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TECHNICAL SPECIFICATION

**5G;
Universal Subscriber Identity
Module Application Toolkit (USAT)
application behavioural test specification
(3GPP TS 31.117 version 17.1.0 Release 17)**

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Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

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

shall indicates a mandatory requirement to do something

shall not indicates an interdiction (prohibition) to do something

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

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

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

cannot indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

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

will not indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

might indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

might not indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

is (or any other verb in the indicative mood) indicates a statement of fact

is not (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

Introduction

The present document defines application behavioural tests for USIM Application Toolkit functionality on an ME with a non-removable UICC/USIM where no access to the physical UICC-Terminal interface can be granted when interacting with a 3GPP network.

The aim of the present document is to ensure the correct behaviour of a UE interfacing with a 3GPP network whilst it is proved that USIM Application Toolkit specific data and functionality is used wherever indicated, similar to application tests defined in TS 31.124 [2] but without direct access to the UICC-Terminal interface.

The present document does not define any aspects related to the administrative management phase of the UICC. Any internal technical realisation of either the UICC or the terminal is only specified where these are important for the verification of specific behaviour. Application specific details for applications residing on an UICC are specified in the respective application specific documents.

1 Scope

The present document describes behavioural tests for the USIM Application Toolkit implemented in Mobile Equipment (ME) or Mobile Stations (MS) supporting a non-removable UICC only within the 3GPP digital cellular telecommunications system, in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-7 [7] and ETSI ETS 300 406 [20].

This document shall provide alternative verification and testing approaches for test cases initially defined in TS 31.124 [2] or ETSI TS 102 384 respectively. To guarantee the highest possible reliability, the verification of existing requirements shall be done using methods defined by ETSI or 3GPP.

A 3GPP ME may support functionality that is not required by 3GPP, but the requirements to do so are outside of the scope of 3GPP. Thus, the present document does not contain tests or references to ETSI TS 102 384 [3] tests for features which are out of scope of 3GPP.

Due to possible limitations in profile handling and updating it is not intended to use the test cases defined within this document with MEs implemented in accordance with Rel-12 or earlier.

2 References

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*.

[1] to [2]   Void

[3]   ETSI TS 102 384 V17.0.0: "Smart cards; UICC-Terminal interface; Card Application Toolkit (CAT) conformance specification".

[4] to [7]   Void

[8]   ETSI TS 102 221 V18.0.0: "UICC-Terminal interface; Physical and logical characteristics".

[9] to [20]   Void

[21]   ETSI TS 102 223 V18.0.0: "Smart Cards; Card Application Toolkit (CAT)"

[22] to [24]   Void

[25]   3GPP TS 31.117 Rel-18: "Universal Subscriber Identity Module Application Toolkit (USAT) application behavioural test specification for non-removable Universal Subscriber Identity Module (nrUSIM)

3 Void

4 to 10 Specification text

The test environment, testing methodology in general, implicit testing, measurement uncertaintiey, format of tests, generic call setup procedures and the USIM Application Toolkit testing on an ME with non-removable UICCrequirements of the present document are provided in 3GPP TS 31.117 [25].

Annex A to Annex C

The Annexes A to Annex C are provided in 3GPP TS 31.117 [25].

Annex D (informative):
Change history

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New**
2024-08	CT6#119-bis	C6-240459				Agreed draft version after CT6#119bis	0.1.0
2024-11	CT6#120-bis	C6-240659				Version with corrections suggested in C6#119-bis and addition of TCs newly introduced in TS 31.124	1.0.0
2024-11	CT6#120-bis	C6-240686				Correction of the incorrect numbering in the former version	0.3.0
2024-11	CT6#120-bis	C6-240706				Addition of a pCRs agreed in C6#120-bis and addition of 'Suggested requirement lists for Test Applet functionality' to Annex C	0.40.0
2024-11	CT6#120-bis	C6-240714				Correction of incorrect numbering and typos from documents attached to C6-240706	0.5.0
2024-12	CT#106	CP-243168				TS Presented for information and approval	1.0.0
2024-12	CT#106					Approved in CT#106	17.0.0
2025-06	CT#108	CP-251031	0001	-	D	Update of 3GPP TS 31.117 to Rel 18	17.1.0

History

Document history		
V17.1.0	June 2025	Publication