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BUSINESS PLAN FOR JTC 1/SC 37 'BIOMETRICS'

PERIOD COVERED:

July 2007 – September 2008

SUBMITTED BY:

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1.0 MANAGEMENT SUMMARY

CHAIRMAN'S REMARKS

Since SC 37's inception, twenty-four standards and three Technical Reports have been published. They are shown in the table below. Seven standards and one Technical Report were published during the reporting period (these documents are highlighted in the table).

The Subcommittee has completed the "first generation" of international biometric standards and during this reporting period it continued developing the "second generation" of biometric standards with the goal of improving the existing standards, adding functionality and reflecting technology innovations and new customers' needs. Ongoing projects are reflected in the SC 37 PoW. They include:

(a) a Harmonized biometric vocabulary (v10 available from the SC 37 web site as Standing Document 2 - SD2);
(b) new parts to the existing biometric technical interface-related standards (e.g., API support for the interchange of certificates and other security aspects);
(c) amendments to these standards;
(d) biometric data interchange formats for other modalities (i.e., voice data and DNA data), revision projects for the existing standards and biometric sample quality standards;
(e) additional parts of the biometric performance testing and reporting standard and related projects (e.g., machine readable test data for biometric testing and reporting;
(f) a multi-part project to specify conformance testing methodology standards for the biometric data interchange formats for the published standards (the scope of these projects may likely be extended to also target the revised standards under development);
(g) and cross-jurisdictional and societal issues-related projects (e.g., use of biometric technology in commercial ID Management applications and processes, pictograms, icons and symbols for use with biometric systems).

The overall progress in this period has been excellent as evidenced in the SC 37 PoW by the number of documents that progressed to the following development level and the addition of several new projects. Accounting for amendment projects, the revision of existing standards and new projects, the SC 37 PoW currently includes twenty projects subdivided into sixty-seven subprojects. At least three standards are expected to be published before the end of the calendar year or early 2009.

As stated in previous reports, the significant increase in the number of standards projects and the pace of development present challenges to the SC 37 National Body experts but, they have responded very well to these challenges. The development of conformance testing methodology standards for the biometric data interchange formats and the revision projects for the biometric data interchange standards enhanced the SC 37 portfolio and responded to customers' needs for these standards. Level 3 conformance testing is still a challenge that needs to be addressed in the near future. Highlighted in gray below are the standards and technical reports that were published during this reporting period.

Project	**Title**	**IS**	**Publication Date**
1.37.19784.1	Biometric application programming Interface – Part 1: BioAPI Specification	ISO/IEC 19784-1: 2006	2006-04-27
1.37.19784.1.1	BioGUI specification	ISO/IEC 19784-1:2006/Amd 1:2007	2007-11-26
1.37.19784.2	Biometric application programming interface – Part 2: Biometric archive function provider interface	ISO/IEC 19784-2:2007	2007-01-15
1.37.19785.1	Common Biometric Exchange Formats Framework (CBEFF) - Part 1: Data element specification	ISO/IEC 19785-1:2006	2006-04-26
1.37.19785.2	Common Biometric Exchange Formats Framework – Part 2: Procedures for the operation of the Biometrics Registration Authority	ISO/IEC 19785-2:2006	2006-05-04
1.37.19785.3	Common Biometric Exchange Formats Framework -- Part 3: Patron format specifications	ISO/IEC 19785-3:2007	2007-12-13
1.37.19794.1	Biometric data interchange formats – Part 1: Framework	ISO/IEC 19794-1:2006	2006-03-31
1.37.19794.2	Biometric data interchange formats – Part 2: Finger minutiae data	ISO/IEC 19794-2:2005	2005-09-20
1.37.19794.3	Biometric data interchange formats – Part 3: Finger pattern spectral data	ISO/IEC 19794-3:2006	2006-08-16
1.37.19794.4	Biometric data interchange formats – Part 4: Finger image data	ISO/IEC 19794-4:2005	2005-06-10
1.37.19794.5	Biometric data interchange formats – Part 5: Face image data	ISO/IEC 19794-5:2005	2005-06-29
1.37.19794.5.1	Conditions for taking photographs for face image data	ISO/IEC 19794-5:2005/Amd 1:2007	2007-12-13

