PREMIER MINISTRE

General Secretariat for Defence and National Security

French Network and Information Security Agency

Certification Report ANSSI-CC-PP-2010/01

Electronic Purse Protection Profile

(reference SFPMEI-CC-PP-EP, version 1.5 dated from 4 February 2010)

Paris, the 17 February 2010

Courtesy Translation

SÉCURITÉ
CERTIFICATION
Ti

Warning

This report testifies that the protection profile evaluated fulfill the evaluation criteria.
A protection profile is a public document which defined for a special product category a set of requirements and security objectives independently of the technology and the implementation. The products defined from this protection profile satisfied the security needs from a common group of users.

Any correspondence about this report has to be addressed to:

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Certification report reference	
ANSSI-CC-PP-2010/01	
Protection profile name	
Electronic Purse Protection Profile	
Protection profile reference	
Reference SFPMEI-CC-PP-EP / version 1.5 dated from 4 February 2010	
Evaluation criteria and version	
Common Criteria version 3.1	
Evaluation level imposed by the PP	
EAL 4 augmented	
ALC_DVS.2, AVA_VAN.5	
Writer	
Trusted Labs SAS	
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Sponsors	
BMS	**SFPMEI**
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Recognition arrangements	
CCRA	**SOG-IS**
Recognition until the EAL4 level	

Introduction

The Certification

Security certification for information technology products and systems is governed by decree number 2002-535 dated April, 18th 2002, and published in the "Journal Officiel de la République Française". This decree stipulates that:

- The French Network and Information Security Agency draws up **certification reports**. These reports indicate the features of the proposed security targets. They may include any warnings that the authors feel the need to mention for security reasons. They may or may not be transmitted to third parties or made public, as the sponsors desire (article 7).

- The **certificates** issued by the Prime Minister certify that the copies of the products or systems submitted for evaluation fulfil the specified security features. They also certify that the evaluations have been carried out in compliance with applicable rules and standards, with the required degrees of skill and impartiality (article 8).

The procedures are available on the Internet site www.ssi.gouv.fr.

Contents

1. Presentation of the protection profile

1.1. Protection profile identification

Title: Electronic Purse Protection Profile.
Reference: SFPMEI-CC-PP-EP, version 1.5.
Date: 4 February 2010.

1.2. Writer

This protection profile has been written by:

Trusted Labs S.A.S.

5 rue du Bailliage
78000 Versailles
France

1.3. Protection profile description

The target of evaluation defined in this protection profile [PP] is an electronic purse. It comprises an integrated circuit (which morever shall be certified in accordance with the protection profile [PP-0035]) and all the embedded software necessary to the implementation of its functionnalities.

The target of evaluation described in the protection profile shall be able to:
- store the amount of electronic money which defines the balance of the electronic purse;
- indicate the available amount of electronic money;
- debit electronic money with debit operations;
- credit electronic money via laod and quickload transactions;
- update electronic purse parameters.

The primary functionality of the target of evaluation defined in the protection profile is to allow the purse holder to make electronic money payment in a simple, secure and fast way.

The target of evaluation shall provide offline payment transactions capabilities thus requiring the following security mechanisms to prevent from fraud:
- integrity protection of electronic money during load, quickload and debit operations;
- integrity and confidentiality protection of cryptographic keys when used or stored;
- mutual authentication between the target of evaluation and the Secure Access Module (SAM) during quickload and debit operations;
- mutual authentication between the target of evaluation and the load device during load transactions;
- authentication of the purse holder during load and quickload transactions.

