

Overall ePass Projects US, Europe & APAC Programs, Market and Technologies

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23 Sept 2008



Never stop thinking

Content list

- Market and Programs, worldwide
- Biometrics and Security, basics
- Product Certification, security and application

World Program on Travel Documents

■ Standardization

- Start 2003 (ICAO 9303-1)
- Finish 2005 (BAC)
- 2008 (EAC) ¹⁾

■ Regulation

- USA 2004 (VISIT)
- Europe 2004 (2252/2004)

■ Implementation Plan

- USA 10/2006 (BAC)
- Europe 6/2006 (BAC)
- 6/2009 (EAC)
- Japan 3/2006 (BAC)
- 3/2009 (BAC/AA)

1) Note: Extended Access Control is at this time not part of the ICAO framework

Overall ePass projects US, Europe & APAC Market & Programs



| CY | # of states w/ ePass | # of pieces ePass (Mio) | # of states w/ border control based on ePass |
|------|-------------------------|----------------------------|--|
| 2004 | 1 ¹⁾ | < 1 | 0 |
| 2005 | 7 | < 5 | 0 |
| 2006 | 33 ²⁾ | 35 | 0 |
| 2007 | 40 | 70 | 3 |
| 2008 | 55 ³⁾ | 80 ³⁾ | 6 ³⁾ |

1) Belgium, November 2004

2) Two regulations: a) US-VWP (deadline: 10/2006), b) EU 2252/2004 (deadline: 08/2006)

3) Estimated

World Program on Travel Documents

■ Participation on Secure Industry (2007)

- ePassport producer 25 (for 40+ countries)
- eCover/inlay producer 10 (for all 3 kinds of embedding)
- OS/application SW provider 12 (for various configuration₁)
- IC/package provider 7 (3 have > 95% Share)

■ ePass Market Share on the complete Government eID Market (2007)

- 50% (total market was 140 Mio. pcs, according EUROSMART²⁾)

■ Government eID Market Share vs. complete Smart Card Market (2007)

- 5% (total market was 4.3 Bill. pcs, according EUROSMART)

1) IFX has 35% Share in pieces

2) Market picture without National eID China

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World Program on Travel Documents

■ Biometric

- mandatory Face: Image, JPEG, JPEG 2000 or WSQ
- 1st . option: Fingerprint
- 2nd. option: Iris
- 3rd. option: Signature

■ Security

- Passive Authentication (PA): e.g. Thailand
- Basic Access Control (BAC): e.g. USA, Australia...
- BAC/Active Authentication: e.g. Hong Kong, Austria...
- Extended Access Control (EAC): e.g. Germany, Singapore

Overall ePass projects US, Europe & APAC Biometrics and Security



| | | CY | 2004 | 2005 | 2006 | 2007 | 2008 | |
|---------------------------|------------|-----------------------|------|-----------------|-----------------|-----------------|------------------|---|
| | | # issuing ePass [Mio] | < 1 | < 5 | 35 | 70 | 80 ¹⁾ | |
| # of States ²⁾ | Biometrics | Face | 1 | 6 | 31 | 40 | t.b.d. | |
| | ICAO | Face & Fingerprint | | 1 ³⁾ | 2 ⁴⁾ | 3 ⁵⁾ | | |
| # of States ²⁾ | Security | EAC | | | 1 | 2 | t.b.d. | |
| | | ICAO | AA | 1 | 1 | 7 | | 9 |
| | | BAC | | 6 | 24 | 31 | | |
| | | PA | 1 | 1 | 1 | 1 | | |

1) estimated 2) with participation on program 3) Thailand 4) + Singapore 5) + Germany

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Overall ePass projects US, Europe & APAC Certification



| | | Security Certificate | |
|---------------------------|---|--|--|
| | | HW ¹⁾ | HW/SW ¹⁾ (incl. Application) |
| Application Certification | cross over test interoperability (ICAO & BIG) | e.g. Thailand Belgium Australia Hong Kong* | e.g. Poland* Spain* Italy* |
| | + conformity test (ISO) | e.g. USA ⁴⁾ * Japan ²⁾ UK* | e.g. Germany ³⁾ * Taiwan ³⁾ * |