1.37.19794.6	Biometric data interchange formats – Part 6: Iris image data	ISO/IEC 19794-6:2005	2005-06-10
1.37.19794.7	Biometric data interchange formats – Part 7: Signature/sign time series data	ISO/IEC 19794-7:2007	2007-06-12
1.37.19794.8	Biometric data interchange formats - Part 8: Finger pattern skeletal data	ISO/IEC 19794-8:2006	2006-09-22
1.37.19794.9	Biometric data interchange formats – Part 9: Vascular image data	ISO/IEC 19794-9:2007	2007-02-28
1.37.19794.10	Biometric data interchange formats – Part 10: Hand silhouette data	ISO/IEC 19794-10:2007	2007-05-31
1.37.19795.1	Biometric performance testing and Reporting – Part 1: Principles and framework	ISO/IEC 19795-1: 2006	2006-03-24
1.37.19795.2	Biometric performance testing and reporting – Part 2: Testing methodologies for technology and scenario Evaluation	ISO/IEC 19795-2:2007	2007-01-12
1.37.19795.3	Biometric performance testing and reporting -- Part 3: Technical Report: Modality-specific testing	ISO/IEC TR 19795-3:2007	2007-12-06
1.37.19795.4	Biometric performance testing and reporting -- Part 4: Interoperability performance testing	ISO/IEC 19795-2:2007	2008-05-29
1.37.24709.1	Conformance testing for the biometric application programming interface (BioAPI) - Part 1: Methods and procedures	ISO/IEC 24709.1: 2007	2007-01-29
1.37.24709.2	Conformance testing for the biometric application programming interface (BioAPI) - Part 2: Test assertions for biometric service providers	ISO/IEC 24709.2: 2007	2007-02-02
1.37.24722	Biometrics - Multimodal and other multibiometric fusion	ISO/IEC TR 24722:2007	2007-06-22
1.37.24713-1	Biometric profiles for interoperability and data interchange -- Part 1: Overview of biometric systems and biometric profiles	ISO/IEC 24713-1:2008	2008-02-25
1.37.24713-2	Biometric profiles for interoperability and data interchange -- Part 2: Physical access control for employees at airports	ISO/IEC 24713-2:2008	2008-05-22
1.37.24741	Biometrics tutorial	ISO/IEC TR 24741:2007	2007-09-18

The Business Plan addresses the status of SC 37's PoW, and it discusses recent achievements and details opportunities and ongoing collaborative work with other JTC 1 SCs, liaison organizations and external organizations on projects where the SC 37

biometrics experts can lend their expertise. SC 37 is also participating in JTC 1 activities including the Ad Hoc Group on Vocabulary, the Special Group on Accessibility and the JTC1 SWG on Planning. SC 37 intends to maintain and enhance the relationship with other JTC 1 Subcommittees, ISO Technical Committees, Liaison Organizations and External Organizations to further promote the adoption of the international biometric standards and harmonization of biometric and related security, tokens-based and telecommunication standards.

1.2 JTC 1 SC 37 STATEMENT OF SCOPE

The Statement of Scope has not changed since it was approved at the first meeting of SC 37 held in December 2002. It is included below for convenience.

"*Standardization of generic biometric technologies pertaining to human beings to support interoperability and data interchange among applications and systems. Generic human biometric standards include: common file frameworks; biometric application programming interfaces; biometric data interchange formats; related biometric profiles; application of evaluation criteria to biometric technologies; methodologies for performance testing and reporting and cross jurisdictional and societal aspects.*

Excluded is the work in ISO/IEC JTC 1/SC 17 to apply biometric technologies to cards and personal identification.

