

# SC37 report on Biometric Data Format and Related Standards

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- ISO/IEC JTC1/SC37 WG3 Convenor -

plenary meeting  
2024-01-12

# Meetings Report

## Tallinn Meeting

- 2023-06-26 to 2023-06-30
- <https://sd.iso.org/meetings/126252>
- 79 participants

## Okayama Meeting

- 2024-01-08 to 2024-01-11
- <https://sd.iso.org/meetings/134513>
- 89 participants

# Biometric Data Interchange Formats

# G2 development

## Status of ISO/IEC 19794

- Amendment ISO/IEC 19794-14

### **RECOMMENDATION 3.7 – DIS/DAM Registration/Circulation**

<b>Reference</b> (e.g. <a href="#"><u>ISO/IEC DIS xxx</u></a> )	ISO/IEC 19794-14:2022/DAmD 1
<b>Title</b>	<i>Information technology — Biometric data interchange formats — Part 14: DNA data – AMD 1: Conformance requirements</i>
<b>Project Editor (PE)</b>	<i>C. J. Lee</i>
<b>Deadline for submitting DAmD text to the SC Committee Manager</b>	31 January 2024
<b>Deadline for PDoC Circulation</b>	TBD – as soon as possible after the closure of the DIS ballot
<b>Subsequent stage (if necessary)</b>	50.00 (FDIS)

# G3 development

## Status of ISO/IEC 39794 in 2023

- Several parts are published

- ▶ Part 1 (Framework)
- ▶ Part 2 (Finger minutiae)
- ▶ Part 4 (Finger image data)
- ▶ Part 5 (Face image data)
- ▶ Part 6 (Iris image data)
- ▶ Part 9 (Vascular image data)
- ▶ Part 16 (Full body image data)
- ▶ Part 17 (Gait image sequence)

- Parts under development

- ▶ Part 12 (Fingermark image data)

### RECOMMENDATION 3.5 – Working Draft/Standing Document/Base Document Circulation

WG 3 requests its WG 3 Secretary to circulate the following texts to WG 3 experts for review.

<b>Reference</b> (e.g. ISO/IEC WD xxx)	ISO/IEC 39794-2:2023/WD Amd 1
<b>Title</b> Please also include any requests to experts for comment/contributions on specific sections issues	<i>Extensible biometric data interchange formats – Part 2: Finger minutiae data – Amendment 1: Handling of the on-card biometric comparison format</i>
<b>Project Editor (PE)</b>	Editor Robert Mueller Co-Editor Olaf Henniger
<b>Deadline for submitting WD text to the WG Convenor/ Secretary</b>	12 February 2024
<b>Deadline for Expert Comments</b>	6 May 2024
<b>Deadline for PDoC Circulation</b>	27 May 2024
<b>Subsequent stage (if necessary)</b>	20.00 (WD stage)

### RECOMMENDATION 3.2- Continuation of the PWI ISO/IEC 39794-12 development in the ad hoc group on fingermark image data

WG 3 requests its WG Convener/Secretary to continue the WG 3 Ad hoc group for further development of PWI ISO/IEC 39794-12 *Extensible biometric data interchange formats – Part 12: Fingermark image data*.

## Related Standards

# Biometric Sample Quality

## Status in 2024: Revision ongoing

- ISO/IEC 29794 Part 1: Framework (FDIS)
  - ▶ definition of quality score, quality component, quality measure, EDC
- ISO/IEC 29794 Part 4: Finger image data (FDIS)
  - ▶ the reference implementation NFIQ2.2 is in GitHub  
<https://github.com/usnistgov/NFIQ2>
- ISO/IEC 29794 Part 5: Face image data (DIS)
  - ▶ the reference implementation OFIQ1.0 will be in GitHub 2024-03  
<https://github.com/BSI-OFIQ/OFIQ-Project>
  - ▶ Specific Image Defect Detection (SIDDD) test report  
[https://pages.nist.gov/frvt/reports/quality\\_sidd/frvt\\_quality\\_sidd\\_report.pdf](https://pages.nist.gov/frvt/reports/quality_sidd/frvt_quality_sidd_report.pdf)
- ISO/IEC 29794 Part 6: iris image data
- ISO/IEC 29794 Part 9: vascular image data
- ISO/IEC 29794 Part 12: fingerprint image data

# Biometric Sample Quality

## Status in 2024

- ISO/IEC 29794 Part 1: Framework (FDIS)

### **RECOMMENDATION 3.3b – Initiate Publication of ISO/IEC *Biometric sample quality — Part 1: Framework***

Anticipating the approval of the FDIS ballot (end date: 2024-02-16) on ISO/IEC FDIS 29794-1, WG 3 requests SC 37 Committee manager to initiate the publication process.

