

Replaces:

**ISO/IEC JTC 1
Information Technology**

Document Type: other (defined)

Document Title: SC 37 Chairman's Presentation to the November 2008 JTC 1 Plenary Meeting in Nara

Document Source: SC 37 Chairman

Document Status: This document is circulated to National Bodies for review and consideration at the November 2008 JTC 1 Plenary meeting in Nara.

Action ID: ACT

Due Date:

No. of Pages: 14

JTC 1 SC 37 – ‘Biometrics’

Chairman Report

(Period Covered: July 2007 – September 2008)

***Fernando Podio,
Chairman JTC 1 SC 37 - Biometrics
National Institute of Standards and Technology
1 (301) 975 - 2947
fernando.podio@nist.gov***

Overview

- Market Opportunities for Biometric Technologies and Standards
- SC Planning Activities
- Cooperation With Other Organizations
- Adoption Examples
- Challenges

Market Opportunities for Biometric Technologies and Standards

- Using biometrics for identifying human beings offers some unique advantages.
- Used alone, or together with other authentication technologies such as tokens, biometric technologies can provide higher degrees of security than other technologies used alone and can also be used to overcome their weaknesses.
- Deploying biometric-based authentication systems for interoperability and data interchange requires a comprehensive set of international standards that meet the customers' needs.

Market Opportunities for Biometric Technologies and Standards – Examples^{1,2}

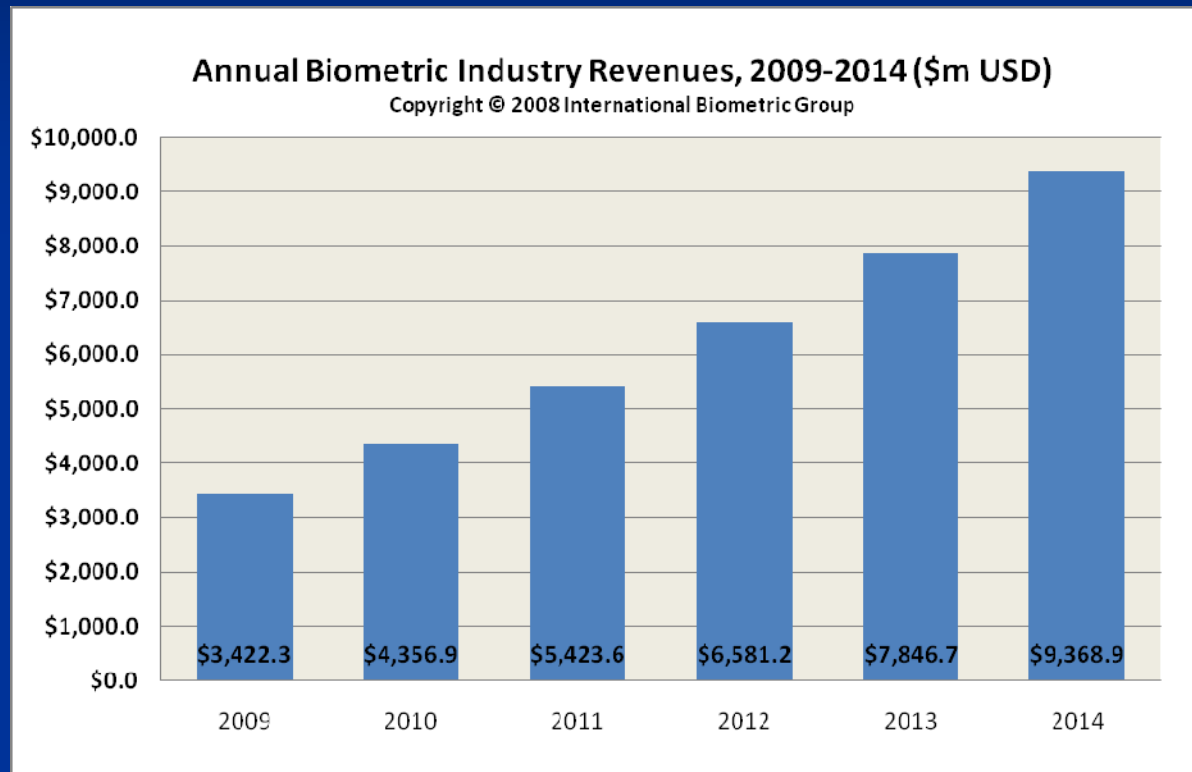
- Increasing number of global government projects
 - Border, aviation, maritime, and transportation security
 - Physical / logical access control
- Financial institutions
 - Employee-based / customer-based (e.g., safe deposit boxes)
- Healthcare industry
 - Service provider security to protect patient privacy
 - Patient delivery verification protecting patient and provider
- Educational applications
 - School lunch programs / online identity verification
 - Parent / Guardian verification for child release

