

# National Biometric Security Project

## Emerging Standards Relevant to Biometrics



Standard Number or Project Code	Official Name of Standard	Purpose	Current Status	Link to Latest Document (Note that documents are not necessarily available to everyone. Where a direct link is unavailable, follow the link and look for the document number. A password or payment may be required.)	Remarks
<b>Non M1 US Standards</b>					
NIST ELFT-EFT	Evaluation of Latent Fingerprint Technologies: Extended Feature Sets	ELFT-EFS is an evaluation of the accuracy of latent matching using features marked by experienced human latent fingerprint examiners.	Emerging	<a href="http://fingerprint.nist.gov/standard/cdeffs/index.html">http://fingerprint.nist.gov/standard/cdeffs/index.html</a>	
NIST SP 800-122	DRAFT Guide to Protecting the Confidentiality of Personally Identifiable Information (PII)	intended to identify PII and determining what level of protection each instance of PII requires.	Emerging	<a href="http://csrc.nist.gov/publications/drafts/800-122/Draft-SP800-122.pdf">http://csrc.nist.gov/publications/drafts/800-122/Draft-SP800-122.pdf</a>	
ANSI/NIST - ITL 1-2010	N/A	This updated standard replaces ANSI/NIST-ITL 1-2007 and ANSI/NIST-ITL 2-2008 standards that address the interchange of fingerprint, facial, and SMT data	WD	<a href="http://fingerprint.nist.gov/standard/ANSI-NIST_2010_draft/ANSI-NIST_2010_draft/ANSI-NIST_2010_draft/ITL_2010_base_doc.pdf">http://fingerprint.nist.gov/standard/ANSI-NIST_2010_draft/ANSI-NIST_2010_draft/ANSI-NIST_2010_draft/ITL_2010_base_doc.pdf</a>	

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<b>INCITS M1 STANDARDS</b>					
M1 SD 2	List of Defined CBEFF Format Type codes	Data formats as developed in the Biometric Data Interchange Formats work of the INCITS M1 committee	SD	<a href="https://standards.incits.org/apps/org/workgroup/m1/download.php/7401/m1080535rev.htm">https://standards.incits.org/apps/org/workgroup/m1/download.php/7401/m1080535rev.htm</a>	
M1 SD 4	Report on Issues for Harmonizing Conformity Assessment to Biometric Standards	Identification of issues for harmonizing conformity assessment to biometric standards	SD	<a href="https://standards.incits.org/apps/org/workgroup/m1/download.php/7402/m1050067.pdf">https://standards.incits.org/apps/org/workgroup/m1/download.php/7402/m1050067.pdf</a>	
M1 SD 5	Common Text for Inclusion in the Introductory Clauses of INCITS M1 Ongoing Projects in INCITS M1.2, M1.3 and M1.4	This standard is one of a family of American National Standards being developed by INCITS that support interoperability and data interchange among biometrics applications and systems.	SD	<a href="https://standards.incits.org/apps/org/workgroup/m1/download.php/7403/Common_Text_CT_SD5.pdf">https://standards.incits.org/apps/org/workgroup/m1/download.php/7403/Common_Text_CT_SD5.pdf</a>	
<b>M 1.2 Standards - Biometric Technical Interfaces</b>					
ANSI INCITS 398-2008 (Revision 1)	Information Technology - Conformance Testing Methodology Standard for Patron Formats Conforming to INCITS 398-2008, Information Technology – Common Biometric Exchange Formats Framework (CBEFF)	This standard specifies the concepts, test types and a conformance testing methodology to test conformance of CBEFF Biometric Information Records (BIR) claiming to be conformant to patron formats A, the BioAPI BIR or the NIST/ITL Type 99 data record specified in ANSI INCITS 398-2008 annexes as well as the LDS patron format for applications other than MRTD and other ICAO applications.	WD	<a href="https://standards.incits.org/apps/org/workgroup/m1.2/download.php/10301/m1.2-2010-00030.pdf">https://standards.incits.org/apps/org/workgroup/m1.2/download.php/10301/m1.2-2010-00030.pdf</a>	Project 1853D - Part 1