Approved unanimously.



# Biometric Sample Quality

## Status in 2024

- ISO/IEC 29794 Part 4: Finger image data (FDIS)

### **RECOMMENDATION 3.8 – FDIS/FDAM Registration/Circulation**

<b>Reference</b> ( <u>e.g.</u> ISO/IEC FDIS xxx)	<i>ISO/IEC FDIS 29794-4</i>
<b>Title</b>	<i>Biometric sample quality – Part 4: Finger image data</i>
<b>Project Editor (PE)</b>	<i>Greg Fiumara</i>
<b>Deadline for submitting FDIS text to the SC Committee Manager</b>	12 February 2024

# Biometric Sample Quality

## Status in 2024

- ISO/IEC 29794 Part 5: Face image data (DIS)
  - ▶ Face image quality workshop: November 7-9
  - ▶ Slides and recordings are available at:  
<https://eab.org/events/program/325>

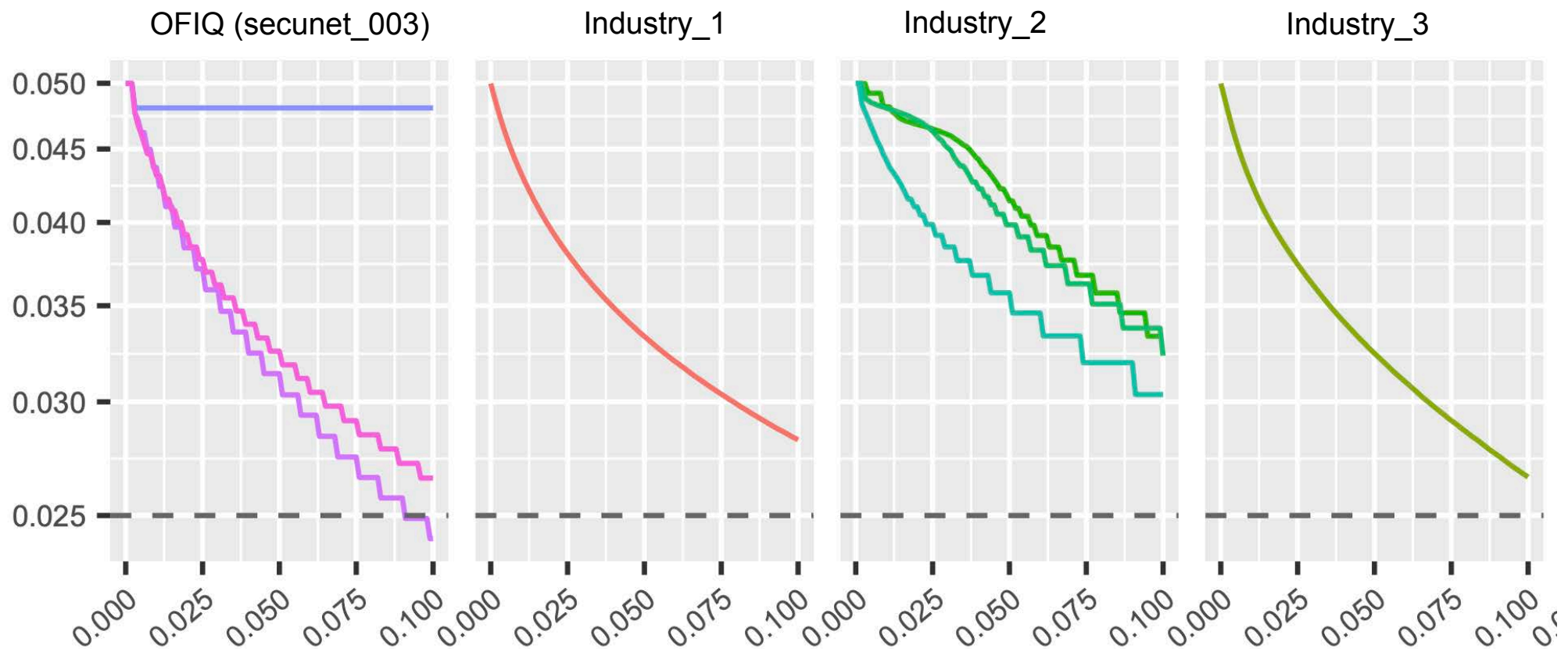
### **RECOMMENDATION 3.7 – DIS/DAM Registration/Circulation**