Market Opportunities for Biometric Technologies and Standards – Examples^{1,2}

- Consumer uses expected to significantly increase:
 - Personal security and convenient:
 - Cell phones
 - Mobile computing devices – laptops, PDS, etc.
 - Portable memory storage
 - Home automation and Security:
 - Home alarm systems & environmental controls
 - Door locks & access control systems
 - Retail:
 - Point of purchase authentication at retail locations
- Gaming and hospitality industries

1, 2: Frost & Sullivan, July 2008 & International Biometric Industry Association 2008

Biometric Market Annual Revenue Projections

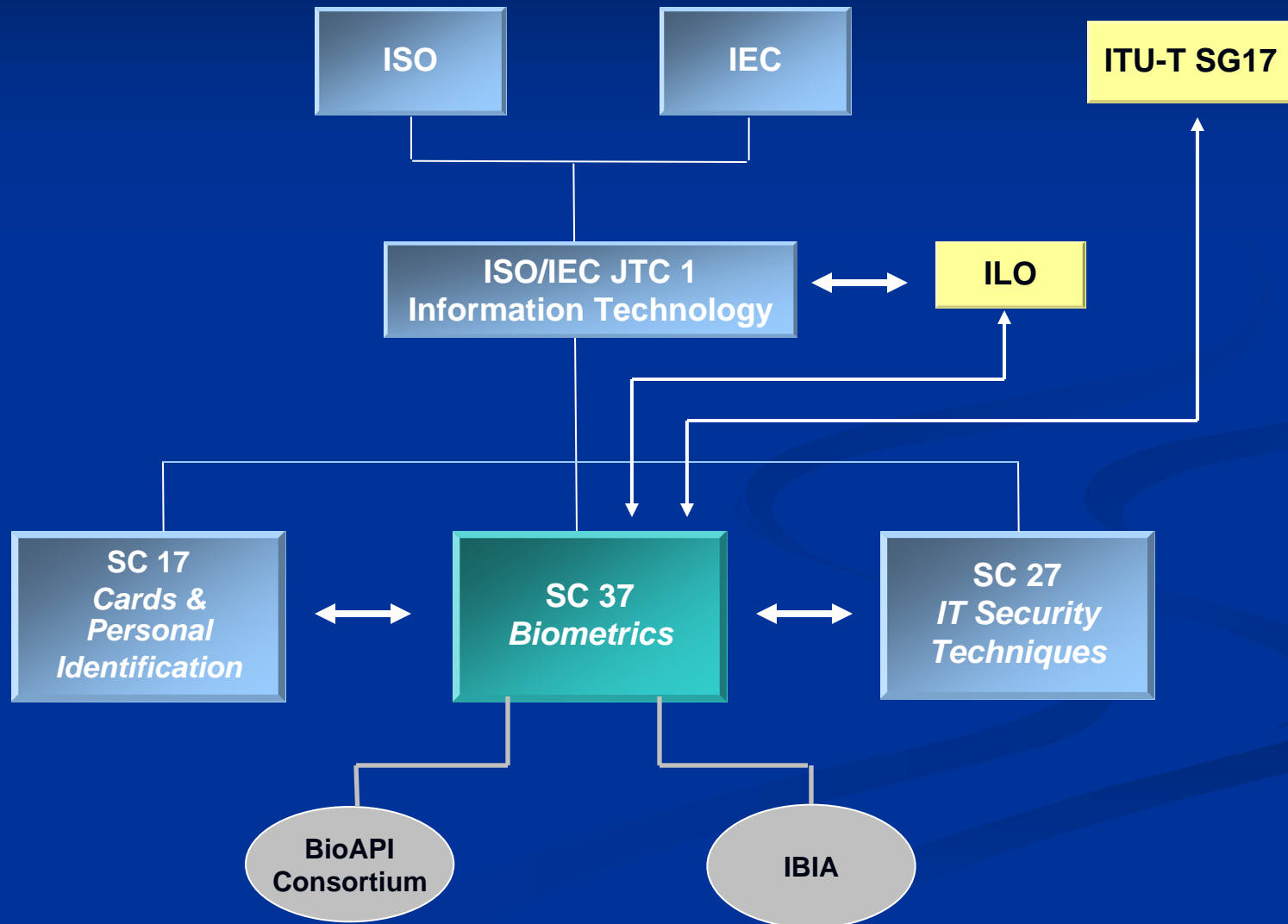


“Biometric Market and Industry Report, 2009-2014”, October 2008. Used by permission from International Biometric Group (www.biometricgroup.com).

SC 37 Planning Activities

- Established a Special Group on WG Structure
 - Will provide and maintain a five-year outlook for SC 37 taking into account:
 - Current PoW against biometric technology and application trends
 - Possible overlaps, gaps and dependencies between current work elements and the WG structure.
 - Encouraged close interaction between WGs on projects of common interest (ongoing through WG joint meetings).
 - Encouraged the development of WG roadmaps (under development). Draft roadmaps posted for National Body comments.
 - Will contribute outcome to the JTC 1 SG on Planning.

Cooperation Examples



Cooperation Examples

- SC 37 expert team contributes to SC 27 projects:
 - Authentication context for biometrics (ACBio)
 - Security evaluation of biometrics
 - Glossary of IT security terminology
 - Template protection
 - Interest in reviewing:
 - Framework for Identity Management
 - Privacy framework
 - Privacy reference architecture