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Project 1829D	Biometric application programming interface – Java (BioAPI Java)	The proposed standard will specify an interface of a BioAPI Java framework and BioAPI Java BSP which will mirror the corresponding components specified in ISO/IEC 19784-1.	WD	<a href="https://standards.incits.org/apps/org/workgroup/m1/download.php/7503/m1-2009-00546-000.pdf">https://standards.incits.org/apps/org/workgroup/m1/download.php/7503/m1-2009-00546-000.pdf</a>	Project 1829D
<b>M 1.3 Standards - Biometric Data Interchange Formats</b>					
ANSI INCITS 456	Speaker Recognition Format for Raw Data Interchange (SIVR)	Standard defines a method of representing raw speaker identification and verification (SIV) data using the concept of Session and Instances within a Session	Public Review	<a href="http://www.techstreet.com/standards/INCITS/456_Draft_3?product_id=1632185">http://www.techstreet.com/standards/INCITS/456_Draft_3?product_id=1632185</a>	Revision 8 (456:200x)
ANSI INCITS 394:2004 [R2009]	Application Profile for Interoperability - Data Interchange and Data Integrity of Biometric Based Personal Identification for Border Management	It defines a set of base standards and criteria for applying those standards in applications that use biometrics to authenticate the identity of non-citizens as they enter, stay in, and leave the United States.	Public Review to Withdraw-Pending	<a href="http://www.techstreet.com/standards/INCITS/394_Draft?product_id=1159928">http://www.techstreet.com/standards/INCITS/394_Draft?product_id=1159928</a>	
ANSI INCITS 378:2009 AMENDMENT 1	Finger Minutiae Format for Data Interchange AMENDMENT 1		Public Review	<a href="http://www.techstreet.com/standards/INCITS/378_2009_Amendment_1_Draft?product_id=1666586">http://www.techstreet.com/standards/INCITS/378_2009_Amendment_1_Draft?product_id=1666586</a>	
ANSI INCITS 381:2009 AMENDMENT 1	Finger Image Based Data Interchange Format AMENDMENT 1		Public Review	<a href="http://www.techstreet.com/standards/INCITS/381_2009_Amendment_1_Draft?product_id=1666587">http://www.techstreet.com/standards/INCITS/381_2009_Amendment_1_Draft?product_id=1666587</a>	
ANSI INCITS 394-2004	Application Profile for Interoperability, Data Interchange and Data Integrity of Biometric-Based Personal Identification for Border Management	Profile for Using Other Biometric Standards in Applications Involving Border Management (primarily for State Department and DHS)	Public Review to Withdraw-Pending	<a href="http://webstore.ansi.org/ansidocstore/product.asp?sku=ANSI+INCITS+394%2D2004">http://webstore.ansi.org/ansidocstore/product.asp?sku=ANSI+INCITS+394%2D2004</a>	
ANSI INCITS 395:2005	Biometric Data Interchange Formats - Signature/Sign Data		Public Review to Withdraw-Pending	<a href="http://www.techstreet.com/standards/INCITS/395_2005?product_id=1226685">http://www.techstreet.com/standards/INCITS/395_2005?product_id=1226685</a>	