<b>Reference</b> ( <i>e.g. ISO/IEC DIS xxx</i> )	<i>ISO/IEC DIS 29794-5</i>
<b>Title</b>	<i>Biometric sample quality – Part 5: Face image data</i>
<b>Project Editor (PE)</b>	<i>Patrick Grother</i>
<b>Deadline for submitting DAmD text to the SC Committee Manager</b>	17 January 2024
<b>Deadline for PDoC Circulation</b>	TBD – as soon as possible after the closure of the DIS ballot
<b>Subsequent stage (if necessary)</b>	<i>50.00 (FDIS)</i>

# 29794-5 Happiness for Researchers

With **good results**

- How do we confirm good results?
- with **steep EDC** curves



[SOURCE: [https://pages.nist.gov/frvt/reports/quality\\_sidd/frvt\\_quality\\_sidd\\_report.pdf](https://pages.nist.gov/frvt/reports/quality_sidd/frvt_quality_sidd_report.pdf)]

# Biometric Sample Quality

## Status in 2024

- ISO/IEC 29794 Part 5: Face image data (DIS)

### **Recommendation 3.13**

WG 3 requests the SC 37 committee manager to ask ITTF to upload the electronic inserts (conformance test sets and Tables A.1 through A.4) from ISO/IEC DIS 29794.5 to the ISO Standards Maintenance Portal.

The following information needs to be provided:

1. reason for / need of URN/URI – a justification for why this information cannot be included in the master (PDF) file. It will be more beneficial and less error-prone for standard users/adaptors if the test data files could be electronically downloaded and directly used for testing, rather than having to extract them from a PDF file. Moreover, including the test data in the PDF file would make it excessively large and challenging to handle and maintain.
2. details of the resource that needs to be made available (e.g. file formats, number of files, etc.). Annex A: Images and target values that are input/output of the ISO/IEC 29794-5 reference implementation OFIQ, to be used in conformance tests.
3. expected life cycle or update policy of the resource (after publication, will the material change, and if so details). Once published, the material must not be changed. The material must be kept available at least as long as ISO/IEC 29794-5 is not withdrawn. If changes are required by way of a technical corrigendum, amendment, or revision of ISO/IEC 29794-5, the additional publication of the changed material (properly labelled with edition and version numbers) will be requested.

# Biometric Sample Quality

## Status in 2024

- ISO/IEC 29794 Part 12: Fingerprint image data (PWI)

**RECOMMENDATION 3.1 - Continuation of the PWI ISO/IEC 29794-12 development in the ad hoc group on fingerprint image data**

WG 3 requests its WG Convener/Secretary to continue the WG 3 Ad hoc group for further development of PWI ISO/IEC 29794-12 *Biometric sample quality - Part 12: Fingerprint image data*.

The next Adhoc group meeting is scheduled for 2024-04-03; 10:00 UTC.

# Presentation Attack Detection

## ISO/IEC 30107 parts

- Part 1 - Framework
  - ▶ status: revision completed (published in 2023)
- Part 2 - Data formats
  - ▶ status: IS - published in 2016
- Part 3 - Testing and Reporting
  - ▶ status: revision completed (published in 2023)
- Part 4 - Profile for Evaluation of Mobile Devices
  - ▶ status: revision completed (published in 2024)

**RECOMMENDATION 3.3a – Initiate Publication of ISO/IEC 30107-4 *Biometric presentation attack detection* — Part 4: Profile for testing of mobile devices**

Considering the approved pDoC on ISO/IEC FDIS 30107-4, WG 3 requests SC 37 Committee manager to initiate the publication process.