Excluded is the work in ISO/IEC JTC 1/SC 27 for biometric data protections techniques, biometric security testing, evaluations, and evaluations methodologies."

The hierarchy and interrelationships between the scopes of work in SC 37, SC 27, and SC 17 and work conducted in these SCs remains the same.

1.3 PROJECT REPORT

The SC 37 PoW is posted in the SC 37 web site as Standing Document (SD1). Last update reflects the results of the SC 37 WG and Plenary meetings in Busan, Korea held in July 2008 (attached).

1.4 COOPERATION AND LIAISON ACTIVITIES

SC 37 is achieving one of its main goals; that is, the development of international standards that support the mass market adoption of biometric technologies. Adoption of SC 37 standards is underway which shows market acceptance of the standards. SC 37's additional goals are: (a) adoption of its standards by other JTC 1 SCs and ISO/IEC TCs (i.e., use of these standards by reference within their own standards projects) and (b) adoption of these standards by external organizations for their own requirements.

In order to achieve these goals, SC 37 actively collaborates with a number of these organizations. During this reporting period, SC 37 biometric experts have taken a

proactive role in providing their expertise to other JTC 1 SCs and external organizations in biometric-related projects. Examples of cooperation with these organizations follow.

1.4.1 SC 17

The technologies addressed by SC 17 and SC 37 are, for some applications, complementary in nature. The potential contributions that SC 37 can make to SC 17 through this liaison activity are substantial, particularly in the specification on the use of biometric data within their projects. SC 37 is collaborating with SC 17 by submitting contributions on biometric-related projects and through liaison reports. These activities demonstrate the excellent communication and cooperation between these two SCs. Most recently, SC 37 reviewed and submitted comments on 1.SC17.24787 — Information technology — Identification cards — On-Card matching. In addition, SC 37s experts offered to assist SC 17 in relation to the use of CBEFF (19785 Part 1 -3) patron formats within this project. SC 37 cooperation with SC 17 on this project is expected to continue.

1.4.2 SC 27

The complementary nature of SC 27 and SC 37 projects facilitates close and anticipated long term collaboration between experts from both SCs and a strong spirit of cooperation continues to exist. SC 37 is working with SC 27 in the development of 1.27.19792 - Security Evaluation of Biometrics and 1.27.24761 – Authentication Context for Biometrics (ACBio) and hopes to also contribute to 1.27.24745 – the Biometric Template Protection project. In reaction to comments by SC 27, SC 37 is developing Part 4 of the 19785 standard. This part of the Common Biometric Exchange Formats Framework (CBEFF) standard is to develop a CBEFF Security Block Format specification(s). In addition, SC 37 is developing Amendment 3 of the BioAPI specification, 19784-1.3 to provide support for the interchange of certificates and security assertions and other security aspects. These two new projects in SC 37 support ACBio's requirements.

As stated above, one of the goals of this activity is to support JTC 1 standardization efforts and to achieve harmonization between the SC 37 and SC 27 standards. This extends also to vocabulary development efforts (SC 37's SD2 and SC 27's Glossary of IT Security Terminology). Due to its work on Cross Jurisdictional Issues on the Use of Biometrics (under SC 37 WG6), SC 37 is also interested in other SC 27 projects including 1.27.24760 - Framework for Identity Management, 1.27.29100 - Privacy Framework and 1.27.29101 - Privacy Reference Architecture.

1.4.3 ISO/TC 68

SC 37, via resolution at its June 2007 Plenary, discontinued its liaison relationship with ISO/TC 68/SC 2 due to lack of activity and the diminishing work program of TC 68/SC 2.

