PKCS #15 v1.0 Amendment 1

RSA Laboratories

1 December, 1999

Table of Contents

1. INTRODUCTION 1

2. CHANGES TO SECTION 7, "INFORMATION SYNTAX IN ASN.1" 1

3. CHANGES TO SECTION 8, "ASN.1 MODULE" 2

A. INTELLECTUAL PROPERTY CONSIDERATIONS 3

B. REFERENCES 3

C. ABOUT PKCS 3

1. Introduction

In certain circumstances, there is a need to make a PKCS #15-library aware of the fact that a user has to re-authenticate after accessing a private object, e.g. a private key, a certain number of times. This amendment documents the changes to PKCS #15 v1.0 needed to support this.

2. Changes to Section 7, "Information Syntax in ASN.1"

[Replace the ASN.1 definition of ***PKCS15CommonObjectAttributes*** *in Section 7.1.7 with:]*

```
PKCS15CommonObjectAttributes ::= SEQUENCE {
        label    PKCS15Label OPTIONAL,
        flags    PKCS15CommonObjectFlags OPTIONAL,
        authId  PKCS15Identifier OPTIONAL,
        ...,
        userConsent INTEGER (1..pkcs15-ub-userConsent) OPTIONAL
} (CONSTRAINED BY {-- authId should be present in the IC card case if flags.private is set.
        -- It must equal an authID in one AuthRecord in the AODF. userConsent may only
        -- be present if flags.private is set. -- })
```

[Add the following paragraph after the currently last paragraph in Section 7.1.7:]

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003-903078-100-001-000

The **userConsent** field gives, in the case of a private object, the number of times an application may access the object without explicit consent from the user (e.g. a value of **3** indicates that a new authentication will be required before the first, the 4th, the 7th, etc. access).

3. Changes to Section 8, "ASN.1 Module"

[Add the following definition after the definition of pkcs15-ub-recordLength:]

```
pkcs15-ub-userConsent INTEGER ::= 15
```

*[Replace the ASN.1 definition of **PKCS15CommonObjectAttributes** with:]*

```
PKCS15CommonObjectAttributes ::= SEQUENCE {
        label    PKCS15Label OPTIONAL,
        flags    PKCS15CommonObjectFlags OPTIONAL,
        authId   PKCS15Identifier OPTIONAL,
        ...,
        userConsent INTEGER (1..pkcs15-ub-userConsent) OPTIONAL
} (CONSTRAINED BY {-- authId should be present in the IC card case if flags.private is set.
        -- It must equal an authID in one AuthRecord in the AODF. userConsent may only
        -- be present if flags.private is set. -- })
```

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A. Intellectual property considerations

RSA Security makes no patent claims on the general constructions described in this document, although specific underlying techniques may be covered.

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RSA Security makes no representations regarding intellectual property claims by other parties. Such determination is the responsibility of the user.

B. References

[1] RSA Laboratories. *PKCS #15: Cryptographic Token Information Format Standard*. Version 1.0, April 1999.

C. About PKCS

The *Public-Key Cryptography Standards* are specifications produced by RSA Laboratories in cooperation with secure systems developers worldwide for the purpose of accelerating the deployment of public-key cryptography. First published in 1991 as a result of meetings with a small group of early adopters of public-key technology, the PKCS documents have become widely referenced and implemented. Contributions from the PKCS series have become part of many formal and *de facto* standards, including ANSI X9 documents, PKIX, SET, S/MIME, and SSL.

Further development of PKCS occurs through mailing list discussions and occasional workshops, and suggestions for improvement are welcome. For more information, contact:

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