1.4. Functional requirements

The security functional requirements which are identified in this protection profile are the following:

- Audit data generation (FAU_GEN.1)
- Audit review (FAU_SAR.1)
- Protected audit trail storage (FAU_STG.1)
- Enforced proof of origin (FCO_NRO.2)
- Cryptographic operation (FCS_COP.1)
- Complete access control (FDP_ACC.2)
- Security attribute based access control (FDP_ACF.1)
- Subset information flow control (FDP_IFC.1)
- Simple security attributes (FDP_IFF.1)
- Import of user data without security attributes (FDP_ITC.1)
- Stored data integrity monitoring (FDP_SDI.1)
- TSF Generation of secrets (FIA_SOS.2)
- Timing of authentication (FIA_UAU.1)
- Unforgeable authentication (FIA_UAU.3)
- Single-use authentication mechanisms (FIA_UAU.4)
- Re-authenticating (FIA_UAU.6)
- Management of security attributes (FMT_MSA.1)
- Static attribute initialisation (FMT_MSA.3)
- Inter-TSF confidentiality during transmission (FPT_ITC.1)
- Inter-TSF detection and modification (FPT_ITI.1)
- Notification of physical attack (FPT_PHP.2)
- Resistance of physical attack (FPT_PHP.3)
- Function recovery (FPT_RCV.4)
- Replay detection (FPT_RPL.1)

All these security functional requirements are extracted from Common Criteria part 2 [CC].

1.5. Assurance requirements

The assurance requirements required for this protection profile is **EAL 4 augmented with the following assurance requirements[1]:**

Components	Descriptions
ALC_DVS.2	Sufficiency of security measures
AVA_VAN.5	Advanced methodical vulnerability analysis

Tableau 1 - Augmentations

All these security assurance requirements are extracted from Common Criteria part 3 [CC].

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[1] **Erreur ! Source du renvoi introuvable.**: table of different evaluation assurance levels (EAL – Evaluation Assurance Level) predefined in the Common Criteria [CC].

2. Evaluation

2.1.   Evaluation referential

The evaluation has been conducted in accordance with the **Common Criteria standard version 3.1** [CC] and the evaluation methodology defined within the CEM [CEM].

2.2.   Sponsors

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SFPMEI

168 rue de Rivoli
75001 Paris
France

2.3.   Evaluation facility

SERMA Technologies

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2.4.   Evaluation tasks

The evaluation technical report [ETR], delivered to ANSSI the 12 January 2010, provides details on the work performed by the evaluation facility and assesses that all evaluation tasks are "**pass**".

3. Certification

3.1. Conclusion

The evaluation was carried out according to the current rules and standards, with the required competency and impartiality for a licensed evaluation facility. All the work performed permits the release of a certificate in conformance with the decree 2002-535.

3.2. European recognition (SOG-IS)

This certificate is issued in accordance with the provisions of the SOG-IS agreement [SOG-IS].
The European Recognition Agreement made by SOG-IS in 1999 allows recognition from Signatory States of the agreement[1], of ITSEC and Common Criteria certificates. The European recognition is applicable up to ITSEC E6 and CC EAL7 levels. The certificates that are recognized in the agreement scope are released with the following marking:

3.3. International common criteria recognition (CCRA)

This certificate is released in accordance with the provisions of the CCRA [CC RA].

The Common Criteria Recognition Arrangement allows the recognition, by signatory countries[2], of the Common Criteria certificates. The mutual recognition is applicable up to the assurance components of CC EAL4 level and also to ALC_FLR family. The certificates that are recognized in the agreement scope are released with the following marking:

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1 The signatory countries of the SOG-IS agreement are: Finland, France, Germany, Greece, Italy, The Netherlands, Norway, Spain, Switzerland and United Kingdom.
2 The signatory countries of the CCRA arrangement are: Australia, Austria, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Israel, Italy, Japan, the Republic of Korea, Malaysia, Netherlands, New-Zealand, Norway, Pakistan, Singapore, Spain, Sweden, Turkey, the United Kingdom and the United States of America.