1.4.4 ITU-T SG 17

Coordination of work and close collaboration between SC 37 and ITU-T SG17 continues within the well-established collaborative procedures between ITU-T and JTC 1 in areas such as security requirements, specifications and authentication. Recently, the product of the joint effort between SC 37 and ITU-T, the development of a Biometric Interworking Protocol (BIP), reached FDIS status (ISO/IEC FDIS 24708/ITU-T X.1083, BioAPI Interworking Protocol). This document was developed by a collaborative team with ITU-T SG17 Question 8. The document was completed and is awaiting publication. Recently, SC 37 provided ITU-T with its perspective on the role that biometrics can play in ID Management. This was in response to a liaison report from ITU-T (Liaison Statement from ITU-T SG 17 on the Technical Output of the Focus Group on Identity Management (FG IdM)).

1.4.5 BioAPI Consortium

The BioAPI Consortium is actively participating in the SC 37 standards activities that are related to the development of the BioAPI standard. SC 37 is maintaining a fluid channel of communication with this external organization.

1.4.6 The International Biometric Industry Association (IBIA)

IBIA serves as the Common Biometric Exchange Formats Framework (CBEFF) Registration Authority (project 1.37.19785). SC 37 maintains an active liaison with this organization and assists them in fulfilling this important role. IBIA is also contributing to the work of SC 37/WG 6 via the submission of contributions on the development of 1.37.24714, Multi-Part Technical Report on Cross Jurisdictional and Societal Aspects of Implementations of Biometric Technologies as well as the development of the Harmonized Biometric Vocabulary within SC 37 WG1.

1.4.7 International Labour Office of the UN

SC 37's previous Business Plans described in detail the relationship between ILO and ISO, regarding the Seafarer's ID. As a result of this collaboration, SC 37 established a Category A liaison relationship with ILO and during the previous reporting period established a group of experts within SC 37/WG 3 to further assist ILO with solving potential interoperability issues related to their project. Within this ongoing relationship, SC 37 is developing a Biometric Profile for Seafarers (1.37.24713-3). After the SC 37 meeting in July 2008, the document reached FCD status. This work takes into account ILO's requirements for a detailed biometric profile for verification and identification of seafarers with as much information on the architecture and implementation as possible (with reference to ILO Convention No. 185, and ILO's technical requirements). SC 37 experts on biometric profiles and technical interfaces are addressing ILO's technical requirements for the profile.

2.0 PERIOD REVIEW

Membership in SC 37 has increased to 25 P-Members, 7 O-Members and a number of liaisons with other JTC 1 SCs and external organizations. SC 37 Working Groups continue to meet approximately every six months and the SC 37 Plenary meets approximately once a year (co-located with its Working Groups). The SC 37 National Bodies remain very active in meetings and very responsive to ballots and calls for contributions. Over six hundred documents have been posted in the SC 37 Document register during this period. The SC made excellent progress during this period as illustrated by:

(a) the recently published biometric standards;
(b) other standards expected to be completed and published in the next reporting period;
(c) the advancement of many of the projects to the next development level; and
(d) the close and fruitful collaboration with other SCs and external organizations.

As discussed above, SC 37 contributes to a number of projects in other SCs such as SC 17 and SC 27 and has shared its current version of its harmonized biometric vocabulary with numerous standards organizations. It has also contributed terms and definitions to the JTC1 Terminum project.

Participation in both the SC 37 WGs and Plenary has been excellent. The intensified level of work and the technical challenges presented by the development of the second generation of biometric standards are being successfully addressed through the dedication of over 160 experts from the NBs and Liaison organizations participating in SC 37. The Chairman remarks above discuss SC 37's participation in JTC 1 activities. During this reporting period, the SC 37 WGs met in Tel-Aviv, Israel, in January 2008 and in Busan, Korea in July 2008. The Plenary met in July 2008 co-located with the WGs. The next SC 37 WG meetings are scheduled for January 2009 in Kauai, Hawaii, USA. The WGs and Plenary are scheduled to meet in July 2009 in Moscow, Russian Federation.

2.1 MARKET REQUIREMENTS

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 and can also be used to overcome the weaknesses of other technologies. Biometric technologies are currently required in many public and private sector applications worldwide to authenticate an individual's identity, secure national borders and restrict access to secure sites including buildings and computer networks. Biometrics provides for secure transactions, positive identification, and augmentation to human judgment.

