Status	IUT Spt	Spt Range	Test Result
X101	R-153	2	Image Data, Iris centres, Iris height, Iris diameters	C		3				
X102	R-154	2	Image Data, Iris centres, Iris height, Iris diameters	C		4				
X103	R-155	2	Image Format and Iris image properties bit field	C		5				
X104	R-157	2	Image Format and Image data	C		5				



Table A.9 — Conformance test assertions for type 2 XML-encoded records

Test Num	Rqt ID	Level	Element Name	Operator	Opd	Test Note	Status	IUT Spt	Spt Range	Test Result
X201	R-153	2	Image Data, Iris centres, Iris height, Iris diameters	C		3				
X202	R-154	2	Image Data, Iris centres, Iris height, Iris diameters	C		4				
X203	R-155	2	Image Format and Iris image properties bit field	C		5				
X204	R-157	2	Image Format and Image data	C		5				
X205	R-158	2	IrisImage. Representation-List. Representation. Width	EQ	640					
X206	R-158	2	IrisImage. Representation-List. Representation. Height	EQ	480					

Table A.10 — Conformance test assertions for type 3 XML-encoded records

Test Num	Rqt ID	Level	Element Name	Operator	Opd	Test Note	Status	IUT Spt	Spt Range	Test Result
X301	R-153	2	Image Data, Iris centres, Iris height, Iris diameters	C		3				
X302	R-154	2	Image Data, Iris centres, Iris height, Iris diameters	C		4				
X303	R-155	2	Image Format and Iris image properties bit field	C		5				
X304	R-157	2	Image Format and Image data	C		5				
X305	R-159	2	Iris Centre	C		6				