Annex 1. Evaluation level of the product

Class	Family	Components by assurance level							Assurance level of the product	
		EAL 1	EAL 2	EAL 3	EAL 4	EAL 5	EAL 6	EAL 7	EAL 4+	Name of the component
ADV Development	ADV_ARC		1	1	1	1	1	1	1	Security architecture description
	ADV_FSP	1	2	3	4	5	5	6	4	Complete functional specification
	ADV_IMP				1	1	2	2	1	Implementation representation of the TSF
	ADV_INT					2	3	3		
	ADV_SPM						1	1		
	ADV_TDS		1	2	3	4	5	6	3	Basic modular design
AGD Guidance	AGD_OPE	1	1	1	1	1	1	1	1	Operational user guidance
	AGD_PRE	1	1	1	1	1	1	1	1	Preparative procedures
ALC Life-cycle support	ALC_CMC		2	3	4	4	5	5	4	Production support, acceptance procedures and automation
	ALC_CMS	1	2	3	4	5	5	5	4	Problem tracking CM coverage
	ADO_DEL		1	1	1	1	1	1	1	Delivery procedures
	ALC_DVS			1	1	1	2	2	2	Sufficiency of security measures
	ALC_FLR									
	ALC_LCD			1	1	1	1	2	1	Developer defined life-cycle model
	ALC_TAT				1	2	3	3	1	Well-defined development tools
ST Security Target Evaluation	ASE_CCL	1	1	1	1	1	1	1	1	Conformance claims
	ASE_ECD	1	1	1	1	1	1	1	1	Extended components definition
	ASE_INT	1	1	1	1	1	1	1	1	ST introduction
	ASE_OBJ	1	2	2	2	2	2	2	2	Security objectives
	ASE_REQ	1	2	2	2	2	2	2	2	Derived security requirements
	ASE_SPD		1	1	1	1	1	1	1	Security problem definition
	ASE_TSS	1	1	1	1	1	1	1	1	TOE summary specification
ATE Tests	ATE_COV		1	2	2	2	3	3	2	Analysis of coverage
	ATE_DPT			1	2	3	3	4	1	Testing: basic design
	ATE_FUN		1	1	1	1	2	2	1	Functional testing
	ATE_IND	1	2	2	2	2	2	3	2	Independent testing - sample
AVA Vulnerability assessment	AVA_VAN	1	2	2	3	4	5	5	5	Advanced methodical vulnerability analysis

Annex 2.   References

Decree number 2002-535 dated 18th April 2002 related to the security evaluations and certifications for information technology products and systems.	
[CPP/P/01]	Procedure CPP/P/01 – Protection profiles certification, DCSSI.

[CC]	Common Criteria for Information Technology Security Evaluation :
	 Part 1: Introduction and general model,
	   July 2009, version 3.1, revision 3 Final, ref CCMB-2009-07-001;
	 Part 2: Security functional components,
	   July 2009, version 3.1, revision 3 Final, ref CCMB-2009-07-002;
	 Part 3: Security assurance components,
	   July 2009, version 3.1, revision 3 Final, ref CCMB-2009-07-003.

[CEM]	Common Methodology for Information Technology Security Evaluation : Evaluation Methodology, July 2009, version 3.1, revision 3 Final, ref CCMB-2009-07-004.
[CC RA]	Arrangement on the Recognition of Common Criteria certificates in the field of information Technology Security, May 2000.
[SOG-IS]	«Mutual Recognition Agreement of Information Technology Security Evaluation Certificates», version 2.0, April 1999, Management Committee of Agreement Group.
[PP-0035]	Security IC Platform Protection Profile, Reference: BSI-PP-0035, version 1.0 dated from 15/06/2007 *Certified by the BSI (Bundesamt für Sicherheit in der Informationstechnik) under the reference BSI-CC-PP-0035-2007.*
[PP]	Electronic Purse Protection Profile, Reference: SFPMEI-CC-PP-EP, version 1.5 dated from 04/02/2010, Trusted Labs SAS
[RTE]	Electronic Purse and Secure Access Module for EM system Protection Profiles Evaluation Report, Reference: MONEO_APE_v1.2, version 1.2, Serma Technologies