SC 37 is meeting its main goal which includes developing international standards, keeping in mind the customer's needs and the support for the mass market adoption of these standards. SC 37 also strongly promotes the harmonization of biometric standards with related standards such as security and token-based standards that use biometrics. Through this work (the successful development of its portfolio of standards as well as the strong collaboration with other standards bodies) SC 37 is helping to ensure that

standards-based personal recognition systems and applications based on biometric solutions are more interoperable, scalable and secure.

As reported in previous SC 37 Business Plans, many of the standards developed by SC 37 have been adopted by major global customers such as the International Civil Aviation Organization (ICAO) and the International Labour Office (ILO) of the United Nations as well as by government programs in several SC 37 National Bodies.

2.2 ACHIEVEMENTS

SC 37 Standing Document 1 (SD1) summarizes the status of each project/subproject in SC 37's PoW. To date, twenty-four standards and three Technical Reports have been published, including seven standards and one Technical Report published during the reporting period (highlighted in the table of published standards above). SC 37 continued development of the "second generation" of standards to improve the existing standards, address technology innovations and new customers' needs. The SC 37 PoW currently includes twenty projects subdivided into sixty-seven subprojects.

The table below provides a summary of the status of the SC 37 active projects / subprojects as of September 2008.

Project/Subproject Status	Number of Projects/Subprojects in this Status
FDIS	1 (awaiting publication)
FCD	4
CD	12
WD	21
Base document	1
PDTR	2
DTR	1 (awaiting publication)
PDAM	2
FDAM	2

The Table below includes a list of the Standing Documents developed by SC 37 (some of the SDs were developed by SC 37 Officers and are used as SC management tools).These documents are available at the SC 37 web site.

SD Number	SD Name
SD 1	SC 37 Programme of Work (September 2008)

SD 2	Harmonized Biometric Vocabulary (V10 – July 2008)
SD 3	Project Editor Role and Responsibility (April 2008)
SD 4	Liaison Officer Role and Responsibility (July 2004)
SD 5	Rules for SC 37 Rapporteur Groups (July 2004)
SD 6	Procedures for SC 37 Ballot Resolution Meetings (July 2004)
SD 7	SC 37 Conformity Assessment Report (July 2004)
SD 8	Management of CBEFF Namespaces (R2 – July 2005)
SD 9	Register of CBEFF Namespaces (R3 – November 2007)
SD 10	SC 37 National Body/Project Editor Comment Template (April 2008)
SD 11	SC 37 Part 1 Overview Standards Harmonization Document (May 2008)
SD 12	SC 37 Project Description Information (August 2006)
SD 13	Rules for the Establishment and Operation of SC 37 Special Groups (R2 – December 2006)
SD 14.1	WG 1 Draft Roadmap (July 2008)
SD 14.2	WG 2 Draft Roadmap (July 2008)
SD 14.3	WG 3 Draft Roadmap (July 2008)
SD 14.4	WG 4 Draft Roadmap (July 2008)
SD 14.5	WG 5 Draft Roadmap (July 2008)
SD 14.6	WG 6 Draft Roadmap (July 2008)

As mentioned above, international and national organizations have adopted many of the biometric standards development by SC 37. This is a major achievement. ICAO, for example, selected facial recognition as the globally interoperable biometric for machine-assisted identity confirmation for Machine Readable Travel Documents (MRTD). ICAO requires conformance to the face recognition standard developed by ISO/IEC JTC 1/SC 37. Other ICAO requirements for ISO/IEC JTC 1/SC37 standards are the fingerprint data interchange formats, the iris recognition interchange format, and an instantiation of the Common Biometric Exchange Formats Framework (CBEFF). ILO's requirements for the Seafarers' ID Card include the use of two fingerprint templates to be stored in a barcode placed in the area indicated by the ICAO's 9303 standard. ILO's requirements specify the use of some of the standards approved by SC 37, specifically finger minutiae and finger image data interchange formats (published as International Standards in 2005). The adoption of these standards is a significant contribution to the customer and the biometric and ID management industries, and will significantly impact the use of biometrics for MRTD in the countries represented within ICAO. As related above, SC 37 is helping ILO by developing a biometric profile for Seafarers. The document, which is in FCD status as a result of the SC 37 meetings in July 2008, includes, as normative references, several of the SC 37 standards.

