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In the present document, modal verbs have the following meanings:

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The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

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should indicates a recommendation to do something

should not indicates a recommendation not to do something

may indicates permission to do something

need not indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

can indicates that something is possible

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will indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

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1 Scope

The present document covers the minimum characteristics considered necessary in order to provide compliance to 3GPP TS 43.019 [7].

The present document describes the technical characteristics and methods of test for testing the SIM API for Java Card™ (3GPP TS 43.019 [7]) implemented in the Subscriber Identity Modules (SIMs) for GSM. It specifies the following parts:

- test applicability;
- test environment description;
- tests format;
- test area reference;
- conformance requirements;
- test auite files;
- test procedure;
- test coverage; and
- a description of the associated testing tools that shall be used.

2 References

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The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

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[1] Void.

[2] Void.

[3] 3GPP TS 51.011: "Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface (Release 4)".

[4] 3GPP TS 11.14: "Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface (Release 99)".

[5] 3GPP TS 11.17: "Digital cellular telecommunications system (Phase 2+); Subscriber Identity Module (SIM) test specification (Release 99)".

[6] Void.

[7] 3GPP TS 43.019: "Subscriber Identity Module Application Programming Interface (SIM API) for Java Card™; Stage 2 (Release 5)".

[8] 3GPP TS 23.048: "Security Mechanisms for the (U)SIM application toolkit; Stage 2 (Release 5)".

[9] ISO/IEC 7816-3 (1997): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 3: Electronic signals and transmission protocols".

[10] 3GPP TS 42.019: "Subscriber Identity Module Application Programming Interface (SIM API); Stage 1 (Release 5)".

[11] SUN Java Card Specification "Java Card 2.1 API Specification".

[12] SUN Java Card Specification "Java Card 2.1 Runtime Environment Specification".

[13] SUN Java Card Specification "Java Card 2.1 VM Architecture Specification".

NOTE: SUN Java Card Specifications can be downloaded at http://java.sun.com/products/javacard.

[14] ETSI TS 101 220: "Smart Cards; ETSI numbering system for telecommunication application providers".

[15] 3GPP TS 51.010-1: "Mobile Station (MS) conformance specification; Part 1: Conformance specification (Release 5)".

[16] 3GPP TS 51.014: "Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 51.010-1 [15] and the following apply:

applet: application built up using a number of classes which will run under the control of the Java Card virtual machine

applet installation parameters: default values for applet installation parameters

applet loading script: file containing the APDU commands that will load and install the test applet in the card

CleanUp Script file: file containing the APDU commands that will restore the Default Initial Conditions on the SIM

Conformance Requirement Reference: description of the expected card behaviour according to 3GPP TS 43.019 [7]

expected state: state in which the SIM is supposed to be after the execution of the test procedure applied on the relevant initial conditions

security parameters: minimum security requirements defined for the applet installation process

test area: set of Test Cases applicable to a specific part (class method, framework behaviour, …) of the 3GPP TS 43.019 [7].

test case: elementary test that checks for compliance with one or more Conformance Requirement References

test Output file: TBD.

test procedure: the sequence of actions/commands to perform all the test cases defined in a test area

test script file: file containing the APDU commands that will execute and verify the test results

Test Toolkit Applet: applet designed to test a specific functionality of the SIM API (3GPP TS 43.019 [7])

3.2 Abbreviations

For the purpose of the present document, the abbreviations given in GSM 01.04 [2] and the following apply:

AC	Application Code
AID	Application Identifier
APDU	Application Protocol Data Unit

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API	Application Programming Interface
CAD	Card Acceptance Device
CRR	Conformance Requirements Reference
CRRC	Conformance Requirement Reference Context Error
CRRN	Conformance Requirement Reference Normal
CRRP	Conformance Requirement Reference Parameter Error
FFS	For Further Study
IFD	Interface Device
JCRE	Java Card™ Run Time Environment
JVM	Java Virtual Machine
SE	Sending Entity
SIM	Subscriber Identity Module

4 Test Environment

This clause specifies requirements that shall be met and the testing rules that shall be followed during the test procedure.

4.1 Applicability

The tests defined in the present document shall be performed taking into account the services supported by the card as specified in the EF_{SST} file.

The test defined in the present document are applicable to cards implementing 3GPP TS 43.019 [7] unless otherwise stated.

The tests defined in the present document require that the card support the concatenation process with 2 concatenated SMS. Therefore the envelope handler shall support 280 bytes of data.

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4.2 Test environment description

The general architecture for the test environment is.

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