



FOR INFORMATION

FOURTEENTH ITEM ON THE AGENDA

Report of the Director-General**Ninth Supplementary Report: Follow-up
to the Seafarers' Identity Documents
Convention (Revised), 2003 (No. 185)**

1. The Governing Body was informed¹ that during 2004 seven biometric products were tested on board a cruise ship in a realistic seafaring environment to determine if they could meet the technical requirements of the Seafarers' Identity Documents Convention (Revised), 2003 (No. 185) and the ILO SID-0002 standard. The ILO's stated performance criteria were a 1 per cent false rejection rate (or less) at a 1 per cent false acceptance rate. After allowing vendors to modify software to resolve interoperability issues, three biometric products were found to meet the performance criteria.² Later, the lessons learned from this initial testing were incorporated into an amended version of the SID-0002 standard, which was approved by the Governing Body in November 2005.³ Due to the emergence of new vendors in different parts of the world and the general improvement of biometric technology, a further test was undertaken in 2006. This one took place on land and used volunteers from the general public, but normalized the data to that of the previous test using the results from the three products that had been found to meet the ILO performance criteria. When this test was complete, a total of six new products, in addition to the three previous ones, were found to meet the performance criteria. One of the previous products was also tested in a modified form at the request of its supplier and this modified form was found to be better performing and thus a suitable replacement for the previously tested product.⁴
2. Since 2006, new biometric technologies have become available and some of the algorithms that were previously tested have become outdated. Therefore, in 2008 a new test took place in two phases. The initial phase used three new products and the nine previously tested products. The second phase substituted modified versions of two of the nine previously tested products and a modified version of one of the three new products (since the vendor requested to submit an altered version of the product during the test). Full data collection

¹ GB.292/16/2.

² GB.292/16/2(Add.)

³ GB.294/16/3.

⁴ GB.297/19/6.

from 189 test subjects, 125 of whom had also voluntarily participated in the 2006 test, took place in September and October 2008. A total of 84,806 fingerprint images were collected under controlled and supervised conditions. Data processing and analysis took place from November 2008 until January 2009. A total of 119,197,971 individual fingerprint matches were computed, resulting in a total of 20,251,227 two-finger transactions being simulated. In accordance with an agreement with the International Organization for Standardization (ISO), the results of the testing and the draft conclusions of the ILO expert were submitted for an independent review by experts in ISO's SC 37 group dealing with biometric standards. The ILO expert then produced his final report, which took the SC 37 experts' opinions into account.

3. The final report found that two of the three new products tested in the first phase achieved the ILO performance criteria when used in conjunction with the nine products previously found to meet those criteria and with each other. The mean false rejection rate at a false acceptance rate of 1.0 per cent was 0.80 per cent. In the second phase, the entire test was recomputed using modified versions of two previous products and a modified version of the new product that had performed poorly in the first phase. This test also produced a mean false rejection rate of 0.80 per cent at a false acceptance rate of 1.0 per cent, but the modified version of one of the previous products demonstrated unacceptable performance when used interoperably with another of the previous products. Therefore, in order to preserve the interoperability of all existing ILO SID systems, the modified version of that product was determined to have failed to meet the requirement in ILO SID-0002 for interoperability with all other biometric products.
4. Accordingly, 12 products (eight previously tested products, one modified version of a previously tested product and three completely new products) can now be identified as meeting the requirements of Convention No. 185 and the ILO SID-0002 standard. Thus, products fully meeting the Convention's requirements for global interoperability of the biometric element of the seafarers' identity document are available from several different sources at the present time, with the possibility of more sources being identified in the future. The 12 products concerned are listed in the table below.

Vendor	Software	Sensor Name
Bioscrypt	Bioscrypt SDK for SIDs, Version 1.0	UPEK TouchChip TC-S1
Cogent	BioSDK Version 3.10 COGENT BSP	Cogent Fingerprint Scanner CSD301
Dermalog	Dermalog BioPackage Version 1.3	Dermalog ZF1
Hyundai	Trugate-HIT-SHB BSP -> HIT UBF3.0 BSP	Smiths Heimann ACCO 1394
Identix	BioEngine Version 6	DFR-2100
Intech	Intech SOP SDK	Intech SOP 1.00.00
Intech	Sonda SDK for SID Version 1.3	Intech SOP 1
Lumidigm	Lumidigm SDK Version 2.4	Lumidigm Venus V-300
NEC	SPID SID Edition Version 1.1	CROSSMATCH L SCAN 100R
Sagem	BioAPI Version 1.1 Sagem BSP	MSO 100
Sonda	Sonda SID SDK Version 1.0	CrossMatch Verifier 300 LC 2.0
Steria	Steria BioMatch Version 1.4	Smiths Heimann ACCO 1394

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Submitted for information.