The European Union (EU) password specification working document [1] describes solutions for chip enabled EU passports, based on EU's Council Regulation on standards for security features and biometrics in passports and travel documents issued by Member States[2]. The specification relies on international standards, especially ISO/IEC standards and ICAO recommendations on MRTDs, and includes specifications for biometric face and fingerprint identifiers; thus the specifications are underpinned by ISO/IEC standards resulting from the work of SC 37. A number of standards are referred to in this EU document including an ICAO New Technology Working Group's Technical Report[3] as well as the ISO/IEC 19794-4:2005 and ISO/IEC 19794-5:2005 standards developed by SC 37.

Several countries represented in SC 37 are also adopting the SC 37 standards. For example, in Spain two official documents store biometric data using SC 37 standards. The electronic national identity card (DNIe) includes personal information of the citizen, details of electronic certificates and the biometric information. The image of the face is stored following ISO/IEC 19794-5 and ICAO standards. Finger minutiae are stored using the ISO/IEC 19794-2 standard. In addition, the biometric data included in Spanish e-Passports is the image of the face based on ISO/IEC 19794-5 and ICAO standard compliant stored in JPEG2000 format (ISO 15444)[4]. In the United States of America, several organizations require selected biometric data interchange standards developed by SC 37 and some of the ongoing biometric testing programs use some of the performance testing methodology standards developed by the Subcommittee. The Registered Traveler Interoperability Consortium (RTIC) uses some of the JTC 1/SC 37 standards as well. The Registry of U.S. Government Recommended Biometric Standards developed by the National Science and Technology Council Subcommittee on Biometrics and Identity Management[5] recommends some of the data formats specified in SC 37 standards: the finder minutiae, face image and iris image data interchange formats as well as the BioAPI specification and its companion conformance testing methodology standard. Two parts of the multi-part performance testing methodology standard developed by SC 37 are also included in the Registry.

2.3 RESOURCES

Participation in SC 37's Programme of Work by National Bodies and Liaison Organizations is very good and has increased during this period. SC 37 has 25 P-Members, 7 O-Members and a number of Liaison organizations.

2.4 ENVIRONMENTAL ISSUES

Not applicable to this SC.

2.5 PARTICIPATION METRICS

At the January 2008 in Tel-Aviv, Israel, over 85 delegates from 13 member countries and liaison organizations participated in the SC 37 WG meetings. Approximately one-hundred delegates from fifteen countries and multiple liaison organizations participated in the WG meetings in July 2008 in Busan, Korea. Thirteen countries were represented at the Plenary. The required 50% voting participation was met or exceeded in every ballot.

3.0 FOCUS NEXT WORK PERIOD

3.1 DELIVERABLES:

Deliverables expected from the next work period (July 2008 – June 2009) on a project level are reflected in the PoW (SD1). SC 37 will focus on significantly advancing the development of standards/technical reports projects within its PoW. Several of them, as indicated in the SD1, will be close to completion at the end of the next reporting period. One standard and one Technical Report are awaiting publication.

During this reporting period, SC 37 established a Special Group on WG Structure to provide and maintain a five-year outlook for SC 37. This five-year outlook will take into account the current PoW against biometric technology and application trends, as well as overlaps, gaps and dependencies between current work elements and the WG structure. This SG met in January 2008 in Tel-Aviv, Israel and in April 2008 in New York, New York, USA. The SG recommendations encouraged close interaction between WGs on projects of common interest (ongoing) and encouraged the WG Conveners to develop draft roadmaps for consideration at their WG meeting in July 2008. As a result of these meetings and the SC 37 Plenary, six WG roadmaps were posted for National Body comments. These roadmaps will be reviewed at the upcoming WG meetings in January 2009 in Hawaii, USA.