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ANSI INCITS 420-200X	Biometric Profile - Point-of-Sale Biometrics-Based Verification and Identification (Revision 19)	Profile for Using Other Biometric Standards in Applications Involving Point-of-Sale Transactions	Emerging	<a href="http://webstore.ansi.org/RecordDetail.aspx?sku=BSR+INCITS+420-200x+(Revision+19)">http://webstore.ansi.org/RecordDetail.aspx?sku=BSR+INCITS+420-200x+(Revision+19)</a>	
<b>M 1.5 Standards - Biometric Performance Testing and Reporting</b>					
ANSI INCITS 409	Biometric Performance Testing and Reporting				
Part 5	Framework for Testing and Evaluation of Biometric Systems for Access Control	Specific standards for testing performance of biometric access control systems	Public Review	<a href="http://www.techstreet.com/standards/INCITS/409_5_Draft?product_id=1617645">http://www.techstreet.com/standards/INCITS/409_5_Draft?product_id=1617645</a>	
Part 7	Framework for Testing Methodologies for Specific Environments of Biometric Systems	Describes modifications to general test guidelines required for testing of specific biometric modalities in specific environments	Public Review	<a href="http://www.incits.org/tc_home/m1htm/2008xdocs/m1080332.pdf">http://www.incits.org/tc_home/m1htm/2008xdocs/m1080332.pdf</a>	Revision 7
Part 8	Statistical methods for decision making	This TR deals with the final two stages of the Biometric Testing Life-Cycle	WD	<a href="http://www.incits.org/tc_home/m1htm/2007docs/m1070504.pdf">http://www.incits.org/tc_home/m1htm/2007docs/m1070504.pdf</a>	This TR will fill a gap where 19795-1 stops short of being what is needed for use by decision makers
<b>ISO/IEC JTC 1 SC 37 STANDARDS</b>					
<b>WG 1 Standards - Harmonized Biometrics</b>					
ISO/IEC 24745	Security Techniques - Biometric Template Protection	Describes security techniques for biometric template protection	CD	<a href="http://www.iso.org/iso/search.htm?qt=24745&amp;published=on&amp;active_tab=standards">http://www.iso.org/iso/search.htm?qt=24745&amp;published=on&amp;active_tab=standards</a>	
ISO/IEC TR 20015	Governance of IT - Framework and Model		NP	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50962">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50962</a>	
ISO/IEC CD 2382-37	Harmonized Biometric Vocabulary	Definitions of biometric terms	CD	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=55194">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=55194</a>	
<b>WG 2 Standards - Biometric technical interfaces</b>					
ISO/IEC 19785	Common Biometric Exchange Formats Framework (CBEFF)	To allow biometric data to be exchanged with clearly understood header elements defined in a registry of formats			

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Part 1 Amendment 1	Data element specification - Amendment 1	Defines structures and data elements for biometric information records	FPDAM	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=53729">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=53729</a>	
Part 2 Amendment 1	Procedures for the Operation of the Biometric Registration Authority - Amendment 1	Specifies the procedures to be followed by the Biometric Registration Authority	FPDAM	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=53730">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=53730</a>	
Part 3 Amendment 1	Patron Format Specifications Amendment 1	Specifies and publishes registered CBEFF patron formats	FPDAM	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=53731">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=53731</a>	
Part 4	Security Block Format Specifications	Provides information on the specific techniques that can be used to define a CBEFF security block	FCD	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50860">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50860</a>	
ISO/IEC 19784	Biometric Application Programming Interface (BioAPI)	Defines an Application Programming Interface for biometric software			
Part 1 Amendment 3	Support for the interchange of certificates and security assertions, and other security aspects	Adds support for encryption and digital signatures to BioAPI	FPDAM	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50787">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50787</a>	
Part 2 Corrigendum 1	Biometric archive function provider interface	Issued to correct technical errors and ambiguities in ISO/IEC 19784-2:2007, which were inadvertently introduced in drafting and could lead to incorrect application of that International Standard.	DCOR	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8756957&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8756957&amp;objAction=Open</a>	
Part 4	Biometric Sensor Function Provider Interface	Low level function calls for dealing with BioAPI compliant sensors	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8698837&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8698837&amp;objAction=Open</a>	
ISO/IEC 24708 Amendment 1	BioAPI Interworking Protocol (BIP) Support for the interchange of certificates and security assertions, and other security aspects	Adds support for encryption and digital signatures to BIP	NP	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51119">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51119</a>	

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ISO 24787	Information technology -- Identification cards -- On-card biometric comparison	This standard establishes - requirements for performing comparisons of biometric samples and returning decisions on an ICC and - security policies for on-card biometric comparison It also establishes commands and rules to permit pre-comparison computations to be done off-card. The standard does not establish - requirements for off-card comparison implementations, - requirements for system-on-card implementations, or - modality-specific requirements for storage and comparison.	FCD	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=41557">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=41557</a>	SC17 Work Item
ISO/IEC 24709	Conformance Testing for BioAPI	Standardized methods of determining whether a software system conforms to the BioAPI standard above			
Part 3	Test Assertions for BioAPI Frameworks	Defines specific assertions that must be tested in order to verify conformance for BioAPI frameworks	FCD	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=43609">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=43609</a>	
Part 4	Test Assertions for Biometric Applications	Defines specific assertions that must be tested in order to verify conformance for Biometric Applications	WD	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=43610">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=43610</a>	
ISO/IEC 29164	Embedded BioAPI	provides a standard interface with hardware biometric modules, designed to be integrated in embedded systems which may be constrained in memory and computational power.	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8720349&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8720349&amp;objAction=Open</a>	

