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DNA testing
Biometrics-based verification
Biometrics-based identification
Conformance testing methodology
Biometric sample quality
Biometric data interchange formats
Modality-specific testing
BioAPI specification

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Biometrics

Standards for the automated recognition of individuals based on their behavioural and biological characteristics

Biometric standards for recording a full spectrum of biometric information for use in identity management

The breadth and depth of standards for biometrics continues to grow. The standards cover data structures to digitally encode a full spectrum of biometric technologies, data – finger, face, iris, signature, vascular, and hand geometry; including a Technical Report for multimodal and other multi-biometric fusion.

The BS ISO/IEC 19794 standards are applicable to all identity management systems using biometrics, including:

- Identity document delivery and access management systems – such as border controls, corporate identity and access cards
- Forensic identification – to identify casualties or suspects at the scene of a crime
- Citizens' rights – including voting, national health, unemployment benefits, driving licences
- Privileges associated with a particular employment category – including access to highly secure areas such as ports, airports, military establishments, company buildings, information systems
- Access to services – including banking services, financial services, and online purchases.

BS ISO/IEC 19794 will be used in access control and identification systems such as those based on smart cards or other recognition tools, and also applies to the storage of biometric identification data in corporate databases.

Reinforce Security and Prevent Fraud

These standards are essential for those concerned with government contracts and procurement or with the enhancement of IT security through the identification of personnel and/or physical access control. They will be of interest to any organization wishing to reinforce security and prevent fraud by implementing strong identity management and access management.

The standards are therefore essential to the following professional activities:

- Identity product/service vendors
- Identity document issuing authorities
- Planners and procurers of identity and access management systems
- Legislators
- Systems integrators
- Auditors

Specified by Governments

Many Governments around the world (including UK, USA, and most other European countries,) now specify that the use of biometrics by government departments shall conform to these international biometrics standards covering biometric data formats. Use of the standards will enable interoperability within each biometric technology, where biometric data records produced by equipment and software from different vendors can be compared, without the need for any collaboration between the two vendors.

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As the number and scale of deployments of biometric recognition systems increase, biometrics is moving from an era where vendor-specific products, techniques and solutions were acceptable, into an era where interoperability is important and conformance to standards is required by most procurers of biometric products.

Standards development is being undertaken in groupings covering:

- Interfaces
- Data Formats
- Profiles
- Testing
- Societal
- Vocabulary

Each of these groupings has a series of standards, where some are completed or soon to be published, and others are still 'work in progress'.

Interfaces

- Standardization of interfaces and interactions between biometric components and sub-systems, including security mechanisms
 - BS ISO/IEC 19784 BioAPI
 - BS ISO/IEC 19785 Common biometric exchange formats framework
 - BS ISO/IEC 24708 BioAPI interworking protocol
 - BS ISO/IEC 24709 Conformance testing for BioAPI
 - BS ISO/IEC 29141 Tenprint capture using BioAPI
 - PD ISO/IEC TR 24722 Multimodal and other multi-biometric fusion
 - BS ISO/IEC 29141 Tenprint capture using BioAPI
 - BS ISO/IEC 29164 Embedded BioAPI

Data Formats

- Standardization of the content, meaning and representation of biometric interchange formats
 - BS ISO/IEC 19794 Biometric data interchange formats
 - BS ISO/IEC 29109 Conformance testing for biometric data interchange formats
 - BS ISO/IEC 29159 Biometric calibration, augmentation and fusion data
 - PD ISO/IEC TR 29794 Technical report for biometric sample quality

Profiles

- Standardization of biometric base standards to application profiles
 - BS ISO/IEC 24713 Biometrics profiles for interoperability and data Interchange
 - PD ISO/IEC TR 29195 Passenger processes for biometric recognition in automated border crossing systems



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Profiles

- Standardization of biometric base standards to application profiles
 - BS ISO/IEC 24713 Biometrics profiles for interoperability and data Interchange
 - PD ISO/IEC TR 29195 Passenger processes for biometric recognition in automated border crossing systems

Testing

- Standardization of biometric performance metric definitions and calculations; approaches to test performance and requirements for reporting
 - BS ISO/IEC 19795 Biometric performance testing and reporting
 - BS ISO/IEC 29120 Machine readable test data for biometric testing and reporting
 - BS ISO/IEC 29197 Evaluation methodology for environmental influence in biometric systems
 - BE ISO/IEC 29198 Characterization for fingerprint databases for technology evaluation

Societal

- Study and standardization of technical solutions to societal aspects of biometric implementation
 - PD ISO/IEC TR 24714 Technical report for jurisdictional and societal considerations for commercial applications, covering general guidance, and specific technologies and practical applications
 - BS ISO/IEC 24779 Pictograms, icons and symbols for use with biometric systems
 - PD ISO/IEC TR 29144 The role of biometrics in identity management
 - PD ISO/IEC TR 29194 Guidance on the inclusive design and operation of biometric systems

Vocabulary

- Standardization of vocabulary used for biometrics
 - BS ISO 2382-37 Harmonized biometric vocabulary

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British Standards
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