# Morphing Attack Potential

## ISO/IEC 20059

- Methodologies to evaluate the resistance of biometric recognition systems to morphing attacks

### RECOMMENDATION 3.4 – Extension to Target dates/PoW Limit Dates

WG 3 requests authorization to extend the target dates/PoW limit dates for the following project:

PROJECT #	TITLE	CURRENT LIMIT DATES	NEW LIMIT DATES
ISO/IEC CD1 20059	Methodologies to evaluate the resistance of biometric recognition systems to morphing attacks	2024-02-09 (40.00 DIS registered)	2024-11-09
		2025-02-09 (60.60 Publication)	2025-11-09

Rationale: Harmonization of the new content regarding scarlarisation of the MAP matrix.

### RECOMMENDATION 3.6 – CD/DTR/DTS/CD Amd/DCOR Registration/Circulation

The Project Editors are instructed to submit the following text(s) **(along with the corresponding approved disposition of comments document upon which this text is based)** to the SC 37 Committee Manager for an 8-week ballot.

<b>Reference</b> (e.g. ISO/IEC CD xxx)	ISO/IEC CD 20059.2
<b>Title</b> Please also include any requests to experts for comment/contributions on specific sections issues	Methodologies to evaluate the resistance of biometric recognition systems to morphing attacks
<b>Project Editor (PE)</b>	Matteo Ferrara
<b>Deadline for submitting CD text to the SC Committee Manager</b>	12 February 2024
<b>Deadline for PDoC Circulation</b>	27 May 2024
<b>Subsequent stage (if necessary)</b>	DIS

# GIT - Bitbucket

## Bitbucket structure of repositories

<https://sd.iso.org/bitbucket-pilot/projects/ISOIECJTC1SC37>

<https://sd.iso.org/.../ISOIECJTC1SC37/WG1>

<https://sd.iso.org/.../ISOIECJTC1SC37/WG2>

<https://sd.iso.org/.../ISOIECJTC1SC37/WG3>

...

<https://sd.iso.org/.../ISOIECJTC1SC37/WG6>

<https://sd.iso.org/.../ISOIECJTC1SC37/WG3/29794>

<https://sd.iso.org/bitbucket-pilot/projects/ISOIECJTC1SC37/repos/wg3/browse/29794/part-01>

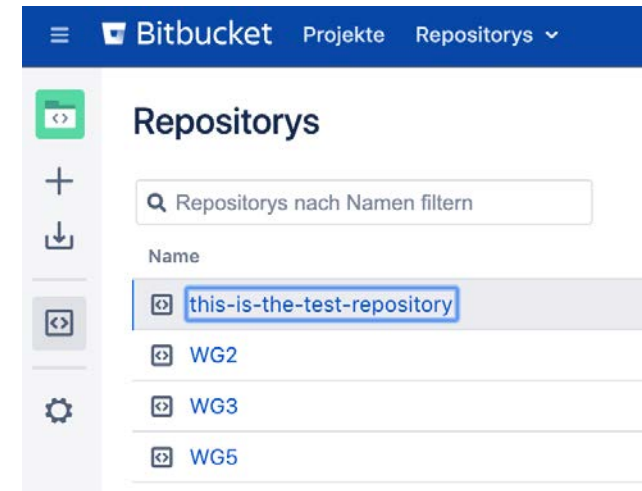
<https://sd.iso.org/.../ISOIECJTC1SC37/WG3/39794>

<https://sd.iso.org/.../WG3/39794/harmonization-assurance-test-tool>

<https://sd.iso.org/.../WG3/39794/conversion-tools>

<https://sd.iso.org/.../WG3/39794/conversion-tools/xsd-to-asn1-xslt>

<https://sd.iso.org/.../WG3/39794/conversion-tools/asn1-to-xsd>





# Thanks

## Many thanks

- to the sponsors
  - ▶ for meetings facilities and social event
- to the editors
- to the delegates

# References

## Web

- Convenors website with latest news and slides  
<http://www.christoph-busch.de/standards-sc37wg3.html>
- ISO/IEC JTC SC37  
<http://isotc.iso.org/livelink/livelink?func=ll&objId=2262372&objAction=browse&sort=name>
- Published ISO/IEC Standards  
[http://www.iso.org/iso/iso\\_catalogue/catalogue\\_tc/catalogue\\_tc\\_browse.htm?commid=313770&published=on](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_tc_browse.htm?commid=313770&published=on)