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ISO/IEC xxxxx	Biometric Identity Assurance Services (BIAS)	This standard will specify biometric services used for identity assurance that are invoked over a services-based framework. It is intended to provide a generic set of biometric and identity-related functions and associated data definitions to allow remote access to biometric services.	NP	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8594934&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8594934&amp;objAction=Open</a>	Document N3563
<b>WG 3 Standards - Biometric Data Interchange Formats</b>					
ISO/IEC 19794	Biometric Data Interchange Formats	Modules, designed to be integrated in embedded systems which may be constrained in memory and computational power.			
Part 1 Revision	Framework	Provides supplementary guidance on the definition of minutiae points in a fingerprint image	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8698944&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8698944&amp;objAction=Open</a>	
Part 1 - Amendment 1	Framework for XML encoding	The purpose of this Annex is to establish a framework for the future work on XML counterparts for the multiple Biometric Data Format standards as defined in the multi-part ISO/IEC19794 standard.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9064398&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9064398&amp;objAction=Open</a>	
Part 2 - Amendment 1	Detailed Description of Finger Minutiae Location, Direction and Type	Provides supplementary guidance on the definition of minutiae points in a fingerprint image	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9016720&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9016720&amp;objAction=Open</a>	
Part 2 Revision	Finger Minutiae Data	Revision to deal with common headers, better specification of conformance and other areas for improvement	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8704957&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8704957&amp;objAction=Open</a>	

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Part 3 Revision	Finger Pattern Spectral Data	Revision to deal with common headers, better specification of conformance and other areas for improvement	NP	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50921">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50921</a>	
Part 4 Revision	Finger Image Data	Revision to deal with common headers, better specification of conformance and other areas for improvement	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8700890&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8700890&amp;objAction=Open</a>	
Part 4 Correction 1	Finger image data Technical Corrigendum 1	Correct technical errors and ambiguities in ISO/IEC 19794-4:2005, which were inadvertently introduced in drafting and could lead to incorrect application of that International Standard.	CD	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50350">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50350</a>	
Part 4 AMD 1	Information technology - Biometric data interchange formats – Part 4: Finger image data AMENDMENT 1: Conformance test assertions	This normative annex specifies elements of conformance testing methodology, test assertions, and test procedures as applicable to this part of biometric data interchange format standard .	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8724109&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8724109&amp;objAction=Open</a>	
Part 5 Revision	Face Image Data	Revision to deal with common headers, better specification of conformance and other areas for improvement	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8704497&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8704497&amp;objAction=Open</a>	
Part 5 Correction 3	Face Image Data — Technical Corrigendum 3	to correct technical errors and ambiguities in ISO/IEC 19794-5:2007, which were inadvertently introduced in drafting and could lead to incorrect application of that International Standard.	Withdrawn		
Part 5 Revision AMD 1	Face Image Data Ammendment 1	N/A	NP	N/A	Base Document under development
Part 6 Revision	Iris Image Data	Revision to deal with common headers, better specification of conformance and other areas for improvement	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8720562&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8720562&amp;objAction=Open</a>	

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Part 6 Revision AMD 1	Part 6: Iris image data – Amendment 1: Conformance testing methodology	This annex specifies elements of conformance testing methodology, test assertions, and test procedures as applicable to this part of biometric data interchange format standard .	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8755552&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8755552&amp;objAction=Open</a>	
Part 7	Signature/sign time series data	This part of ISO/IEC 19794 specifies data interchange formats for signature/sign behavioural data captured in the form of a multi-dimensional time series using devices such as digitizing tablets or advanced pen systems.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736613&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736613&amp;objAction=Open</a>	
Part 8	Finger Pattern Skeletal Data	Specifies the interchange format for the exchange of pattern-based skeletal fingerprint recognition data.	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8698424&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8698424&amp;objAction=Open</a>	
Part 8	Finger Pattern Skeletal Data – Draft Technical Corrigendum 1	Correct technical errors and ambiguities in ISO/IEC 19794-8:2006, which were inadvertently introduced in drafting and could lead to incorrect application of that International Standard.	Withdrawn		
Part 9	Vascular Image data	This part of ISO/IEC 19794 standard specifies an image interchange format for biometric person identification or verification technologies that utilize human vascular biometric images and may be used for the exchange and comparison of vascular image data.	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736610&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736610&amp;objAction=Open</a>	Revises 19794-9:2007
Part 10	Hand Geometry Silhouette data		NP	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=55939">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=55939</a>	Revises 19794-10:2007