Cooperation Examples

- SC 37 expert team contributes to SC 17 projects:
 - Identification cards -- Integrated circuit cards -- Part 11: Personal verification through biometric methods
 - Identification cards – On-Card matching
- Collaborative work with ITU-T SG17 Q.8:
 - BioAPI Interworking Protocol - Awaiting publication
- Liaison relationship with ILO:
 - Biometric profile for Seafarers – FCD status

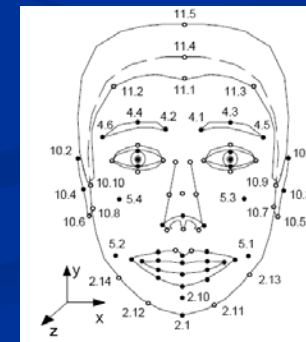
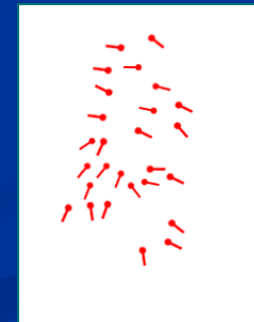
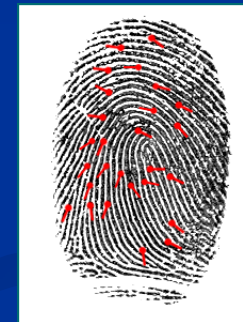
Examples of Organizations / Countries Requiring / Recommending SC 37 Standards

- International Civil Aviation Organization (ICAO):
 - Requirements for Machine Readable Travel Documents
- International Labor Office of the United Nations – Requirements for a Seafarer's ID Card
- The EU passport specification working document
 - Based on EU's Council Regulation on standards for security features and biometrics in passports and travel documents issued by Member States.
- Spain: National ID Cards / Passports
- USA: Registered Traveller / Registry of USG Recommended Biometric Standards

Technology Innovations and Biometric Standards

Challenges

- Finger minutiae data interchange format standard
 - Minutia location and angle detection is difficult.
 - False minutia
 - Missing minutia
 - Ridge count accuracy
 - Uncertainty undermines interoperability
- Face image
 - Difficult to test some of the normative requirements
 - Exposure, lighting, pose angle



Technology Innovations and Biometric Standards

Challenges

- Iris image
 - Un-centered Eyes
 - Eyelid, Eyelash, Reflection Masking
- Hand geometry
 - Level 3 Conformance testing
 - Hand Detection Correctness
 - Silhouette Accuracy
 - Distortion Accuracy
- Biometric APIs for mobile devices

