



ISO/IEC JTC 1/SC 37 N31

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Replaces:

**ISO/IEC JTC 1/SC 37
Biometrics**

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U.S. contribution to JTC1/SC37 on an NP for Biometric Performance Testing and Reporting

PROPOSAL FOR A NEW WORK ITEM

Date of presentation of proposal: to be determined	Proposer: ISO/IEC JTC 1/SC 37
Secretariat: U.S.A. (ANSI)	ISO/IEC JTC 1/SC37 N XXXX

A proposal for a new work item shall be submitted to the secretariat of the ISO/IEC joint technical committee concerned with a copy to the ISO Central Secretariat.
 Presentation of the proposal - to be completed by the proposer. Guidelines for proposing and justifying a new work item are given in ISO Guide 26.

Title: Biometric Performance Testing and Reporting

Scope

The proposed standard would establish common procedures for testing and reporting the performance of biometric systems. In addition, the proposed standard would specify the reporting requirements that compliant declarations must meet in association with such reports.

Purpose and justification –

Currently, there is no standardization in methods of evaluating biometric system performance. Each vendor develops unique test procedures and uses data sets of varying size, quality and origin to establish performance metrics that typically include False Match Rate, False Non-Match Rate and Failure To Enroll Rate. These variations make it impossible for customers and system designers to accurately assess the suitability of a given biometric system. They also make it impossible to design a system that combines multiple biometric systems to achieve customer-specified levels of performance.

Lack of standards in this area impedes the wide-scale adoption of biometric technologies in security and information system deployments. In the absence of standards, reporting of biometric system performance lacks rigor and disclosure. When customer experience varies significantly from their expectations, their confidence in the underlying technologies diminishes, as does their willingness to entrust the protection of human lives, important infrastructure or confidential information to systems that rely upon them.

By establishing a standard for measuring and reporting the performance of biometric systems, we will:

- Encourage the adoption of biometrics in applications where predictable performance is required.
- Provide a basis for objective comparison of biometric system performance based on compliant reports and disclosures.
- Allow customers and integrators to accurately assess system cost versus performance based on their particular needs.
- Increase the credibility of biometrics technologies within the customer community.
- Facilitate the development and deployment of large-scale systems based on biometric technologies.
- Provide a level playing field for providers who accurately report the performance of their biometric systems.
- Ensure that biometric system vendors can analyze new and existing products' performance in a cost-effective and statistically rigorous manner.

Programme of work

If the proposed new work item is approved, which of the following document(s) is (are) expected to be developed?

- a single International Standard
- more than one International Standard (expected number:)
- a multi-part International Standard consisting of parts
- an amendment or amendments to the following International Standard(s)
- a technical report, type

Relevant documents to be considered –

Biometric Evaluation Methodology Working Group – Common Methodology for Information Technology Security Evaluation, Version 1.0, August 2002

Best Practices in Testing and Reporting Performance of Biometric Devices, Version 2.01, August 2002

Cooperation and liaison

NIST/Biometrics Consortium Biometrics Working Group

ISO/IEC JTC1/SC17
 ISO/IEC JTC1/SC27
 Common Criteria Biometric Evaluation Methodology Working Group

Preparatory work offered with target date(s): To be distributed prior to first meeting on this subject

Signature:

Will the service of a maintenance agency or registration authority be required?NO.....
 - If yes, have you identified a potential candidate?NO.....
 - If yes, indicate name

Are there any known requirements for coding?NO.....
 -If yes, please specify on a separate page

Are there any known requirements for cultural and linguistic adaptability? ...NO....
 - If yes, please specify on a separate page

Does the proposed standard concern known patented items?Unknown at this time....
 - If yes, please provide full information in an annex

Comments and recommendations of the JTC 1 Secretariat - attach a separate page as an annex, if necessary

Comments with respect to the proposal in general, and recommendations thereon:
 It is proposed to assign this new item to JTC 1/SC 37

Voting on the proposal - Each P-member of the ISO/IEC joint technical committee has an obligation to vote within the time limits laid down (normally three months after the date of circulation).

Date of circulation: YYYY-MM-DD	Closing date for voting: YYYY-MM-DD	Signature of JTC 1/SC37 Secretary: Lisa A. Rajchel
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NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	Validity	Explanation
A Business Requirement		
A.1 Market Requirement	Essential <input checked="" type="checkbox"/> Desirable <input type="checkbox"/> Supportive <input type="checkbox"/>	See attached
A.2 Regulatory Context	Essential <input type="checkbox"/> Desirable <input type="checkbox"/> Supportive <input checked="" type="checkbox"/> Not Relevant <input type="checkbox"/>	See attached
B. Related Work		
B.1 Completion/Maintenance of current standards	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
B.2 Commitment to other organization	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
B.3 Other Source of standards	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
C. Technical Status		
C.1 Mature Technology	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	See attached
C.2 Prospective Technology	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
C.3 Models/Tools	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	See attached
D.2 Interoperability	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
E. Other Justification		

A1. Market Requirements

Increased awareness in the capabilities of biometric technologies has produced a demand for generic biometric standards. This proposed NWI will define standards for testing and reporting the performance of biometric systems in a uniform and verifiable manner and will, as a result, increase the acceptance of these systems in the marketplace.

A2. Regulatory Context

There are no existing standards for measurement and reporting of biometric systems. This lack materially hampers the adoption and use of biometric technologies, to the detriment of potential users, technology providers and system integrators.

C1. Mature Technology

Statistical analyses of the performance of biometric systems have been developed and refined over many years, and there is a defacto set of performance measures that have been commercially reported for several years. These measures are sufficiently mature for standard definition.

D1. Conformity Assessment

This testing and reporting standard is expected to include a normative set of definitions, procedures, formulae and disclosure requirements. As such, conformance can be assessed through review of disclosed information and, ideally, demonstration of the stated performance against reference data sets of sufficient size to establish the statistical significance of the performance claimed.