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Part 11	Signature/Sign Dynamic Data	Uses dynamic data extracted from the raw time series data from a signature or sign	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8721396&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8721396&amp;objAction=Open</a>	
Part 11 Amendment 1	Signature/Sign Dynamic Data AMD 1 Conformance Test Assertions	This normative annex specifies elements of conformance testing methodology, test assertions, and test procedures as applicable to signature/sign processed dynamic data.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8725285&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8725285&amp;objAction=Open</a>	
Part 13	Speech Data Interchange Format for Speaker Recognition	Defines speech data interchange format(s) for speaker recognition. One data interchange format will support raw speech; other possibilities include formats for interchange at the feature vector level.	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736036&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736036&amp;objAction=Open</a>	
Part 13 Amendment 1	Speech Data Interchange Format for Speaker Recognition	This amendment specifies elements of conformance testing methodology, test assertions, and test procedures as applicable to biometric data interchange format standard – Part 13: Voice data.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8723889&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8723889&amp;objAction=Open</a>	
Part 14	DNA Data Interchange Format	Defines a format for the exchange of DNA information for human identification	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8723051&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8723051&amp;objAction=Open</a>	
Part 14 Amendment 1	DNA Data Interchange Format	This part of ISO/IEC 19794-14 specifies elements of conformance testing methodology, test assertions, and test procedures as applicable to biometric data interchange format standard – part 14: DNA data	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9017379&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9017379&amp;objAction=Open</a>	

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ISO/IEC 29109	Conformance Testing Methodology for Biometric Data Interchange Records as defined in ISO/IEC 19794 Biometric Data Interchange Format Standard	Defines a conformance testing methodology, including test procedures, test assertions and in some cases, test data, for testing conformance to each of the data interchange formats defined in ISO 19794			
Part 2	Finger Minutiae Data	Conformance assertions and specific tests for ISO 19794-2	FDIS	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50878">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50878</a>	
Part 2 AMD 1	Level 3 Conformance testing	Level 3 Conformance testing	NP	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9408733&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9408733&amp;objAction=Open</a>	
Part 3 Revision	Finger Pattern Spectral Data	Conformance assertions and specific tests for ISO 19794-3	NP	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51429">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51429</a>	
Part 4	Finger Image Data	Conformance assertions and specific tests for ISO 19794-4	FDIS	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50906">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50906</a>	
Part 5 Revision	Face Image Data	Conformance assertions and specific tests for ISO 19794-5	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8699168&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8699168&amp;objAction=Open</a>	
Part 6 Revision	Iris Image Data	Conformance assertions and specific tests for ISO 19794-6	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8700996&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8700996&amp;objAction=Open</a>	
Part 7 Revision	Signature/Sign Time Series Data	Conformance assertions and specific tests for ISO 19794-7	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8719268&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8719268&amp;objAction=Open</a>	
Part 8 Revision	Finger Pattern Skeletal Data	Conformance assertions and specific tests for ISO 19794-8	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8698648&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8698648&amp;objAction=Open</a>	
Part 9 Revision	Vascular Biometric Image Data	Conformance assertions and specific tests for ISO 19794-9	FCD	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=53321">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=53321</a>	
Part 10	Hand Geometry Silhouette Data	Conformance assertions and specific tests for ISO 19794-10	FDIS	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50909">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50909</a>	