1) ISO 15408, Common Criteria

* IFX products are awarded

2) Test form NMDA

3) Test from BSI

4) Test from NIST

Interoperability

The complete view



| time window (CY) | 2004 – 2006 | 2006 - 2008 |
|--|--|---|
| key driver | ICAO NTWG TF5 ¹⁾ | BIG ²⁾ , EU Commission |
| scope of interest application level | PA → BAC (BAC/AA) | EAC |
| events | 2004 Canberra, Australia 2004 West Virginia, USA 2004 Sydney, Australia 2005 Tokyo, Japan 2005 Singapore 2006 Berlin, Germany | 2007 Paris, France 2007 Dublin, Ireland 2007 Ispra, Italy 2008 Prague, Czech Rep. ... |
| typical reading time | 3 ... 7 sec (DG1, DG2) | 9 ... 14 sec (DG1, DG2, DG3, DG14) |

1) International Civil Aviation Organisation, New Technical Working Group, Task Force 5

2) Brussels Interoperability Group, Belgium

Highest Security Certification is the Key

Example:

Security Controller

- 36k and 80k EEPROM
- Contactless
- Dual Interface
- Contact-based



BSI-DSZ-CC-0399-2007

Infineon Smart Card IC (Security Controller)
 SLE66CLX800 PE / m1581-e12, SLE66CLX800PEM /
 m1580-e12, SLE66CLX800PES / m1582-e12,
 SLE66CLX360 PE / m1587-e12, SLE66CLX360PEM /
 m1588-e12 and SLE66CLX360PES / m1589-e12
 with specific IC Dedicated Software



Common Criteria Arrangement
 for components up to EAL4

from

Infineon Technologies AG

The IT products identified in this certificate have been evaluated at an accredited and licensed/ approved evaluation facility using the *Common Methodology for IT Security Evaluation, Version 2.3* (ISO/IEC 15408:2005) extended by advice of the Certification Body for components beyond EAL4 and smart card specific guidance for conformance to the *Common Criteria for IT Security Evaluation, Version 2.3* (ISO/IEC 15408:2005).

Evaluation Results:

- PP Conformance: Protection Profile BSI-PP-0002-2001
 Functionality: BSI-PP-0002-2001 conformant plus product specific extensions
 Common Criteria Part 2 extended
 Assurance Package: Common Criteria Part 3 conformant, EAL5 augmented by:
 ALC_DVS.2 (Life cycle support - Sufficiency of security measures),
 AVA_MSU.3 (Vulnerability assessment - Analysis and testing for insecure states),
 AVA_VLA.4 (Vulnerability assessment - Highly resistant)

This certificate applies only to the specific version and release of the product in its evaluated configuration and in conjunction with the complete Certification Report.

The evaluation has been conducted in accordance with the provisions of the certification scheme of the German Federal Office for Information Security (BSI) and the conclusions of the evaluation facility in the evaluation technical report are consistent with the evidence adduced.

The notes mentioned on the reverse side are part of this certificate.

Bonn, 28. January 2007

The President of the Federal Office
 for Information Security



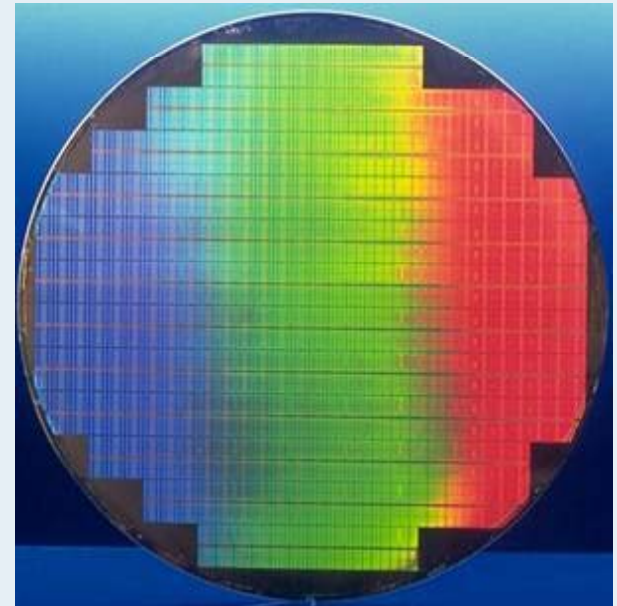
SGSIS - MRA

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<http://www.bsi.bund.de/zertifiz/zert/report.htm#Smartcards>

Any Questions ?



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