3.2 STRATEGIES

SC 37 initiates work as required and engages with other organizations as appropriate, to meet the needs of the IT community and other customers in order to promote adoption of the biometric standards and support the market adoption of biometric technologies. As discussed in this report, large external organizations (e.g., ICAO, ILO and the EU) have already demonstrated the need for SC 37 standards.

The Subcommittee is rising to the challenges presented by technology innovations and new customers' needs by examining these technology innovations and by working to support these new customers' needs. As discussed above, the SC is also closely cooperating with other standards organizations (e.g., JTC 1 SC 17, SC 27, ITU-T) to support work within these standards bodies and to achieve harmonization of biometric standards with related projects within these organizations. The SC is also responding to their needs by initiating required new projects in support of their standards such as SC 27's ACBio.

The adoption of SC 37 standards is also facilitated through the close interaction and participation by a significant number of National Body experts and the promotion of the SC's work through talks in technical conferences, chapters in books, and articles published by ISO and other organizations. Examples of such publications include:

- ISO Focus issues
- National Body publications (e.g., Standards Institute of Israel's publication on Homeland Security, sponsored by the US-Israel Science and Technology Foundation, April 2007)
- a technical book on biometrics[6],
- a book on standards [7] that is used in a course of university graduate program
- international conference proceedings[8].

The SC 37 work has also been reflected in a number of International technical conferences (e.g., Biometric Consortium, USA (2005 – 2008), International Conference on Biometrics, Seoul, Korea, August 2007).

3.2.1 RISKS

Adoption of biometric-based high performance, interoperable systems will depend, in part, on the timely availability of a portfolio of biometric standards that are required by other standards bodies within JTC 1, ISO TCs, external standards organizations and other customers (end-users and industry). The major risk that may jeopardize this consumer adoption is the time associated with the development of these standards. SC 37 is doing its best to mitigate this risk through the use of IT tools, international cooperation and team work, the establishment of OWG to work in-between WG meetings and tight program management.

3.2.2 OPPORTUNITIES

Biometric technologies are already playing a crucial role in a wide range of applications. As the marketplace for biometric-based solutions has widened significantly, the importance of these biometric technologies has also dramatically increased. Homeland defense is the highest priority for many countries. These countries are now seriously considering or have already approved new legislation that calls for the investigation and use of biometric technologies as soon as possible for homeland defense applications (this was, in part addressed in the discussion on adoption above). The prevention of ID theft will also become a significant market for biometrics in the future. Commercial applications are already using biometrics or are considering the role that biometrics will play in current or future personal verification and identification systems.

Standardized biometric-based solutions are becoming mandatory requirements in many of these applications. As SC 37 has demonstrated, the Subcommittee provides the ideal opportunity to develop biometric standards that meet these customer requirements. Based on National Body and Liaison Organization contributions, SC 37 has already addressed the development of the first generation of needed biometric standards which is reflected in early customer adoption. SC 37 is also rising to the challenge of technology innovation

and new customers' needs and is addressing new projects and the second generation of biometric standards development to meet these new customers' needs.

3.3 WORK PROGRAM PRIORITIES

SC 37 will continue to focus on market relevant projects as in the current period of reporting. Program priorities include delivering on time the standards and technical reports described above to maximize adoption by JTC 1 SCs as well as external standards organizations and customers. There is consensus in the biometric community that companion standards are required for the base standards which address conformance, interoperability, performance and quality and SC 37 is addressing these needs. SC 37 does have some challenges ahead. For example, more work needs to be done in fully defining level 3 conformance testing methodologies for some of the requirements in the data interchange standards.

4. REFERENCES

[1] "Biometrics Deployment of EU-Passports", The European Union password specification working document (EN) – 28 June, 2006.

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