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Part 11 Revision	Signature/Sign Dynamic Data	Conformance assertions and specific tests for ISO 19794-11	NP	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51430">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51430</a>	
Part 13 Revision	Voice Data	Conformance assertions and specific tests for ISO 19794-13	NP	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51431">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51431</a>	
Part 14 Revision	DNA Data Interchange Format	Conformance assertions and specific tests for ISO 19794-14	WD	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51428">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51428</a>	
ISO/IEC 29794	Biometric Sample Quality	Methods for use of ISO/IEC 19794 Biometric Data Interchange Format Standards for interchange and interpretation of biometric sample quality scores			
Part 4	Fingerprint Sample Quality	For the purposes of biometric sample quality score normalization, this supplemental Part 4 of 29794 specifies the aspects of quality specific to the finger image modality as necessary.	WD	<a href="http://isotc.iso.org/livelink/livelink/etch/2000/2122/327993/2262372/2263034/2299802/JTC001-SC37-N-2202.pdf?nodeid=6656024&amp;vernum=0">http://isotc.iso.org/livelink/livelink/etch/2000/2122/327993/2262372/2263034/2299802/JTC001-SC37-N-2202.pdf?nodeid=6656024&amp;vernum=0</a>	
Part 4	Technical Report on Fingerprint Image Data	Defines specific methods for developing quality scores for fingerprint images.	DTR	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50911">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50911</a>	
Part 5	Technical Report on Face Image Data	Defines specific methods for developing quality scores for face images.	DTR	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50912">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=50912</a>	
Part 6	Iris Image Data	Defines specific methods for developing quality scores for iris images.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8725078&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8725078&amp;objAction=Open</a>	
ISO/IEC 29159	Information Technology — Biometric Calibration, Augmentation and Fusion Data — Part 1: Fusion Information Format	Establishes machine readable data formats to describe the statistics of similarity score inputs to a fusion process.	FDIS	<a href="http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=45238">http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=45238</a>	
<b>WG 4 Standards - Biometric Function Architecture and Related Profiles</b>					

Standard Number or Project Code	Official Name of Standard	Purpose	Current Status	Link to Latest Document (Note that documents are not necessarily available to everyone. Where a direct link is unavailable, follow the link and look for the document number. A password or payment may be required.)	Remarks
ISO/IEC 29195	Passenger Processes for Biometric Recognition in Automated Border Crossing Systems	This technical report provides recommended best practices and processes for biometric border crossing systems. It defines a biometric border crossing system in terms of the base function that it performs rather than in terms of software components.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8737227&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8737227&amp;objAction=Open</a>	
ISO/IEC TR 29196	Guidance for biometric enrolment	Consolidates information relating to successful, secure and usable implementation of biometric enrolment processes, while indicating areas of uncertainty which organisations proposing to use biometric technologies will need to address during procurement, design, deployment and operation.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8754787&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8754787&amp;objAction=Open</a>	
<b>WG 5 Standards - Biometric Testing and Reporting</b>					
ISO/IEC 19795	Biometric Performance Testing & Reporting				
Part 5	Grading scheme for access control scenario evaluation	Defines how to test biometric performance in an access control system.	FCD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8700364&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8700364&amp;objAction=Open</a>	
Part 6	Testing Methodologies for Operational Evaluation	Gives specific details and requirements for conducting an operational test.	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8722833&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8722833&amp;objAction=Open</a>	
Part 7	Testing of ISO/IEC 7816-based Verification Algorithms	Establishes a mechanism for measuring the core algorithmic capabilities of fingerprint matching algorithms running on standardized ISO/IEC 7816 smart cards.	FDIS	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8756853&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8756853&amp;objAction=Open</a>	

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ISO/IEC 29120	Machine Readable Test Data for Biometric Testing and Reporting	This multipart standard will enhance the usability of biometric test data by providing them in a common and machine readable form.			
Part 1	Test Reports	Establishes machine readable records for documenting the output of a biometric test, and formats for data that tests conformant to parts ISO/IEC 19795 are required to report.	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8737011&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8737011&amp;objAction=Open</a>	
Part 2	Test Input Data Specifications	Establish a mark-up for corpora of archival sample data.	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8735703&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8735703&amp;objAction=Open</a>	
Part 3	Test Certificates	Establish machine readable records for documenting the output of a biometric test.	CD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8737015&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8737015&amp;objAction=Open</a>	
Part 4	Biometric Test Certificates	Intended to support the SC27 ISO/IEC 24761 (AcBio) and similar projects	Withdrawn		
ISO/IEC 29156	Guidance for specifying performance requirements to meet security and usability needs in applications using biometrics	Provide guidance on specifying performance requirements for incorporating biometric recognition in a system	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8723806&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8723806&amp;objAction=Open</a>	
ISO/IEC 29189	Operational evaluation of operator-led biometric systems	The purpose of this technical report is to identify those aspects of performance testing that are uniquely characteristic of [operator-led] systems	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8737564&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8737564&amp;objAction=Open</a>	

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ISO/IEC 29197	Evaluation Methodology for Environmental Influence in Biometric Systems	This standard address how to plan and execute environmental evaluations for biometric systems based on scenario evaluations.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8725180&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8725180&amp;objAction=Open</a>	
ISO/IEC 29198	Characterization and Measurement of difficulty for fingerprint databases for technology evaluation	This Technical Report provides guidance on determining how “challenging” or “stressing” is an evaluation database for fingerprint recognition, based on factors such as sample quality, template ageing, relative rotation, deformation, overlap between impressions, and mixed impression types.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8721965&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8721965&amp;objAction=Open</a>	
<b>WG 6 Standards - Cross- Jurisdictional and Societal Aspects of Biometrics</b>					
ISO/IEC 24714	Technical Report on Cross Jurisdictional and Societal Aspects of Implementations of Biometric Technologies	A complex report that defines guidelines for data privacy, providing support for those with disabilities, and similar societal or legal issues related to biometrics			
Part 2	Specific Technologies and Practical Applications	Provides more detailed coverage of the issues discussed in Part 1, each referring to a specified selection of biometric technologies (fingerprint, iris, face, dynamic signature, voice recognition and vascular biometrics).	Deleted		
ISO/IEC 24779	Cross-jurisdictional and societal aspects of implementation of biometric technologies – Pictograms, icons and symbols for use with biometric systems	Multipart standards specifies a family of icons and symbols used in association with devices for			

Standard Number or Project Code	Official Name of Standard	Purpose	Current Status	Link to Latest Document (Note that documents are not necessarily available to everyone. Where a direct link is unavailable, follow the link and look for the document number. A password or payment may be required.)	Remarks
Part 1	Overview	Defines pictograms, icons and symbols that are recommended for use in the human interface with biometric technology	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736271&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736271&amp;objAction=Open</a>	4th WD
Part 2	Fingerprint Applications	Specifies the icons to be used in conjunction with fingerprint biometric technology	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9063182&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=9063182&amp;objAction=Open</a>	3rd WD
Part 3	Vascular Applications	Describes the symbols and icons to be used in conjunction with vascular image recognition. The goal of this IS is to develop the design of symbols and icons.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8722845&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8722845&amp;objAction=Open</a>	2nd WD
ISO/IEC 29144	The use of biometric technology in commercial Identity Management applications and processes	This standard explains the effects of introducing biometric technology into the processes and applications commonly known as identity management. This includes both the benefits and the challenges arising from the use of biometric technology.	WD	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736044&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8736044&amp;objAction=Open</a>	
ISO/IEC 29194	Accessibility and usability of biometric systems				
Part 1	Guidance on the Inclusive Design and Operation of Biometric Systems	This Technical Report provides guidance for biometric system design and procurement to handle the range of accessibility and usability issues.	PDTR	<a href="http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8723895&amp;objAction=Open">http://isotc.iso.org/livelink/livelink?func=ll&amp;objId=8723895&amp;objAction=Open</a>	

Note on Current Status: ISO standard progression typically follows the following steps:

1) NP - New Project Proposal

3) CD - Committee Draft (Technical Content Should be Relatively Stable)

5) FDIS - Final Draft International Standard (No Changes Permitted)

2) WD - Working Draft

4) FCD - Final Committee Draft (No Significant Changes Should Occur)

6) ISO Standard

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7) **SD** - Standing Document - A special document maintained by SC 37  
9) **PDTR** - Proposed Draft Technical Report

8) **FPDAM** - Final Proposed Draft Amendment  
10) **DTR** - Draft Technical Report

**Note that status in this spreadsheet refers to the latest version of a document available. In some cases, the ballot to approve that version of the document may not yet have taken place.**

There is also the special category of standing document (**SD**), which reflects a document that the technical committee believes is technically useful and should be maintained on the committee web site, but which is not a formal standard

**RED FONT INDICATES A CHANGE (normally an addition or revision change) FROM PREVIOUS REPORT.**